

COLUMBIA COLLEGE

COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK



BULLETIN | 2017-2018

MARCH 30, 2018

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COLUMBIA COLLEGE BULLETIN

2017-2018 | Columbia College | Founded 1754

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ACADEMIC CALENDAR

Columbia University reserves the right to revise or amend this academic calendar, in whole or in part, at any time. Registration and Change of Program period dates are tentative, and students should consult their registration materials or speak with their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) to confirm up-to-date deadlines. Updated calendar information is also available from the Registrar (<http://registrar.columbia.edu/event/academic-calendar>).

SUMMER REGISTRATION DATES FOR FALL 2017

June	12–16	Monday–Friday. Online registration for Fall 2017 via Student Services Online (SSOL) appointment: continuing students only.
	19–23	Monday–Friday. Online registration for Fall 2017 via Student Services Online (SSOL) appointment: continuing students only.
July	31–August 4	Monday–Friday. Online registration for Fall 2017 via Student Services Online (SSOL) appointment: continuing students only.
August	7–11	Monday–Friday. Online registration for Fall 2017 via Student Services Online (SSOL) appointment: continuing students only.
	22–24	Tuesday–Thursday. Online registration for Fall 2017 via Student Services Online (SSOL) appointment: continuing and transfer students only.

FALL TERM 2017

August	1	Tuesday. Last day for new students entering in Fall 2017 to submit vaccination documentation for measles, mumps, and rubella; and to certify meningitis decision online. Vaccination documentation is due 30 days prior to registration; students are not permitted to register for classes without this documentation.
	27	Sunday. New Student Orientation Program begins for new students entering in Fall 2017.

September	1	Friday. Last day to apply or reapply for the B.A. degree to be awarded in October 2017. Applications received after this date are automatically applied to the next conferral date.
	1–2	Friday–Saturday. Fall 2017 online registration for first-year students via Student Services Online (SSOL) appointment.
	2	Saturday. Fall 2017 online registration for continuing students and transfer students via Student Services Online (SSOL) appointment.
	4	Monday. Labor Day. University holiday.
	5	Tuesday. Classes begin for the 264th academic year.
	5–15	Weekdays only. Fall 2017 Change of Program period by online appointment via Student Services Online (SSOL); all students.
	8,11	Friday and Monday. Deferred examination dates.
	14	Thursday. Last day to join a class off the Wait List via Student Services Online (SSOL). The Wait List tool will close at 9:30 p.m.
	15	Friday. End of Change of Program period. Last day to add courses. Last day to uncover grade for Spring or Summer 2017 course taken Pass/D/Fail. Last day to drop a Core Curriculum course. Must be registered for a minimum of 12 points.
	18–October 10	Weekdays only. Post Change of Program Add/Drop period by online appointment via Student Services Online (SSOL).
	29	Friday. Last day to confirm, upgrade, or request a waiver from the Columbia Student Health Insurance Plan.
October	10	Tuesday. Last day for students to drop individual courses.
	18	Wednesday. Award of October degrees.
	19	Thursday. Midterm Date.
November	1	Wednesday. Last day to apply or reapply for the B.A. degree to be awarded in February. Applications received after this date are automatically applied to the next conferral date.
	6	Monday. Academic holiday.
	7	Tuesday. Election Day. University holiday.

	13–17	Monday–Friday. Online registration for Spring 2018 via Student Services Online (SSOL) appointment: continuing students only.
	16	Thursday. Last day for students to register for R credit, to change a regular course to a Pass/D/Fail course or a Pass/D/Fail course to a regular course, and/or to withdraw from an individual course and receive a notation of “W” on the transcript in place of a letter grade.
	22	Wednesday. Academic holiday. Administrative offices open; no classes held.
	23–26	Thursday–Sunday. Thanksgiving holidays.
December	1	Friday. Last day to apply or reapply for the B.A. degree to be awarded in May. Applications received after this date are automatically applied to the next conferral date.
	1	Friday. Last day for new Spring 2018 students to submit vaccination documentation for measles, mumps, and rubella; and to certify meningitis decision online. Vaccination documentation is due 30 days prior to registration; students are not permitted to register for classes without this documentation.
	4–8	Monday–Friday. Online registration for Spring 2018 via Student Services Online (SSOL) appointment: continuing students only.
	11	Monday. Last day of classes.
	12–14	Tuesday–Thursday. Study days.
	15–22	Friday–Friday. Final examinations.
	22	Friday. Fall term ends.
	22	Friday, December 22, 2017 through Monday, January 15, 2018. Winter holidays.

SPRING TERM 2018

January	1	Monday. Last day for applicants to the Class of 2022 to apply for admission.
	2–12	Weekdays only. Online registration for Spring 2018 via Student Services Online (SSOL) appointment: continuing and transfer students only.
	15	Monday. Martin Luther King, Jr. Day. University holiday.
	16	Tuesday. Classes begin.

	16–26	Weekdays only. Change of Program period by online appointment via Student Services Online (SSOL).
	19, 22	Friday and Monday. Deferred examination dates.
	25	Thursday. Last day to join a class off the Wait List via Student Services Online (SSOL). The Wait List tool will close at 9:30 p.m.
	26	Friday. End of Change of Program period. Last day to add courses. Last day to uncover grade for Fall 2017 course taken Pass/D/Fail. Last day to drop a Core Curriculum course. Must be registered for a minimum of 12 points.
February	14	Wednesday. Awarding of February 2018 degrees.
	20	Tuesday. Last day for students to drop individual courses.
March	5	Monday. Midterm date.
	6–9	Tuesday–Friday. Major Declaration.
	12–16	Monday–Friday. Spring recess.
	22	Thursday. Last day for students to register for R credit, to change a regular course to a Pass/D/Fail course or a Pass/D/Fail course to a regular course, and/or to withdraw from an individual course and receive a notation of “W” on the transcript in place of a letter grade.
April	16–20	Monday–Friday. Online registration for Fall 2018 via Student Services Online (SSOL) appointment: continuing students only.
	30	Monday. Last day of classes.
May	1–3	Tuesday–Thursday. Study days.
	4	Friday. Deadline for continuing students to apply for financial aid for 2018–2019.
	4–11	Friday–Friday. Final examinations.
	11	Friday. Spring term ends.

COMMENCEMENT

May	14	Monday. Baccalaureate Service.
	15	Tuesday. Columbia College Class Day. Academic Awards and Prizes Ceremony. Phi Beta Kappa Induction Ceremony.
	16	Wednesday. Award of May 2018 degrees. University Commencement.

SUMMER REGISTRATION DATES FOR FALL 2018

June	11–15	Monday–Friday. Online registration for Fall 2018 via Student Services Online (SSOL) appointment: continuing students only.
	18–22	Monday–Friday. Online registration for Fall 2018 via Student Services Online (SSOL) appointment: continuing students only.
July	30–	Monday–Friday. Online registration for
August 3		Fall 2018 via Student Services Online (SSOL) appointment: continuing students only.
August	6–10	Monday–Friday. Online registration for Fall 2018 via Student Services Online (SSOL) appointment: continuing students only.
	21–23	Tuesday–Thursday. Online registration for Fall 2018 via Student Services Online (SSOL) appointment: continuing and transfer students only.

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John Coatsworth, Ph.D.

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Ph.D., University of Belgrade, 1980

FACULTY A-Z LISTING

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D (p. 14) E (p. 15) F (p. 16)
G (p. 17) H (p. 19) I (p. 21) J
(p. 21) K (p. 22) L (p. 24) M
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(p. 39)

A

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For information about undergraduate admissions, please visit the Office of Undergraduate Admissions website (<http://undergrad.admissions.columbia.edu>) or contact the office by phone or email.

FEES, EXPENSES, AND FINANCIAL AID

ESTIMATED EXPENSES FOR THE ACADEMIC YEAR

An itemized estimate of the cost of attending Columbia College for the 2017–2018 academic year of nine months is as follows:

Tuition	\$54,504
Mandatory Fees	\$2,704
Average Room and Board Cost	\$13,618
Books and Personal Expenses	\$3,347
Travel	varies
Total	\$74,173 + Travel

There is an additional charge of \$450 for new students who are required to attend Orientation.

Information on planning and managing educational expenses is contained at <http://www.columbia.edu/cu/sfs>.

FEES

The following fees, prescribed by statute for each Fall or Spring term, are subject to change at any time at the discretion of the Trustees. The fees shown are those in effect during the 2017–2018 academic year.

University charges, such as tuition and fees, residence halls, and dining plans, are due and payable in full by the date announced before the beginning of each term. To check on an account balance, log in to Student Services Online (SSOL) (<https://ssol.columbia.edu>) or call 212-854-4400. A late payment penalty is assessed on payments received after the due date.

It is the policy of the University to withhold all University services, including registration, diplomas, and official transcripts, until all financial obligations have been met.

Tuition 2017–2018

There is a flat tuition charge for all Columbia College students, including visitors, regardless of the number of credits a student is taking. Students who are enrolled for eight terms must pay the flat tuition, regardless of the number of credits they are taking. The charge for 2017–2018 is \$27,252 a term.

Postgraduate special students and degree candidates enrolled for a ninth term are billed according to the per-point system; the per-point cost is \$1,820.

Late Registration Fee

Students who register after the scheduled period (see *Academic Calendar*) are charged a late registration fee of \$100.

Mandatory Fees

Student Life Fee	\$1,622
Columbia Health Fee	\$1,082
Total	\$2,704

Document Fee

All first-time registrants at Columbia University are charged a one-time document fee of \$105, which thereafter allows them to order transcripts and enrollment and degree certifications, and to receive the mailing of the original diploma at no additional charge. This fee appears on the first Student Account Statement of the Fall term.

International Services Charge

All students holding a non-resident visa are charged an international services charge of \$80 each term, totaling \$160 for academic year 2017–2018. This fee supports the University's services to international students.

Columbia Health and Related Services Fee and Student Health Insurance Premiums

Columbia Health and Related Services Fee

Columbia Health services and programs are supported by the Columbia Health and Related Services Fee. Students who pay the fee can access the on-campus services provided by the five departments of Columbia Health:

- Alice! Health Promotion
- Counseling and Psychological Services
- Disability Services
- Medical Services
- Sexual Violence Response

Students who pay the Columbia Health and Related Services Fee pay no additional charges for most on-campus services. Paying the Columbia Health and Related Services Fee is required for all full-time students. Half-time or part-time students may elect to pay the fee to have access to the full range of on-campus programs and services.

The Columbia Health and Related Services Fee is billed separately for each term. The periods of coverage and fees for 2017–2018 are as follows:

Fall Term	August 15, 2017– December 31, 2017	\$541
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Spring Term	January 1, 2018– August 14, 2018	\$541
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Student Health Insurance Premiums

The University policy also requires all full-time students to have acceptable health insurance coverage, in addition to on-campus programs and services provided by Columbia Health. Columbia University offers the Student Health Insurance Plan (Columbia Plan), which provides two levels of coverage for off-campus health care. The Columbia Plan is administered and underwritten by Aetna Student Health. As with all health insurance programs, there are limits and restrictions to the coverage provided by the Columbia Plan.

Full-time students are enrolled in the Gold Level of the Columbia Plan and billed for the insurance premium as well as the Columbia Health and Related Services Fee. Half-time and part-time students may elect enrollment in the Columbia Plan, which also initiates payment of the Columbia Health and Related Services Fee, described above.

Domestic students who already have an alternate insurance plan that meets the University requirements may request a waiver from enrollment through Student Services Online (SSOL) (<https://ssol.columbia.edu>) before the deadline (September 30 for Fall enrollment; February 15 for new Spring enrollment; or June 30 for new Summer enrollment). All waiver requests are considered, but approval is not guaranteed.

Navigating the U.S. health care system can be complex. To help ensure that international students have access to the highest quality of care on- and off-campus **Columbia University requires all international students to enroll in the Columbia Student Health Insurance Plan.** Please contact the Student Health Insurance Team with any questions. They can be reached via studentinsurance@columbia.edu, 212-854-3286 (<http://bulletin.columbia.edu/columbia-college/fees-expenses-financial-aid/tel:212-854-3286>), or by visiting the office on the 3rd Floor of John Jay Hall.

The following rates are for the 2017–2018 plan year. Columbia Plan rates and benefits change annually.

Fall Term: August 15, 2017–December 31, 2017

Gold Plan	\$1,139
Platinum Plan	\$1,737

Spring Term and Summer Session: January 1, 2018–August 14, 2018

Gold Plan	\$1,852
Platinum Plan	\$2,823

Each year students must make an enrollment/waiver request on SSOL (<https://ssol.columbia.edu>). For the current dates of the open enrollment period, visit <http://health.columbia.edu/insurance>.

Students who do not make a selection and drop below full-time status during the Change of Program period (<http://bulletin.columbia.edu/columbia-college/academic-calendar>) will have their Columbia Health and Related Services Fee and Columbia Plan premiums reversed.

For detailed information about Columbia Health, the Student Health Insurance Plan, or submitting a waiver request, visit <http://health.columbia.edu/insurance> or call 212-854-2284.

Withdrawal and Adjustment of Fees

Withdrawal is defined as the dropping of one's entire program in a given term as opposed to dropping a portion of one's program (see *Academic Regulations*). Any student withdrawing from the College must notify the Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) in writing; **notification to instructors or failure to attend classes does not constitute an official withdrawal from the College and will result in failing grades in all courses.**

A student who withdraws is charged a withdrawal fee of \$75. In addition, students will be charged a housing fee once they leave a university residence. All application fees, late fees, and other special fees are not refundable if the student withdraws after the first 30 days of classes, and any coverage remains in effect until the end of the term. The Columbia Health and Related Services Fee is non-refundable and the Columbia Health Insurance Plan Premium will be refunded in accordance with the Columbia Health Insurance Office insurance eligibility withdrawal policy; <http://health.columbia.edu/student-insurance/eligibility>.

Any adjustment to the tuition that the student has paid is determined by the date of withdrawal. Students receiving financial aid are not entitled to any portion of a refund until all Title IV financial aid programs are credited and all outstanding charges have been paid.

Each term, students are required to register for a full program of courses (minimum of 12 points), by the end of the Change of Program period (<http://bulletin.columbia.edu/columbia-college/academic-calendar>), i.e., by the end of the second week of classes. Students who are not registered for at least 12 points by the end of the Change of Program period will be withdrawn from Columbia College.

Fall and Spring Term Tuition Refund Schedule

For the purposes of tuition proration, a week is defined as beginning on Monday and ending on Sunday. Also note that the official Change of Program period normally ends on a Friday.

Description	Charge Assessed
No Registration	\$0
1st and 2nd week	Document fee for new students only , plus \$75 Withdrawal fee
3rd week	10% tuition, fees, plus \$75 Withdrawal fee

4th week	20% tuition, fees, plus \$75 Withdrawal fee
5th week	30% tuition, fees, plus \$75 Withdrawal fee
6th week	40% tuition, fees, plus \$75 Withdrawal fee
7th week	50% tuition, fees, plus \$75 Withdrawal fee
8th week	60% tuition, fees, plus \$75 Withdrawal fee
9th week and after	100% tuition, fees, plus \$75 Withdrawal fee

There is no difference in the proration schedule of a school or program charging per-point or flat rate tuition.

Mailing Address

Office of Financial Aid and Educational Financing, Columbia College
1130 Amsterdam Avenue
100 Hamilton Hall, Mail Code 2802
New York, NY 10027

Office Location

618 Alfred Lerner Hall
2920 Broadway
New York, NY 10027

Office Hours: Monday–Friday, 9 a.m.–5 p.m.

Telephone: 212-854-3711

Fax: 212-854-5353

Email: ugrad-finaid@columbia.edu

Website: <http://cc-seas.financialaid.columbia.edu>

Columbia is committed to meeting the full demonstrated financial need for all applicants admitted as first-year students or transfer students pursuing their first degree. Financial aid is available for all four undergraduate years, provided that students continue to demonstrate financial need.

All applicants who are citizens or permanent residents of the United States, who are students granted refugee visas by the United States, or who are undocumented students in the United States, are considered for admission in a need-blind manner.

International students who did not apply for financial aid in their first year are not eligible to apply for financial aid in any subsequent years. Foreign transfer candidates applying for aid must understand that such aid is awarded on an extremely limited basis. Columbia does not give any scholarships for academic, athletic, or artistic merit.

The following listing of named scholarship funds have been generously donated by alumni, parents, and friends of Columbia College and are the cornerstone of the College's need-based and full need financial aid program. Fifty percent of Columbia College students receive a Columbia Grant toward their demonstrated need and are eligible to receive named scholarship.

The commitment of the Columbia College community enables the College to maintain an economically, ethnically, and racially diverse student body.

For more information on how to support the named scholarship program at Columbia College, please contact:

Columbia College Donor Relations
Columbia Alumni Center
622 West 113th Street, MC 4530
New York, NY 10025
212-851-7488

Scholarship A-Z Listing

A

FREDERICK F. AND HELEN M. ABDOO SCHOLARSHIP FUND

(1998) Gifts of the family of Frederick F. Abdoo CC'41, LAW'47 ^, P: GS'88 and Helen M. Abdoo ^ P: GS'88.

SAM ACKERMAN SCHOLARSHIP FUND

(2010) Gift of an anonymous donor.

CARROLL ADAMS SCHOLARSHIP FUND

(1997) Gift of Russell F. Warren CC'62 and Laurie A. Warren BC'63.

MICHAEL ADDISON SCHOLARSHIP FUND

(1955) Gift of Viola G. Addison in memory of her husband, Michael Addison.

EDWARD C. ADKINS MEMORIAL SCHOLARSHIP FUND

(2008) Gift of Philip J. Adkins CC'80, P: CC'15.

JAMES HERMAN ALDRICH AND HERMAN ALDRICH EDSON SCHOLARSHIP FUND

(1913) Gift of James Herman Aldrich CC 1863, in honor of the fiftieth anniversary of his graduation, and bequest of James Herman Aldrich CC 1863 and Mary Gertrude Edson Aldrich.

PATRICIA AND SHEPARD ALEXANDER SCHOLARSHIP FUND

(2012) Bequest of Patricia and Shepard L. Alexander CC'21.

SHEPARD L. ALEXANDER SCHOLARSHIP FUND

(2011) Bequest of Patricia and Shepard L. Alexander CC'21.

WILLIAM ALPERN SCHOLARSHIP FUND

(1996) Gift of Minette Alpern P: GSAS'74 and Barbara Alpern Engel GSAS'74 in memory of William Alpern P: GSAS'74.

CECILE AND SEYMOUR ALPERT, M.D. SCHOLARSHIP FUND

(2006) Gift of Cecile B. and Seymour Alpert CC'39.

ALAN J. ALTHEIMER SCHOLARSHIP FUND

(1992) Gift of the Jewish Students Scholarship Fund in honor of Alan Altheimer CC'23, LAW'25 ^.

ALUMNI SCHOLARSHIP FUND

(1935) Gift of the Alumni Fund.

GEORGE J. AMES/LAZARD FRERES SCHOLARSHIP FUND

(1996) Gift of Lazard Freres in honor of George J. Ames CC'37 ^.

ERICA L. AMSTERDAM FAMILY SCHOLARSHIP FUND FOR COLUMBIA COLLEGE

(2002) Gift of Mark Lemle Amsterdam CC'66, LAW'69, P: CC'07, CC'10 in honor of his mother, Erica L. Amsterdam ^ P: CC'66, LAW'69.

CATHERINE AND DENIS ANDREUZZI SCHOLARSHIP FUND

(1995) Gift of Denis M. Andreuzzi CC'53.

JULIO LOUIS ANON AND ROBERT A. KAMINSKI SCHOLARSHIP FUND

(2013) Gift of J. Louis Anon CC'76.

ANONYMOUS SCHOLARSHIP FUND

(1911) Gift of an anonymous donor.

ANONYMOUS SCHOLARSHIP FUND

(1913) Gift of an anonymous donor.

ANONYMOUS SCHOLARSHIP FUND

(1984) Gift of an anonymous donor.

ANONYMOUS FUND FOR STUDENT AID #2

(1954) Gift of an anonymous donor.

ANONYMOUS SCHOLARSHIP FUND III IN COLUMBIA COLLEGE

(1987) Gift of an anonymous donor.

ANONYMOUS #241 COLUMBIA COLLEGE SCHOLARSHIP FUND

(1992) Gift of an anonymous donor.

ANONYMOUS 22076 SCHOLARSHIP FUND

(2008) Gift of an anonymous donor.

ANONYMOUS 32476 SCHOLARSHIP FUND

(2012) Gift of an anonymous donor.

ANONYMOUS 351942 SCHOLARSHIP FUND

(2008) Gift of an anonymous donor.

RAYMOND F. ANTIGNAT SCHOLARSHIP FUND

(1991) Bequest of Raymond F. Antignat CC'37, GSAS'40.

AQUILA FAMILY SCHOLARSHIP FUND

(2013) Gift of Francis J. Aquila CC'79.

ROONE P. ARLEDGE SCHOLARSHIP FUND

(1987) Gift of Roone P. Arledge CC'52 ^.

NICHOLAS F. AND FRANCES N. ARTUSO SCHOLARSHIP FUND

(2006) Gift of Anthony A. Artuso CC'80, P: CC'08, CC'12 and various donors in memory of Anthony's parents, Frances N. and Nicholas F. Artuso SEAS'49, P: CC'80.

ESTATE OF SYLVIA ASHLEY BEQUEST FOR GENERAL UNIVERSITY FINANCIAL AID

(2008) Bequest of Sylvia Ashley.

LOUIS AND THEONIE ASLANIDES SCHOLARSHIP FUND

(2013) Bequest of Peter C. Aslanides CC'62 in memory of his parents, Louis and Theonie Aslanides P: CC'62, GSAS'61.

CHARLES B. ASSIFF SCHOLARSHIP FUND

(1996) Gift of Matthew J. Assiff CC'89 in memory of his father, Charles B. Assiff P: CC'89.

ASTOR PRESIDENTIAL SCHOLARSHIP FUND

(1981) Gift of the Vincent Astor Foundation.

THE BILL AND INGRID ATKINSON MEMORIAL SCHOLARSHIP FUND

(2012) Gift of William H. Atkinson CC'49 ^.

VICTOR AUERBACH ESTATE SCHOLARSHIP GIFT

(2016) Bequest of Victor H. Auerbach CC'51.

BERTHA AND WILLIAM AUGENBRAUN ENDOWED SCHOLARSHIP FUND AT COLUMBIA COLLEGE

(2011) Bequest of Barry S. Augenbraun CC'60.

B**A. JAMES AND VONA HOPKINS BACH SCHOLARSHIP FUND**

(1992) Gift of A. James Bach CC'53, BUS'52.

FREDERICK AND ELEANORE BACKER SCHOLARSHIP FUND

(1984) Bequest of Eleanore W. Backer.

KAMEL S. BAHARY SCHOLARSHIP FUND

(2015) Gift of Kamel S. Bahary CC'54.

BAKER FAMILY SCHOLARSHIP FUND

(2004) Gift of Rebecca and Daniel P. Baker CC'76, P: CC'07, CC'10.

GARY THOMAS BAKER SCHOLARSHIP FUND

(1992) Gift of Jean M. Baker ^ P: '84 ^ in memory of her son, Gary T. Baker CC'84.

ADELLE PHYLLIS BALFUS SCHOLARSHIP FUND

(1989) Gift of Laurence E. Balfus CC'55 and Roberta R. Balfus ^.

ALFRED M. BARABAS MEMORIAL FUND

(1988) Bequest of Alfred M. Barabas CC'36.

KYRA TIRANA BARRY AND DAVID BARRY SCHOLARSHIP FUND

(2009) Gift of Kyra Tirana Barry CC'87, P: CC'17 and David B. Barry CC'87, P: CC'17.

MICHAEL BARRY '89 SCHOLARSHIP FUND
(2010) Gift of Michael I. Barry CC'89.

FREDERIC D. BARSTOW SCHOLARSHIP FUND
(1943) Bequest of William S. Barstow.

ANDREW AND AVERY BARTH SCHOLARSHIP FUND
(2009) Gift of Andrew F. Barth CC'83, BUS'85, P: CC'16.

MILTON B. AND EDITH C. BASSON ENDOWMENT FUND
(1987) Bequest of Milton B. Basson CC'29.

CLEMENT AND ELIZABETH PROBASCO BEACHEY SCHOLARSHIP FUND
(1965) Bequest of Margaret Probasco Beachey in memory of her parents, Clement Beachey and Elizabeth Probasco Beachey.

BARBARA BEHRINGER SCHOLARSHIP FUND
(2009) Gift of Michael P. Behringer CC'89.

BASS FAMILY SCHOLARSHIP FUND
(2016) Gift of Thomas and Michele Bass P: CC'18.

ROBERT L. BELKNAP SCHOLARSHIP FUND
(1987) Gift of various donors in the Class of 1977 in honor of Robert L. Belknap SIPA'57, GSAS'59 ^, P: GSAPP'86.

WILLIAM C. AND ESTHER HOFFMAN BELLER SCHOLARSHIP FUND
(1983) Gift of Esther Hoffman Beller ^ in honor of her husband, William C. Beller CC 1919, GSAS 1920 ^, and herself.

WILLIAM AITKEN BENSEL MEMORIAL ENDOWMENT
(1975) Bequest of Marguerite C. and William A. Bensel CC 1902.

HERBERT R. BERK SCHOLARSHIP FUND
(1999) Bequest of Ruth L. Berk in memory of her husband, Herbert R. Berk CC'28, LAW'30.

PINCUS BERNER MEMORIAL SCHOLARSHIP FUND
(1992) Bequest of Rose Wohl Hofstadter in memory of her brother-in-law, Pincus Berner.

ROBERT BERNOT '55 AND MORRIS LAMER SCHOLARSHIP FUND IN HONOR OF SAMARA BERNOT MESHEL '92
(1996) Gift of Robert Bernot CC'55, P: CC'92 and Morris Lamer ^ in honor of Samara B. Meshel CC'92, P: CC'18.

YOGI BERRA SCHOLARSHIP FUND
(1959) Gift of various donors in honor of Yogi Berra ^.

THE BETHILL FAMILY SCHOLARSHIP FUND
(2009) Gift of Charles D. Bethill CC'69, GSAS'73, SIPA'73, LAW'74.

BIKHCHANDANI SCHOLARSHIP FUND

(2013) Gift of an anonymous donor.

GIUSEPPE AND MARIA BISIO SCHOLARSHIP FUND
(1993) Gift of Attilio Bisio CC'52, SEAS'53, SEAS'54, P: CC'85, LAW'92 in honor of Giuseppe and Maria Bisio.

BLACK ALUMNI COUNCIL ENDOWED SCHOLARSHIP FUND
(2015) Gift of Columbia College Black Alumni Council, alumni, and friends.

CHARLES P. BLACKMORE ATHLETIC SCHOLARSHIP
(1990) Bequest of Charles P. Blackmore CC'38, GSAS'53.

LEO BLITZ MEMORIAL SCHOLARSHIP FUND
(1987) Gift of Steven M. Blitz CC'62, SEAS'63.

THE WILLARD AND ROBERTA BLOCK FAMILY SCHOLARSHIP FUND
(1999) Gift of Willard Block CC'51.

MAXWELL A. BLOOMFIELD SCHOLARSHIP FUND
(2002) Bequest of Maxwell Bloomfield.

BOCKLAGE FAMILY SCHOLARSHIP FUND
(2010) Gift of Alanna and Chandler B. Bocklage CC'00.

ALEXANDER BODINI ENDOWED FINANCIAL AID FUND
(2004) Gift of ACP Holdings, Inc. in memory of Alexander Bodini.

PHILIP BONANNO SCHOLARSHIP FUND
(1996) Gift of Philip P. Bonanno CC'54, SEAS'55, SEAS'64.

STEVE BOOTHE SCHOLARSHIP
(2014) Gift of Steven E. Boothe CC'90.

HOWARD H. BORN SCHOLARSHIP FUND
(1990) Bequest of Howard H. Born.

H. HUBER BOSCOWITZ SCHOLARSHIP FUND
(1994) Bequest of H. Huber Boscowitz CC'23.

DR. LEONARD BRAM SCHOLARSHIP FUND
(2011) Gift of Jonathan D. Bram CC'87, P: CC'14, CC'17.

EDWARD M. BRATTER SCHOLARSHIP FUND
(1984) Gift of Thomas Bratter CC'61 ^, P: CC'87, CC'90 and Carole Bratter W: CC'61 , P: CC'87, CC'90 and in honor of Edward M. Bratter CC'26, LAW'28 ^, P: CC'61 ^.

THE MICHAEL O. BRAUN SCHOLARSHIP FUND
(2006) Gift of Michael O. Braun CC'70, LAW'73, P: CC'09.

BREAD OF LIFE FOUNDATION SCHOLARSHIP
(1993) Gift of Paul J. Grant CC'65.

JESSICA LEE BRETT SCHOLARSHIP FUND
(2008) Gift of Patricia Brett CC'87, P: CC'18 and James T. Brett CC'84, P: CC'18.

LAURENCE AND MARION BREWER '38 CC
SCHOLARSHIP FUND

(2006) Bequest of Marion and Laurence A. Brewer CC'38.

BRILLO-SONNINO FAMILY SCHOLARSHIP FUND

(2009) Gift of Mark D. Sonnino CC'82 and Lyn C. Brillo.

THE CRAIG B. BROD SCHOLARSHIP

(2011) Gift of Craig B. Brod CC'77.

HAROLD BROD MEMORIAL ROOM SCHOLARSHIP
FUND

(1958) Gift of Beth Brod W: CC'47 in memory of her husband,
Harold Brod CC'47.

DOROTHY R. BRODIN SCHOLARSHIP FUND FOR THE
HUMANITIES

(2007) Bequest of Dorothy R. Brodin GSAS'43, GSAS'63.

BRONIN FAMILY SCHOLARSHIP FUND

(1996) Gift of Andrew Bronin CC'69.

ROBERT R. BROOKHART MEMORIAL SCHOLARSHIP
FUND

(1991) Bequest of Herbert A. Deane CC'42, GSAS'53 in honor
of Robert R. Brookhart CC'59 ^.

FRANK AND DEENIE BROSENS SCHOLARSHIP FUND

(2006) Gift of the Frank Brosens and Deenie Brosens Foundation.

CAITLIN AND TOM BROWN SCHOLARSHIP FUND

(2013) Gift of Thomas P. Brown CC'92 and Caitlin T. Brown
BC '91.

FREDRIC WALDEN BROWN MEMORIAL SCHOLARSHIP
FUND

(2005) Bequest of Norma L. and John H. Brown.

HAROLD BROWN SCHOLARSHIP FUND

(1990) Gift of Harold Brown CC'46, GSAS'46, GSAS'49.

SAMUEL POTTER BROWN SCHOLARSHIP FUND

(1998) Bequest of Samuel P. Brown CC'41, BUS'41.

CARL M. BRUKENFELD CLASS OF 1927 MEMORIAL
SCHOLARSHIP FUND

(1970) Gift of M. Ronald Brukenfeld GSAS'39 ^.

CLARENCE BRUNER-SMITH SCHOLARSHIP FUND -
COLUMBIA COLLEGE

(2002) Bequest of Clarence Bruner-Smith CC'25.

LOUISE AND ROBERT BRUNNER FAMILY
SCHOLARSHIP FUND

(2014) Gift of Rochelle L. and Thomas W. Brunner CC'66, P:
CC'95.

MICHAEL S. BRUNO, M.D. SCHOLARSHIP FUND

(1989) Gift of Michael S. Bruno CC'43, PS'45 ^, P: BUS'70,
BUS'82.

DR. ELI BRYK SCHOLARSHIP FUND

(1999) Gift of Eli Bryk CC'78, PS'82, P: CC'07, CC'08, CC'10,
CC'13, BC'03, BUS'11, GSAS'10, JRN'14, LAW'11, PS'15.

BRYNJOLFSSON FAMILY UNDERGRADUATE
SCHOLARSHIP FUND

(2008) Gift of Margaret and John Brynjolfur Brynjolfsson CC'86.

BUCHMAN FAMILY SCHOLARSHIP FUND

(1989) Gift of Stephen L. Buchman CC'59, LAW'62.

ANNIE P. BURGESS SCHOLARSHIP FUND

(1913) Bequest of Annie P. Burgess.

DANIEL BURGESS SCHOLARSHIP FUND

(1913) Bequest of Annie P. Burgess.

J. GARY BURKHEAD SCHOLARSHIP FUND

(1988) Gift of J. Gary Burkhead CC'63.

DR. IRVIN J. BUSSING SCHOLARSHIP FUND

(1996) Gift of Irvin J. Bussing CC'22, GSAS'35 ^.

RICHARD BUTLER SCHOLARSHIP FUND

(1903) Gift of Mrs. Richard Butler in memory of her husband,
Richard Butler.

BENJAMIN J. BUTTENWIESER PRESIDENTIAL
SCHOLARSHIP FUND

(1992) Gift of Lionel I. Pincus BUS'56 ^, P: CC'92, CC'95,
BUS'02, the Charles H. Revson Foundation, and various donors
in memory of Benjamin J. Battenwieser CC 1919.

MICHAEL BYOWITZ / RUTH HOLZER / SUZANNE
BYOWITZ SCHOLARSHIP FUND

(2008) Gift of Ruth Holzer and Michael H. Byowitz CC'73,
P: CC'13, LAW'14 in honor of the thirty-fifth anniversary of
Michael's graduation.

C

JOHN T. CAHILL MEMORIAL SCHOLARSHIP FUND

(1967) Gift of various donors in memory of John T. Cahill
CC'24.

EDWARD F. CALESA SCHOLARSHIP FUND

(1989) Gift of Edward F. Calesa CC'63 in honor of Joel Larus
GSAS'60.

STEVEN C. CALICCHIO FUND

(2013) Gift of Steven C. Calicchio Foundation.

JOHN AND BETTY CARROLL MEMORIAL
SCHOLARSHIP FUND

(2004) Gift of Barbara Bartlik and David S. Carroll CC'76,
LAW'79, P: CC'11 in honor of David's parents, John and Betty
Carroll P: CC'76, LAW'79.

PROFESSOR JOHN P. CARTER SCHOLARSHIP FUND

(2001) Bequest of Rachel H. Carter in memory of her husband,
John P. Carter CC'36.

EDWIN H. CASE MEMORIAL SCHOLARSHIP FUND

(1994) Gift of Stephen H. Case CC'64, LAW'68, P: CC'92, BUS'02 and various donors in memory of Stephen's son, Edwin H. Case CC'92.

CENTRAL DELICATESSEN FUND

(2015) Gift of an anonymous donor.

DOUGLAS A. CHADWICK, JR. SCHOLARSHIP FUND

(2004) Gift of Douglas A. Chadwick CC'61, BUS'62.

FRANK W. CHAMBERS SCHOLARSHIP FUND

(1950) Gift of various donors in memory of Frank W. Chambers CC 1906.

SOU CHAN SCHOLARSHIP FUND

(1949) Gift of Sou Chan.

RYAN CHANG SCHOLARSHIP FUND

(2011) Gift of Ryan S. Chang CC'02.

SO YOUNG CHANG FAMILY SCHOLARSHIP FUND

(2015) Gift of So Young Chang BUS'02.

JOYCE CHANG SCHOLARSHIP FUND

(2016) Gift of Joyce Chang CC'87 and David I. Robbins.

CHANG CHAN YUK PING SCHOLARSHIP FUND

(2011) Gift of Pamela and Eric M.P. Tang P: CC'09.

CHAPMAN FAMILY SCHOLARSHIP FUND

(2015) Gift of Kenneth B. Chapman CC'97.

JOHN CHEE SCHOLARSHIP FUND

(1988) Gift of John K. C. Chee CC'68, BUS'70, P: CC'95, CC'97, CC'01.

CHARLIE CHO SCHOLARSHIP FUND

(2011) Gift of Charles W. Cho CC'96.

THE CHODASH FAMILY SCHOLARSHIP FUND

(2015) Gift of Craig L. Chodash CC'90.

CHOU SCHOLARSHIP FUND

(2010) Gift of Silas Kei-Fong Chou.

SILAS CHOU SCHOLARSHIP FUND

(2010) Gift of Silas Kei-Fong Chou.

DANIEL S.J. CHOY COLUMBIA COLLEGE SCHOLARSHIP FUND

(2013) Gift of Daniel S.J. Choy CC'44, PS'49.

PHILLIP AND THEODORA CHRISTIE ENDOWED SCHOLARSHIP

(2016) Bequest of Phillip and Theodora Christie.

JEREMIAH AND YOLANDA CIANCIA FAMILY SCHOLARSHIP FUND

(2008) Gift of Jeremiah and Yolanda Cancia Foundation.

RICHARD H. CIPOLLA MEMORIAL SCHOLARSHIP FUND

(1981) Gift of John and Patricia Klingenstein in memory of Richard H. Cipolla SEAS'48.

ROBERT CIRICILLO SCHOLARSHIP FUND

(2004) Gift of Robert C. Ciricillo CC'67.

JOHN J. CIRIGLIANO SCHOLARSHIP FUND

(1987) Gift of John J. Cirigliano CC'64.

TATJANA CIZEVSKA SCHOLARSHIP FUND

(1986) Gift of Tatjana Cizevska GSAS'49 ^.

CLASS OF 1892 ARTS AND MINES SCHOLARSHIP

(1917) Gift of various donors in the Class of 1892 Arts and Mines.

CLASS OF 1896 ARTS AND MINES SCHOLARSHIP

(1921) Gift of various donors in the Class of 1896 Arts and Mines.

CLASS OF 1900 FUND

(1950) Gift of various donors in the Class of 1900 College, Engineering and Architecture.

CLASS OF 1902 COLLEGE AND ENGINEERING SCHOLARSHIP FUND

(1952) Gift of various donors in the Class of 1902.

CLASS OF 1905 SCHOLARSHIP FUND

(1955) Gift of various donors in the Class of 1905.

CLASS OF 1906 FRANK D. FACKENTHAL SCHOLARSHIP FUND

(1948) Gift of various donors in the Class of 1906.

CLASS OF 1907 ENGINEERING FUND

(1937) Gift of various donors in the Class of 1907.

CLASS OF 1908 COLLEGE FUND FOR A ROOM IN RESIDENCE HALLS FUND

(1948) Gift of various donors in the Class of 1908.

CLASS OF 1909 SCHOLARSHIP FUND

(1959) Gift of various donors in the Class of 1909.

CLASS OF 1911 FUND

(1936) Gift of various donors in the Class of 1911.

CLASS OF 1914 COLLEGE AND ENGINEERING FUND

(1969) Gift of various donors in the Class of 1914.

CLASS OF 1915 SCHOLARSHIP FUND

(1950) Gift of various donors in the Class of 1915.

CLASS OF 1916 COLLEGE AND ENGINEERING FUND

(1947) Gift of various donors in the Class if 1916.

CLASS OF 1916 SCHOLARSHIP FUND

(1951) Gift of various donors in the Class of 1916.

CLASS OF 1917 COLLEGE, ENGINEERING, JOURNALISM FUND

(1939) Gift of various donors in the Class of 1917.

CLASS OF 1918 SCHOLARSHIP FUND

(1948) Gift of various donors in the Class of 1918.

CLASS OF 1918 50TH ANNIVERSARY SCHOLARSHIP FUND

(1968) Gift of various donors in the Class of 1918.

CLASS OF 1920 SCHOLARSHIP FUND

(1983) Gift of various donors in the Class of 1920.

CLASS OF 1921 SCHOLARSHIP FUND

(1936) Gift of various donors in the Class of 1921.

CLASS OF 1922 NATIONAL SCHOLARSHIP ENDOWMENT FUND

(1950) Gift of various donors in the Class of 1922.

CLASS OF 1924 SCHOLARSHIP FUND

(1949) Gift of various donors in the Class of 1924.

CLASS OF 1924 SCHOLARSHIP ROOM ENDOWMENT

(1949) Gift of various donors in the Class of 1924.

CLASS OF 1925 HERBERT E. HAWKES SCHOLARSHIP FUND

(1987) Gift of various donors in the Class of 1925.

CLASS OF 1926 DWIGHT C. MINER SCHOLARSHIP FUND

(1973) Gift of various donors including faculty, students, and alumni.

CLASS OF 1927 SCHOLARSHIP FUND

(1947) Gift of various donors in the Class of 1927.

CLASS OF 1928 COLLEGE PERMANENT FUND

(1956) Gift of various donors in the Class of 1928.

CLASS OF 1929 TENTH ANNIVERSARY FUND

(1939) Gift of various donors in the Class of 1929.

CLASS OF 1932 SCHOLARSHIP FUND

(1982) Gift of various donors in the Class of 1932.

THE CLASS OF 1933 SCHOLARSHIP FUND

(2008) Bequest of Mabel H. Tunstead.

CLASS OF 1933 SCHOLARSHIP FUND

(1988) Gift of various donors in the Class of 1933.

CLASS OF 1934 SCHOLARSHIP FUND

(1986) Gift of various donors in the Class of 1934.

CLASS OF 1936 SCHOLARSHIP FUND

(1965) Gift of various donors in the Class of 1936.

CLASS OF 1938 SCHOLARSHIP FUND

(1967) Gift of various donors in the Class of 1938.

CLASS OF 1942 GEORGE A. HYMAN, M.D. SCHOLARSHIP FUND

(2005) Gift of Barry S. Hyman CC'77, PS'86 and the George A. Hyman Revocable Trust in memory of Barry's father, George A. Hyman CC'42, PS'45, P: CC'77, PS'86.

CLASS OF 1942 SCHOLARSHIP FUND

(1967) Gift of various donors in the Class of 1942.

CLASS OF 1943 SCHOLARSHIP FUND

(1976) Gift of various donors in the Class of 1943.

CLASS OF 1951 SCHOLARSHIP FUND

(1996) Gift of various donors in the Class of 1951.

CLASS OF 1952 ENDOWMENT FUND

(1988) Gift of various donors in the Class of 1952 in honor of the thirty-fifth anniversary of their graduation.

COLUMBIA COLLEGE CLASS OF 1952 SCHOLARSHIP FUND

(2002) Gift of various donors in the Class of 1952.

CLASS OF 1953/ MICHAEL I. SOVERN SCHOLARSHIP FUND

(1983) Gift of various donors in the Class of 1953.

CLASS OF 1955 SCHOLARSHIP FUND

(1982) Gift of various donors in the Class of 1955.

CLASS OF 1956 ALAN N. MILLER SCHOLARSHIP FUND

(2014) Gift of various donors in the Class of 1956 in honor of the fifty-fifth anniversary of their graduation and in memory of Alan N. Miller CC'56, SEAS'57, BUS'58, P: CC'88.

CLASS OF 1956 SCHOLARSHIP FUND

(1982) Gift of various donors in the Class of 1956.

THE CLASS OF 1958 PETER STUYVESANT SCHOLARSHIP

(1992) Gift of David J. Londoner CC'58, BUS'59 ^, P: CC'91, Bernard W. Nussbaum CC'58, P: CC'93, BUS'02, and other graduates of Stuyvesant High School in the Class of 1958.

CLASS OF 1959 SCHOLARSHIP FUND

(1992) Gift of various donors in the Class of 1959.

CLASS OF 1966 SCHOLARSHIP FUND

(1986) Gift of various donors in the Class of 1966.

CLASS OF 1968 SCHOLARSHIP FUND

(1988) Gift of various donors in the Class of 1968.

CLASS OF 1969 SCHOLARSHIP FUND

(1991) Gift of various donors in the Class of 1969 in honor of the twentieth anniversary of their graduation.

CLASS OF 1975 NEIL SELINGER MEMORIAL SCHOLARSHIP FUND

(2013) Gift of various donors in the Class of 1975.

THE CLASS OF 1979 DEAN AUSTIN E. QUIGLEY SCHOLARSHIP FUND

(2014) Gift of the Class of 1979 in honor of the thirtieth anniversary of their graduation.

THE CLASS OF 1984 SCHOLARSHIP FUND
(2013) Gift of various donors in the Class of 1984.

THE CLASS OF 1985 SCHOLARSHIP FUND
(2014) Gift of Class of 1985 in honor of the twenty-fifth anniversary of their graduation.

THE CLASS OF 1989 SCHOLARSHIP FUND
(2014) Gift of Class of 1989 in honor of the twentieth anniversary of their graduation.

THE COLUMBIA COLLEGE CLASS OF 1994 SCHOLARSHIP FUND
(2014) Gift of the Class of 1994 in honor of the fifteenth anniversary of their graduation.

THE COLUMBIA COLLEGE CLASS OF 2005 SCHOLARSHIP FUND
(2013) Gift of various donors in the Class of 2005.

MICHAEL J. CLEMENS SCHOLARSHIP FUND
(1990) Bequest of Michael J. Clemens CC'61, GSAS'64.

ETHEL CLYDE SCHOLARSHIP FUND
(1979) Bequest of Ethel Clyde GS'31, P: CC'30 ^.

DONN COFFEE MEMORIAL SCHOLARSHIP FUND
(2005) Gift of Toni Coffee BC'56, W: CC'55, BUS'56.

JOAN M. COHEN SCHOLARSHIP FUND
(1987) Gift of Alan N. and Joan M. Cohen Foundation.

SANFORD M. COHEN SCHOLARSHIP FUND
(1996) Gift of Sanford M. Cohen CC'83.

PETER AND JOAN COHN SCHOLARSHIP FUND
(2004) Gift of Peter F. Cohn CC'58, PS'62, P: CC'93.

COLE FUND
(1943) Bequest of Edward F. Cole.

MAE AND HARRY COLE MEMORIAL FUND
(1965) Bequest of Harry Dix Cole CC 1913.

HENRY S. COLEMAN SCHOLARSHIP FUND
(1992) Gift of Bradford R. Higgins CC'74, LAW'78 in honor of Henry S. Coleman CC'46, SEAS'46 ^.

HENRY S. COLEMAN LEADERSHIP SCHOLARSHIP FUND
(1994) Gift of Mary Lou and Robert F. Coviello CC'67, BUS'68, P: CC'99 in honor of Henry S. Coleman CC'46, SEAS'46 ^.

LAURA AND STEVEN COLEMAN SCHOLARSHIP FUND
(2013) Gift of Steven E. Coleman CC'83, P: CC'15, CC'20.

PERRY MCDONOUGH COLLINS SCHOLARSHIP FUND
(1917) Bequest of Kate Collins Brown in memory of her uncle, Perry McDonough Collins.

COLUMBIA COLLEGE ALUMNI FUND ENDOWMENT
(1983) Gift of various donors.

COLUMBIA COLLEGE SCHOLARSHIP FUND
(2011) Gift of various donors.

COLUMBIA COLLEGE VARIOUS SCHOLARSHIPS
(1981) Gift of various donors.

COLUMBIA COLLEGE WOMEN SCHOLARSHIP FUND
(2009) Gift of various donors.

COLUMBIA UNIVERSITY ALUMNI CLUB OF NASSAU COUNTY SCHOLARSHIP FUND
(1986) Gift of the Columbia University Alumni Club of Nassau County.

COLUMBIA UNIVERSITY CLUB FOUNDATION SCHOLARSHIP FUND
(1967) Gift of the Columbia University Club Foundation.

COLUMBIA UNIVERSITY CLUB OF NEW ENGLAND SCHOLARSHIP FUND
(1985) Gift of various members of the Columbia University Club of New England.

COLUMBIA UNIVERSITY FUND FOR STUDENTS
(2005) Bequest of Al Jolson.

CONEDISON ENDOWED SCHOLARSHIP FUND
(2015) Gift of Consolidated Edison Company of New York, Inc.

HARRIET WALLER CONKLIN/LILLIAN CHERNOK SABLE FUND
(2010) Gift of an anonymous donor.

COOK FAMILY FUND
(2011) Gift of Michael L. Cook CC'65.

CORNACCHIA FAMILY SCHOLARSHIP FUND
(2010) Gift of Thomas W. Cornacchia CC'85, P: CC'17, CC'19 and Goldman Sachs Charitable Gift Fund.

CHARLES K. COSSE MEMORIAL SCHOLARSHIP FUND
(1975) Gift of Anne L. Cosse ^ in memory of her husband, Charles K. Cosse CC'25.

PAUL AND LILLIAN COSTALLAT SCHOLARSHIP FUND
(1972) Bequest of Lillian and Paul Costallat.

BERTHE COSTIKYAN SCHOLARSHIP FUND
(1990) Gift of Andrew M. Costikyan CC'43 ^ and Edward N. Costikyan CC'47, LAW'49 ^ in memory of their mother, Berthe Costikyan P: CC'43 ^, CC'47, LAW'49 ^.

CHARLES HALSTEAD COTTINGTON SCHOLARSHIP FUND - COLUMBIA COLLEGE
(2002) Bequest of Marianne W. Cottington in memory of her husband, Charles Halstead Cottington.

LOUISE CRAIGMYLE SCHOLARSHIP FUND

(1960) Gift of Louise Craigmyle ^.

FREDERIC M. AND MARY E. CURRAN CLASS OF 1919 SCHOLARSHIP FUND

(1967) Bequest of Mary E. and Frederic M. Curran CC 1919 ^.

CHESTER W. CUTHELL CLASS OF 1905 SCHOLARSHIP FUND

(1945) Gift of various donors in the Class of 1905 in honor of the fortieth anniversary of their graduation.

D

FATHER JOHN K. DALY MEMORIAL SCHOLARSHIP FUND

(2014) Gift of Arthur D. Trezise CC'50 in memory of Father John K. Daly.

CHARLES ANDERSON DANA SCHOLARSHIP FUND

(1988) Gift of David S. Dana CC'53 ^ in memory of his father, Charles A. Dana CC 1902, GSAS 1904, LAW 1905, P: CC'53 ^.

HORACE E. DAVENPORT FUND

(1958) Gift of Horace E. Davenport CC'29 ^.

VERA B. DAVID SCHOLARSHIP FUND

(1963) Bequest of Vera B. David.

A.M. DAVIS SCHOLARSHIP FUND

(1944) Gift of A.M. Davis ^.

AL DAVIS SCHOLARSHIP FUND

(2015) Gift of Hank Davis CC'63

ARTHUR M. DAVIS SCHOLARSHIP FUND

(1989) Bequest of Arthur M. Davis CC'24.

EDWIN F. DAVIS SCHOLARSHIP FUND

(1939) Bequest of Edwin F. Davis.

THE PIRI AND NATE DAVIS FAMILY SCHOLARSHIP

(2005) Gift of Stacey R. and Eugene I. Davis CC'75, SIPA'76, LAW'80, P: CC'05, CC'07.

SARAH DAVIS FINANCIAL AID SCHOLARSHIP FUND

(1998) Gift of Hank Davis CC'63.

JUDGE ARCHIE DAWSON MEMORIAL SCHOLARSHIP FUND

(1964) Gift of various donors in memory of Archie Dawson CC'21.

THE RAUL J. DE LOS REYES MEMORIAL SCHOLARSHIP FUND

(2005) Gift of Richard N. de los Reyes CC'97.

RICHARD AND DANIELA DE LOS REYES SCHOLARSHIP FUND

(2015) Gift of Richard N. de los Reyes CC'97.

HERBERT A. DEANE SCHOLARSHIP FUND

(1991) Bequest of Herbert A. Deane CC'42, GSAS'53.

THE DEBART SCHOLARSHIP FUND - COLUMBIA COLLEGE

(2002) Gift of J. Richard deBart GS'77.

DELOITTE AND TOUCHE SCHOLARSHIP GIFT

(2003) Gift of various donors.

LEONARDO C. AND MARY M. DE MORELOS SCHOLARSHIP FUND

(1999) Bequest of Leonardo C. De Morelos GSAS'54.

FRANK W. DEMUTH SCHOLARSHIP FUND

(1965) Bequest of Frank W. Demuth CC 1914, LAW 1916.

LELAND S. DENNING SCHOLARSHIP FUND

(2005) Bequest of Leland S. Denning CC'39.

ROBERT STEVEN DENNING SCHOLARSHIP FUND

(2008) Gift of Roberta B. and Steven A. Denning P: CC'06.

ROBERT STEVEN DENNING SCHOLARSHIP FUND

(2014) Gift of Roberta B. and Steven A. Denning P: CC'06 in honor of the 30th birthday of their son, Robert Steven Denning CC'06.

CARL W. DESCH SCHOLARSHIP FUND IN MEMORY OF KATHARINE W. DESCH

(1992) Gift of Carl W. Desch CC'37, GSAS'39 ^ in memory of his wife, Katharine Desch.

WILLIAM B. AND ALAN TAYLOR DEVOE SCHOLARSHIP FUND

(1985) Bequest of Edith T. Alexander in memory of her first husband, William Devoe CC 1906, and in memory of Alan Devoe.

WILLIAM AND IDA H. DEWAR FINANCIAL ASSISTANCE AND SCHOLARSHIP FUND

(1988) Bequest of Ida H. Dewar W: CC'16.

EDWARD WILSON DEWILTON SCHOLARSHIP FUND

(1974) Bequest of Rollo Linamore DeWilton CC 1910.

SIDNEY R. AND ARTHUR W. DIAMOND SCHOLARSHIP FUND

(1986) Gift of Arthur W. Diamond CC'25, LAW'26 ^ and Sidney R. Diamond CC'20, LAW'22 ^, P: GSAS'60, LAW'63.

LEONARD DICKSON SCHOLARSHIP FUND

(1962) Gift of the Dickson Foundation in memory of Leonard Dickson CC 1913.

GRACE AND JAMES DIGNAN FAMILY SCHOLARSHIP FUND

(2013) Gift of Grace and James H. Dignan CC'91.

WILLIAM A.S. DOLLARD AND BERNARD F. KELLEY SCHOLARSHIP

(2001) Bequest of William A.S. Dollard CC'24, GSAS'26.

MARTIN DORSCH STUDENT ASSISTANCE FUND

(1978) Bequest of Martin Dorsch.

ROGER E. DOUNCE SCHOLARSHIP FUND

(2014) Bequest of Shirley A. Ingalls.

PAUL SEYMOUR DREUX SCHOLARSHIP FUND

(1984) Bequest of Paul S. Dreux CC 1918.

DRL FUND

(2010) Gift of an anonymous donor.

AVRAM DRORI SCHOLARSHIP FUND

(2010) Gift of Avram J. Drori CC'04, BUS'09.

ELIZABETH AND DANIEL DWYER SCHOLARSHIP FUND

(2010) Gift of Elizabeth A. Dwyer CC'92 ^.

THE DYCKMAN INSTITUTE SCHOLARSHIP FUND

(1943) Gift of the Dyckman Institute.

E

EDWARD MEAD EARLE SCHOLARSHIP FUND

(1954) Bequest of Edward Mead Earle.

DANIEL EASTMAN SCHOLARSHIP FUND

(1978) Bequest of Ida R. Eastman in memory of her son, Daniel Eastman.

BERIL EDELMAN MEMORIAL SCHOLARSHIP FUND

(1997) Gift of Joan Goody ^ in memory of her father, Beril Edelman CC'24, SEAS'26.

STANLEY EDELMAN SCHOLARSHIP FUND

(2000) Gift of Henry Nias Foundation.

DR. JAMES C. EGBERT MEMORIAL SCHOLARSHIP FUND

(1955) Gift of Lester D. Egbert CC 1914 ^ in memory of his father, James C. Egbert CC 1881.

JOHN S. AND SARAH STONE EHLINGER SCHOLARSHIP FUND

(2010) Gift of John S. Ehlinger CC'91, BUS'98.

ADOLPHUS EHRLICH SCHOLARSHIP FUND

(2011) Bequest of Adolphus O. Ehrlich.

THE ERIC EISNER SCHOLARSHIP FUND

(2010) Gift of Eric Eisner CC'70, LAW'73, P: CC'11.

ABIGAIL ELBAUM SCHOLARSHIP FUND

(2007) Gift of Abigail Black Elbaum CC'92, BUS'94.

DANIEL GIRAUD ELLIOT FUND

(1949) Bequest of Margaret Henderson Elliot.

THE DAVID AND ALICE ENG FAMILY SCHOLARSHIP FUND

(2007) Gift of Calvin Eng GSAS'71, Catherine Eng PS'76, Eva Eng, and John Eng PS'74.

SOLTON ENGEL NATIONAL SCHOLARSHIP FUND

(1950) Gift of Solton Engel CC 1916 ^.

JEREMY G. EPSTEIN '67 SCHOLARSHIP FUND

(2003) Gift of Jeremy G. Epstein '67 ^.

ESPOSITO-CRANDALL FAMILY SCHOLARSHIP FUND

(2010) Gift of Michele A. Esposito CC'96.

J. HENRY ESSER SCHOLARSHIP FUND

(2012) Gift of the Marion Esser Kaufman Foundation.

EXTER FAMILY SCHOLARSHIP FUND

(2011) Gift of Diane and Neil Exter P: CC'14.

F

MICHAEL AND JANE DIEHL FACKENTHAL SCHOLARSHIP AND FELLOWSHIP FUND

(1968) Bequest of Frank D. Fackenthal CC 1906 in memory of his parents, Jane and Michael Diehl Fackenthal P: CC 1906.

FALK WALLACE FAMILY SCHOLARSHIP FUND

(2010) Gift of Edward C. Wallace CC'71, P: CC'12, CC'14 and Pamela S. Falk LAW'92, P: CC'12, CC'14.

HAMEN AND PHYLLIS FAN FAMILY SCHOLARSHIP FUND

(2011) Gift of Phyllis M.W. and Hamen S.H. Fan P: CC'13, BUS'15.

FANG FAMILY SCHOLARSHIP FUND

(2011) Gift of Anna A. Fang-Hamm CC'04.

GERALD FEINBERG MEMORIAL SCHOLARSHIP FUND

(2007) Bequest of Barbara J. Feinberg P: CC'92, CC'95, LAW'95 in memory of her husband, Gerald Feinberg CC'53, GSAS'54, GSAS'57, P: CC'92, CC'95, LAW'95.

PHILIP FELDMAN SCHOLARSHIP FUND

(1985) Bequest of Philip Feldman CC 1918.

SYLVIA FELLER AND LUCILLE KNIPE SCHOLARSHIP FUND

(2000) Gift of Matthew F. Feller CC'76, PS'80.

FERGANG FAMILY SCHOLARSHIP FUND

(2009) Gift of Yale M. Fergang CC'87, SEAS'88.

E. ALVIN AND ELAINE M. FIDANQUE FUND

(1994) Bequest of E. Alvin Fidanque CC'26.

FINK FAMILY SCHOLARSHIP FUND

(2016) Gift of Andrew A. Fink CC'91, LAW'94.

CAROL AND JOHN FINLEY SCHOLARSHIP FUND

(2015) Gift of John G. and Carol T. Finley BC'83, LAW'86, BUS'87.

PETER AND SUSAN FISCHBEIN FAMILY SCHOLARSHIP FUND

(2014) Gift of Susan G. Kaufman and Peter D. Fischbein CC'60, LAW'63, P: CC'16.

ANDREW L. FISHER '66 CC SCHOLARSHIP FUND
(2005) Gift of Phebe and Louis A. Goodman CC'65.

ELIZA AND CANNING FOK ENDOWED FUND FOR
INTERNATIONAL STUDENT FINANCIAL AID
(2011) Gift of Canning Fok P: CC'13.

FORD/EEOC ENDOWMENT SCHOLARSHIP FUND -
COLUMBIA COLLEGE
(2003) Gift of the Ford Motor Company.

SIDNEY FORSCH SCHOLARSHIP FUND
(1967) Gift of Josephine E. Forsch ^ in memory of her husband,
Sidney Forsch CC 1906.

MABEL V.P. SMITH FORSYTH SCHOLARSHIP FUND
(1977) Bequest of Mabel V.P. Smith Forsyth.

GARY S. FRAGIN SCHOLARSHIP FUND
(1990) Gift of Gary S. Fragin SIPA'69, BUS'70, P: BUS'01,
BUS'03, LAW'03.

JOHN AND MAY FRASER SCHOLARSHIP FUND
(1971) Bequest of Ian F. Fraser CC'29, GSAS'39.

JUDGE JOHN JOSEPH FREEDMAN SCHOLARSHIP
FUND
(1995) Bequest of Josephine Van Zindt in memory of her father,
John Freedman.

DORIS AND JESSE FREIDIN SCHOLARSHIP FUND
(1987) Gift of John S. Freidin CC'62, in memory of his parents,
Doris and Jesse Freidin P: CC'62.

ALBERT W. FRIBOURG SCHOLARSHIP FUND
(1993) Bequest of Albert W. Fribourg CC'24, LAW'27.

A. ALAN FRIEDBERG SCHOLARSHIP FUND
(1986) Gift of A. Alan Friedberg CC'53.

LAWRENCE N. FRIEDLAND SCHOLARSHIP FUND
(1991) Gift of Lawrence N. Friedland CC'47, LAW'49.

JACOB W. FRIEDMAN SCHOLARSHIP FUND
(1995) Gift of Jacob W. Friedman CC'33, LAW'35 ^.

ROBERT AND BARBARA FRIEDMAN SCHOLARSHIP
FUND
(2010) Gift of Robert L. Friedman CC'64.

GORDON BROOK FULCHER, JR. SCHOLARSHIP FUND
(2011) Gift of Eleanor L. Fulcher in memory of her brother,
Gordon B. Fulcher, Jr. GS'61.

FUND DEVELOPMENT CONCIL DC SCHOLARSHIP
FUND
(2015) Gift of Nairi C. Balian CC'88, P: CC'16.

PHILIP FUSCO MEMORIAL SCHOLARSHIP FUND
(1992) Gift of various donors in memory of Philip R. Fusco
CC'88.

G

GAGUINE SCHOLARSHIP FUND
(1984) Gift of Benito Gaguine CC'32, LAW'34 ^, P: CC'69.

STUART GARCIA MEMORIAL SCHOLARSHIP FUND
(1987) Gift of various donors in memory of Stuart L. Garcia
CC'84.

DOUGLAS B. GARDNER SCHOLARSHIP FUND
(2002) Gift of Neal L. Wolkoff CC'77.

GEHRIG SCHOLARSHIP FUND
(1958) Gift of Mel Allen and various donors in honor of Lou
Gehrig CC'25 ^.

GEORGE AUGUSTUS GEIGER SCHOLARSHIP FUND
(1976) Bequest of Louise L. Geiger.

GERMAN SOCIETY OF THE CITY OF NEW YORK
SCHOLARSHIP FUND
(2002) Gift of the German Society of the City of New York.

WILLIAM HENRY GIBSON SCHOLARSHIP FUND
(1927) Gift of Honoro Gibson Pelton in memory of her father,
William Henry Gibson CC 1875.

ARTHUR A. GLADSTONE ENDOWED SCHOLARSHIP
FUND
(2009) Bequest of Arthur A. Gladstone CC'32, LAW'34.

JOSEPH E. GLASS, JR. SCHOLARSHIP FUND
(1996) Gift of Christopher K. Tahbaz CC'86, LAW'90 and
various donors in memory of Joseph Glass CC'86, SIPA'90.

THOMAS GLOCER SCHOLARSHIP FUND
(2013) Gift of Thomas H. Glocer CC'81.

THE THOMAS R. GOETHALS SCHOLARSHIP FUND
(2017) Bequest of Thomas R. Goethals, Jr. GSAS'59.

ABRAHAM AND LEE GOLDEN SCHOLARSHIP FUND
(2011) Gift of Bruce Golden CC'81 and Michelle Mercer.

GOLDEN FUTURE SCHOLARSHIP FUND
(2012) Gift of an anonymous donor.

CHARLES AND JANE GOLDMAN SCHOLARSHIP FUND
(1993) Gift of Charles N. Goldman CC'53, LAW'55.

GOLDSCHMIDT FAMILY SCHOLARSHIP FUND
(2010) Gift of Lawrence E. Goldschmidt CC'64, LAW'67, P:
SW'95, LAW'99, SIPA'04 and Beatrice C. Goldschmidt TC'41,
W: CC'32, P: CC'64, LAW'67.

ERIC AND TAMAR GOLDSTEIN SCHOLARSHIP FUND
(2006) Gift of Eric S. Goldstein CC'80, P: CC'15, CC'18.

THE CARTER GOLEMBE SCHOLARSHIP FUND
(1995) Gift of various donors in honor of Carter H. Golembe
CC'45, GSAS'52 ^.

JOHN P. GOMMES SCHOLARSHIP FUND

(2011) Gift of Thomas D. Gomme CC'98, LAW'02, JRN'06 in honor of his father, John P. Gomme P: CC'98, LAW'02, JRN'06.

EMANUEL GOODMAN SCHOLARSHIP FUND

(1989) Bequest of Emanuel Goodman JRN'22.

RICHARD GOODMAN SCHOLARSHIP

(2014) Gift of Richard A. Goodman CC'70, GSAS'71, GSAS'77, BUS'79.

ALAN GORNICK SCHOLARSHIP FUND

(1990) Gift of Alan L. Gornick CC'35, LAW'37 ^.

EUGENE AND PHYLLIS GOTTFRIED SCHOLARSHIP FUND

(2013) Gift of Eugene L. Gottfried CC'50, PS'54 and Phyllis Swain Gottfried ^.

FRANKLIN AND IRENE GOULD SCHOLARSHIP FUND

(2015) Bequest of Franklin N. Gould CC'40.

THE SARAH E. GRANT SCHOLARSHIP FUND AT COLUMBIA COLLEGE

(2007) Gift of Annette M. Grant BC'83, P: CC'12, CC'17, CC'18, SEAS'20 and Geoffrey T. Grant SEAS'82, P: CC'12, CC'17, CC'18, SEAS'20.

GREATER NEW YORK MUTUAL INSURANCE COMPANY FUND

(1967) Gift of the Greater New York Mutual Insurance Company.

THE GEOFFREY E. GROSSMAN SCHOLARSHIP FUND

(2007) Gift of Geoffrey E. Grossman CC'08, GSAS'11.

THE MATTHEW C. GROSSMAN SCHOLARSHIP FUND

(2007) Gift of Matthew C. Grossman CC'05, GSAS'07.

THE SHARON AND PETER GROSSMAN FAMILY SCHOLARSHIP

(2005) Gift of Sharon and Peter A. Grossman CC'79, P: CC'05, CC'08, GSAS'07, GSAS'11.

PETER GRUENBERGER FAMILY SCHOLARSHIP FUND

(2000) Gift of Peter Gruenberger CC'58, LAW'61.

GRUENSTEIN FAMILY SCHOLARSHIP FUND

(2014) Gift of Nicole and David Gruenstein CC'77, P: CC'18.

WALTER GUENSCH SCHOLARSHIP FUND

(2001) Gift of Walter A. Guensch CC'39 ^.

LEE AND ELIZABETH GUITTAR SCHOLARSHIP FUND

(1994) Gift of Lee J. Guittar CC'53, GSAS'94.

H. HAROLD GUMM AND ALBERT VON TILZER SCHOLARSHIP FUND

(1998) Bequest of H. Harold Gumm CC 1901, LAW 1904.

GURIAN FAMILY SCHOLARSHIP FUND

(2008) Gift of Lori Bikson-Gurian and Craig R. Gurian CC'79, LAW'83, GSAS'03, P: CC'13, LAW'17.

LAWRENCE GUSSMAN COLUMBIA COLLEGE SCHOLARSHIP FUND

(1987) Gift of Lawrence A. Gussman CC'37, SEAS'38, SEAS'39 ^, P: CC'64, BUS'68 in honor of the fiftieth anniversary of his graduation.

H

G. HENRY HALL FUND

(1915) Bequest of George Henry Hall.

SEWARD HENRY HALL SCHOLARSHIP FUND

(2002) Bequest of Seward Henry Hall CC'37, GSAS'39.

ALBERT J. HAMBRET FUND

(1969) Bequest of Albert J. Hambret.

ALEXANDER HAMILTON SCHOLARSHIP FUND

(2011) Gift of Peter N. Hiebert CC'71.

GEORGE HAMMOND SCHOLARSHIP FUND AT COLUMBIA COLLEGE

(2004) Bequest of George Hammond CC'28.

JINDUK HAN AND FAMILY SCHOLARSHIP FUND

(2011) Gift of Jinduk Han CC'85, P: CC'17, CC'19.

ELLEN KING HAND MEMORIAL FUND

(1941) Bequest of Oliver Kane Hand in memory of his mother, Ellen K. Hand.

HAO FAMILY SCHOLARSHIP FUND

(2015) Gift of Kenneth Hao.

JAMES RENWICK HARRISON SCHOLARSHIP FUND

(1936) Bequest of James R. Harrison CC 1917.

PROFESSOR C. LOWELL HARRISS SCHOLARSHIP FUND

(1988) Gift of Lowell G. Harriss CC'68, LAW'71, P: CC'99 in honor of his father, C. Lowell Harriss GSAS'40 ^, P: CC'68, LAW'71, BUS'72 ^, LAW'74, BUS'75, LAW'79.

VIRGINIA HARROLD SCHOLARSHIP

(2016) Gift of Thomas J. Harrold CC'66.

LAWRENCE S. HARTE SCHOLARSHIP FUND

(1991) Gift of Lawrence S. Harte CC'53, P: CC'88, BC'92, BUS'92.

THE PETER AND HILARY HATCH SCHOLARSHIP FUND

(2008) Gift of Hilary R. Hatch CC'92 and Peter A. Hatch CC'92.

PERCY D. HAUGHTON MEMORIAL FUND

(1926) Gift of Haughton Memorial Committee in memory of Percy D. Haughton.

HENRY FIELD HAVILAND SCHOLARSHIP FUND

(1988) Bequest of Henry F. Haviland SEAS 1902.

DEAN HERBERT E. HAWKES MEMORIAL FUND
(1943) Gifts of various donors in memory of Herbert E. Hawkes.

DEAN HERBERT E. HAWKES MEMORIAL SCHOLARSHIP FUND
(2005) Gift of Charles R. O'Malley CC'44 ^.

CHARLES HAYDEN MEMORIAL SCHOLARSHIP FUND
(1945) Gift of the Charles Hayden Foundation.

WILLIAM RANDOLPH HEARST FOUNDATION SCHOLARSHIP FUND
(1984) Gift of the William Randolph Hearst Foundation.

THE ROBERT M. HECKER SCHOLARSHIP FUND
(2009) Bequest of Robert M. Hecker CC'36, SEAS'36.

JOSEPH AND MARION HEFFERNAN SCHOLARSHIP FUND
(1987) Gift of William C. Heffernan CC'68.

HELLENIC STUDENT FUND
(2013) Gift of an anonymous donor.

M. AND M. HERMAN SCHOLARSHIP FUND
(1988) Gift of Paul R. Herman CC'58, LAW'61, P: CC'97, CC'98 in memory of his parents, Miriam R. and Murry S. Herman P: CC'58, LAW'61.

STEPHEN A. HERMIDES SCHOLARSHIP FUND
(1983) Bequest of Stephen A. Hermides.

RICHARD HERPERS MEMORIAL SCHOLARSHIP FUND
(1962) Gift of Mrs. Henry F. Herpers P: CC'38 in memory of her son, Richard Herpers CC'38.

DAVID B. HERTZ COLLEGE/ENGINEERING INTERSCHOOL SCHOLARSHIP FUND
(1989) Gift of David B. Hertz CC'39.

OREN C. HERWITZ 1930 MEMORIAL ENDOWED SCHOLARSHIP FUND
(2009) Bequest of Mary E. Herwitz in memory of her husband, Oren C. Herwitz LAW'30.

ANDREW L. HERZ SCHOLARSHIP FUND
(1988) Gift of Andrew L. Herz CC'68, LAW'71.

ROBERT IRWIN HERZ MEMORIAL FUND
(1969) Gift of Fred S. Herz ^ P: CC'66 ^ in honor of his son, Robert I. Herz CC'66 ^.

ABRAM S. HEWITT MEMORIAL
(1948) Gift of Norvin H. Green CC 1919 ^ in memory of his grandfather Abram S. Hewitt CC 1842.

ABRAM S. HEWITT SCHOLARSHIP FUND
(1953) Gift of Norvin H. Green CC 1919 ^ in memory of his grandfather Abram S. Hewitt CC 1842.

PROFESSOR GEORGE W. HIBBITT MEMORIAL SCHOLARSHIP FUND

(1966) Gift of Thomas E. Bratter CC'61 ^, P: CC'87, CC'90 and other donors in memory of George Whiting Hibbitt.

RICHARD AND CHRISTIANE HIEGEL SCHOLARSHIP FUND
(2012) Gift of Richard J. Hiegel CC'56, LAW'62, P: GSAS'91, LAW'94.

NORMAN HILDES-HEIM FUND
(2013) Gift of the Hildes-Heim Foundation.

DAVID AND NANCY HILLIS SCHOLARSHIP FUND
(1988) Gift of Leslie D. Hillis CC'67, PS'72.

FERNAND AND REBECCA HIRSCH SCHOLARSHIP FUND
(2005) Bequest of Frances M. Holding in memory of Rebecca and Fernand Hirsch.

PATRICIA ELLEN HIRSCH SCHOLARSHIP FUND
(1977) Gift of various donors in memory of Patricia E. Hirsch.

CHARLES F. HOELZER JR., MEMORIAL SCHOLARSHIP FUND
(1980) Gift of various donors in memory of Charles F. Hoelzer CC'42.

HOFFEN FAMILY SCHOLARSHIP FUND
(2013) Gift of Sandra H. Kim Hoffen CC'87 and Howard I. Hoffen SEAS'85.

ROBERTA L. AND JOEL S. HOFFMAN SCHOLARSHIP FUND
(1996) Gift of Joel S. Hoffman CC'67, P: CC'05.

FRANK AND MARY HOGAN SCHOLARSHIP FUND
(1975) Gift of Mary R. Hogan ^ in memory of her husband, Frank Smithwick Hogan CC'24, LAW'28.

HONG KONG ALUMNI ASSOCIATION SCHOLARSHIP FUND
(1992) Gift of Columbia University Alumni Association (Hong Kong) Limited.

JAMES T. HORN SCHOLARSHIP FUND
(1938) Gift of Sarah L. Horn ^ and Mary T. Horn ^ in memory of their brother, James T. Horn.

DAVID H. HOROWITZ SCHOLARSHIP FUND
(1994) Gift of David H. Horowitz CC'48, LAW'50 ^.

ELISSA HOROWITZ SCHOLARSHIP FUND
(2004) Gift of Benjamin A. Horowitz CC'88, P: CC'11, CC'16.

FELICIA AND BEN HOROWITZ SCHOLARSHIP FUND
(2010) Gift of Benjamin A. Horowitz CC'88, P: CC'11, CC'16.

GEDALE B. AND BARBARA S. HOROWITZ SCHOLARSHIP FUND
(2000) Gift of Gedale B. Horowitz CC'53, LAW'55, P: BC'83, LAW'89.

LIBBY HOROWITZ SCHOLARSHIP FUND

(1999) Gift of Donald J. Horowitz CC'56, P: CC'88 in honor of his mother, Libby Horowitz P: CC'56.

RUSSELL C. AND MELONEE A.R. HOROWITZ SCHOLARSHIP FUND

(2002) Gift of Melonee and Russell C. Horowitz CC'88.

HOWARD FAMILY SCHOLARSHIP

(2015) Gift of an anonymous donor.

CHARLES EUGENE HUBER, JR. M.D. SCHOLARSHIP FUND

(1970) Bequest of Francis D. Huber CC'25, PS'28 in memory of his brother, Charles E. Huber, Jr.

FREDERICK W. HUBER SCHOLARSHIP FUND

(1924) Gift of Frederick W. Huber.

JOHN L. HUEMER SCHOLARSHIP FUND

(2008) Bequest of Kathleen W. Huemer P: CC'65 ^, CC'81, LS'70 ^ in memory of her son, John L. Huemer CC'65.

THE MICHAEL AND BETH HUGHES FAMILY ENDOWED SCHOLARSHIP FUND

(2008) Gift of Beth A. Hughes BUS'93 and Michael J. Hughes LAW'93.

HUMANITIES SCHOLARSHIP FUND IN HONOR OF JACQUES BARZUN

(1987) Gift of Vincent A. Carrozza CC'49 in honor of Jacques Barzun CC'27, GSAS'28, GSAS'32 ^, P: PS'66.

HAROLD M. STEWART AND MARY STEWART HUTCHENS ENDOWMENT FUND

(2013) Bequest of Mary Stewart Hutchens.

ALLEN HYMAN SCHOLARSHIP FUND

(2005) Gift of Valerie A. and Allen I. Hyman CC'55, P: CC'85, CC'88 ^, PS'90.

ANDREW HYMAN AND MOLLY CHREIN SCHOLARSHIP FUND

(2007) Gift of Andrew D. Hyman CC'88 ^.

I

THE CASEY ICHNIOWSKI MEMORIAL FUND

(2015) Gift of various donors in memory of Casey Ichniowski P: CC'07, CC'10, CC'18.

HELEN K. IKELER SCHOLARSHIP FUND

(1996) Bequest of Helen K. Ikeler GSAS'28.

ANTHONY M. IMPARATO, M.D. SCHOLARSHIP FUND

(1988) Gift of Anthony M. Imparato CC'43.

MARGARET MILAM INSERNI SCHOLARSHIP FUND

(2016) Gift of Margarita Inserni P: CC'16.

ORRIN C. ISBELL FUND

(1989) Bequest of Emily D. Isbell in memory of her husband, Orrin C. Isbell CC 1912, LAW 1914.

J

MARTIN D. JACOBS MEMORIAL FUND

(1987) Gift of Stephen Jacobs CC'75 in memory of his father, Martin D. Jacobs CC'25, LAW'27, P: CC'75.

JACOBSON BERLINSKI FAMILY SCHOLARSHIP FUND

(2011) Gift of Britta Wilson Jacobson CC'96.

HOWARD I. JACOBY PRESIDENTIAL SCHOLARSHIP FUND

(1981) Bequest of Jacob J. Jacoby.

JAFFE FAMILY SCHOLARSHIP FUND

(1988) Gift of Henry Jaffe CC'27, LAW'29 ^, P: CC'88 in honor of his daughter, Rebecca Jaffe CC'88.

GEORGE M. JAFFIN SCHOLARSHIP FUND

(1986) Gift of George M. Jaffin CC'24, LAW'26 ^.

DOROTHEA JAMESON AND LEO M. HURVICH SCHOLARSHIP FUND

(2011) Bequest of Leo M. Hurvich.

THE LANCY C. JEN SCHOLARSHIP FUND

(2007) Gift of the Pei-Ling Charitable Trust.

JM SCHOLARSHIP FUND

(2009) Gift of an anonymous donor.

THE CLARENCE C. JOCHUM SCHOLARSHIP FUND

(1999) Gift of Clare Kim Plumridge in memory of her father, Clarence C. Jochum CC'30.

FREDERICK R. JOHNSON FUND

(1961) Gift of an anonymous donor in memory of Frederick R. Johnson.

RICK AND LEE JOHNSON MEMORIAL SCHOLARSHIP FUND

(1987) Gift of Rick Johnson CC'71 ^ in memory of his father Lee Johnson and later renamed in his memory by his wife, WeiWei Du W: CC'71.

AL JOLSON FUND

(1962) Bequest of Al Jolson.

CLAYTON E. JONES SCHOLARSHIP FUND

(2015) Gift of Clayton E. Jones CC'81, P: CC'17, CC'20.

THEODORE H. JOSEPH CLASS OF 1898 GRADUATE ASSISTANCE FUND

(1986) Bequest of Ruth G. Joseph in memory of her husband, Theodore H. Joseph CC 1896.

MIKE JUPKA, JR., MEMORIAL SCHOLARSHIP FUND

(1982) Gift of various donors in memory of Mike Jupka CC'80.

K

THEODORE KAHAN SCHOLARSHIP FUND

(1990) Gift of Robert L. Kahan CC'69 in memory of Theodore Kahan CC 1920, P: CC'69.

ALAN R. KAHN FAMILY SCHOLARSHIP FUND

(1999) Gift of Alan R. Kahn CC'59, P: CC'95, GS'05.

PROCTOR WILLIAM E. KAHN SCHOLARSHIP FUND

(1986) Gift of various donors in memory of William E. Kahn P: CC'78.

THE KAISER FAMILY SCHOLARSHIP

(2010) Gift of Michael G. and Michelle E. Kaiser CC'87, PH'92, PS'97, P: CC'20.

EDWARD C. & ELIZABETH B. KALAIDJIAN SCHOLARSHIP

(2010) Bequest of Elizabeth B. and Edward C. Kalaidjian CC'42, LAW'47, P: CC'82.

KAMATH FAMILY SCHOLARSHIP FUND

(2014) Gift of Anantha N. and Sucheta A. Kamath P: CC'17, SEAS'20.

SANDRA AND MICHAEL KAMEN SCHOLARSHIP FUND

(2011) Gift of Michael W. Kamen CC'66, P: CC'01.

VICTOR V. KAMINSKI III MEMORIAL SCHOLARSHIP FUND

(2002) Gift of various donors in memory of Victor V. Kaminski CC'79.

LAMONT AND LEAH KAPLAN SCHOLARSHIP FUND

(1984) Gift of Martin S. Kaplan CC'61, P: CC'89, LAW'94, in honor of his parents, Leah E. and Lamont Kaplan P: CC'61.

THE ROBERT AND SHIRLEY KAPLAN AND JOSEPH AND HELEN KOHN SCHOLARSHIP FUND

(2007) Gift of Arthur H. Kohn CC'84, LAW'86, P: CC'13 and Ruth L. Kohn BC'84, P: CC'13.

RAVI KAPUR SCHOLARSHIP FUND

(1982) Gift of various donors in memory of Ravi Kapur CC'79.

JUDY AND JEANETTE KATEMAN MEMORIAL SCHOLARSHIP FUND

(1987) Gift of Paul R. Kateman CC'64, P: CC'89, CC'93, LAW'92 in memory of his wife, Judith A.B. Kateman P: CC'89, CC'93, LAW'92, and mother, Jeanette Kateman P: CC'64.

SAMUEL AND VICKI KATZ SCHOLARSHIP FUND

(2015) Gift of Samuel L. Katz CC'86.

ALI KAY/ DILLER-VON FURSTENBERG FOUNDATION GIFT

(2016) Gift of Alison P. Kay CC'06.

RALPH KEEN SCHOLARSHIP FUND

(2001) Gift of Ralph Keen CC'79.

ELLWOOD WADSWORTH KEMP, JR., COLUMBIA COLLEGE CLASS OF 1919 MEMORIAL SCHOLARSHIP FUND

(1990) Bequest of Morris Kemp CC'24, GSAS'25, LS'36 in memory of his brother, Ellwood W. Kemp CC 1919, LAW 1922.

THE ROBERT F. KEMP CC'82 MEMORIAL SCHOLARSHIP FUND

(2003) Gift of various donors in the Class of 1982 in memory of Robert F. Kemp CC'82.

GRACE BEACHEY KEMPER FUND

(1962) Bequest of Grace B. Kemper in memory of her parents, Clement Beachey and Elizabeth Probasco Beachey.

SIGMUND MARSHALL KEMPNER SCHOLARSHIP FUND

(1980) Gift of various donors in honor of Sigmund Marshall Kempner CC 1919 ^ for his 80th birthday.

MARGARETE E. KENNEDY ESTATE SCHOLARSHIP FUND

(2010) Bequest of Margarete E. Kennedy.

KERZNER SCHOLARSHIP FUND

(2011) Gift of Heather O'Brien Kerzner CC'91.

MOSSETTE AND HENRI KEYZER-ANDRE SCHOLARSHIP FUND

(1988) Gift of Henri Keyzer-Andre ^ and Mossette Keyzer-Andre PS'23 ^.

SEILAI KHOO MEMORIAL SCHOLARSHIP FUND

(2001) Gift of Solomon Henriques Gayle CC'85 in memory of his fiancée, Seilai Khoo CC'86.

KHOSROWSHAHI FAMILY SCHOLARSHIP FUND

(2014) Gift of Delia M. and Bijan Khosrowshahi P: CC'16, CC'18.

KIERANTIMBERLAKE SCHOLARSHIP FUND ON BEHALF OF RICHARD MAIMON'85

(2017) Gift of Richard L. Maimon '85.

KILLAM CANADIAN FUND

(2012) Bequest of Constance Killam and Elizabeth Killam Rodgers.

KILLOUGH (WALTER H.D.) FUND FOR ERASMUS HALL SCHOLARSHIPS

(1988) Bequest of Walter H. D. Killough in memory of his father, James H. Killough.

KIM FAMILY FUND

(2013) Gift of Sung H. Kim CC'90, BUS'97.

SANG AND BORAH KIM FAMILY SCHOLARSHIP FUND

(2014) Gift of Borah and Sang Kim CC'92.

THE MARK AND ANLA CHENG KINGDON FUND

(2005) Gift of Anla C. and Mark E. Kingdon CC'71, P: CC'09, CC'16.

GRAYSON KIRK SCHOLARSHIP FUND

(1982) Gift of various donors in honor of Grayson Kirk '53 HON ^.

KLINGENSMITH FAMILY SCHOLARSHIP FUND

(2016) Gift of Nancy A. and Robert V. Klingensmith CC'66.

KN SCHOLARSHIP FUND GIFT

(1995) Gift of Kallman Nashner BUS'37 ^.

JEFFREY D. KNOWLES SCHOLARSHIP

(2011) Gift of Jeffrey D. Knowles CC'71, P: CC'08.

LAWRENCE AND RUTH KOBRIN SCHOLARSHIP FUND

(1993) Gift of Lawrence A. Kobrin CC'54, LAW'57, P: CC'92, GSAS'96.

DR. RUTH M. KOCH SCHOLARSHIP FUND

(2006) Bequest of Ruth M. Koch.

HAROLD KORZENIK SCHOLARSHIP FUND

(1985) Gift of the Harold Korzenik Fund, Inc.

THE HAROLD AND ROSE KOVNER SCHOLARSHIP FUND

(2003) Gift of Rose Kovner ^ in memory of her husband, Harold Kovner CC'23, LAW'25.

KOWDLEY-DIXIT SCHOLARSHIP FUND

(2015) Gift of Kris V. Kowdley CC'81, P: CC'20.

DAVID H. KRAFT SCHOLARSHIP FUND

(1995) Gift of Gilman Kraft CC'47 ^, BC'86.

ROBERT KRAFT FAMILY SCHOLARSHIP FUND

(1986) Gift of Robert K. Kraft CC'63, P: CC'94.

KRAMER ENDOWED SCHOLARSHIP FUND

(1965) Gift of the Kramer Foundation.

ROBERT J. KRANE AND JULIUS Y. GRAFF SCHOLARSHIP FUND

(1997) Gift of Robert J. Krane CC'63 ^, P: '04 and Diane Graff Krane BC'65, W: CC'63, P: CC'04 in honor of Diane's father, Julius Y. Graff P: BC'65, and later renamed in memory of Robert.

MARCY AND JOSH KREVITT SCHOLARSHIP FUND

(1913) Gift of Josh A. Krevitt CC'89 and Marcy Nislow Krevitt BC'90.

THE KRISBERG FAMILY SCHOLARSHIP

(2006) Gift of Brian C. Krisberg CC'81, LAW'84, P: CC'17.

JOSEPH WOOD KRUTCH SCHOLARSHIP FUND #2

(1973) Gift of Marcelle L. Krutch ^ in memory of her husband, Joseph W. Krutch GSAS'24, '54 HON.

RICK KURNIT AND DIANE KATZIN SCHOLARSHIP FUND

(2008) Gift of Richard A. Kurnit CC'72.

THE KUNG AND YEUNG SCHOLARSHIP FUND

(2011) Gift of Ann Y. and Kenneth C.P. Kung P: CC'11, CC'19.

PAUL SAMUEL KURZWEIL SCHOLARSHIP FUND

(1996) Gift of Harvey Kurzweil CC'66, LAW'69, P: CC'95 ^, CC'00, LAW'97.

L

LAACU ENDOWED SCHOLARSHIP FUND

(2015) Gift of various donors.

PREM LACHMAN SCHOLARSHIP FUND

(2009) Gift of Joyce F. and Prem A. Lachman CC'82.

AMNON AND Yael LANDAN SCHOLARSHIP FUND

(2012) Gift of Amnon M. and Yael Landan P: CC'10, CC'17, SEAS'07.

NORMAN JOSEPH LANDAU SCHOLARSHIP FUND

(1999) Gift of Lisa L. Carnoy CC'89 in memory of her father, Norman J. Landau P: CC'89.

JERRY G. LANDAUER SCHOLARSHIP FUND

(1981) Gift of various donors, and bequest of Jerry G. Landauer CC'53.

PATRICIA LANDMAN AND DANIELLE LANDMAN MEMORIAL FUND

(2007) Bequest of Shirley Landman.

DENNIS H. AND SUSAN F. LANGER SCHOLARSHIP FUND

(2001) Gift of Susan F. and Dennis H. Langer CC'71, P: CC'04, CC'08.

DENNIS '71, SUSAN, WILLIAM '04 AND THOMAS '08 LANGER SCHOLARSHIP FUND

(2001) Gift of Susan F. and Dennis H. Langer CC'71, P: CC'04, CC'08.

GEORGE R. LANYI MEMORIAL FOUNDATION SCHOLARSHIP FUND

(1992) Gift of Andrew A. Lanyi in memory of his son, George R. Lanyi.

PETER I. B. LAVAN SCHOLARSHIP FUND

(1983) Gift of Peter I.B. Lavan CC 1915, LAW 1918 ^.

JONATHAN AND JEANNE LAVINE SCHOLARSHIP FUND

(2011) Gift of Jonathan S. Lavine CC'88, P: CC'16, CC'18.

THE GEORGE AND EVA KOONS LAVOLIS SCHOLARSHIP FUND IN MEMORY OF EVE'S PARENTS BY DR. MARTIN RAYMOND AND EVE LEWELLIS LEBOWITZ

(1995) Gift of Eve Lebowitz ^.

PAUL LAZARE SCHOLARSHIP FUND

(1987) Gift of Paul L. Lazare CC'36 ^.

HARRY R. LEA SCHOLARSHIP FUND

(1993) Bequest of Harry R. Lea BUS'25.

ESTELLE LEAVY SCHOLARSHIP FUND

(1984) Bequest of Estelle Leavy.

THE LEE FAMILY SCHOLARSHIP FUND

(2008) Gift of Jay Hyun Lee P: CC'08, CC'13.

DANNY L. LEE SCHOLARSHIP FUND

(2016) Gift of Danny L. Lee CC'95.

FRANK LAMPSON LEE SCHOLARSHIP FUND

(1987) Gift of Frank H. Lee GSAS'32 ^, P: CC'50 in memory of his son, Frank L. Lee CC'50.

GRANVILLE WHEELER LEE, SR., CLASS OF 1931, MEMORIAL SCHOLARSHIP FUND

(1997) Gift of Granville Wheeler Lee and Mildred Kimble Lee W: CC'31 in memory of their father and husband respectively, Granville W. Lee CC'31.

KAI-FU AND SHEN-LING LEE SCHOLARSHIP FUND

(2008) Gift of Kai-Fu Lee CC'83, P: CC'12.

K. C. LEE SCHOLARSHIP FUND

(2009) Gift of Rupert X. Li CC'84.

ROBERT AND ALISON LEE FAMILY SCHOLARSHIP FUND

(2013) Gift of Allison and Robert Lee CC'84.

ERWIN H. LEIWANT SCHOLARSHIP FUND

(1991) Gift of Irene K. Leiwant LS'70, W: CC'41, P: CC'71, CC'74, LAW'71 in memory of her husband, Erwin H. Leiwant CC'41, P: CC'71, CC'74, LAW'71, on the fiftieth anniversary of his graduation.

NICHOLAS LEONE FAMILY SCHOLARSHIP FUND

(2014) Gift of Nicholas P. Leone CC'88, P: CC'19.

HAROLD LEVENTHAL SCHOLARSHIP FUND

(2010) Gift of Peter Buscemi CC'69, LAW'76 and Judith A. Miller.

THE LEVINE FAMILY SCHOLARSHIP FUND

(2004) Gift of Karen and Joseph H. Levine CC'76, P: CC'07, GSAS'12, GSAS'13, PS'14.

LEONARD LEVINE SCHOLARSHIP FUND

(1984) Gift of Rachelle Levine ^ in memory of her husband, Leonard Levine BUS'21.

JOHN TAYLOR LEWIS SCHOLARSHIP FUND

(1979) Gift of various donors in memory of John T. Lewis CC'74.

LIEPPE FAMILY SCHOLARSHIP FUND

(2016) Gift of Charles A. Lieppe CC'66.

SALLY LIPPER MEMORIAL SCHOLARSHIP

(1993) Gift of Kenneth Lipper CC'62 in memory of his mother, Sally Lipper P: CC'62.

LOU LITTLE SCHOLARSHIP FUND

(1979) Gift of various donors in honor of Lou Little.

CATHERINE LIVINGSTON AND FRANK GORDON SCHOLARSHIP FUND

(1998) Bequest of James L. Gordon CC'31.

FRANK A. LLOYD, JR. SCHOLARSHIP FUND

(2012) Bequest of Frank A. Lloyd, Jr. CC'45, GSAS'54.

HARRY LEON LOBSENZ SCHOLARSHIP FUND

(1962) Gift of the Harry L. Lobsenz Foundation.

DANIEL S. LOEB SCHOLARSHIP ENDOWMENT FUND

(2010) Gift of Daniel S. Loeb CC'83.

JAMES J. AND JOVIN C. LOMBARDO SCHOLARSHIP FUND

(1996) Gift of James J. Lombardo CC'71 and Jovin C. Lombardo CC'61, P: CC'04, CC'06.

THE BENJAMIN B. AND BETSY A. LOPATA SCHOLARSHIP FUND

(2000) Gift of Benjamin B. Lopata CC'72, P: CC'06, CC'08.

FRANK AND VICTOR LOPEZ-BALBOA SCHOLARSHIP FUND

(2007) Gift of Francisco J. Lopez-Balboa CC'82, P: CC'13, CC'15 and Victor M. Lopez-Balboa CC'82, P: CC'14, CC'18 in honor of the twenty-fifth anniversary of their graduation.

LORENZO FAMILY SCHOLARSHIP FUND

(1992) Gift of Francisco A. Lorenzo CC'61, P: BUS'12.

OLEGARIO LORENZO MEMORIAL SCHOLARSHIP FUND

(1986) Gift of Francisco A. Lorenzo CC'61, P: BUS'12 in memory of his father, Olegario Lorenzo P: CC'61.

IRWIN AND MARIANETTE L. LOWELL SCHOLARSHIP FUND

(2004) Bequest of Irwin E. Lowell CC'27.

LI LU '96 SCHOLARSHIP FUND

(2015) Gift of Li Lu CC'96, BUS'96, LAW'96.

STANLEY B. AND JUDITH M. LUBMAN SCHOLARSHIP FUND

(1998) Gift of Judith M. and Stanley B. Lubman CC'55, LAW'58, LAW'59, LAW'70.

A. LEONARD LUHBY CLASS OF 1938 SCHOLARSHIP FUND

(2004) Gift of Sarah Luhby W: CC'38, P: CC'92, JRN'97 in memory of her husband, A. Leonard Luhby CC'38, P: CC'92, JRN'97.

LUI FAMILY SCHOLARSHIP

(2011) Gift of Frederick Lui P: CC'15.

LYON STUDENT SCHOLARSHIP FUND FOR COLUMBIA COLLEGE

(1962) Bequest of John Henry Hobart Lyon CC 1897 in memory of his father, Sylvanus Lyon.

M

M&BG SCHOLARSHIP FUND

(2006) Gift of an anonymous donor.

RICHARD C. AND LINAN MA SCHOLARSHIP FUND

(2017) Gift of Eric Ma CC'89, BUS'93.

THOMAS MACIOCE SCHOLARSHIP FUND

(1986) Gift of Edwin W. Rickert CC'36 ^ and various donors in honor of Thomas M. Macioce CC'39, LAW'42 ^.

THE MADDON FAMILY SCIENCE SCHOLARSHIP FUND

(2011) Gift of Paul J. Maddon CC'81, GSAS'85, GSAS'88, PS'89.

DR. LEO C. MAITLAND SCHOLARSHIP FUND

(2012) Gift of Tracy V. Maitland CC'82.

MALIN-SERLE FAMILY SCHOLARSHIP FUND

(2011) Gift of Janet B. Serle and Ira B. Malin CC'75, P: CC'11, CC'17.

DONALD LEE MARGOLIS SCHOLARSHIP FUND

(1988) Gift of Donald L. Margolis CC'63, BUS'65.

JAMES, DONALD, AND EMILY MARGOLIS SCHOLARSHIP FUND

(1993) Gift of Donald L. Margolis CC'63, BUS'65.

HERBERT MARK '42 MEMORIAL SCHOLARSHIP FUND

(2007) Gift of various donors in memory of Herbert Mark CC'42, P: JRN'82.

MARSHALL D. AND KATHERINE S. MASCOTT ENDOWED SCHOLARSHIP

(2007) Bequest of Katherine S. and Marshall D. Mascott CC'48.

DR. JEROME & CORA MARKS SCHOLARSHIP FUND

(2012) Bequest of Cora M. Marks.

MICHAEL D. MARTOCCI SCHOLARSHIP FUND

(2000) Bequest of Helen Martocci P: CC'58 in memory of her son, Michael D. Martocci CC'58.

THE AARON LEO MAYER SCHOLARSHIP FUND

(2007) Bequest of Lillian C. Mayer P: CC'56, LAW'59.

BARBARA MAZUR SCHOLARSHIP FUND

(1999) Gift of Ilana B. Mazur SW'86 and Marc B. Mazur CC'81 P: CC'12, CC'15 in memory of their mother, Barbara Mazur P: CC'81, SW'86.

LOUIS K. MCCLYMONDS SCHOLARSHIP FUND

(1926) Bequest of Annie M. McClymonds in memory of her husband, Louis K. McClymonds.

DOUGLAS H. MCCORKINDALE SCHOLARSHIP FUND

(1987) Gift of Douglas H. McCorkindale CC'61, LAW'64.

PAUL C. MCCORMICK SCHOLARSHIP FUND

(2010) Gift of Paul C. McCormick CC'78, PS'82, PS'89, PH'00, P: CC'10, CC'14, GS'12, PS'16.

WILLIAM MCDAVID SCHOLARSHIP FUND

(2008) Gift of William H. McDavid CC'68, P: CC'08, CC'10, CC'14, GS'17.

PATRICK AND YVETTE MCGARRIGLE COLLEGE SCHOLARSHIP

(2011) Gift of Patrick C. McGarrigle CC'86.

MCKEEVER FAMILY SCHOLARSHIP

(2012) Gift of Valerie and Michael F. McKeever P: CC'11.

NICHOLAS MCDOWELL MCKNIGHT SCHOLARSHIP FUND

(1962) Bequest of Carl J. McKnight.

SPENCER J. MCGRADY SCHOLARSHIP FUND

(1994) Bequest of Spencer J. McGrady CC'39.

MABEL C. MEAD FUND

(1958) Bequest of Mabel C. Mead.

LILAVATI H. MEHTA SCHOLARSHIP FUND

(2015) Gift of an anonymous donor.

RAPHAEL MEISELS SCHOLARSHIP FUND

(1985) Gift of Raphael Meisels CC'21 ^.

MELCHER FAMILY FUND

(2015) Gift of James L. Melcher CC'61, P: CC'90.

JAMES L. MELCHER AND DR. APRIL ANN BENASICH SCHOLARSHIP FUND

(2007) Gift of James L. Melcher CC'61, P: CC'90.

SAMUEL AND BLANCHE MENDELSON MEMORIAL SCHOLARSHIP FUND

(1983) Gift of Laurans A. Mendelson CC'60, BUS'61, P: CC'87, CC'89, BUS'89.

MESHEL FAMILY SCHOLARSHIP FUND

(2011) Gift of Adam R. Meshel CC'92, LAW'95, P: CC'18.

CHARLES AND JEANNE METZNER SCHOLARSHIP FUND

(2013) Bequest of Jeanne Metzner ^.

ASENATH KENYON AND DUNCAN MERRIWETHER SCHOLARSHIP FUND

(1991) Bequest of Duncan Merriwether CC'28, BUS'28, P: BUS'56, BUS'67.

LILLIAN S. MICHAELSON SCHOLARSHIP FUND

(1989) Gift of Alvin S. Michaelson CC'60.

JOSEPH S. MICHOM SCHOLARSHIP FUND

(1948) Bequest of Joseph Stewart Michom.

THE IRA L. MILLER FAMILY SCHOLARSHIP FUND

(2004) Gift of Edward J. Miller CC'73, Howard Miller CC'76, BUS'78, Robert J. Miller CC'76, and Stephen Miller CC'69, GSAS'70.

JAMES MILLER SCHOLARSHIP FUND

(2013) Gift of James H. Miller CC'70.

MAX MILLER SCHOLARSHIP FUND

(1989) Gift of Warren R. Stern CC'74 in memory of his wife's grandfather, Maxim D. Miller.

MILLER-HEDIN FAMILY SCHOLARSHIP

(2008) Gift of Evan Miller CC'78.

MEREDITH G. MILSTEIN SCHOLARSHIP FUND

(2011) Gift of Meredith G. Milstein CC'09, BUS'17.

THE PHILIP AND CHERYL MILSTEIN SCHOLARSHIP FUND

(1987) Gift of Philip L. Milstein CC'71, P: CC'09, CC'10, BC'14, BUS'17 and Cheryl S. Milstein BC'82, P: CC'09, CC'10, BC'14, BUS'17.

SEYMOUR MILSTEIN SCHOLARSHIP FUND

(2002) Gift of Philip Milstein CC'71, P: CC'09, CC'10, BC'14, BUS'17.

THOMAS AND JOY MISTELE SCHOLARSHIP FUND

(2008) Gift of C. Joy and Thomas M. Mistele P: CC'10.

JOHN P. MITCHEL MEMORIAL FUND

(1940) Bequest of Mary Purroy Mitchel in memory of her husband, John Purroy Mitchel CC 1899.

MOFFAT SCHOLARSHIP FUND

(1862) Gift of William B. Moffat.

FREDERICK B. MONELL, JR. AND HELEN P. MONELL SCHOLARSHIP FUND

(1983) Gift of Helen P. Monell ^.

ELIZABETH WILMA MONTGOMERY SCHOLARSHIP FUND

(1986) Gift of William E. Collin CC'24 ^.

DR. ROYAL M. MONTGOMERY SCHOLARSHIP FUND

(1992) Gift of Maxine C. Montgomery ^ in honor of her husband, Royal M. Montgomery CC'28, PS'31 ^.

SIDNEY MORGENBESSER MEMORIAL FUND

(2005) Gift of various donors in memory of Sidney Morgenbesser.

JAMES P. MORRISON SCHOLARSHIP FUND

(1973) Gift of James P. Morrison CC'30 ^, P: CC'63 ^ in memory of his son, Peter N. Morrison CC'63.

DAISY IRENE LUTZ MORSE MEMORIAL FUND

(2005) Bequest of Elizabeth B. Morse GSAS'34 and Herbert C. Morse GSAS'41, GSAS'73.

CLARA W. MOSSLER SCHOLARSHIP FUND

(1999) Bequest of Harold M. Mossler in memory of his mother, Clara W. Mossler.

THOMAS L. MOUNT SCHOLARSHIP FUND

(2009) Bequest of Thomas L. Mount CC'30.

MOXIE'S CREATIVE INTELLECT SCHOLARSHIP FUND

(2014) Gift of Marian F.H. Wright CC'90 in memory of her mother, Nonya Rhoads Stevens Wright P: CC'90.

MUKHERJEE-RUSSELL MEMORIAL FUND

(2010) Gift of Tanmoy Mukherjee CC'86.

GLADYS H. MUÑOZ SCHOLARSHIP FUND

(1996) Gift of Carlos R. Muñoz CC'57, GSAS'61.

STAN MUSIAL SCHOLARSHIP FUND

(1962) Gift of various donors in honor of Stan Musial.

N

THOMAS A. NACLERIO SCHOLARSHIP FUND

(2000) Bequest of Thomas A. Naclerio CC'33.

ALI NAMVAR SCHOLARSHIP FUND

(2011) Gift of Ali Namvar CC'91.

JON NARCUS SCHOLARSHIP FUND

(2004) Gift of John S. Freidin CC'62, Burton Lehman CC'62, LAW'65 and Jerry I. Speyer CC'62, BUS'64, P: CC'92, LAW'93.

AMERICO C. NARDIS SCHOLARSHIP FUND

(2008) Gift of Americo C. Nardis CC'98.

MURRAY AND BELLE NATHAN SCHOLARSHIP ENDOWMENT

(2011) Bequest of Belle C. and Murray L. Nathan CC'34, GS'41.

NAWN FAMILY SCHOLARSHIP FUND

(2013) Gift of Christopher M. and Lori D. Nawn P: CC'16.

THE NAYYAR FAMILY SCHOLARSHIP FUND

(2013) Gift of Ashok Nayyar CC'85, P: CC'20.

THOMAS B. NEFF SCHOLARSHIP FUND

(1969) Gift of Thomas B. Neff CC'51, BUS'52 ^.

THE CHARLES E. AND DOROTHY C. NEWLON SCHOLARSHIP FUND

(2010) Bequest of Charles E. Newlon SEAS'42.

THE JEFFREY NEWMAN SCHOLARSHIP FUND

(2015) Bequest of Jeffrey A. Newman CC'67, LAW'71, P: CC'02, CC'04.

JEROME A. NEWMAN SCHOLARSHIP FUND

(1956) Gift of Jerome A. Newman CC 1917, LAW 1919 ^ in honor of the fortieth anniversary of his graduation.

NG TENG FONG SCHOLARSHIP FUND

(2011) Gift of Daryl Win-Kong Ng CC'01, GSAPP'10.

NG TENG FONG SCHOLARSHIP FUND

(2005) Gift of Robert Chee-Siong Ng P: CC'01, CC'03, CC'12, CC'14, GSAPP'10.

LOUIS AND MARINA NICHOLAS SCHOLARSHIP FUND

(1998) Gift of Socrates Nicholas CC'56.

9/11 MEMORIAL FUND SCHOLARSHIP

(2002) Gift of Robert Berne CC'60, BUS'62; Mark E. Kingdon CC'71, P: CC'09, CC'16; Philip L. Milstein CC'71, P: CC'09, CC'10, BC'14, BUS'17; Richard E. Witten CC'75, P: CC'10, BUS'15, LAW'15; and various donors in memory of Richard A. Aronow CC'75, Robert M. Murach CC'78, John B. Fiorito CC'82, Seilai Khoo CC'86, Brian P. Williams CC'94, Joseph A. Della Pietra CC'99, Brooke A. Jackman CC'00, and Tyler V. Ugolyn CC'01.

ADRIANE NOCCO SCHOLARSHIP FUND

(2010) Gift of Frank P. Nocco CC'85, LAW'88 in honor of his mother, Adriane G. Nocco P: CC'85, LAW'88.

DAVID NORR, CLASS OF 1943 SCHOLARSHIP FUND

(1981) Gift of David Norr CC'43, BUS'48 ^.

NORRY FAMILY SCHOLARSHIP FUND FOR THE COLLEGE

(1984) Gift of Neil J. Norry CC'59 ^, P: CC'85, LAW'86 in honor of the twenty-fifth anniversary of his graduation.

O

EUGENE V. OEHLERS SCHOLARSHIP FUND

(1994) Bequest of Josephine M. Yacavone in honor of Eugene V. Oehlers CC 1920 ^.

ALFRED OGDEN FUND

(1989) Bequest of Alfred Ogden CC 1909, LAW 1912.

SANDRA A. AND LEWIS P. (CC'36) OGLE SCHOLARSHIP FUND

(2004) Bequest of Sandra A. and Lewis P. Ogle CC'36.

OMAR FAMILY SCHOLARSHIP FUND

(2016) Gift of Sharif and Maha A. Omar P: CC'16.

GIDEON H. OPPENHEIMER SCHOLARSHIP FUND

(1971) Bequest of Gideon H. Oppenheimer CC'47, LAW'49.

GEORGE M. ORPHANOS SCHOLARSHIP FUND

(2007) Bequest of George M. Orphanos CC'59.

BLANCHE WITTES OSHEROV SCHOLARSHIP FUND

(2004) Bequest of Blanche W. Osheroov GS'49, GSAS'52.

JENNIFER MAXFIELD OSTFELD AND SCOTT D. OSTFELD FAMILY SCHOLARSHIP FUND

(2014) Gift of Jennifer M. Ostfeld CC'99, JRN'00 and Scott D. Ostfeld CC'98, BUS'02, LAW'02.

OUZOUNIAN FAMILY SCHOLARSHIP FUND

(2014) Gift of Souren G. Ouzounian CC'89.

OZ FAMILY SCHOLARSHIP FUND

(2009) Gift of Lisa J. and Mehmet C. Oz P: CC'12.

OZALTIN FAMILY SCHOLARSHIP FUND

(2010) Gift of Nuri Ozaltin.

P

PACKER-BAYLISS SCHOLARS

(2001) Gift of M. Jerome and Marie Packer in honor of Geoffrey C. Bayliss CC'82.

STELIOS AND ESPERANZA PAPADOPOULOS SCHOLARSHIP FUND

(2005) Gift of Esperanza and Stelios Papadopoulos P: CC'07.

EMANUEL M. PAPPER AND PATRICIA M. SCHOLARSHIP FUND

(2002) Bequest of Emanuel M. Papper CC'35, '88 HON.

MAX PAPPER SCHOLARSHIP FUND

(1961) Gift of Lillian M. Jaffe; Emanuel M. Papper CC'35, '88 HON ^; and Solomon Papper CC'42 ^.

JOHN AND MINNIE PARKER NATIONAL SCHOLARSHIP FUND GIFT

(1960) Gift of Minnie Parker Charitable Trust.

HERBERT AND JEANETTE PEARL SCHOLARSHIP FUND

(1997) Gift of Richard E. Pearl CC'69.

ROBERT I. PEARLMAN SCHOLARSHIP FUND - CC

(1989) Gift of Robert I. Pearlman CC'55, SEAS'55, SEAS'56.

B. DAVID AND ROSANN PECK SCHOLARSHIP FUND

(1989) Gift of Barry D. Peck CC'59, P: CC'91, GSAPP'91.

ROBERT L. PELZ SCHOLARSHIP FUND

(1989) Gift of Robert L. Pelz CC'39, LAW'42 ^.

ANTHONY PENALE SCHOLARSHIP FUND

(1996) Bequest of Anthony G. Penale GSAS'49.

HERBERT C. PENTZ SCHOLARSHIP FUND

(2002) Bequest of Herbert C. Pentz CC'22, LAW'24.

DR. M. MURRAY AND LILLIAN PESHKIN SCHOLARSHIP FUND

(1991) Bequest of Lillian R. Peshkin.

DR. NIS A. PETERSEN SCHOLARSHIP FUND

(2008) Bequest of Nis A. Petersen CC'51, SIPA'54.

WILLIAM E. PETERSEN SCHOLARSHIP FUND

(1992) Gift of William E. Petersen CC'27, BUS'28, '80 HON ^, P: CC'68, BUS'73.

THE PETITO FAMILY SCHOLARSHIP FUND

(2007) Gift of Paula K. and Dominic A. Petito CC'77, P'13.

MARY ELLEN AND BRUCE EBEN PINDYCK SCHOLARSHIP FUND

(1981) Gift of Bruce E. Pindyck CC'67, LAW'70, BUS'71, P: CC'03, JRN'15 and Mary Ellen Pindyck LAW'73, GSAPP'75, P: CC'03, JRN'15.

FRANK R. PITT SCHOLARSHIP FUND

(1967) Gift of Frank R. Pitt CC'28, LAW'30 ^.

FRANK R. PITT SCHOLARSHIP FUND

(2000) Bequest of Frank R. Pitt CC'28, LAW'30.

PLANALP TREVOR FAMILY SCHOLARSHIP FUND

(2010) Gift of Stephen S. Trevor CC'86 and Ronnie D. Planalp BUS'86.

ELVIRA AND HAROLD POLLACK MEMORIAL SCHOLARSHIP FUND

(1998) Bequest of Roy H. Pollack SEAS'50 in memory of his parents, Elvira and Harold Pollack P: SEAS'50.

FRED P. POMERANTZ FOUNDATION SCHOLARSHIP FUND

(1965) Gift of Fred P. Pomerantz.

LOUIS JOHN POPPER SCHOLARSHIP FUND

(1991) Bequest of Louis J. Popper CC 1918.

PETER POUNCEY SCHOLARSHIP FUND

(1992) Gift of Daniel L. Dolgin CC'74, LAW'77 in honor of Peter R. Pouncey GSAS'69, P: CC'00, SOA'08.

LEONARD PRICE SCHOLARSHIP FUND

(2006) Bequest of Leonard Price CC'28.

MARIE, CHARLES, AND WALTER PROBST MEMORIAL SCHOLARSHIP FUND

(1968) Bequest of Marie Probst.

PULITZER SCHOLARS FUND

(1958) Gift of former Pulitzer Scholars.

JOSEPH PULITZER SCHOLARSHIP FUND A

(1902) Gift of Joseph Pulitzer '52 HON ^.

JOSEPH PULITZER SCHOLARSHIP FUND B

(1959) Bequest of Joseph Pulitzer '52 HON.

Q

QUANDT FAMILY FUND

(2012) Gift of Leonard Langenscheidt CC'12 and Gabriele Quandt P: CC'12.

ROBERT T. AND MARILYN L. QUITTMAYER SCHOLARSHIP FUND

(1986) Gift of Robert T. Quittmeyer CC'41, LAW'47 ^ in honor of the fiftieth anniversary of his graduation.

R

STANLEY A. AND BARBARA B. RABIN SCHOLARSHIP FUND

(2007) Gift of Barbara B. and Stanley A. Rabin CC'58, SEAS'59.

THOMAS D. RABIN SCHOLARSHIP FUND

(1997) Gift of Ruth H. and I. Stephen Rabin CC'55, LAW'58 in memory of their son, Thomas D. Rabin.

RAPAPORT SCHOLARSHIP FUND IN MEMORY OF HENRY N. RAPAPORT, CC 1925, LAW 1927

(1985) Gift of Michael S. Rapaport BUS'64, LAW'64; Peter A. Rapaport LAW'65; David A.H. Rapaport CC'69; Robert D. Rapaport BUS'59; Martin S. Rapaport CC'62, LAW'65, P: CC'09; Richard A. Rapaport CC'69; and M. Murray Peshkin ^.

BROOKE AND RICHARD RAPAPORT SCHOLARSHIP FUND

(1999) Gift of Richard A. Rapaport CC'69.

PROFESSOR WILLIAM H. REINMUTH SCHOLARSHIP FUND

(1988) Gift of Curtis Instruments in memory of William H. Reinmuth P: CC'89.

ROSE AND SAM REISS SCHOLARSHIP FUND

(1987) Gift of Robert S. Reiss CC'52, in honor of his parents, Sam and Rose Reiss P: CC'52.

HUBERT M. RELYEA SCHOLARSHIP FUND

(1993) Bequest of Hubert M. Relyea CC'31.

PATRICIA REMMER BC '45 - COLUMBIA COLLEGE SCHOLARSHIP FUND

(2004) Gift of Patricia C. Remmer BC'45 ^.

JOHN AND EUNICE RIM SCHOLARSHIP

(2014) Gift of Eunice and John C. B. Rim SEAS'82.

PETER C. RITCHIE, JR., SCHOLARSHIP FUND

(1939) Bequest of Virginia J. Ritchie.

GERALD AND MAY ELLEN RITTER MEMORIAL SCHOLARSHIP FUND

(1986) Gift of Gerald and May Ellen Ritter Memorial Fund.

GERALD AND MAY ELLEN RITTER PRESIDENTIAL FELLOWSHIP FUND

(1981) Gift of Gerald and May Ellen Ritter Memorial Fund.

RJM FOUNDATION SCHOLARSHIP FUND

(2015) Gift of Roberta M. Campbell TC'69, P: CC'04. CC'13, SIPA'08.

EDWIN ROBBINS CC 1953 RESIDENTIAL SCHOLARSHIP FUND

(1985) Gift of Edwin Robbins CC'53, LAW'55, P: BC'82, LAW'88.

EDWIN ROBBINS CLASS OF 1953 RESIDENTIAL SCHOLARSHIP FUND II

(2014) Gift of Edwin Robbins CC'53 , LAW'55, P: BC'82, LAW'88.

ADELINE AND GERARD ROBERTS SCHOLARSHIP FUND

(1979) Bequest of Adeline Roberts.

DR. DUDLEY F. ROCHESTER SCHOLARSHIP FUND
(1998) Gift of Dudley F. Rochester CC'50, PS'55.

RODIN LEVINE FAMILY SCHOLARSHIP FUND
(2011) Gift of John D. Rodin CC'97 and Rachel L. Rodin CC'97, BUS'01.

ROELOFFS FAMILY SCHOLARSHIP
(2012) Gift of Kurt W. Roeloffs CC'84.

HENRY WELSH ROGERS SCHOLARSHIP FUND
(2006) Bequest of Henry Welsh Rogers.

HOWARD MALCOLM ROGERS SCHOLARSHIP FUND
(1925) Bequest of Henrietta Rogers.

ROBERT AND SARA ROONEY SCHOLARSHIP FUND
(2014) Gift of Corinne and Robert P. Rooney CC'89.

ARTHUR G. ROSEN FAMILY SCHOLARSHIP FUND
(1991) Gift of Arthur G. Rosen CC'65.

IDA ROSENBERG SCHOLARSHIP FUND
(1999) Gift of Robert J. Rosenberg CC'67, P: CC'99, LAW'02; Lauren Rosenberg Gershell CC'99, LAW'02; and Marcia R. Fox P: CC'99, LAW'02.

PROFESSOR JOHN D. ROSENBERG SCHOLARSHIP FUND
(2008) Gift of John A. Carey CC'71 in honor of John D. Rosenberg CC'50, GSAS'60, P: CC'97.

GERALD E. ROSENBERGER SCHOLARSHIP FUND
(1967) Gift of various donors in memory of Gerald E. Rosenberger.

DR. LOUIS A. AND BEATRICE B. ROSENBLUM SCHOLARSHIP FUND
(2002) Bequest of Beatrice Rosenblum Vare SW'41.

LEO L. ROSENHIRSCH MEMORIAL SCHOLARSHIP FUND
(1966) Gift of the Rosenhirsch Foundation.

ANNA AND AARON ROSENSHINE SCHOLARSHIP FUND
(1989) Gift of Allen G. Rosenshine CC'59.

LEWIS A. ROSENTHAL SCHOLARSHIP FUND
(1951) Gift of William Rosenthal P: CC'28 in memory of his son, Lewis A. Rosenthal CC'28.

KATHLEEN ROSKOT MEMORIAL SCHOLARSHIP FUND
(2005) Gift of various donors in memory of Kathleen Roskot CC'02.

MERVIN ROSS '51, '52 SCHOLARSHIP FUND

(2016) Gift of Marjorie L. Ross W: CC'51, BUS'52 in memory of her husband, Mervin Ross CC'51, BUS'52.

EUGENE T. ROSSIDES SCHOLARSHIP FUND

(1996) Gift of Eugene T. Rossides CC'49, LAW'52, P: CC'84.

SAMUEL H. ROTHFELD CC 1934 SCHOLARSHIP FUND
(1995) Gift of Michael B. Rothfeld CC'69, BUS'71, JRN'71, SIPA'71, P: CC'06, CC'08 in memory of his father, Samuel H. Rothfeld GS'34, P: CC'69, BUS'71, JRN'71, SIPA'71.

DAVID H. ROUS SCHOLARSHIP FUND
(1973) Gift of various donors in memory of David H. Rous CC'25, LAW'28.

JOSEPH RUBIN SCHOLARSHIP FUND

(1975) Gift of Harvey Rubin CC'54, SEAS'58, P: CC'79, CC'82, CC'87, SIPA'84 in memory of his father, Joseph Rubin P: CC'54, SEAS'58.

SAMUEL RUDIN SCHOLARSHIP FUND

(2000) Gift of Joan H. and Paul A. Marks CC'46, PS'49, '00 HON, P: GSAS'84.

GEORGE RUPP SCHOLARSHIP FUND

(1994) Gift of the Henry and Lucy Moses Fund, Inc. in honor of George Rupp '93 HON.

PETER F. RUSSELL SCHOLARSHIP FUND

(1987) Gift of various donors in memory of Peter F. Russell CC'62.

THE RICHARD RUZIKA SCHOLARSHIP FUND

(2000) Gift of Richard M. Ruzika CC'81 ^, P: CC'16.

THE FRIENDS OF RICH RUZIKA SCHOLARSHIP FUND

(2013) Gift of various donors in memory of Richard M. Ruzika CC'81, P: CC'16.

S

DAVID G. SACKS SCHOLARSHIP FUND

(2005) Bequest of David G. Sacks CC'44, LAW'48.

EUGENE SALBERG SCHOLARSHIP FUND

(1964) Bequest of Eugene Salberg.

EVAN C. AND EVAN T. SALMON SCHOLARSHIP FUND

(2003) Bequest of Avis D. Salmon.

ARNOLD A. SALTZMAN SCHOLARSHIP FUND

(1986) Gift of Arnold A. Saltzman CC'36 ^, P: CC'67, CC'69.

ARNOLD A. SALTZMAN SCHOLARSHIP FUND FOR DOUBLE DISCOVERY PROGRAM

(2006) Gift of Arnold A. Saltzman CC'36 ^, P: CC'67, CC'69.

ERIC F. SALTZMAN SCHOLARSHIP FUND

(1986) Gift of Eric F. Saltzman CC'69, P: CC'10.

SAMUELS FAMILY SCHOLARSHIP FUND

(2009) Gift of an anonymous donor.

SANDELMAN FAMILY SCHOLARSHIP FUND

(2002) Gift of Corrie M. and Jonathan E. Sandelman P: CC'13.

HERB AND PEARL SANDICK SCHOLARSHIP FUND

(2010) Gift of Herbert Sandick CC'43, PS'45 ^, P: CC'69.

AARON AND JAMES SATLOFF SCHOLARSHIP FUND

(1996) Gift of James E. Satloff CC'84, BUS'86 in honor of his father, Aaron Satloff CC'56, P: CC'84, BUS'86.

SATOW FAMILY SCHOLARSHIP FUND

(1988) Gift of Phillip M. Satow CC'63, P: CC'88, CC'96, SIPA'01.

ALEXANDER SAUNDERS SCHOLARSHIP FUND

(1922) Bequest of Mary E. Saunders LS 1900, GSAS 1945 in memory of her husband, Alexander Saunders.

LESLIE M. SAUNDERS SCHOLARSHIP FUND

(1916) Bequest of Alexander Saunders.

SCANDINAVIAN SCHOLARSHIP FOR SCIENTIFIC RESEARCH

(1986) Gift of an anonymous donor.

PETER K. SCATURRO SCHOLARSHIP FUND

(1997) Gift of Peter K. Scaturro SEAS'82, SEAS'85.

MORRIS A. AND ALMA B. SCHAPIRO SCHOLARSHIP FUND

(1999) Gift of the Alma and Morris Schapiro Fund.

SCHELL-O'CONNOR FAMILY SCHOLARSHIP FUND

(2013) Gift of Kathleen O. and J. Michael Schell CC'69.

SCHENLEY INDUSTRIES, INC., SCHOLARSHIP FUND

(1962) Gift of Schenley Industries Inc. in memory of Ralph T. Heymsfeld CC'27, P: CC'65.

JONATHAN SCHILLER SCHOLARSHIP FUND

(2011) Gift of Jonathan D. Schiller CC'69, LAW'73, P: CC'01, CC'06, LAW'08, SCE'13.

SCHLUMBERGER FOUNDATION SCHOLARSHIP FUND

(1984) Gift of the Schlumberger Foundation.

IRVING SCHMEZEL SCHOLARSHIP FUND

(1965) Gift of Claire L. Schmezel ^ in memory of her husband, Irving Schmezel ^.

JOHN NORBERT SCHMITT SCHOLARSHIP FUND

(2011) Bequest of John N. Schmitt CC'32.

MILDRED AND SAMUEL SCHOLNICK SCHOLARSHIP FUND

(2001) Gift of Arnold R. Tolkin CC'54, P: CC'79, CC'82, LAW'81.

SAMUEL AND ANNA SCHREIBER SCHOLARSHIP FUND

(1987) Gift of Leonard I. Schreiber CC'35, LAW'37 ^.

ROBERT SCHWARZ SCHOLARSHIP FUND

(1968) Gift of the Schwarz family in memory of Robert Schwarz.

GERTRUDE AND WILLIAM P. SCHWEITZER SCHOLARSHIP FUND IN THE SCIENCES

(1990) Bequest of Gertrude Schweitzer P: CC'60.

WILLIAM P. SCHWEITZER SCHOLARSHIP FUND

(1973) Gift of Gertrude Schweitzer ^ P: CC'60, in memory of her husband, William P. Schweitzer CC'21, GSAS'22, P: CC'60.

MARY H. SCRANTON SCHOLARSHIP FUND

(1936) Bequest of Mary N. Scranton.

FRANK LINWOOD AND GRACE FARRINGTON SEALY FUND

(1989) Bequest of Donald F. Sealy CC 1918, GSAS 1920, LAW 1923 in memory of his parents Grace F. and Frank L. Sealy P: CC 1918, GSAS 1920, LAW 1923.

THE ALBERT A. SEGNA MEMORIAL SCHOLARSHIP FUND

(2003) Gift of Rudy A. Segna CC'81, P: CC'08, CC'09.

KARL LUDWIG SELIG SCHOLARSHIP FUND

(2001) Gift of Thomas H. Glocer CC'81.

THERESA PRINCE SEMON SCHOLARSHIP FUND

(1953) Gift of the Board of Trustees of the Good Neighbor Federation.

MR. AND MRS. PING LING SENG SCHOLARSHIP FUND

(1986) Gift of Peter Seng CC'63, GSAPP'87, P: CC'87 in honor of his parents, Mr. and Mrs. Ping Ling Seng.

ARTHUR J. AND KATHERINE FLINT SHADEK SCHOLARSHIP FUND

(1970) Gift of Katherine F. Shadek LAW'49, W: CC'48, P: CC'73, CC'75, BUS'76 and Arthur J. Shadek LAW'48 ^, P: CC'73, CC'75, BUS'76.

NORMAN SHAPIRO SCHOLARSHIP FUND

(1977) Gift of Eleanor Redman Shapiro.

REUBEN SHAPIRO SCHOLARSHIP FUND

(2010) Gift of Susan A. and Robert J. Grey CC'72, P: BUS'07.

SOLOMON AND DORA MONNESS SHAPIRO SCHOLARSHIP FUND

(1952) Bequest of Dora Monness Shapiro.

RUBIN AND SARAH SHAPS SCHOLARSHIP FUND

(1999) Bequest of Philip P. Shaps.

GEORGE SHAW SCHOLARSHIP FUND

(1988) Gift of various donors in memory of George D. Shaw CC'53.

PO-CHIEH SHAW SCHOLARSHIP FUND

(2013) Gift of Gordon Shaw BUS'92.

JAMES PATRICK SHENTON SCHOLARSHIP FUND

(1998) Gift of Socrates Nicholas CC'56.

JAMES T. SHERWIN SCHOLARSHIP FUND

(2014) Gift of James T. Sherwin CC'53, LAW'56, P: GSAS'92, GSAS'96, GSAS'03.

EDITH SHIH SCHOLARSHIP FUND

(2008) Gift of Edith Shih TC'77, TC'78.

JESSE SIEGEL SCHOLARSHIP FUND

(1984) Gift of Jesse S. Siegel CC'49 ^, P: BC'80, SW'83.

DOROTHY O'BRIEN AND FERDINAND J. SIEGHARDT SCHOLARSHIP FUND

(1972) Bequest of Ferdinand J. Sieghardt.

SIDNEY J. SILBERMAN SCHOLARSHIP FUND AT COLUMBIA COLLEGE

(1998) Gift of Sidney J. Silberman CC'42, LAW'47 ^.

RONALD K. SIMONS CC '82 SCHOLARSHIP

(2003) Gift of Ronald K. Simons CC'82, BUS'89.

SINGH FAMILY SCHOLARSHIP FUND

(2001) Gift of Ravi M. Singh CC'88.

LUCIANO SIRACUSANO SCHOLARSHIP FUND

(2013) Gift of Luciano Siracusano CC'87, P: CC'18.

MARVIN SIROT SCHOLARSHIP FUND

(1984) Gift of Margaret Sirot W: CC'56, BUS'57, P: BC'85 and various donors in memory of Marvin Sirot CC'56, BUS'57, P: BC'85.

SAMUEL T. SKIDMORE SCHOLARSHIP FUND

(1990) Bequest of Samuel T. Skidmore.

JOSEPH M. SKRYPSKI SCHOLARSHIP FUND

(2007) Bequest of Joseph M. Skrypski CC'39.

LAWRENCE SLAUGHTER SCHOLARSHIP FUND

(2010) Gift of Lawrence D. Slaughter CC'85, P: CC'19.

ERIC V. SMITH SCHOLARSHIP FUND

(1994) Gift of Blair W. Smith BUS'85 and various donors in memory of Eric V. Smith CC'88.

GLORIA KAUFMAN KLEIN SMITH SCHOLARSHIP FUND

(2009) Bequest of Gloria K. Smith GSAS'53.

DAVID W. SMYTH SCHOLARSHIP FUND

(1926) Gift of David W. Smyth ^.

THE SOLENDER FAMILY FUND

(2011) Gift of Michael S. Solender CC'86, P: CC'17.

JOSEPH SOLOMON PRESIDENTIAL SCHOLARS AND FELLOWS FUND

(1983) Bequest of Julian C. Levi CC 1896 in honor of Joseph Solomon.

HERBERT B. SOROCA SCHOLARSHIP FUND

(1990) Gift of Herbert B. Soroca CC'63, LAW'66.

ESTHER AND JULIUS SPIEGEL SCHOLARSHIP FUND

(2015) Gift of Allen M. Spiegel CC'67.

SOL SPIEGELMAN SCHOLARSHIP FUND

(1992) Gift of Richard Axel CC'67, P: SIPA'11.

SPINGARN FAMILY SCHOLARSHIP FUND

(1990) Gift of James L. Spingarn CC'62, P: CC'89, BC'92, BUS'94.

ARTHUR B. SPINGARN SCHOLARSHIP FUND

(1993) Bequest of Arthur B. Spingarn CC1897, GSAS 1899, LAW 1900.

ROBERT G. SPIRO, M.D. CLASS OF 1951 MEMORIAL SCHOLARSHIP FUND

(2015) Gift of Mary J. Spiro W: CC'51, P: CC'86 in memory of her husband, Robert G. Spiro CC'51, P: CC'86.

LISA AND DAVID STANTON FAMILY SCHOLARSHIP

(2011) Gift of David B. Stanton CC'77, P: CC'09, CC'11.

EARLE J. STARKEY MEMORIAL SCHOLARSHIP FUND

(2009) Gift of Charles P. Starkey CC'72.

C.V. STARR SCHOLARSHIP FUND AT COLUMBIA UNIVERSITY

(2004) Gift of C.V. Starr Foundation.

HARRISON R. AND EDNA L. STEEVES SCHOLARSHIP FUND

(1995) Gift of Edna L. Steeves GSAS'48 ^.

ALAN AND RUTH STEIN SCHOLARSHIP FUND

(1986) Gift of Ruth S. and Alan L. Stein CC'52, P: BUS'85.

ALAN W. STEINBERG SCHOLARSHIP FUND

(1990) Gift of Suzanne and Alan W. Steinberg CC'48, SEAS'50.

MRS. RICHARD STEINSCHNEIDER SCHOLARSHIP FUND

(1958) Gift of Richard Steinschneider CC 1919 ^, P: CC'43, SEAS'43 ^ and Marie R. Steinschneider ^ P: CC'43, SEAS'43 ^.

MICHAEL D. STEPHENS SCHOLARSHIP FUND

(2002) Gift of Michael D. Stephens CC'66, PH'70.

HELEN M. C. AND J. EDWARD STERN BIO-MEDICAL SCHOLARSHIP FUND

(1996) Gift of the J. Edward and Helen M.C. Stern Foundation.

HERBERT B. STERN SCHOLARSHIP FUND

(1997) Gift of Herbert B. Stern CC'59, P: CC'07, SOA'12.

WARREN AND SUSAN STERN FAMILY SCHOLARSHIP FUND

(2014) Gift of Warren R. Stern CC'74.

ARNOLD AND MATILE STIEFEL SCHOLARSHIP FUND

(1948) Bequest of Matile L. Stiefel.

**ROBERT S. (1959C) AND MARCIA B. STONE
SCHOLARSHIP FUND**

(1992) Gift of Robert S. Stone CC'59, P: CC'91; Chester I. Stone CC'67; and Phyllis B. Stone CC'91.

LUDWIG STROSS SCHOLARSHIP FUND

(1943) Gift of Ines Stross in memory of her husband, Ludwig Stross.

ARTHUR HAYS SULZBERGER SCHOLARSHIP FUND

(1963) Gift of Arthur H. Sulzberger CC 1913, '59 HON ^, P: CC'51.

**OLON E. SUMMERFIELD FOUNDATION INC.,
SCHOLARSHIP FUND**

(1956) Gift of the Solon E. Summerfield Foundation, Inc.

BERNARD AND MARJORIE SUNSHINE SCHOLARSHIP

(2002) Gift of Bernard Sunshine CC'46, P: CC'79, GSAS'83, GSAS'89, GSAS'91 and Marjorie H. Sunshine LS'69, P: CC'79, GSAS'83, GSAS'89, GSAS'91.

SURDNA FOUNDATION SCHOLARSHIP FUND

(1966) Gift of the Surdna Foundation, Inc.

**SUSTAINABLE DEVELOPMENT SCHOLARSHIP
ENDOWMENT FUND**

(2010) Gift of Joseph H. Ellis CC'64 and Barbara Ellis BC'64, GSAS'65.

SWERGOLD FAMILY SCHOLARSHIP FUND

(1990) Gift of Leopold Swergold CC'62.

**ANNA WARE AND MACRAE SYKES SCHOLARSHIP
FUND**

(1963) Gift of Macrae Sykes CC'33 ^ in honor of his mother, Anna G. Collins ^ P: CC'33 ^.

ROBERT J. SZARNICKI FAMILY SCHOLARSHIP FUND

(2000) Gift of Robert J. Szarnicki CC'65.

**AGNES CHI-CHEN LIN SZE COLUMBIA BUSINESS
SCHOOL CLASS OF 1945 SCHOLARSHIP FUND**

(2015) Gift of Morgan Sze in memory of his mother, Agnes C. Lin Sze BUS'45.

T

**THE LEAH G. AND CHRISTOPHER K. TAHBAZ FAMILY
SCHOLARSHIP FUND**

(2015) Gift of Christopher K. Tahbaz CC'86, LAW'90.

**DANIEL TAMKIN AND CINDY CARDINAL
SCHOLARSHIP FUND**

(2009) Gift of Daniel S. Tamkin CC'81, P: CC'12 and Lucinda M. Cardinal BC'83, P: CC'12.

**THE ANGELO TARALLO MEMORIAL SCHOLARSHIP
FUND**

(2005) Gift of Patricia Tarallo W: CC'61, LAW'64.

ABRAHAM TAUB SCHOLARSHIP FUND

(1991) Bequest of Abraham Taub CP'22, GSAS'27.

WALLACE TAYLOR MEMORIAL SCHOLARSHIP FUND

(1992) Gift of the Senior Society of Sachems in honor of the seventy-fifth anniversary of its founding and the alumnus credited with founding the society, Wallace Taylor CC 1916 ^.

WILLIAM TOWSON TAYLOR SCHOLARSHIP FUND

(1976) Bequest of William T. Taylor CC'21, LAW'23 and gift of various donors in his memory.

DR. JOSEPH F. TEDESCO SCHOLARSHIP FUND

(2004) Bequest of Vera L. Tedesco.

TEPLER FAMILY SCHOLARSHIP FUND

(2013) Gift of Isidore Tepler CC'76, P: CC'18.

FRANKLIN A. THOMAS SCHOLARSHIP FUND

(2008) Gift of Franklin A. Thomas CC'56, LAW'63, '79 HON.

**BRIAN AND SABINE THOMSON FAMILY SCHOLARSHIP
FUND**

(2017) Gift of Brian J. Thomson CC'89.

BLANCHE S. THORMAN SCHOLARSHIP FUND

(1972) Bequest of Blanche S. Thorman.

**THE ISABEL AND IRVING N. TOLKIN MEMORIAL
SCHOLARSHIP FUND**

(1983) Gift of Isabel Tolkin ^ P: CC'54, CC'60, GSAPP'62 and various donors in memory of Isabel's husband, Irving N. Tolkin P: CC'54, CC'60, GSAPP'62, and later renamed in memory of Isabel and Irving.

**LAURIE J. AND JEFFREY D. TOLKIN SCHOLARSHIP
FUND**

(2000) Gift of Jeffrey D. Tolkin CC'79, LAW'81 and Laurie J. Tolkin BC'79, DM'83.

**LILLIAN AND TRYGVE H. TONNESSEN SCHOLARSHIP
FUND**

(1989) Gift of Trygve H. Tonnessen CC'39, GSAS'51.

GRACE C. TOWNSEND SCHOLARSHIP FUND

(1940) Bequest of Grace C. Townsend.

LOTTIE A. TRIPP SCHOLARSHIP FUND

(1979) Bequest of W. Arthur Tripp CC 1909.

**MARGUERITE AND JOSEPH A. TRISKA MEMORIAL
SCHOLARSHIP FUND**

(1983) Gift of Theodore H. Elliott.

TRUST BRIDGE PARTNERS SCHOLARSHIP FUND

(2009) Gift of Shujun Li.

**KYRIAKOS TSAKOPOULOS SCHOLARSHIP FUND IN
HONOR OF EUGENE ROSSIDES**

(2005) Gift of Kyriakos Tsakopoulos CC'93 in honor of his grandfather, Kyriakos Tsakopoulos.

MARIA TSAKOS SCHOLARSHIP FUND

(2016) Gift of Nikolas P. Tsakos CC'85.

THE TUKMAN FAMILY SCHOLARSHIP FUND
(2007) Gift of Lois and Melvin Tukman P: CC'89, BUS'98.

ARTHUR S. TWITCHELL SCHOLARSHIP FUND
(1995) Bequest of Arthur C. Twitchell.

U

US STEEL SCHOLARSHIP FUND
(2002) Gift of USX.

V

JOHN AND LOUISE SMITH VALENTE FUND
(1969) Bequest of Louise S. Valente and John Valente.

VAN AMRINGE SCHOLARSHIP FUND IN COLUMBIA COLLEGE
(1957) Bequest of Emily Buch.

THE VANECH FAMILY SCHOLARSHIP FUND
(2016) Gift of Dean N. and Denise E. Vanech P: CC'14.

SAMUEL AND SUSAN VARGHESE FAMILY SCHOLARSHIP FUND
(2014) Gift of Tajar S. Varghese CC'01.

IVAN B. VEIT ENDOWMENT FUND
(2005) Bequest of Ivan B. Veit CC'28.

SIGMUND AND MARY VIOLIN SCHOLARSHIP FUND
(1996) Gift of George A. Violin CC'63, SIPA'66, PS'67.

VISA FINANCIAL AID ENDOWMENT FUND
(1994) Proceeds from VISA credit card receipts.

WILLIAM F. VOELKER MEMORIAL SCHOLARSHIP FUND
(1976) Bequest of William F. Voelker CC'42, LAW'48 and gift of various donors in his memory.

VOLLBRECHTHAUSEN FAMILY - GOLDMAN SACHS SCHOLARSHIP FUND
(2014) Gift of Alejandro Vollbrechthausen P: CC'16.

H. EDWARD VOLLMERS MEMORIAL SCHOLARSHIP FUND
(1976) Gift of various donors in memory of H. Edward Vollmers CC 1920, SEAS 1922.

FRANCES AND GUSTAVE VON GROSCHWITZ SCHOLARSHIP FUND IN ART HISTORY
(1991) Bequest of Gustave von Groschwitz CC'26.

W

LEO J. WALSH MEMORIAL SCHOLARSHIP FUND
(2006) Bequest of Leo J. Walsh CC'53, GSAS'56, GSAS'62.

WANG FAMILY SCHOLARSHIP FUND

(2009) Gift of Philip P. Wang CC'70, P: CC'18.

WILLIAM H. WARDEN MEMORIAL SCHOLARSHIP FUND
(1996) Bequest of Dorothy Warden.

THE WARREN FAMILY SCHOLARSHIP FUND
(2005) Gift of Irwin H. Warren CC'71, LAW'74.

HELEN L. WARREN SCHOLARSHIP FUND
(2007) Bequest of Helen L. Warren TC'55.

GEORGE WASCHECK SCHOLARSHIP FUND
(1990) Gift of George E. Wascheck CC'24, SEAS'26.

MORRIS W. WATKINS SCHOLARSHIP FUND
(1987) Gift of William E. Collin CC'24 ^ in honor of Morris W. Watkins CC'24, GSAS'28 ^.

ROBERT WATT SCHOLARSHIP FUND
(1976) Gift of various donors in memory of Robert W. Watt CC 1916.

DR. CHARLES A. WEBSTER INTERSCHOOL SCHOLARSHIP FUND
(1994) Gift of Charles A. Webster CC'40, PS'43 ^.

GEORGE E. WEIGL SCHOLARSHIP FUND
(1982) Bequest of George E. Weigl BUS'31.

JOSHUA H. AND DONNA WEINER SCHOLARSHIP FUND
(1998) Gift of Joshua H. Weiner CC'36 ^ and Donna Weiner W: CC'36.

ARTHUR S. AND MARIAN E. WEINSTOCK SCHOLARSHIP FUND
(1995) Gift of Arthur S. Weinstock CC'41^ and Marian E.K. Weinstock ^.

GEORGE J. AND FRANCES K. WEINSTOCK SCHOLARSHIP FUND
(2006) Gift of Arthur S. Weinstock CC'41 ^ in memory of his parents, Frances K. and George J. Weinstock P: CC'41 ^.

EDWARD S. WEISIK SCHOLARSHIP FUND
(2004) Bequest of Edward S. Weisik CC'37.

RABBI SHELDON J. WELTMAN, PH.D., SCHOLARSHIP FUND
(1992) Bequest of Rabbi Sheldon J. Weltman CC'58.

WEST END SCHOLARSHIP FUND
(1998) Gift of Katherine A. Gardner JRN'81; Kirk W. Michel BUS'79, P: BUS'15; and Joseph F. Spiegel.

JOHN VISSCHER WHEELER SCHOLARSHIP FUND
(1914) Bequest of Susan E. Johnson Hudson in memory of John V. Wheeler CC 1865.

THE JOHN AND MARY JO WHITE SCHOLARSHIP

(2008) Gift of John W. and Mary Jo White LAW'74, P: CC'08, LAW'15.

JOSEPH THOMAS WIDOWFIELD SCHOLARSHIP FUND
(1994) Bequest of Joseph T. Widowfield CC'83.

MARK HINCKLEY WILLES SCHOLARSHIP FUND
(1989) Gift of Mark H. Willes CC'63, BUS'67.

THE WILLNER FAMILY SCHOLARSHIP FUND
(2002) Gift of Jane and David Bloomgarden, and Joseph H. Willner PS'77.

NEAL J. WILSON SCHOLARSHIP
(2016) Gift of Neal J. Wilson CC'88.

GEORGE LEO WINGSHEE MEMORIAL SCHOLARSHIP FUND
(2004) Gift of Donna W. Loo P: CC'11, GS'16.

RICHARD E. WITTEN SCHOLARSHIP FUND
(2005) Gift of Richard E. Witten CC'75, P: CC'10, BUS'15, LAW'15.

WOLF FAMILY SCHOLARSHIP FUND
(2011) Gift of Sherri P. Wolf CC'90 and Douglas R. Wolf CC'88.

BEN D. WOOD SCHOLARSHIP FUND
(1986) Bequest of Benjamin D. Wood CC'22, GSAS'24.

GORDON W. WOOD SCHOLARSHIP FUND
(1992) Gift of Gordon W. Wood CC'43, SEAS'48 ^.

WALTER WOODS SCHOLARSHIP FUND
(1997) Bequest of Norma E. Woods in memory of her husband, Walter Woods.

KENNETH AND THOMAS WRIGHT SCHOLARSHIP FUND
(2008) Gift of Kenneth B. Wright CC'74.

DAVID WU AND FRED WANG FUND
(2010) Gift of Fred W. Wang SEAS'95 and Weiming D. Wu SEAS'02.

X

XU FAMILY SCHOLARSHIP FUND
(2014) Gift of an anonymous donor.

LIU XU SCHOLARSHIP FUND
(2006) Gift of an anonymous donor.

Y

PHILIP C. YACOS MEMORIAL SCHOLARSHIP FUND
(1986) Gift of Helen N. Yacos-Obuhanych ^ P: CC'80 ^ and various donors in memory of Helen's son, Philip C. Yacos CC'80.

YAGODA FAMILY SCHOLARSHIP FUND
(2016) Gift of Scott R. Yagoda CC'86, LAW'92, P: CC'20.
FREDERIC AND ANNA YANG SCHOLARSHIP FUND

(2015) Gift of Hong A. Yang BUS'98 and Frederic S. Yang BUS'97.

YATRAKIS SCHOLARSHIP FUND
(2009) Gift of Demetrios P. Yatrakis CC'05, BUS'10.

ONG YEE SCHOLARSHIP FUND
(2010) Gift of Danny O. Yee CC'77, P: CC'15 and Stephanie W. Yee PS'82, P: CC'15.

KENNETH YIM FAMILY FUND
(2011) Gift of Kenneth K.L. Yim SEAS'73, BUS'75, P: CC'11, SEAS'10.

SAMUEL YIN SCHOLARSHIP FUND
(2005) Gift of Samuel Yin CC'76.

YI-CHANG YIN AND WAN-HUNG CHANG YIN SCHOLARSHIP FUND
(2000) Gift of Samuel Yin CC'76.

THE WILLIAM H. YOKEL SCHOLARSHIP FUND
(2007) Bequest of William H. Yokel CC'44.

YOUNG ALUMNI SCHOLARSHIP FUND
(2016) Gift of young alumni from Columbia College.

THE YU FAMILY FUND
(2005) Gift of Kyung-Sun Yu P: CC'09, CC'13.

YU FAMILY SCHOLARSHIP FUND
(2014) Gift of Raymond Yu CC'89, SEAS'90.

BONG AND MAY YU SCHOLARSHIP FUND
(2016) Gift of Bong Y. and May W. Yu P: CC'88, CC'89, SEAS'90.

TUNG LI AND HUI HSI YUAN MEMORIAL SCHOLARSHIP FUND
(1967) Gifts of various donors in memory of Tung Li Yuan CC'22 and later renamed in memory of Hui Hsi and Tung Li Yuan CC'22.

Z

VICTOR AND BETTY ZARO SCHOLARSHIP FUND
(1995) Gift of Victor J. Zaro CC'42 ^.

TIMOTHY ZARO SCHOLARSHIP FUND
(1998) Gift of Victor J. Zaro CC'42 ^ in honor of Timothy Zaro.

VICTOR J. ZARO SCHOLARSHIP FUND
(1996) Gift of Victor J. Zaro CC'42 ^.

JESSICA ZAUNER MEMORIAL SCHOLARSHIP FUND
(2006) Gift of Anton Zauner CC'73, BUS'75, P: CC'08 ^, BUS'11 and Anna E. Zauner GS'79, P: CC'08 ^, BUS'11 in memory of their daughter, Jessica Zauner CC'08.

JOSEPH C. ZAVATT SCHOLARSHIP FUND—COLUMBIA COLLEGE

(2006) Bequest of Anna Maas Zavatt in memory of her husband, Joseph C. Zavatt CC'22, LAW'24.

ZBT—STANLEY I. FISHEL, CC'34 SCHOLARSHIP FUND

(2004) Gift of Delta ZBT Corporation.

FRANK JOSEPH ZDENOVEC SCHOLARSHIP FUND

(1949) Bequest of Frank J. Zdenovec.

THE ZICKLER FAMILY SCHOLARSHIP FUND

(2008) Gift of Leo E. Zickler CC'58.

ZIENTS FAMILY SCHOLARSHIP FUND

(2015) Gift of Mary M. and Jeffrey D. Zients P: CC'17.

DAVID AND RAY MOONEY ZWERLING SCHOLARSHIP FUND

(1991) Gift of L. Steven Zwerling CC'60, GSAS'61 and Leonard J. Zwerling CC'65 in honor of their parents, Ray M. and David Zwerling P: CC'60, CC'65, GSAS'61, on their anniversary.

[^] *Deceased; P: Parent; W: Widow*

ACADEMIC REQUIREMENTS

In order to graduate from Columbia College with a Bachelor of Arts degree, all students must successfully complete:

- 124 points of academic credit
- the Core Curriculum
- one major or concentration

POINTS AND CREDIT

Every student must complete 124 points of academic credit. The last two terms must be taken while enrolled in the College for study on this campus or on one of the Columbia-sponsored international programs (<http://bulletin.columbia.edu/columbia-college/study-abroad/#sponsoredprogramtext>).

Courses may not be repeated for credit. All courses taken multiple times appear on the student's official transcript, but only the grade received in a course taken for the first time is factored into the GPA. A course that is repeated cannot be counted toward the 12-point minimum required for full-time status in any given semester. Credit cannot be earned for courses taken in subjects and at the same level for which Advanced Standing credit (AP, IB, GCE, etc.) has been granted. For more information, see *Academic Regulations*—Placement and Advanced Standing (<http://bulletin.columbia.edu/columbia-college/regulations/#placementadvancedstandingtext>).

Students also cannot receive credit for previous courses in which the content has been substantially duplicated, at Columbia or elsewhere. For example, credit cannot be earned for two first-term calculus courses, even if one is more theoretical in approach than the other; credit cannot be earned for two comparable terms of a science or foreign language even if one has a Barnard course number and the other a Columbia course number. In some courses, only partial credit may be counted toward the degree. Courses not listed in this Bulletin must be approved by the advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>), since such courses might not bear College credit (e.g., MATH UN1003 College Algebra and Analytic Geometry). Students who have questions about whether degree credit may be earned in a course should consult with their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>).

THE CORE CURRICULUM

The following required courses constitute the Columbia College Core Curriculum (p. 77). They include general education requirements in major disciplines and, except for Physical Education, must be taken for a letter grade:

Literature Humanities

HUMA CC1001 - HUMA CC1002	Masterpieces of Western Literature and Philosophy and Masterpieces of Western Literature and Philosophy
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Frontiers of Science

SCNC CC1000	Frontiers of Science
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University Writing

ENGL CC1010	University Writing
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Contemporary Civilization

COCI CC1101 - COCI CC1102	Introduction To Contemporary Civilization in the West and Introduction To Contemporary Civilization In the West
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Art Humanities

HUMA UN1121	Masterpieces of Western Art
-------------	-----------------------------

Music Humanities

HUMA UN1123	Masterpieces of Western Music
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Science Requirement

Two terms from the list of approved courses

Global Core Requirement

Two terms from the list of approved courses

Foreign Language Requirement

Four terms or the equivalent

Physical Education

Two terms and a swimming test

Students are required to complete *Literature Humanities*, *University Writing*, and *Frontiers of Science* in the first year. Failure to complete these courses in the first year will result in the student being placed on academic probation.

Additionally, the College expects students to complete *Contemporary Civilization* in their sophomore year, and *Art Humanities* and *Music Humanities* by the end of junior year. For pedagogical reasons, the College considers *Literature Humanities* to be a pre-requisite for *Contemporary Civilization*.

All Columbia College students must complete *Literature Humanities* before taking *Contemporary Civilization*. Columbia Engineering students have been given an exception to this rule because of the structure of their curriculum.

Courses in fulfillment of the Core Curriculum must be taken in Columbia College, with the exception of the Foreign Language requirement, which, in some instances and as determined by the relevant academic department at Columbia, may be satisfied at Barnard College. Other exceptions to this rule are granted only with the approval of the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>)'s Committee on Academic Standing, except for the Global Core and the Science requirements, for which students must petition the appropriate faculty committee and must first meet with their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>). Students who wish to satisfy degree requirements with courses taken at other universities in the summer must meet with their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) in

order to discuss the process for receiving advance approval from the dean of advising.

THE DEPARTMENTAL MAJOR OR CONCENTRATION

All students must complete either a major or a concentration as described in the departmental sections of this Bulletin. The purpose of the major or concentration requirement is to give each student the experience of doing sustained and advanced work, including individual research, in a field of special interest. A major consists of intensive study in one department involving the satisfaction of a variety of requirements; a concentration demands fewer departmental course points or requirements than a major.

Whether the student chooses a major or concentration depends on their particular aims and needs, as well as on the offerings of the particular department in which they plan to work. It should be emphasized that this requirement is not designed to produce professionally trained specialists, nor is it assumed that students will ultimately pursue employment in work related to the subject in which they are majoring or concentrating. It is, however, assumed that the intensive study in an academic department, together with the successful completion of the Core Curriculum and the remaining degree requirements, will afford students an education and the requisite skills that will serve them well throughout their professional and personal lives.

The faculty members of each academic department determine the requirements for a major or concentration. It is the students' responsibility to ensure that they complete the major or concentration requirements that are in effect as of their sophomore year. Each department has one or more directors of undergraduate studies (DUS) (<http://www.college.columbia.edu/academics/majoradvising>) to whom questions regarding the major or concentration should be directed.

All courses used to meet the requirements of a major or concentration, including related courses, may not be taken for a grade of Pass/D/Fail, except the first such one-term course taken by the student in his or her eventual major, unless otherwise specified by the department. Students should check with the relevant academic department for both the minimum and maximum points allowed for a major and/or concentration, as well as for any restrictions on courses in which a student earns a grade of D.

Some majors and concentrations require that certain introductory courses be completed before the start of the junior year. Students should carefully read the requirements for their proposed major or concentration and direct questions to the relevant director of undergraduate studies (DUS) (<http://www.college.columbia.edu/academics/majoradvising>).

In the first and sophomore years, students should confer with faculty members in the department, advising deans in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>), and advisers in the Center for Career Education (<http://www.careereducation.columbia.edu>) while considering their

choice of major or concentration. All students declare a major and/or concentration in their fourth term. Information about the process for declaring a major or concentration is sent to students in the spring of the sophomore year by the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>).

Interdisciplinary and Interdepartmental Majors and Concentrations

Interdisciplinary and interdepartmental majors and concentrations combine coursework in two or more areas of study.

Interdisciplinary majors and concentrations are linked to the interdisciplinary programs (see *Departments of Instruction*).

Interdepartmental majors and concentrations are linked to two or more departments (see *Departments of Instruction*).

There are no independent majors or concentrations permitted at this time.

Special Concentrations

In certain cases, a program of study has been designated a “special concentration.” While a special concentration may require a similar number of courses or points of credit as a departmental concentration does, a special concentration does not fulfill a degree requirement. Therefore, a special concentration can only be pursued as a second program of study, in addition to a major or concentration.

Double Majors/Concentrations

Most Columbia College students graduate with a single program of study — i.e., major or concentration. It is possible to declare a maximum of two programs of study — i.e., two majors, two concentrations, a major and a concentration, a major and a special concentration, or a concentration and a special concentration.

Students will not be awarded additional semesters for the purposes of completing an additional major or concentration. Students must complete their degree requirements within eight terms (including the terms that transfer students spent at other institutions).

If a student does decide to pursue two programs, they may not both be owned by the same offering unit (department, institute, or center). For example, a student may not declare programs in Russian Language and Culture and in Slavic Studies, both of which are owned by the Department of Slavic Languages; similarly, a student may not declare programs in Mathematics and in Applied Mathematics, both of which are owned by the Department of Mathematics. All joint majors (e.g., Economics-Political Science) will be considered as owned by both offering units, so that a student may not, for example, major in both Political Science and Economics-Political Science.

If a student chooses to declare two programs of study, the student can, in certain situations, apply a single course to both programs (“double-counting”). There are three conditions under which students may apply a single course to two programs, and

depending on the two programs declared, some or all of these conditions may apply:

1. If two programs both require the same coursework to teach fundamental skills needed for the field, those courses may be applied to both programs. The Committee on Instruction has defined that coursework as the following:

- (1) elementary and intermediate foreign language courses;
- (2) the calculus sequence (I through IV, or Honors A and B);
- (3) introductory courses in Statistics (STAT UN1101 or 1201);
- (4) the introductory course in computer programming (COMS W1004).

If faculty members feel that other courses should be included in this category, those courses would need to be approved for such purpose by the Committee on Instruction.

2. In addition to double-counting any fundamental courses enumerated above, a student pursuing two programs of study may apply a maximum of two classes to both programs, if applicable. Offering departments, institutes, or centers may choose to restrict the double-counting of particular courses, and such restrictions cannot be appealed.

3. In addition to those courses that can be double-counted as noted above, a maximum of two courses taken in the Core Curriculum can also be counted toward the requirements of a program of study (major, concentration, special concentration), if applicable. Offering departments, institutes, or centers may choose to restrict the double-counting of courses taken in the Core Curriculum, and such restrictions cannot be appealed.

REQUIREMENTS FOR TRANSFER STUDENTS

Columbia College offers transfer students the opportunity to experience a wide-ranging liberal arts education that includes its Core Curriculum and a broad range of majors and concentrations. To graduate from Columbia College, all transfer students must successfully:

- earn at least 124 points in academic credit;
- complete the Core Curriculum;
- complete one major or concentration.

Upon admission to Columbia College, transfer students should familiarize themselves with the regulations pertaining to their special status (see *Academic Regulations*—Regulations for Transfer Students (<http://bulletin.columbia.edu/columbia-college/regulations>)).

PLANNING AN ACADEMIC PROGRAM

When planning their program, all students are expected to consult with their advising dean in the Berick Center for Student Advising

(<https://www.cc-seas.columbia.edu/csa>) as well as with their departmental advisers. Advising deans in the Berick Center for Student Advising (<http://www.cc-seas.columbia.edu/csa>) serve as the primary advisers for all general graduation requirements and monitor students' progress toward completing the Core Curriculum. Directors of Undergraduate Studies (DUS) (<http://www.college.columbia.edu/academics/majoradvising>), and other faculty representatives of the academic departments, serve as the primary advisers for major and concentration program planning.

The Berick Center for Student Advising (<http://www.cc-seas.columbia.edu/csa>), located in 403 Lerner, is the first stop for students to discuss their advising needs as they create and reflect on their program of study at Columbia. Productive advising is built on a true partnership in which the student and the adviser work together. The spirit of an ideal advising partnership is one of mutual engagement, responsiveness, and dedication. Regular advising conversations—the fundamental building blocks of the partnership—enable an adviser to serve as a resource of knowledge, and as a source of referrals, so that students may make the most of all the opportunities available to them inside and outside the classroom during their time at the College. Students can make appointments with their advising dean using the online Comprehensive Advising Management System (<http://studentaffairs.columbia.edu/csa/appointments>).

Though students are assigned an advising dean, students may make appointments with any of the advisers in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>). Students who wish to change advisers permanently should not hesitate to make an appointment with Andrew Plaa, dean of advising, to have a new advising dean assigned to them.

To ensure successful planning, students should familiarize themselves with all academic opportunities in which they are interested. In particular, students should note that some majors and concentrations require that certain introductory courses be completed before the start of the junior year. Similarly, study abroad, professional programs, and graduate schools have a range of requirements that must be successfully completed at prescribed times during the undergraduate career. Specifically, students considering a major in the sciences should, in their first two years, focus on required introductory science courses in addition to Core requirements. Students considering a major in the humanities and social sciences should, in their first two years, take a combination of Core requirements and introductory level courses in the department(s) in which they are interested in majoring. Under no circumstances will students be granted more semesters to complete an additional concentration or major.

In addition, all students should:

- 1. become thoroughly familiar with the requirements for the degree and with the College regulations, including deadlines;
- 2. plan to complete *University Writing* (ENGL CC1010), *Frontiers of Science* (SCNC CC1000), *Masterpieces of Western Literature and Philosophy I & II* (HUMA CC1001-HUMA CC1002), as well as *Introduction*

to *Contemporary Civilization in the West* (COCI CC1101 -COCI CC1102) by the end of the sophomore year;

3. choose a major or concentration in their fourth term. Students will either declare their major online or submit a paper form to the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>), 403 Lerner. Some majors and concentrations require departmental review, and students can only declare these majors after receiving approval by the department. A major or concentration may be changed at any time as long as the requisite departmental approval is received, the requirements have been or can be fulfilled, and the student can still graduate by the end of their eighth semester. If a different major or concentration is decided upon, a new form must be filed with the advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>).

exact number of points is to be determined in consultation with the department.

Ordinarily, only seniors are allowed to register for independent study, although other students may be approved for independent study at the discretion of the departmental representative. Approval depends on the quality of the proposal, the student's qualifications, and the availability of an appropriate faculty adviser.

Advising for First-Year Students

In the summer, each incoming student receives the *Academic Planning Guide for New Students*, which is designed to assist incoming students in planning and creating their academic programs. Incoming students should read the *Academic Planning Guide for New Students* prior to their first advising appointment. Students will receive information by email about opportunities to connect with their advising deans in the summer.

Each first-year student is preregistered for *Literature Humanities* as well as for *Frontiers of Science* or *University Writing*. (First-year students are pre-registered for either *Frontiers of Science* or *University Writing* in the fall term and take the other course in the spring term.)

All incoming students are expected to meet with their advising deans in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) during the summer (in person or by phone/internet), during the New Student Orientation Program (NSOP), and/or in the first two weeks of the term (Change-of-Program period) in order to discuss their fall course selections, their transition to college, their short- and long-term goals, and the community of advisers that they can build throughout their time at Columbia.

Students should continue to meet with their advising deans as they finalize their program in the first two weeks of the term. Students are expected to stay in touch regularly with their advising deans in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) throughout their time at Columbia.

Supervised Independent Study

Supervised individual work on a special topic is available to qualified students as an alternative or as a supplement to courses and seminars in the field of specialization. Students must develop a plan of study with a faculty adviser and then obtain the approval of the department. Progress reports are submitted as required. From one to six points of credit may be awarded for this work; the

CORE CURRICULUM

The Center for the Core Curriculum

202 Hamilton
212-854-2453
core-curriculum@columbia.edu

The Core Curriculum is the cornerstone of the Columbia College education. The central intellectual mission of the Core is to provide all students with wide-ranging perspectives on significant ideas and achievements in literature, philosophy, history, music, art, and science.

Contemporary Civilization began in 1919 as a course on war and peace issues, and the creation of *Literature Humanities* followed in 1937. By 1947, *Art Humanities* and *Music Humanities* had been added, and a new course in *Asian Humanities* was introduced. The Global Core requirement, formerly Major Cultures, joined the Core in 1990, and *Frontiers of Science* in 2004. Though celebrated for their content, Core Curriculum courses are equally important for their small class format. Taught in seminars of approximately twenty-two students, these courses ensure that education at Columbia begins with an emphasis on active intellectual engagement. The small class sizes provide students with opportunities to develop intellectual relationships with faculty early on in their College career and to participate in a shared process of intellectual inquiry. In the Core Curriculum, the pursuit of better questions is every bit as important as the pursuit of better answers. The skills and habits honed by the Core—careful observation, close analysis, effective argument, imaginative comparison, and respect for a variety of ideas—provide a rigorous preparation for life as an engaged citizen in today's complex and changing world.

Committee on the Core Curriculum

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Chair of Music Humanities
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LITERATURE HUMANITIES

Paul Brooke Program Chair for Literature Humanities

Prof. Julie A. Crawford

602 Philosophy

212-854-5779

jc830@columbia.edu

Literature Humanities Website (<http://www.college.columbia.edu/core/lithum>)

HUMA CC1001-HUMA CC1002 Masterpieces of Western Literature and Philosophy, popularly known as “Literature Humanities” or “Lit Hum,” is a year-long course that offers Columbia College students the opportunity to engage in intensive study and discussion of some of the most significant texts of Western culture. The course is not a survey, but a series of careful readings of literary works that reward both first encounters and long study. Whether classwork focuses on the importance of the text to literary history or on its significance to our contemporary culture, the goal is to consider particular conceptions of what it means to be human as well as the place of such conceptions in the development of critical thought.

The principal objectives of *Literature Humanities* are to teach students to analyze literary texts and to construct well-reasoned arguments. An interdepartmental staff of professorial and preceptorial faculty meets with groups of approximately twenty-two students for four hours a week in order to discuss texts by Homer, Aeschylus, Sophocles, Euripides, Herodotus, Thucydides, Aristophanes, Plato, Vergil, Augustine, Dante, Boccaccio, Montaigne, Shakespeare, Austen, Dostoevsky, and Woolf, as well as Hebrew Scriptures and New Testament writings.

REGISTRATION PROCEDURE

All information concerning registration in *HUMA CC1001-HUMA CC1002 Masterpieces of Western Literature and Philosophy* is included in the registration materials sent to students. All first-year students are preregistered in *Literature Humanities*.

All Core Curriculum courses, including *Literature Humanities*, must be taken for a letter grade. Students may not drop or withdraw from *Literature Humanities* after the Core drop deadline, which is also the end of the Change-of-Program period (p. 4). For more information, see *Registration—Dropping Core Courses*.

COURSES OF INSTRUCTION

HUMA CC1001 Masterpieces of Western Literature and Philosophy. 4 points.

Taught by members of the Departments of Classics; English and Comparative Literature; French; German; Italian; Middle Eastern, South Asian, and African Studies; Philosophy; Religion; Slavic

Languages; and Spanish; as well as members of the Society of Fellows. Major works by over twenty authors, ranging in time, theme, and genre, from Homer to Virginia Woolf. Students are expected to write at least two papers, to complete two examinations each semester, and to participate actively in class discussions.

Fall 2017: HUMA CC1001

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
HUMA 1001	001/71246	M W 8:10am - 10:00am 309 Hamilton Hall	Nancy Workman	4	22/22
HUMA 1001	002/16570	M W 8:10am - 10:00am 206 Broadway Residence Hall	Michael West	4	22/22
HUMA 1001	003/69321	M W 12:10pm - 2:00pm 109 Hartley Hall	Janet Lee	4	22/22
HUMA 1001	004/22668	M W 12:10pm - 2:00pm 304 Hamilton Hall	Deborah Martinsen	4	21/22
HUMA 1001	005/71067	M W 12:10pm - 2:00pm 607 Hamilton Hall	Eliza Zingesser	4	20/22
HUMA 1001	006/64468	M W 12:10pm - 2:00pm 402 Hamilton Hall	Bianca Calabresi	4	19/22
HUMA 1001	007/66364	M W 12:10pm - 2:00pm 412 Pupin Laboratories	Cristobal Silva	4	21/22
HUMA 1001	008/19285	M W 2:10pm - 4:00pm 309 Hamilton Hall	Wolfgang Mann	4	22/22
HUMA 1001	009/29634	M W 2:10pm - 4:00pm 301 Hamilton Hall	Robert Kubala	4	22/22
HUMA 1001	010/18505	M W 2:10pm - 4:00pm 412 Pupin Laboratories	Debashree Mukherjee	4	20/22
HUMA 1001	011/14915	M W 2:10pm - 4:00pm 601b Fairchild Life Sciences Bldg	Jessica Merrill	4	19/22
HUMA 1001	012/72613	M W 2:10pm - 4:00pm 318 Hamilton Hall	Humberto Ballesteros	4	22/22
HUMA 1001	013/12812	M W 2:10pm - 4:00pm 402 Hamilton Hall	Steven Baker	4	21/22
HUMA 1001	014/62867	M W 4:10pm - 6:00pm 313 Pupin Laboratories	Shulamit Shinnar	4	18/22
HUMA 1001	015/63084	M W 4:10pm - 6:00pm 402 Hamilton Hall	Matthew Margini	4	21/22
HUMA 1001	016/19714	M W 4:10pm - 6:00pm 412 Pupin Laboratories	Lauren Robertson	4	20/22
HUMA 1001	017/67211	M W 4:10pm - 6:00pm	Benjamin VanWagoner	4	21/22

		424 Pupin Laboratories				HUMA 1001	038/62995	T Th 12:10pm - 2:00pm 301 Hamilton Hall	Jennifer Rhodes	4	22/22
HUMA 1001	018/64587	M W 4:10pm - 6:00pm 413 Hamilton Hall	Dustin Stewart	4	22/22	HUMA 1001	039/70762	T Th 12:10pm - 2:00pm 111 Carman Hall	Ashley Simone	4	20/22
HUMA 1001	019/21512	M W 4:10pm - 6:00pm 609 Hamilton Hall	Gerard Lynch	4	19/22	HUMA 1001	040/68985	T Th 12:10pm - 2:00pm 306 Hamilton Hall	Emily Traverse	4	19/22
HUMA 1001	020/68446	M W 4:10pm - 6:00pm C01 80 Claremont	James Adams	4	20/22	HUMA 1001	041/70874	T Th 12:10pm - 2:00pm 109 Hartley Hall	Katharine McIntyre	4	21/22
HUMA 1001	021/71086	M W 6:10pm - 8:00pm 413 Hamilton Hall	Maude Meisel	4	21/22	HUMA 1001	042/63643	T Th 2:10pm - 4:00pm 301 Hamilton Hall	Edward Mendelson	4	21/22
HUMA 1001	022/77439	M W 6:10pm - 8:00pm 111 Carman Hall	Jude Webre	4	18/22	HUMA 1001	043/66511	T Th 2:10pm - 4:00pm 607 Hamilton Hall	Molly Murray	4	22/22
HUMA 1001	023/74709	M W 6:10pm - 8:00pm 707 Hamilton Hall	Konstantia Zanou	4	12/22	HUMA 1001	044/25746	T Th 2:10pm - 4:00pm 206 Broadway Residence Hall	Katherine Biers	4	22/22
HUMA 1001	024/11585	T Th 8:10am - 10:00am 301 Hamilton Hall	Brendan Nieuburt	4	21/22	HUMA 1001	045/69639	T Th 2:10pm - 4:00pm 613 Hamilton Hall	Sarah Arkebauer	4	22/22
HUMA 1001	025/19086	T Th 8:10am - 10:00am 302 Hamilton Hall	Rosa Schneider	4	20/22	HUMA 1001	046/26264	T Th 2:10pm - 4:00pm 616 Hamilton Hall	Rebecca Hildebrand	4	18/22
HUMA 1001	026/25013	T Th 10:10am - 12:00pm 302 Hamilton Hall	Nicholas Dames	4	21/22	HUMA 1001	047/27065	T Th 2:10pm - 4:00pm 609 Hamilton Hall	Austin Graham	4	21/22
HUMA 1001	027/10129	T Th 10:10am - 12:00pm C01 80 Claremont	Clemence Boulouque	4	21/22	HUMA 1001	048/23742	T Th 2:10pm - 4:00pm 507 Hamilton Hall	Marc Van De Mieroop	4	15/22
HUMA 1001	028/19992	T Th 10:10am - 12:00pm 325 Pupin Laboratories	Paraskevi Martzavou	4	18/22	HUMA 1001	049/74895	T Th 4:10pm - 6:00pm 306 Hamilton Hall	Seth Kimmel	4	21/22
HUMA 1001	029/65227	T Th 10:10am - 12:00pm 206 Broadway Residence Hall	Rex Barnes	4	21/22	HUMA 1001	050/29685	T Th 4:10pm - 6:00pm 407 Hamilton Hall	Grace Delmolino	4	20/22
HUMA 1001	030/62154	T Th 10:10am - 12:00pm 309 Hamilton Hall	Joanna Stalnaker	4	22/22	HUMA 1001	051/21431	T Th 4:10pm - 6:00pm 302 Hamilton Hall	Nicole Gervasio	4	20/22
HUMA 1001	031/29496	T Th 10:10am - 12:00pm 307 Pupin Laboratories	Sarah bin Tyeer	4	18/22	HUMA 1001	052/19687	T Th 4:10pm - 6:00pm 402 Hamilton Hall	Margo Rosen	4	22/22
HUMA 1001	032/63790	T Th 10:10am - 12:00pm 311 Fayerweather	Christina Iglesias	4	21/22	HUMA 1001	053/17050	T Th 4:10pm - 6:00pm 424 Pupin Laboratories	Atefeh Akbari Shahmirzadi	4	14/22
HUMA 1001	033/28651	T Th 10:10am - 12:00pm 607 Hamilton Hall	Valentina Izmirlieva	4	22/22	HUMA 1001	054/63319	T Th 4:10pm - 6:00pm 313 Hamilton Hall	Michael Paulson	4	18/22
HUMA 1001	034/69136	T Th 10:10am - 12:00pm 201a Philosophy Hall	Janet Lee	4	21/22	HUMA 1001	055/75261	T Th 6:10pm - 8:00pm 206 Broadway Residence Hall	Anuk Arudpragasam	4	13/22
HUMA 1001	035/12760	T Th 10:10am - 12:00pm 301 Hamilton Hall	Jennifer Rhodes	4	21/22	HUMA 1001	056/65526	T Th 6:10pm - 8:00pm 402 Hamilton Hall	Dhananjay Jagannathan	4	19/22
HUMA 1001	036/27790	T Th 12:10pm - 2:00pm 206 Broadway Residence Hall	Rebecca Stanton	4	22/22	HUMA 1001	057/24427	T Th 6:10pm - 8:00pm 306 Hamilton Hall	Ana Fernandez Cebrian	4	16/22
HUMA 1001	037/74376	T Th 12:10pm - 2:00pm 302 Hamilton Hall	Erica Richardson	4	17/22	HUMA 1001	061/87999	M W 12:10pm - 2:00pm 224 Pupin Laboratories	Katherine Balkoski	4	22/22

HUMA 1001	062/96699	M W 4:10pm - 6:00pm 316 Hamilton Hall	Usha Nathan	4	21/22	HUMA 1002	013/74744	M W 2:10pm - 4:00pm 402 Hamilton Hall	Sahar Ullah	4	21/22
HUMA 1001	063/96997	T Th 12:10pm - 2:00pm 402 Hamilton Hall	Michael Paulson	4	15/22	HUMA 1002	014/23575	M W 4:10pm - 6:00pm 313 Pupin Laboratories	Shulamit Shinnar	4	20/22
HUMA 1001	064/97146	T Th 4:10pm - 6:00pm 609 Hamilton Hall	Valeria Tsygankova	4	13/22	HUMA 1002	015/27964	M W 4:10pm - 6:00pm 402 Hamilton Hall	Matthew Margini	4	22/22

HUMA CC1002 Masterpieces of Western Literature and Philosophy. 4 points.

Taught by members of the Departments of Classics; English and Comparative Literature; French; German; Italian; Middle Eastern, South Asian, and African Studies; Philosophy; Religion; Slavic Languages; and Spanish; as well as members of the Society of Fellows. Major works by over twenty authors, ranging in time, theme, and genre, from Homer to Virginia Woolf. Students are expected to write at least two papers, to complete two examinations each semester, and to participate actively in class discussions.

Spring 2018: HUMA CC1002

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment						
HUMA 1002	001/21402	M W 8:10am - 10:00am 309 Hamilton Hall	Nancy Workman	4	20/22	HUMA 1002	020/63203	M W 4:10pm - 6:00pm C01 80 Claremont	James Adams	4	18/22
HUMA 1002	002/11678	M W 8:10am - 10:00am 206 Broadway Residence Hall	Michael West	4	22/22	HUMA 1002	021/10417	M W 6:10pm - 8:00pm 411 Hamilton Hall	Maude Meisel	4	22/22
HUMA 1002	003/19730	M W 12:10pm - 2:00pm 109 Hartley Hall	Janet Lee	4	22/22	HUMA 1002	022/69344	M W 6:10pm - 8:00pm 707 Hamilton Hall	Sahar Ullah	4	17/22
HUMA 1002	004/64748	M W 12:10pm - 2:00pm 318 Hamilton Hall	Lauren Kopajtic	4	16/22	HUMA 1002	023/24603	M W 6:10pm - 8:00pm 201 80 Claremont	Konstantia Zanou	4	19/22
HUMA 1002	005/68000	M W 12:10pm - 2:00pm 316 Hamilton Hall	Eliza Zingesser	4	21/22	HUMA 1002	024/14776	T Th 8:10am - 10:00am 301 Hamilton Hall	Brendan Niebuurt	4	22/22
HUMA 1002	006/65295	M W 12:10pm - 2:00pm 402 Hamilton Hall	Bianca Calabresi	4	21/22	HUMA 1002	025/67717	T Th 8:10am - 10:00am 302 Hamilton Hall	Rosa Schneider	4	22/22
HUMA 1002	007/27312	M W 12:10pm - 2:00pm 313 Pupin Laboratories	Cristobal Silva	4	21/22	HUMA 1002	026/67565	T Th 10:10am - 12:00pm 302 Hamilton Hall	Nicholas Dames	4	22/22
HUMA 1002	008/74535	M W 2:10pm - 4:00pm 309 Hamilton Hall	Patricia Grieve	4	20/22	HUMA 1002	027/19916	T Th 10:10am - 12:00pm C01 80 Claremont	Clemence Boulouque	4	22/22
HUMA 1002	009/15313	M W 2:10pm - 4:00pm 301 Hamilton Hall	Robert Kubala	4	20/22	HUMA 1002	028/77224	T Th 10:10am - 12:00pm 222 Pupin Laboratories	Rachel Zhang	4	22/22
HUMA 1002	010/18347	M W 2:10pm - 4:00pm 222 Pupin Laboratories	Debashree Mukherjee	4	17/22	HUMA 1002	029/15164	T Th 10:10am - 12:00pm 206 Broadway Residence Hall	Rex Barnes	4	21/22
HUMA 1002	011/69348	M W 2:10pm - 4:00pm 601b Fairchild Life Sciences Bldg	Jessica Merrill	4	20/22	HUMA 1002	030/25488	T Th 10:10am - 12:00pm 309 Hamilton Hall	Joanna Stalnaker	4	22/22
HUMA 1002	012/27504	M W 2:10pm - 4:00pm 318 Hamilton Hall	Humberto Ballesteros	4	22/22	HUMA 1002	031/24501	T Th 10:10am - 12:00pm 613 Hamilton Hall	Sarah bin Tyeer	4	12/22
						HUMA 1002	032/21370	T Th 10:10am - 12:00pm 253 Engineering Terrace	Rosalind Morris	4	9/22

HUMA 1002	033/18206	T Th 10:10am - 12:00pm 609 Hamilton Hall	Valentina Izmirlieva	4	22/22
HUMA 1002	034/27389	T Th 10:10am - 12:00pm 318 Hamilton Hall	Janet Lee	4	21/22
HUMA 1002	035/26424	T Th 10:10am - 12:00pm 301 Hamilton Hall	Jennifer Rhodes	4	21/22
HUMA 1002	036/29772	T Th 12:10pm - 2:00pm 206 Broadway Residence Hall	Rebecca Stanton	4	19/22
HUMA 1002	037/75855	T Th 12:10pm - 2:00pm 302 Hamilton Hall	Erica Richardson	4	18/22
HUMA 1002	038/70208	T Th 12:10pm - 2:00pm 301 Hamilton Hall	Jennifer Rhodes	4	22/22
HUMA 1002	039/18420	T Th 12:10pm - 2:00pm 111 Carman Hall	Ashley Simone	4	19/22
HUMA 1002	040/12810	T Th 12:10pm - 2:00pm 306 Hamilton Hall	Jessica Dzaman	4	13/22
HUMA 1002	041/28434	T Th 12:10pm - 2:00pm 109 Hartley Hall	Katharine McIntyre	4	20/22
HUMA 1002	042/28682	T Th 2:10pm - 4:00pm 301 Hamilton Hall	Edward Mendelson	4	22/22
HUMA 1002	043/11588	T Th 2:10pm - 4:00pm 607 Hamilton Hall	Molly Murray	4	21/22
HUMA 1002	044/12999	T Th 2:10pm - 4:00pm 206 Broadway Residence Hall	Katherine Biers	4	21/22
HUMA 1002	045/13761	T Th 2:10pm - 4:00pm 318 Hamilton Hall	Sarah Arkebauer	4	21/22
HUMA 1002	046/72585	T Th 2:10pm - 4:00pm 511 Hamilton Hall	Rebecca Hildebrand	4	22/22
HUMA 1002	047/71301	T Th 2:10pm - 4:00pm 609 Hamilton Hall	Austin Graham	4	22/22
HUMA 1002	048/20542	T Th 2:10pm - 4:00pm 707 Hamilton Hall	Marc Van De Mierop	4	18/22
HUMA 1002	049/28683	T Th 4:10pm - 6:00pm 306 Hamilton Hall	Seth Kimmel	4	20/22
HUMA 1002	050/21443	T Th 4:10pm - 6:00pm 315 Hamilton Hall	Grace Delmolino	4	22/22
HUMA 1002	051/75147	T Th 4:10pm - 6:00pm 302 Hamilton Hall	Nicole Gervasio	4	22/22
HUMA 1002	052/69061	T Th 4:10pm - 6:00pm 402 Hamilton Hall	Margo Rosen	4	22/22
HUMA 1002	053/72894	T Th 4:10pm - 6:00pm 424 Pupin Laboratories	Atefeh Akbari Shahmirzadi	4	22/22

HUMA 1002	054/63910	T Th 4:10pm - 6:00pm 313 Hamilton Hall	Michael Paulson	4	18/22
HUMA 1002	055/65977	T Th 6:10pm - 8:00pm 206 Broadway Residence Hall	Anuk Arudpragasam	4	20/22
HUMA 1002	056/22761	T Th 6:10pm - 8:00pm 402 Hamilton Hall	Dhananjay Jagannathan	4	21/22
HUMA 1002	057/24043	T Th 6:10pm - 8:00pm 306 Hamilton Hall	Ana Fernandez Cebrian	4	22/22
HUMA 1002	061/26075	M W 12:10pm - 2:00pm 424 Pupin Laboratories	Katherine Balkoski	4	20/22
HUMA 1002	062/67730	M W 4:10pm - 6:00pm 316 Hamilton Hall	Usha Nathan	4	22/22
HUMA 1002	063/25322	T Th 12:10pm - 2:00pm 402 Hamilton Hall	Michael Paulson	4	18/22
HUMA 1002	064/13926	T Th 4:10pm - 6:00pm 609 Hamilton Hall	Valeria Tsygankova	4	17/22

CONTEMPORARY CIVILIZATION

Carnoy Family Program Chair for Contemporary Civilization:

Prof. Patricia Kitcher

718 Philosophy

212-854-8617

pk206@columbia.edu

Contemporary Civilization Website (<http://www.college.columbia.edu/core/conciv>)

The central purpose of *COCI CC1101-COCI CC1102*

Introduction To Contemporary Civilization In the West, also known as “Contemporary Civilization” or “CC”, is to introduce students to a range of issues concerning the kinds of communities—political, social, moral, and religious—that human beings construct for themselves and the values that inform and define such communities, in order to prepare students to become active and informed citizens. Founded in 1919 as a course on war and peace issues, Contemporary Civilization has evolved continuously while remaining a constant and essential element of the Columbia College curriculum. The course asks students to read closely texts in various traditions of argument and to construct arguments of their own, both in speech and in writing, about some of the explicit and implicit issues that these texts raise.

Both the form and the content of the course contribute to the achievement of its aims. The discussion format is intended to respond in a palpable way to the existence, in these traditions, of different and often conflicting points of view; to embody the possibility of reasoned discourse among people who hold disparate convictions; and to help students sharpen their own skills of

thought and argument about matters of current personal and civic concern through participating in and extending the debates of the past. The Contemporary Civilization syllabus introduces students to a set of ideas and arguments that has played a formative role in the political and cultural history of our time, alerts them to ideas that have not held an influential role in that history, and acquaints them with some exemplars of critical thinking about alternative cultures, institutions, and practices.

Because Contemporary Civilization is a year-long course, readings are necessarily selective. While these readings change from time to time, the factors that lead to adoption of a text always include historical influence, the presentation of ideas of enduring importance, and the demonstrated ability of a text to provoke productive discussion. Among the readings currently required in the course are the Bible, the Qur'an, and works by Plato, Aristotle, Augustine, Machiavelli, Descartes, Hobbes, Locke, Hume, Smith, Rousseau, Kant, Burke, Tocqueville, Mill, Hegel, Marx, Darwin, Nietzsche, DuBois, Freud, and Woolf.

REGISTRATION PROCEDURE

All information concerning registration in *COCI CC1101-COCI CC1102 Introduction To Contemporary Civilization In the West* is included in the registration materials sent to students. Students normally take Contemporary Civilization in their second year at Columbia.

All Core Curriculum courses, including *Contemporary Civilization*, must be taken for a letter grade. Students may not drop or withdraw from *Contemporary Civilization* after the Core drop deadline (which is also the end of the Change-of-Program period (p. 4)). For more information, see *Registration—Dropping Core Courses*.

COURSES OF INSTRUCTION

COCI CC1101 Introduction To Contemporary Civilization in the West. 4 points.

Taught by members of the Departments of Anthropology, Classics, English and Comparative Literature, French, German, History, Middle East and Asian Languages and Cultures, Philosophy, Political Science, Religion, Slavic Languages, and Sociology; and members of the Society of Fellows. A study in their historical context of major contributions to the intellectual traditions that underpin contemporary civilization. Emphasis is on the history of political, social, and philosophical thought. Students are expected to write at least three papers to complete two examinations, and to participate actively in class discussions.

Fall 2017: COCI CC1101

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
COCI 1101	001/68716	M W 8:10am - 10:00am 301 Hamilton Hall	Victoria Wiet	4	21/22
COCI 1101	002/10474	M W 8:10am - 10:00am 302 Hamilton Hall	Ethan Yee	4	22/22
COCI 1101	003/73315	M W 10:10am - 12:00pm	Charles Armstrong	4	22/22

COCI 1101	004/29003	301 Hamilton Hall M W 10:10am - 12:00pm	Michael Stanislawski	4	22/22
COCI 1101	005/68170	306 Hamilton Hall M W 10:10am - 12:00pm	Adam Kosto	4	21/22
COCI 1101	006/77544	302 Hamilton Hall M W 10:10am - 12:00pm	Stathis Gourgouris	4	22/22
COCI 1101	007/67579	206 Broadway Residence Hall M W 10:10am - 12:00pm	Kevin Elliott	4	21/22
COCI 1101	008/29567	111 Carman Hall M W 10:10am - 12:00pm	Courtney Bender	4	21/22
COCI 1101	009/29952	309 Hamilton Hall M W 12:10pm - 2:00pm	Whitney Laemmli	4	19/22
COCI 1101	010/65943	301 Hamilton Hall M W 12:10pm - 2:00pm	Jason Resnikoff	4	22/22
COCI 1101	011/74896	306 Hamilton Hall M W 12:10pm - 2:00pm	Charles McNamara	4	17/22
COCI 1101	012/73309	206 Broadway Residence Hall M W 12:10pm - 2:00pm	Kevin Elliott	4	20/22
COCI 1101	013/61231	111 Carman Hall M W 12:10pm - 2:00pm	Bruno Bosteels	4	21/22
COCI 1101	014/70682	302 Hamilton Hall M W 12:10pm - 2:00pm	Benjamin Barasch	4	22/22
COCI 1101	015/14850	309 Hamilton Hall M W 2:10pm - 4:00pm	Turkuler Isiksel	4	20/22
COCI 1101	016/73660	302 Hamilton Hall M W 2:10pm - 4:00pm	Joshua Simon	4	22/22
COCI 1101	017/62977	306 Hamilton Hall M W 2:10pm - 4:00pm	Emily Jones	4	19/22
COCI 1101	018/72737	325 Pupin Laboratories M W 2:10pm - 4:00pm	Tunc Sen	4	19/22
COCI 1101	019/16582	224 Pupin Laboratories M W 2:10pm - 4:00pm	Lamyu Bo	4	22/22
COCI 1101	020/70392	206 Broadway Residence Hall M W 2:10pm - 4:00pm	Giulia Bonasio	4	20/22
COCI 1101	021/21135	109 Hartley Hall M W 2:10pm - 4:00pm	Robert Goodman	4	21/22
COCI 1101	022/23635	111 Carman Hall M W 2:10pm - 4:00pm	Alana Hein	4	12/22
COCI 1101	023/10308	652 Schermerhorn Hall M W 4:10pm - 6:00pm	Peter Pazzagli	4	22/22

COCI 1101 024/17235	M W 4:10pm - 6:00pm 302 Hamilton Hall	Kathryn Tabb	4	22/22		111 Carman Hall			
COCI 1101 025/18002	M W 4:10pm - 6:00pm 306 Hamilton Hall	Kathy Eden	4	22/22	COCI 1101 045/10997	T Th 2:10pm - 4:00pm 109 Hartley Hall	Una Stojnic	4	20/22
COCI 1101 026/26970	M W 4:10pm - 6:00pm 206 Broadway Residence Hall	Candace Cunard	4	18/22	COCI 1101 046/16769	T Th 2:10pm - 4:00pm 306 Hamilton Hall	Nicole Callahan	4	22/22
COCI 1101 027/24374	M W 4:10pm - 6:00pm 111 Carman Hall	Guido Parietti	4	18/22	COCI 1101 047/74884	T Th 2:10pm - 4:00pm 402 Hamilton Hall	Melissa Fusco	4	22/22
COCI 1101 028/64078	M W 4:10pm - 6:00pm 109 Hartley Hall	Rebecca Lossin	4	20/22	COCI 1101 048/28251	T Th 2:10pm - 4:00pm 601b Fairchild Life Sciences Bldg	Daniel del Nido	4	21/22
COCI 1101 029/23707	M W 4:10pm - 6:00pm 309 Hamilton Hall	Richard John	4	22/22	COCI 1101 049/18647	T Th 2:10pm - 4:00pm 309 Hamilton Hall	Stephanie Ramsey	4	21/22
COCI 1101 030/12167	M W 4:10pm - 6:00pm 304 Hamilton Hall	Andreas Avgousti	4	21/22	COCI 1101 050/23976	T Th 4:10pm - 6:00pm 206 Broadway Residence Hall	Jessica Simon	4	21/22
COCI 1101 031/73403	M W 6:10pm - 8:00pm 301 Hamilton Hall	Brittany Koffer	4	22/22	COCI 1101 051/13639	T Th 4:10pm - 6:00pm 111 Carman Hall	Michelle Chun	4	19/22
COCI 1101 032/14521	M W 6:10pm - 8:00pm 302 Hamilton Hall	Jeremy Forster	4	22/22	COCI 1101 052/71004	T Th 4:10pm - 6:00pm 109 Hartley Hall	Douglas Chalmers	4	22/22
COCI 1101 033/23073	T Th 8:10am - 10:00am 206 Broadway Residence Hall	Campbell Birch	4	22/22	COCI 1101 053/64870	T Th 4:10pm - 6:00pm 301 Hamilton Hall	Luke Mayville	4	21/22
COCI 1101 034/24247	T Th 8:10am - 10:00am 111 Carman Hall	Tianna Uchacz	4	22/22	COCI 1101 054/25472	T Th 4:10pm - 6:00pm 425 Pupin Laboratories	Blase Provitola	4	17/22
COCI 1101 035/75965	T Th 10:10am - 12:00pm 306 Hamilton Hall	Emmanuelle Saada	4	21/22	COCI 1101 055/72238	T Th 4:10pm - 6:00pm 616 Hamilton Hall	Tillmann Taape	4	15/22
COCI 1101 036/20718	T Th 10:10am - 12:00pm 111 Carman Hall	Neslihan Senocak	4	21/22	COCI 1101 056/24469	T Th 6:10pm - 8:00pm 301 Hamilton Hall	Zachary Herz	4	13/22
COCI 1101 037/15342	T Th 10:10am - 12:00pm 601b Fairchild Life Sciences Bldg	Daniel del Nido	4	21/22	COCI 1101 057/72094	T Th 6:10pm - 8:00pm 302 Hamilton Hall	Jeremy Forster	4	22/22
COCI 1101 038/16228	T Th 10:10am - 12:00pm 109 Hartley Hall	Nicole Callahan	4	22/22	COCI 1101 061/74887	T Th 6:10pm - 8:00pm 109 Hartley Hall	Ignacio Ojea Quintana	4	21/22
COCI 1101 039/72595	T Th 10:10am - 12:00pm 313 Pupin Laboratories	Thomas Dodman	4	21/22	COCI 1101 062/10505	T Th 4:10pm - 6:00pm 601b Fairchild Life Sciences Bldg	Luise Papcke	4	22/22
COCI 1101 040/77242	T Th 10:10am - 12:00pm 424 Pupin Laboratories	Jessica Kimpell	4	22/22	COCI 1101 063/74487	M W 6:10pm - 8:00pm 306 Hamilton Hall	Manuel Bautista Gonzalez	4	19/22
COCI 1101 041/18181	T Th 10:10am - 12:00pm 304 Hamilton Hall	Aileen Forbes	4	21/22	COCI 1101 064/25339	M W 8:10am - 10:00am 306 Hamilton Hall	Charles McNamara	4	13/22
COCI 1101 042/76964	T Th 2:10pm - 4:00pm 304 Hamilton Hall	Elisabeth Ladenson	4	20/22					
COCI 1101 043/76217	T Th 2:10pm - 4:00pm 302 Hamilton Hall	Richard Billows	4	22/22					
COCI 1101 044/72095	T Th 2:10pm - 4:00pm	Michelle Chun	4	21/22					

COCI CC1102 Introduction To Contemporary Civilization In the West. 4 points.

Taught by members of the Departments of Anthropology, Classics, English and Comparative Literature, French, German, History, Middle East and Asian Languages and Cultures, Philosophy, Political Science, Religion, Slavic Languages, and Sociology; and members of the Society of Fellows. A study in their historical context of major contributions to the intellectual traditions that underpin contemporary civilization. Emphasis is on the history of political,

social, and philosophical thought. Students are expected to write at least three papers to complete two examinations, and to participate actively in class discussions.

Spring 2018: COCI CC1102

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment					
COCI 1102 001/76054		M W 8:10am - 10:00am 301 Hamilton Hall	Victoria Wiet	4	22/22	COCI 1102 020/25305	206 Broadway Residence Hall M W 2:10pm - 4:00pm	Giulia Bonasio	4	18/22
COCI 1102 002/16180		M W 8:10am - 10:00am 302 Hamilton Hall	Ethan Yee	4	22/22	COCI 1102 021/28969	109 Hartley Hall M W 2:10pm - 4:00pm	Robert Goodman	4	14/22
COCI 1102 003/19799		M W 10:10am - 12:00pm 301 Hamilton Hall	Charles Armstrong	4	22/22	COCI 1102 022/26019	111 Carman Hall M W 2:10pm - 4:00pm	Alana Hein	4	9/22
COCI 1102 004/24402		M W 10:10am - 12:00pm 306 Hamilton Hall	Michael Stanislawski	4	22/22	COCI 1102 023/70640	652 Schermerhorn Hall M W 4:10pm - 6:00pm	Mark Lilla	4	21/22
COCI 1102 005/25120		M W 10:10am - 12:00pm 302 Hamilton Hall	Manan Ahmed	4	21/22	COCI 1102 024/62506	306 Hamilton Hall M W 4:10pm - 6:00pm	Roosevelt Montas	4	22/22
COCI 1102 006/11851		M W 10:10am - 12:00pm 206 Broadway Residence Hall	Stathis Gourgouris	4	22/22	COCI 1102 025/60591	302 Hamilton Hall M W 4:10pm - 6:00pm	Kathy Eden	4	22/22
COCI 1102 007/23430		M W 10:10am - 12:00pm 111 Carman Hall	Kevin Elliott	4	19/22	COCI 1102 026/71032	301 Hamilton Hall M W 4:10pm - 6:00pm	Candace Cunard	4	21/22
COCI 1102 008/66938		M W 10:10am - 12:00pm 309 Hamilton Hall	Courtney Bender	4	22/22	COCI 1102 027/74735	206 Broadway Residence Hall M W 4:10pm - 6:00pm	Guido Parietti	4	21/22
COCI 1102 009/16505		M W 12:10pm - 2:00pm 301 Hamilton Hall	Mark Lilla	4	22/22	COCI 1102 028/68933	111 Carman Hall M W 4:10pm - 6:00pm	Rebecca Lossin	4	21/22
COCI 1102 010/19107		M W 12:10pm - 2:00pm 306 Hamilton Hall	Jason Resnikoff	4	22/22	COCI 1102 029/26245	109 Hartley Hall M W 4:10pm - 6:00pm	Richard John	4	22/22
COCI 1102 011/10261		M W 12:10pm - 2:00pm 206 Broadway Residence Hall	Charles McNamara	4	19/22	COCI 1102 030/15146	309 Hamilton Hall M W 4:10pm - 6:00pm	Joelle Abi-Rached	4	22/22
COCI 1102 012/20765		M W 12:10pm - 2:00pm 111 Carman Hall	Kevin Elliott	4	22/22	COCI 1102 031/76323	315 Hamilton Hall M W 6:10pm - 8:00pm	Brittany Koffer	4	22/22
COCI 1102 013/27825		M W 12:10pm - 2:00pm 302 Hamilton Hall	Bruno Bosteels	4	22/22	COCI 1102 032/60045	301 Hamilton Hall M W 6:10pm - 8:00pm	Jeremy Forster	4	22/22
COCI 1102 014/63032		M W 12:10pm - 2:00pm 309 Hamilton Hall	Benjamin Barasch	4	19/22	COCI 1102 033/72957	302 Hamilton Hall T Th 8:10am - 10:00am	Campbell Birch	4	22/22
COCI 1102 015/21540		M W 2:10pm - 4:00pm 302 Hamilton Hall	Turkuler Isiksel	4	22/22	COCI 1102 034/18153	206 Broadway Residence Hall T Th 8:10am - 10:00am	Tianna Uchacz	4	19/22
COCI 1102 016/62359		M W 2:10pm - 4:00pm 306 Hamilton Hall	Joshua Simon	4	21/22	COCI 1102 035/76433	111 Carman Hall T Th 10:10am - 12:00pm	Emmanuelle Saada	4	22/22
COCI 1102 017/68703		M W 2:10pm - 4:00pm 313 Pupin Laboratories	Emily Jones	4	21/22	COCI 1102 036/19438	306 Hamilton Hall T Th 10:10am - 12:00pm	Neslihan Senocak	4	22/22
COCI 1102 018/76634		M W 2:10pm - 4:00pm 224 Pupin Laboratories	Tunc Sen	4	20/22	COCI 1102 037/27495	111 Carman Hall T Th 10:10am - 12:00pm	Daniel del Nido	4	20/22
COCI 1102 019/21231		M W 2:10pm - 4:00pm	Lamyu Bo	4	22/22	COCI 1102 038/15931	601b Fairchild Life Sciences Bldg T Th 10:10am - 12:00pm	Nicole Callahan	4	22/22
						COCI 1102 039/15272	109 Hartley Hall T Th 10:10am - 12:00pm	Thomas Dodman	4	20/22

COCI 1102 040/64516	T Th 10:10am - 12:00pm 425 Pupin Laboratories	David Eisenbach	4	21/22
COCI 1102 041/27471	T Th 10:10am - 12:00pm 616 Hamilton Hall	Harro Mueller	4	20/22
COCI 1102 042/71395	T Th 2:10pm - 4:00pm 302 Hamilton Hall	Elisabeth Ladenson	4	17/22
COCI 1102 043/73664	T Th 2:10pm - 4:00pm 306 Hamilton Hall	Richard Billows	4	22/22
COCI 1102 044/22718	T Th 2:10pm - 4:00pm 111 Carman Hall	Michelle Chun	4	22/22
COCI 1102 045/11831	T Th 2:10pm - 4:00pm 253 Engineering Terrace	Una Stojnic	4	22/22
COCI 1102 046/66510	T Th 2:10pm - 4:00pm 109 Hartley Hall	Nicole Callahan	4	22/22
COCI 1102 047/24056	T Th 2:10pm - 4:00pm 402 Hamilton Hall	Melissa Fusco	4	22/22
COCI 1102 048/73411	T Th 2:10pm - 4:00pm 325 Pupin Laboratories	Daniel del Nido	4	21/22
COCI 1102 049/12833	T Th 2:10pm - 4:00pm 309 Hamilton Hall	Stephanie Ramsey	4	21/22
COCI 1102 050/70159	T Th 4:10pm - 6:00pm 206 Broadway Residence Hall	Jessica Simon	4	20/22
COCI 1102 051/77653	T Th 4:10pm - 6:00pm 111 Carman Hall	Michelle Chun	4	22/22
COCI 1102 052/14675	T Th 4:10pm - 6:00pm 109 Hartley Hall	Douglas Chalmers	4	22/22
COCI 1102 053/76276	T Th 4:10pm - 6:00pm 301 Hamilton Hall	Luke Mayville	4	21/22
COCI 1102 054/61210	T Th 4:10pm - 6:00pm 425 Pupin Laboratories	Blase Provitola	4	10/22
COCI 1102 055/13597	T Th 4:10pm - 6:00pm 616 Hamilton Hall	Tillmann Taape	4	14/22
COCI 1102 056/11427	T Th 6:10pm - 8:00pm 301 Hamilton Hall	Zachary Herz	4	14/22
COCI 1102 057/27719	T Th 6:10pm - 8:00pm 302 Hamilton Hall	Jeremy Forster	4	22/22
COCI 1102 061/24891	T Th 6:10pm - 8:00pm 109 Hartley Hall	Ignacio Ojea Quintana	4	20/22
COCI 1102 062/13986	T Th 4:10pm - 6:00pm 601b Fairchild Life Sciences Bldg	Luise Papcke	4	20/22

COCI 1102 063/13183	M W 6:10pm - 8:00pm 306 Hamilton Hall	Manuel Bautista Gonzalez	4	21/22
COCI 1102 064/23160	M W 8:10am - 10:00am 306 Hamilton Hall	Charles McNamara	4	19/22

ART HUMANITIES

Chair of Art Humanities

Prof. Matthew McKelway

919 Schermerhorn

212-854-4505

mpm8@columbia.edu

Art Humanities Website (<http://www.college.columbia.edu/core/classes/arthurm.php>)

HUMA UN1121 Masterpieces of Western Art, or “Art Humanities”, has been a degree requirement for all College students and an integral part of the Core Curriculum since 1947. It teaches students how to look at, think about, and engage in critical discussion of the visual arts. It is not a historical survey, but an analytical study of a limited number of monuments and artists. The course focuses on the formal structure of works of architecture, sculpture, painting, and other media, as well as the historical contexts in which these works were made and understood. Among the topics included in the syllabus are the Parthenon, Amiens Cathedral, and works by Raphael, Michelangelo, Bruegel, Bernini, Rembrandt, Goya, Monet, Picasso, Wright, Le Corbusier, Pollock, and Warhol. In addition to discussion-based class meetings, all sections of Art Humanities make extensive use of the vast resources of New York City through field trips to museums, buildings, and monuments. A sophisticated website is an integral part of the course and can be viewed at <http://learn.columbia.edu/mc/arthurm/index.html>.

REGISTRATION PROCEDURE

All information concerning registration in HUMA UN1121 Masterpieces of Western Art is included in the registration materials sent to students. It is the expectation of the College that all students complete *Art Humanities* by the end of their third year.

All Core Curriculum courses, including *Art Humanities*, must be taken for a letter grade. Students may not drop or withdraw from *Art Humanities* after the Core drop deadline (which is also the end of the Change-of-Program period (p. 4)). For more information, see *Registration—Dropping Core Courses*.

COURSES OF INSTRUCTION

HUMA UN1121 Masterpieces of Western Art. 3 points.

Discussion and analysis of the artistic qualities and significance of selected works of painting, sculpture, and architecture from the Parthenon in Athens to works of the 20th century.

Fall 2017: HUMA UN1121

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment						
HUMA 1121	001/63707	M W 8:40am - 9:55am 608 Schermerhorn Hall	Brian van Oppen	3	18/22	HUMA 1121	018/22758	604 Schermerhorn Hall T Th 8:40am - 9:55am 608 Schermerhorn Hall	Page Knox	3	21/22
HUMA 1121	002/76676	M W 10:10am - 11:25am 604 Schermerhorn Hall	Holger Klein	3	22/22	HUMA 1121	019/20108	T Th 10:10am - 11:25am 604 Schermerhorn Hall	Alexandra Helprin	3	19/22
HUMA 1121	003/16767	M W 10:10am - 11:25am 607 Schermerhorn Hall	Isabella Lores-Chavez	3	21/22	HUMA 1121	020/15640	T Th 10:10am - 11:25am 608 Schermerhorn Hall	Kathryn Kremnitzer	3	21/22
HUMA 1121	004/64096	M W 10:10am - 11:25am 608 Schermerhorn Hall	Tiffany Floyd	3	22/22	HUMA 1121	021/29691	T Th 11:40am - 12:55pm 604 Schermerhorn Hall	Alexandra Helprin	3	18/22
HUMA 1121	005/19901	M W 11:40am - 12:55pm 604 Schermerhorn Hall	Michael Sanchez	3	22/22	HUMA 1121	022/16370	T Th 11:40am - 12:55pm 608 Schermerhorn Hall	Rachel Silveri	3	21/22
HUMA 1121	006/12049	M W 11:40am - 12:55pm 607 Schermerhorn Hall	Stephen Zawodzinski	3	20/22	HUMA 1121	023/16778	T Th 1:10pm - 2:25pm 604 Schermerhorn Hall	Lucas Cohen	3	22/22
HUMA 1121	007/19031	M W 11:40am - 12:55pm 608 Schermerhorn Hall	Sophia D'Addio	3	22/22	HUMA 1121	024/25000	T Th 1:10pm - 2:25pm 608 Schermerhorn Hall	Rachel Silveri	3	20/22
HUMA 1121	008/67035	M W 1:10pm - 2:25pm 604 Schermerhorn Hall	Michael Sanchez	3	20/22	HUMA 1121	025/64666	T Th 2:40pm - 3:55pm 604 Schermerhorn Hall	James Chamberlain	3	20/22
HUMA 1121	009/77022	M W 1:10pm - 2:25pm 608 Schermerhorn Hall	Alessandra Di Croce	3	22/22	HUMA 1121	026/25789	T Th 2:40pm - 3:55pm 607 Schermerhorn Hall	Stephen Murray	3	20/22
HUMA 1121	010/21911	M W 2:40pm - 3:55pm 604 Schermerhorn Hall	Michael Waters	3	21/22	HUMA 1121	027/16824	T Th 2:40pm - 3:55pm 608 Schermerhorn Hall	Emogene Cataldo	3	19/22
HUMA 1121	011/71321	M W 2:40pm - 3:55pm 607 Schermerhorn Hall	Nicholas Frobes-Cross	3	21/22	HUMA 1121	028/21219	T Th 4:10pm - 5:25pm 604 Schermerhorn Hall	Susan Sivard	3	22/22
HUMA 1121	012/68404	M W 2:40pm - 3:55pm 608 Schermerhorn Hall	Alessandra Di Croce	3	19/22	HUMA 1121	029/72537	T Th 4:10pm - 5:25pm 608 Schermerhorn Hall	Karin Christiaens	3	20/22
HUMA 1121	013/20308	M W 4:10pm - 5:25pm 604 Schermerhorn Hall	Eleonora Pistis	3	16/22	HUMA 1121	030/28735	T Th 5:40pm - 6:55pm 608 Schermerhorn Hall	Adam Levine	3	21/22
HUMA 1121	014/60900	M W 4:10pm - 5:25pm 607 Schermerhorn Hall	Bailey Barnard	3	18/22	HUMA 1121	031/27031	M W 5:40pm - 6:55pm 607 Schermerhorn Hall	Steven Niedbala	3	16/22
HUMA 1121	015/22229	M W 4:10pm - 5:25pm 608 Schermerhorn Hall	Matthew Gillman	3	22/22	HUMA 1121	032/78282	M W 7:40pm - 8:55pm 608 Schermerhorn Hall	Irina Oryshkevich	3	21/22
HUMA 1121	016/26617	M W 5:40pm - 6:55pm 608 Schermerhorn Hall	Seher Agarwala	3	15/22	HUMA 1121	033/83096	T Th 8:40am - 9:55am 607 Schermerhorn Hall	Diana Mellon	3	17/22
HUMA 1121	017/27800	T Th 8:40am - 9:55am	Elizabeth Perkins	3	22/22						

HUMA 1121	034/87001	T Th 8:40am - 9:55am 934 Schermerhorn Hall	Muge Arseven Cinar	3	20/22	HUMA 1121	007/18554	M W 11:40am - 12:55pm 604 Schermerhorn Hall	Michael Sanchez	3	21/22
HUMA 1121	035/81771	T Th 10:10am - 11:25am 934 Schermerhorn Hall	Daniel Ralston	3	21/22	HUMA 1121	008/26410	M W 11:40am - 12:55pm 607 Schermerhorn Hall	Kathryn Kremnitzer	3	22/22
HUMA 1121	036/14287	T Th 11:40am - 12:55pm 607 Schermerhorn Hall	Daniel Greenberg	3	21/22	HUMA 1121	009/67627	M W 11:40am - 12:55pm 608 Schermerhorn Hall	Isabella Loes-Chavez	3	22/22
HUMA 1121	037/12549	T Th 2:40pm - 3:55pm 832 Schermerhorn Hall	Leah Pires	3	19/22	HUMA 1121	010/77017	M W 1:10pm - 2:25pm 604 Schermerhorn Hall	Michael Sanchez	3	22/22
HUMA 1121	038/15798	T Th 5:40pm - 6:55pm 604 Schermerhorn Hall	Martina Mims	3	20/22	HUMA 1121	011/25267	M W 1:10pm - 2:25pm 607 Schermerhorn Hall	Nicholas Frobes-Cross	3	21/22
HUMA 1121	039/16899	T Th 5:40pm - 6:55pm 607 Schermerhorn Hall	Rachel Engler	3	19/22	HUMA 1121	012/66270	M W 1:10pm - 2:25pm 608 Schermerhorn Hall	Alessandra Di Croce	3	21/22
HUMA 1121	040/28148	M W 8:40am - 9:55am 930 Schermerhorn Hall	Cathy Zhu	3	19/22	HUMA 1121	013/24116	M W 2:40pm - 3:55pm 604 Schermerhorn Hall	Robert Harrist	3	18/22
HUMA 1121	041/27783	M W 1:10pm - 2:25pm 607 Schermerhorn Hall	Nicholas Frobes-Cross	3	20/22	HUMA 1121	014/18100	M W 2:40pm - 3:55pm 607 Schermerhorn Hall	Nicholas Frobes-Cross	3	22/22
HUMA 1121	042/63022	T Th 10:10am - 11:25am 607 Schermerhorn Hall	Diane Bodart	3	19/22	HUMA 1121	015/62038	M W 2:40pm - 3:55pm 608 Schermerhorn Hall	Alessandra Di Croce	3	21/22
HUMA 1121	043/69272	T Th 4:10pm - 5:25pm 607 Schermerhorn Hall	Jeewon Kim	3	20/22	HUMA 1121	016/69864	M W 2:40pm - 3:55pm 934 Schermerhorn Hall	Adam Levine	3	22/22
Spring 2018: HUMA UN1121						HUMA 1121	017/71128	M W 4:10pm - 5:25pm 604 Schermerhorn Hall	Bailey Barnard	3	21/22
Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment	HUMA 1121	018/72524	M W 4:10pm - 5:25pm 607 Schermerhorn Hall	Stephen Zawodzinski	3	18/22
HUMA 1121	001/23074	M W 8:40am - 9:55am 604 Schermerhorn Hall	Muge Arseven Cinar	3	22/22	HUMA 1121	019/64506	M W 4:10pm - 5:25pm 608 Schermerhorn Hall	Jeewon Kim	3	22/22
HUMA 1121	002/22344	M W 8:40am - 9:55am 607 Schermerhorn Hall	Marta Becherini	3	18/22	HUMA 1121	020/12916	M W 5:40pm - 6:55pm 604 Schermerhorn Hall	Matthew Gillman	3	21/22
HUMA 1121	003/12186	M W 8:40am - 9:55am 608 Schermerhorn Hall	Caroline Wamsler	3	20/22	HUMA 1121	021/60285	M W 5:40pm - 6:55pm 607 Schermerhorn Hall	Olivia Powell	3	22/22
HUMA 1121	004/73831	M W 10:10am - 11:25am 604 Schermerhorn Hall	Dawn Delbanco	3	21/22	HUMA 1121	022/70739	T Th 8:40am - 9:55am 604 Schermerhorn Hall	Steven Niedbala	3	19/22
HUMA 1121	005/18670	M W 10:10am - 11:25am 607 Schermerhorn Hall	Marta Becherini	3	22/22	HUMA 1121	023/23962	T Th 8:40am - 9:55am 607 Schermerhorn Hall	Brian van Oppen	3	19/22
HUMA 1121	006/75387	M W 10:10am - 11:25am 608 Schermerhorn Hall	Martina Mims	3	22/22						

HUMA 1121	024/74208	T Th 8:40am - 9:55am 608 Schermerhorn Hall	Tiffany Floyd	3	18/22
HUMA 1121	025/12033	T Th 10:10am - 11:25am 604 Schermerhorn Hall	Noam Elcott	3	16/22
HUMA 1121	026/22174	T Th 10:10am - 11:25am 607 Schermerhorn Hall	Alexandra Helprin	3	17/22
HUMA 1121	027/63269	T Th 10:10am - 11:25am 608 Schermerhorn Hall	Cathy Zhu	3	19/22
HUMA 1121	028/11825	T Th 10:10am - 11:25am 934 Schermerhorn Hall	Diana Mellon	3	22/22
HUMA 1121	029/21879	T Th 11:40am - 12:55pm 604 Schermerhorn Hall	Rachel Silveri	3	21/22
HUMA 1121	030/19062	T Th 11:40am - 12:55pm 607 Schermerhorn Hall	Alexandra Helprin	3	22/22
HUMA 1121	031/72768	T Th 11:40am - 12:55pm 608 Schermerhorn Hall	Lucas Cohen	3	21/22
HUMA 1121	032/20141	T Th 1:10pm - 2:25pm 604 Schermerhorn Hall	Page Knox	3	22/22
HUMA 1121	033/15120	T Th 1:10pm - 2:25pm 607 Schermerhorn Hall	Yoko Hara	3	21/22
HUMA 1121	034/26049	T Th 1:10pm - 2:25pm 608 Schermerhorn Hall	Sandrine Larrive-Bass	3	21/22
HUMA 1121	035/72196	T Th 2:40pm - 3:55pm 604 Schermerhorn Hall	Susan Sivard	3	22/22
HUMA 1121	036/72396	T Th 2:40pm - 3:55pm 607 Schermerhorn Hall	Sophia D'Addio	3	19/22
HUMA 1121	037/72448	T Th 2:40pm - 3:55pm 608 Schermerhorn Hall	Karin Christiaens	3	17/22
HUMA 1121	038/72547	T Th 4:10pm - 5:25pm 604 Schermerhorn Hall	Emogene Cataldo	3	21/22
HUMA 1121	039/72646	T Th 4:10pm - 5:25pm 607 Schermerhorn Hall	Leah Pires	3	17/22
HUMA 1121	040/72798	T Th 4:10pm - 5:25pm 608 Schermerhorn Hall	Daniel Ralston	3	22/22

HUMA 1121	041/72947	T Th 5:40pm - 6:55pm 604 Schermerhorn Hall	Irina Oryshkevich	3	22/22
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MUSIC HUMANITIES

Chair of Music Humanities

Prof. Giuseppe Gerbino
621 Dodge
212-854-6299
gg2024@columbia.edu

Music Humanities Website (<http://www.college.columbia.edu/core/classes/mh.php>)

Part of the Core Curriculum since 1947, *HUMA UN1123 Masterpieces of Western Music*, or “Music Humanities,” aims to instill in students a basic comprehension of the many forms of the Western musical imagination. Its specific goals are to awaken and encourage in students an appreciation of music in the Western world, to help them learn to respond intelligently to a variety of musical idioms, and to engage them in the issues of various debates about the character and purposes of music that have occupied composers and musical thinkers since ancient times. The course attempts to involve students actively in the process of critical listening, both in the classroom and in concerts that the students attend and write about. The extraordinary richness of musical life in New York is thus an integral part of the course. Although not a history of Western music, the course is taught in a chronological format and includes masterpieces by Josquin des Prez, Monteverdi, Bach, Handel, Mozart, Haydn, Beethoven, Verdi, Wagner, Schoenberg, and Stravinsky, among others. Since 2004, the works of jazz composers and improvisers, such as Louis Armstrong, Duke Ellington, and Charlie Parker, have been added to the list of masterpieces to be studied in this class. Music Humanities digital resources can be viewed at <http://www.columbia.edu/itc/music>.

REGISTRATION PROCEDURE

All information concerning registration in HUMA UN1123 *Masterpieces of Western Music* is included in the registration materials sent to students. It is the expectation of the College that all students complete *Music Humanities* by the end of their third year.

All Core Curriculum courses, including *Music Humanities*, must be taken for a letter grade. Students may not drop or withdraw from *Music Humanities* after the Core drop deadline (which is also the end of the Change-of-Program period (p. 4)). For more information, see *Registration—Dropping Core Courses*.

COURSES OF INSTRUCTION

HUMA UN1123 Masterpieces of Western Music. 3 points.

Analysis and discussion of representative works from the Middle Ages to the present.

Fall 2017: HUMA UN1123

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment	HUMA 1123	022/68054	T Th 10:10am - 11:25am 716 Hamilton Hall	Elise Bonner	3	21/25
HUMA 1123	001/11754	M W 8:40am - 9:55am 404 Dodge Building	Matthew Ricketts	3	24/25	HUMA 1123	023/63023	T Th 1:10pm - 2:25pm 405 Dodge Building	Anne Levitsky	3	24/25
HUMA 1123	002/16274	M W 8:40am - 9:55am 405 Dodge Building	Thomas Smith	3	22/25	HUMA 1123	024/22791	T Th 1:10pm - 2:25pm 716 Hamilton Hall	Carl Bettendorf	3	25/25
HUMA 1123	003/60526	M W 8:40am - 9:55am 622 Dodge Building	Laura Weber	3	19/25	HUMA 1123	025/77448	T Th 2:40pm - 3:55pm 404 Dodge Building	Magdalena Baczevska	3	24/25
HUMA 1123	004/14456	M W 10:10am - 11:25am 404 Dodge Building	Matthew Ricketts	3	25/25	HUMA 1123	026/11345	T Th 2:40pm - 3:55pm 405 Dodge Building	Velia Ivanova	3	23/25
HUMA 1123	005/27530	M W 10:10am - 11:25am 405 Dodge Building	Samuel Yulsman	3	21/25	HUMA 1123	027/24142	T Th 2:40pm - 3:55pm 716 Hamilton Hall	Mahir Cetiz	3	24/25
HUMA 1123	006/29345	M W 10:10am - 11:25am 716 Hamilton Hall	Jane Forner	3	24/25	HUMA 1123	028/69420	T Th 4:10pm - 5:25pm 404 Dodge Building	Mary Robb	3	17/25
HUMA 1123	007/10740	M W 1:10pm - 2:25pm 622 Dodge Building	Ralph Whyte	3	24/25	HUMA 1123	029/72977	T Th 4:10pm - 5:25pm 405 Dodge Building	Joshua Mailman	3	15/25
HUMA 1123	008/11340	M W 1:10pm - 2:25pm 716 Hamilton Hall	Mario Cancel-Bigay	3	23/25	HUMA 1123	030/66083	T Th 4:10pm - 5:25pm 716 Hamilton Hall	Mahir Cetiz	3	24/25
HUMA 1123	009/62574	M W 2:40pm - 3:55pm 404 Dodge Building	Taylor Brook	3	23/25	HUMA 1123	031/18871	T Th 6:10pm - 7:25pm 404 Dodge Building	Ryan Pratt	3	24/25
HUMA 1123	010/20262	M W 2:40pm - 3:55pm 405 Dodge Building	Maja Cerar	3	24/25	HUMA 1123	032/72259	T Th 6:10pm - 7:25pm 716 Hamilton Hall	Daniel Chiarilli	3	24/25
HUMA 1123	011/12135	M W 2:40pm - 3:55pm 716 Hamilton Hall	Marilyn McCoy	3	25/25	Spring 2018: HUMA UN1123					
HUMA 1123	012/18079	M W 4:10pm - 5:25pm 404 Dodge Building	Rachel Chung	3	25/25	HUMA 1123	001/11163	M W 8:40am - 9:55am 404 Dodge Building	Matthew Ricketts	3	25/25
HUMA 1123	013/93647	M W 4:10pm - 5:25pm 405 Dodge Building	Rodolfo Toledo	3	22/25	HUMA 1123	002/72879	M W 8:40am - 9:55am 405 Dodge Building	Mario Diaz de Leon	3	24/25
HUMA 1123	014/61881	M W 4:10pm - 5:25pm 716 Hamilton Hall	Julia Hamilton	3	22/25	HUMA 1123	003/27287	M W 10:10am - 11:25am 404 Dodge Building	Matthew Ricketts	3	24/25
HUMA 1123	015/23298	M W 6:10pm - 7:25pm 404 Dodge Building	Mark DeBellis	3	22/25	HUMA 1123	004/26194	M W 10:10am - 11:25am 405 Dodge Building	Qingfan Jiang	3	22/25
HUMA 1123	016/26893	M W 6:10pm - 7:25pm 405 Dodge Building	Rodolfo Toledo	3	23/25	HUMA 1123	005/72481	M W 1:10pm - 2:25pm 622 Dodge Building	Christopher Washburne	3	25/25
HUMA 1123	017/67116	T Th 8:40am - 9:55am 404 Dodge Building	Mario Diaz de Leon	3	24/25	HUMA 1123	006/17270	M W 1:10pm - 2:25pm 716 Hamilton Hall	Alexander Rothe	3	24/25
HUMA 1123	018/67986	T Th 8:40am - 9:55am 405 Dodge Building	Alexander Rothe	3	23/25	HUMA 1123	007/68112	M W 2:40pm - 3:55pm 404 Dodge Building	Elaine Sisman	3	25/25
HUMA 1123	019/64719	T Th 8:40am - 9:55am 622 Dodge Building	Ashkan Behzadi	3	22/25	HUMA 1123	008/26680	M W 2:40pm - 3:55pm 405 Dodge Building	Anne Levitsky	3	25/25
HUMA 1123	020/17155	T Th 10:10am - 11:25am 404 Dodge Building	Mario Diaz de Leon	3	24/25	HUMA 1123	009/70688	M W 2:40pm - 3:55pm 716 Hamilton Hall	Paula Harper	3	25/25
HUMA 1123	021/74227	T Th 10:10am - 11:25am 405 Dodge Building	Alexander Rothe	3	25/25	HUMA 1123	010/76861	M W 4:10pm - 5:25pm 404 Dodge Building	Mahir Cetiz	3	24/25

HUMA 1123	011/16756	M W 4:10pm - 5:25pm 405 Dodge Building	Lucie Vagnerova	3	25/25
HUMA 1123	012/12183	M W 4:10pm - 5:25pm 716 Hamilton Hall	Joshua Mailman	3	22/25
HUMA 1123	013/70964	M W 6:10pm - 7:25pm 404 Dodge Building	Mahir Cetiz	3	25/25
HUMA 1123	014/29535	M W 6:10pm - 7:25pm 405 Dodge Building	Lucie Vagnerova	3	21/25
HUMA 1123	015/29328	T Th 8:40am - 9:55am 404 Dodge Building	Julia Hamilton	3	19/25
HUMA 1123	016/76488	T Th 8:40am - 9:55am 405 Dodge Building	Velia Ivanova	3	22/25
HUMA 1123	017/22951	T Th 10:10am - 11:25am 404 Dodge Building	Laura Weber	3	25/25
HUMA 1123	018/72983	T Th 10:10am - 11:25am 405 Dodge Building	Jane Forner	3	25/25
HUMA 1123	019/71643	T Th 1:10pm - 2:25pm 404 Dodge Building	Bradford Garton	3	25/25
HUMA 1123	020/16705	T Th 1:10pm - 2:25pm 716 Hamilton Hall	Mario Cancel-Bigay	3	25/25
HUMA 1123	021/70076	T Th 2:40pm - 3:55pm 404 Dodge Building	Magdalena Baczewska	3	18/20
HUMA 1123	022/23146	T Th 2:40pm - 3:55pm 405 Dodge Building	Mary Robb	3	24/25
HUMA 1123	023/29382	T Th 2:40pm - 3:55pm 716 Hamilton Hall	Taylor Brook	3	23/25
HUMA 1123	024/12877	T Th 4:10pm - 5:25pm 404 Dodge Building	Carl Bettendorf	3	25/25
HUMA 1123	025/60471	T Th 4:10pm - 5:25pm 405 Dodge Building	Giuseppe Gerbino	3	25/25
HUMA 1123	026/60983	T Th 4:10pm - 5:25pm 716 Hamilton Hall	Elise Bonner	3	22/25
HUMA 1123	027/65133	T Th 6:10pm - 7:25pm 404 Dodge Building	Kevin Holt	3	22/25
HUMA 1123	028/75857	T Th 6:10pm - 7:25pm 716 Hamilton Hall	Michael Weinstein-Reiman	3	19/25
HUMA 1123	029/19317	M W 8:40am - 9:55am 622 Dodge Building	Thomas Smith	3	25/25
HUMA 1123	030/64729	M W 10:10am - 11:25am 716 Hamilton Hall	Alexander Rothe	3	24/25
HUMA 1123	031/11453	M W 6:10pm - 7:25pm 716 Hamilton Hall	Maria Fantinato Geo de Siqueira	3	23/25
HUMA 1123	032/27228	T Th 8:40am - 9:55am 622 Dodge Building	Samuel Yulsman	3	24/25

HUMA 1123	033/74244	T Th 10:10am - 11:25am 716 Hamilton Hall	David Bird	3	24/25
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EXEMPTION FROM MUSIC HUMANITIES

Although all Columbia students are expected to take *Music Humanities*, there are some students who enter with exceptional musical backgrounds that may qualify them for exemption. Exemption from *Music Humanities* may be obtained by passing an Exemption Exam. In the case of transfer students, exemption may also be obtained by filing a course substitution request.

Exemption Exam

The Exemption Exam is offered on the first Friday of the fall semester by the Music Department (621 Dodge Hall). Students who matriculate in the spring semester should take the exam in the following fall term. Students may take the exam only once during their first year at Columbia. If they do not pass the exam, they must enroll in a section of *Music Humanities*.

Course Substitution

In addition to the Exemption Exam, students with approved transfer credit have the option of requesting exemption on the basis of a similar music course passed with a grade of B or higher at another college or university. This exemption must be requested during the student's first semester at Columbia. Petitions submitted in subsequent semesters will not be considered by the Center for the Core Curriculum.

FRONTIERS OF SCIENCE

Chair of Frontiers of Science

Prof. David J. Helfand
1008B Pupin Hall
212-854-6876
djh@astro.columbia.edu

Frontiers of Science Website (<http://www.college.columbia.edu/core/classes/fos.php>)

SCNC CC1000 Frontiers of Science and *SCNC CC1100 Frontiers of Science: Discussion* is a one-semester course that integrates modern science into the Core Curriculum. The course includes lectures and seminar sections. On Mondays throughout the semester, each of Columbia's leading scientists present a mini-series of lectures. During the rest of the week, senior faculty and Columbia post-doctoral science fellows (research scientists selected for their teaching abilities) lead seminar sections limited to twenty-two students to discuss the lecture and its associated readings, and to debate the implications of the most recent scientific discoveries. *Frontiers of Science* satisfies one of the three required courses of the science requirement for Columbia College.

REGISTRATION PROCEDURE

All information concerning registration in *SCNC CC1000 Frontiers of Science* is included in the registration materials sent to students. All first-year students are preregistered in *Frontiers of Science*. Prospective science majors may petition the Committee on Science Instruction to be allowed to postpone taking *Frontiers of Science* until their sophomore year, if they are enrolled in the following courses during their first-year in the College:

1. Literature Humanities (HUMA CC1001);
2. A mathematics course;
3. A language course at the elementary II level or above;
4. One of the following science major sequences:

CHEM UN2045 Intensive Organic Chemistry I
- CHEM UN2046 (Lecture)
and Intensive Organic
Chemistry II (Lecture) (formerly
CHEM W3045-CHEM W3046)

PHYS UN1601 Physics, I: Mechanics and
- PHYS UN1602 Relativity
and Physics, II: Thermodynamics,
Electricity, and Magnetism

PHYS UN2801 Accelerated Physics I
- PHYS UN2802 and Accelerated Physics II

Students wishing to petition to postpone should do so in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) located in 403 Lerner.

All Core Curriculum courses, including *Frontiers of Science*, must be taken for a letter grade. Students may not drop or withdraw from *Frontiers of Science* after the Core drop deadline (which is also the end of the Change-of-Program period (p. 4)). For more information, see *Registration—Dropping Core Courses*.

COURSES OF INSTRUCTION

SCNC CC1000 *Frontiers of Science*. 4 points.

Corequisites: SCNC CC1100

The principal objectives of *Frontiers of Science* are to engage students in the process of discovery by exploring topics at the forefront of science and to inculcate or reinforce the specific habits of mind that inform a scientific perspective on the world. Sample topics include the brain and behavior, global climate change, relativity, and biodiversity, among others. Taught by members of natural science departments and Columbia Science Fellows.

Fall 2017: SCNC CC1000

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
SCNC 1000	001/61636	M 10:30am - 12:00pm 147 Horace Mann Bldg	David Helfand, Ivana Hughes, Orit Karni-Schmidt, Statia Luszcz-Cook, Mariangels	4	551/570

de Planell
Saguer,
Ellen
Crapster-
Pregont,
Klejda
Bega, Logan
Brenner,
Rachel
Kennedy-
Smith,
Traci
Kantarski,
Pierre
Cristofari,
Prahla
Kumar
Routh,
Fabrizio
Spagnolo,
Tammo
Reichgelt,
Martina
Lessio

Spring 2018: SCNC CC1000

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
SCNC 1000	001/23095	M 10:30am - 12:00pm 147 Horace Mann Bldg	Ivana Hughes	4	529/570

UNIVERSITY WRITING

Director of the Undergraduate Writing Program

Dr. Nicole B. Wallack

310 Philosophy

212-854-3886

nw2108@columbia.edu

Undergraduate Writing Program Office

310 Philosophy

212-854-3886

uwp@columbia.edu

Undergraduate Writing Website (<http://www.college.columbia.edu/core/uwp>)

ENGL CC1010 University Writing is designed to help undergraduates read and write essays in order to participate in the academic conversations that form Columbia's intellectual community. The course gives special attention to the practices of close reading, rhetorical analysis, research, collaboration, and substantive revision. By writing multiple drafts of essays typically ranging from three to ten pages, students will learn that writing is a process of forming and refining their ideas and their prose. Rather than approaching writing as an innate talent, the course teaches writing as a unique skill that can be practiced and developed. Each section of University Writing has a theme. None presume that students will arrive with any background in that area.

COURSES OF INSTRUCTION

ENGL CC1010 University Writing. 3 points.

University Writing helps undergraduates engage in the conversations that form our intellectual community. By reading and writing about scholarly and popular essays, students learn that writing is a process of continual refinement of ideas. Rather than approaching writing as an innate talent, this course teaches writing as a learned skill. We give special attention to textual analysis, research, and revision practices. *University Writing* offers the following themed sections, all of which welcome students with no prior experience studying the theme. Students interested in a particular theme should register for the section within the specified range of section numbers. *UW: Contemporary Essays (sections from 001 to 069)*. Features contemporary essays from a variety of fields. *UW: Readings in Music (sections in the 070s)*. Features essays that analyze the politics, histories, communities, philosophies, and techniques of music-making, from the classical to the contemporary. *UW: Readings in American Studies (sections in the 100s)*. Features essays that explore the culture, history, and politics that form American identity. *UW: Readings in Gender and Sexuality (sections in the 200s)*. Features essays that examine relationships among sex, gender, sexuality, race, class, and other forms of identity. *UW: Readings in Human Rights (sections in the 400s)*. Features essays that investigate the ethics of belonging to a community and issues of personhood, identity, representation, and action. *UW: Readings in Data Sciences (sections in the 500s)*. Features essays that study how our data-saturated society challenges conceptions of cognition, autonomy, identity, and privacy. *UW: Readings in Medical-Humanities (sections in the 600s)*. Features essays that explore the disciplines of biomedical ethics and medical anthropology, to challenge our basic assumptions about medicine, care, sickness, and health. *University Writing for International Students (sections in the 900s)*. Open only to international students, these sections emphasize the transition to American academic writing cultures through the study of contemporary essays from a variety of fields. For further details about these classes, please visit: <http://www.college.columbia.edu/core/uwp>.

Fall 2017: ENGL CC1010

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ENGL 1010	002/17848	M W 8:40am - 9:55am 201b Philosophy Hall	Bernadette Myers	3	14/14
ENGL 1010	003/16798	M W 8:40am - 9:55am 408a Philosophy Hall	Anya Lewis-Meeks	3	14/14
ENGL 1010	005/22346	M W 10:10am - 11:25am 408a Philosophy Hall	Nitzan Rotenberg	3	13/14
ENGL 1010	006/28098	M W 10:10am - 11:25am 616 Hamilton Hall	Akua Banful	3	14/14
ENGL 1010	008/92081	M W 11:40am - 12:55pm	Iris Cushing	3	14/14

ENGL 1010	009/60286	408a Philosophy Hall M W 11:40am - 12:55pm	Theresa Jefferson	3	14/14
ENGL 1010	012/26032	315 Hamilton Hall M W 1:10pm - 2:25pm	Walter Gordon	3	13/14
ENGL 1010	013/83782	408a Philosophy Hall M W 1:10pm - 2:25pm	Jessica Engebretson	3	13/14
ENGL 1010	014/11283	307 Mathematics Building M W 1:10pm - 2:25pm	Shoshana Akabas	3	14/14
ENGL 1010	015/16552	201b Philosophy Hall M W 2:40pm - 3:55pm	Adam Horn	3	14/14
ENGL 1010	017/25998	408a Philosophy Hall M W 2:40pm - 3:55pm	Kent Szlauderbach	3	14/14
ENGL 1010	018/25782	307 Mathematics Building M W 2:40pm - 3:55pm	Nicholas Mayer	3	13/14
ENGL 1010	020/93636	201d Philosophy Hall M W 4:10pm - 5:25pm	Elleza Kelley	3	14/14
ENGL 1010	023/60031	201b Philosophy Hall M W 5:40pm - 6:55pm	Jack Lowery	3	14/14
ENGL 1010	024/82282	201b Philosophy Hall M W 5:40pm - 6:55pm	Daniel Lefferts	3	14/14
ENGL 1010	025/88779	408a Philosophy Hall M W 5:40pm - 6:55pm	Elizabeth McIntosh	3	14/14
ENGL 1010	027/13034	307 Mathematics Building T Th 8:40am - 9:55am	Allaire Conte	3	13/14
ENGL 1010	029/72349	201b Philosophy Hall T Th 8:40am - 9:55am	Meadhbh McHugh	3	13/14
ENGL 1010	032/76797	307 Mathematics Building T Th 10:10am - 11:25am	Ameya Tripathi	3	13/14
ENGL 1010	036/81451	201b Philosophy Hall T Th 11:40am - 12:55pm	Olivia Rutigliano	3	14/14
ENGL 1010	039/90800	201b Philosophy Hall T Th 1:10pm - 2:25pm	Marcus Creaghan	3	14/14
ENGL 1010	040/98148	307 Mathematics Building T Th 1:10pm - 2:25pm	Synne Borgen	3	13/14
		315 Hamilton Hall			

ENGL 1010	044/85284	T Th 2:40pm - 3:55pm 307 Mathematics Building	Julia Simons	3	14/14			201b Philosophy Hall				
						ENGL 1010	402/68198	M W 4:10pm - 5:25pm 408a Philosophy Hall	Timothy Lundy	3	14/14	
ENGL 1010	046/11351	T Th 4:10pm - 5:25pm 201b Philosophy Hall	Nolan Gear	3	13/14							
						ENGL 1010	403/68449	T Th 8:40am - 9:55am 201d Philosophy Hall	Stephen Preskill	3	13/14	
ENGL 1010	047/16000	T Th 4:10pm - 5:25pm 408a Philosophy Hall	Francois Olivier	3	14/14							
						ENGL 1010	404/70998	T Th 2:40pm - 3:55pm 502 Northwest Corner	Kevin Windhauser	3	12/14	
ENGL 1010	049/23397	T Th 4:10pm - 5:25pm 201d Philosophy Hall	Therese Cox	3	13/14							
						ENGL 1010	501/98746	M W 11:40am - 12:55pm 507 Hamilton Hall	Marianna Staroselsky	3	14/14	
ENGL 1010	051/27347	T Th 5:40pm - 6:55pm 201b Philosophy Hall	Shelby Wardlaw	3	14/14							
						ENGL 1010	502/88012	T Th 2:40pm - 3:55pm 425 Pupin Laboratories	Jonathan Reeve	3	13/14	
ENGL 1010	053/13015	T Th 5:40pm - 6:55pm 307 Mathematics Building	Li Qi Peh	3	13/14							
						ENGL 1010	503/86206	T Th 8:40am - 9:55am 408a Philosophy Hall	Jenna Schoen	3	14/14	
ENGL 1010	075/21099	M W 1:10pm - 2:25pm 502 Northwest Corner	Simon Porzak	3	14/14							
						ENGL 1010	601/22797	M W 10:10am - 11:25am 412 Pupin Laboratories	Tibo Halsberghe	3	14/14	
ENGL 1010	076/21549	T Th 10:10am - 11:25am 408a Philosophy Hall	Aidan Levy	3	14/14							
						ENGL 1010	602/23099	T Th 11:40am - 12:55pm 307 Mathematics Building	Abigail Rabinowitz	3	14/14	
ENGL 1010	101/87782	M W 11:40am - 12:55pm 613 Hamilton Hall	Lisa Foad	3	14/14							
						ENGL 1010	603/23299	T Th 2:40pm - 3:55pm 405 Kent Hall	Abigail Rabinowitz	3	14/14	
ENGL 1010	102/86704	T Th 1:10pm - 2:25pm 408a Philosophy Hall	Samuel Carpenter	3	14/14							
						ENGL 1010	901/29031	M W 4:10pm - 5:25pm 201d Philosophy Hall	Rebecca Sonkin	3	14/14	
ENGL 1010	103/14697	T Th 4:10pm - 5:25pm 307 Mathematics Building	Dennis Tang	3	14/14							
						ENGL 1010	902/23448	T Th 5:40pm - 6:55pm 502 Northwest Corner	Justin Snider	3	14/14	
ENGL 1010	104/62288	M W 5:40pm - 6:55pm 401 Hamilton Hall	Trevor Corson	3	14/14							
						ENGL 1010	903/93442	T Th 2:40pm - 3:55pm 201d Philosophy Hall	Vanessa Guida	3	14/14	
ENGL 1010	201/12400	M W 8:40am - 9:55am 307 Mathematics Building	Chelsea Spata	3	14/14							
						Spring 2018: ENGL CC1010						
						Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment	
ENGL 1010	202/20798	M W 2:40pm - 3:55pm 502 Northwest Corner	Alessia Palanti	3	14/14	ENGL 1010	001/14709	M W 8:40am - 9:55am 201b Philosophy Hall	Theresa Jefferson	3	10/14	
ENGL 1010	203/21197	T Th 10:10am - 11:25am 522b Kent Hall	Emma de Beus	3	14/14	ENGL 1010	002/65664	M W 8:40am - 9:55am 201d Philosophy Hall	Nicholas Mayer	3	11/14	
ENGL 1010	204/21550	T Th 11:40am - 12:55pm 408a Philosophy Hall	Olivia Ciacci	3	14/14	ENGL 1010	003/70127	M W 8:40am - 9:55am 408a Philosophy Hall	Meadhbh McHugh	3	14/14	
ENGL 1010	205/21848	T Th 1:10pm - 2:25pm 412 Pupin Laboratories	Allen Durgin	3	14/14	ENGL 1010	005/71728	M W 10:10am - 11:25am 201b Philosophy Hall	Rebecca Wisor	3	14/14	
ENGL 1010	401/67746	M W 10:10am - 11:25am	Rebecca Wisor	3	14/14							

ENGL 1010	006/73734	M W 10:10am - 11:25am 201d Philosophy Hall	Akua Banful	3	14/14	ENGL 1010	042/21500	T Th 2:40pm - 3:55pm 201b Philosophy Hall	Nitzan Rotenberg	3	11/14
ENGL 1010	007/10986	M W 10:10am - 11:25am 408a Philosophy Hall	Olivia Rutigliano	3	14/14	ENGL 1010	046/75251	T Th 4:10pm - 5:25pm 201b Philosophy Hall	Jason Ueda	3	13/14
ENGL 1010	011/70006	M W 1:10pm - 2:25pm 201d Philosophy Hall	Daniella Cadiz Bedini	3	14/14	ENGL 1010	047/24870	T Th 4:10pm - 5:25pm 201d Philosophy Hall	G'Ra Asim	3	14/14
ENGL 1010	015/77282	M W 1:10pm - 2:25pm 522d Kent Hall	Montana Ray	3	13/14	ENGL 1010	048/20067	T Th 4:10pm - 5:25pm 408a Philosophy Hall	Adam Horn	3	13/14
ENGL 1010	017/68951	M W 2:40pm - 3:55pm 253 Engineering Terrace	Elleza Kelley	3	14/14	ENGL 1010	049/19020	T Th 4:10pm - 5:25pm 307 Mathematics Building	Shoshana Akabas	3	14/14
ENGL 1010	019/76536	M W 4:10pm - 5:25pm 201b Philosophy Hall	Daniel Lefferts	3	13/14	ENGL 1010	051/15669	T Th 5:40pm - 6:55pm 201b Philosophy Hall	Marcus Creaghan	3	14/14
ENGL 1010	025/64082	M W 5:40pm - 6:55pm 201b Philosophy Hall	Jack Lowery	3	13/14	ENGL 1010	054/23029	T Th 5:40pm - 6:55pm 201d Philosophy Hall	Synne Borgen	3	14/14
ENGL 1010	026/15001	M W 5:40pm - 6:55pm 201d Philosophy Hall	Elizabeth McIntosh	3	14/14	ENGL 1010	075/12635	M W 1:10pm - 2:25pm 201b Philosophy Hall	Simon Porzak	3	14/14
ENGL 1010	027/21383	M W 5:40pm - 6:55pm 408a Philosophy Hall	Julia Simmons	3	11/14	ENGL 1010	076/11815	T Th 10:10am - 11:25am 201d Philosophy Hall	Aidan Levy	3	14/14
ENGL 1010	028/74990	T Th 8:40am - 9:55am 201b Philosophy Hall	David Jamieson	3	10/14	ENGL 1010	091/18709	M W 2:40pm - 3:55pm 201d Philosophy Hall	Aaron Ritzenberg	3	14/14
ENGL 1010	029/29773	T Th 8:40am - 9:55am 201d Philosophy Hall	Adam Winters	3	14/14	ENGL 1010	092/64583	M W 4:10pm - 5:25pm 201d Philosophy Hall	Avia Tadmor	3	14/14
ENGL 1010	030/71150	T Th 8:40am - 9:55am 408a Philosophy Hall	Iris Cushing	3	14/14	ENGL 1010	101/61087	M W 11:40am - 12:55pm 201d Philosophy Hall	Trevor Corson	3	11/14
ENGL 1010	032/64568	T Th 10:10am - 11:25am 201b Philosophy Hall	Ameya Tripathi	3	14/14	ENGL 1010	102/10979	M W 1:10pm - 2:25pm 408a Philosophy Hall	Lisa Foad	3	12/14
ENGL 1010	035/64032	T Th 11:40am - 12:55pm 201b Philosophy Hall	Jessica Engebretson	3	14/14	ENGL 1010	103/24530	T Th 1:10pm - 2:25pm 408a Philosophy Hall	Samuel Carpenter	3	13/14
ENGL 1010	037/63498	T Th 11:40am - 12:55pm 201d Philosophy Hall	Vanessa Guida	3	14/14	ENGL 1010	104/12575	T Th 2:40pm - 3:55pm 201d Philosophy Hall	Dennis Tang	3	14/14
ENGL 1010	038/28566	T Th 1:10pm - 2:25pm 201b Philosophy Hall	Francois Olivier	3	14/14	ENGL 1010	201/12193	M W 2:40pm - 3:55pm 307 Mathematics Building	Alessia Palanti	3	14/14
ENGL 1010	040/11789	T Th 1:10pm - 2:25pm 201d Philosophy Hall	Walter Gordon	3	14/14	ENGL 1010	202/25399	M W 4:10pm - 5:25pm 408a Philosophy Hall	Chelsea Spata	3	14/14

ENGL 1010	203/77730	T Th 11:40am - 12:55pm 408a Philosophy Hall	Olivia Ciacci	3	14/14
ENGL 1010	204/13047	T Th 1:10pm - 2:25pm 502 Northwest Corner	Emma de Beus	3	12/14
ENGL 1010	205/69513	T Th 4:10pm - 5:25pm 502 Northwest Corner	Allen Durgin	3	14/14
ENGL 1010	401/73978	M W 11:40am - 12:55pm 408a Philosophy Hall	Valerie Jacobs	3	14/14
ENGL 1010	402/13294	M W 4:10pm - 5:25pm 502 Northwest Corner	Timothy Lundy	3	14/14
ENGL 1010	403/62812	T Th 2:40pm - 3:55pm 408a Philosophy Hall	Kevin Windhauser	3	14/14
ENGL 1010	404/72301	T Th 5:40pm - 6:55pm 408a Philosophy Hall	Stephen Preskill	3	14/14
ENGL 1010	501/75858	M W 11:40am - 12:55pm 502 Northwest Corner	Marianna Staroselsky	3	13/14
ENGL 1010	502/77601	M W 2:40pm - 3:55pm 502 Northwest Corner	Jonathan Reeve	3	8/14
ENGL 1010	503/71726	T Th 8:40am - 9:55am 307 Mathematics Building	Jenna Schoen	3	14/14
ENGL 1010	504/72205	T Th 5:40pm - 6:55pm 502 Northwest Corner	Shelby Wardlaw	3	14/14
ENGL 1010	601/17047	M W 1:10pm - 2:25pm 502 Northwest Corner	Tibo Halsberghe	3	14/14
ENGL 1010	602/29114	T Th 2:40pm - 3:55pm 502 Northwest Corner	Abigail Rabinowitz	3	14/14
ENGL 1010	603/74819	M W 5:40pm - 6:55pm 307 Mathematics Building	Li Qi Peh	3	14/14
ENGL 1010	901/65018	M W 4:10pm - 5:25pm 307 Mathematics Building	Rebecca Sonkin	3	12/14
ENGL 1010	902/61287	T Th 10:10am - 11:25am 307 Mathematics Building	Anya Lewis- Meeks	3	14/14

WRITING CENTER

The Undergraduate Writing Program sponsors The Writing Center (<http://www.college.columbia.edu/core/uwp/writing-center>) in 310 Philosophy, which offers individual writing instruction and consultations to students enrolled in Columbia University courses. Students may visit the center at any stage in the writing process. The Writing Center's consultants are advanced graduate students who have had significant training and experience teaching writing at Columbia. Students may walk in during open hours or sign up for appointments.

FOREIGN LANGUAGE REQUIREMENT

General Information:

Office of Academic Planning and Administration
202 Hamilton
212-851-9814
cc-apa@columbia.edu

The Foreign Language Requirement Website (<http://www.college.columbia.edu/core/classes/fl.php>)

The foreign language requirement forms part of Columbia College's mission to prepare students to be tomorrow's conscientious and informed citizens. Knowledge of another's language and literature is the most important way to begin to know a country and people. The study of a foreign language:

1. Introduces students to world cultures, also making them aware of their own culture within that context;
2. Informs students of the differences in structure, grammar, and syntax that distinguish languages from each other, and clarifies the intimate links between language and cultural meaning;
3. Contributes to the development of students' critical, analytical, and writing skills.

The requirement may be satisfied in one of the following ways:

1. Satisfactory completion of the second term of an intermediate language sequence.
2. Demonstration of an equivalent competence through the appropriate score on the SAT II Subject Test or Advanced Placement Tests.
3. Demonstration of an equivalent competence through the College's own placement tests (consult the department through which the language is offered).
4. The successful completion of an advanced level foreign language or literature course that requires *2102* or the equivalent as a prerequisite. This course must be taken for a letter grade.
5. Students whose native language is not English are not required to take an additional foreign language or an achievement test if

they have completed the secondary school requirement in the native language.

Because success in learning a foreign language is dependent on the full engagement of the students enrolled in a language course, all terms of language instruction/conversation courses, whether being used toward fulfillment of the foreign language requirement or not, must be taken in order and for a letter grade. These courses may not be taken for a grade of Pass/D/Fail.

Students wishing to satisfy the requirement in any other language should consult with their advising dean. In some instances, equivalent language courses offered at Barnard College and in the School of General Studies may be used to satisfy the requirement, however, students should speak with the Columbia department to ensure that courses from these schools are approved for the requirement.

Any student who wishes to submit a language course taken at another institution in fulfillment of the language requirement must pass a departmental placement examination.

In order to ensure that students achieve foreign-language proficiency without a significant break in progress, this requirement must be completed before a student can be eligible to study abroad, even if the language of instruction of the study-abroad program is English. For students seeking to study abroad in other languages, more advanced foreign-language study is usually required (see *Special Programs*).

The following languages are offered in the College toward satisfaction of the requirement:

- **Akkadian**
Language Resource Center
- **Arabic**
Middle Eastern, South Asian, and African Studies
- **Armenian**
Middle Eastern, South Asian, and African Studies
- **Bengali**
Language Resource Center
- **Catalan**
Latin American and Iberian Cultures
- **Chinese**
East Asian Languages and Cultures
- **Czech**
Slavic Languages
- **Dutch**
Germanic Languages (p. 256)
- **Filipino**
Language Resource Center
- **Finnish**
Germanic Languages
- **French**
French and Romance Philology
- **German**
Germanic Languages
- **Greek, Classical and Modern**
Classics
- **Hebrew**
Middle Eastern, South Asian, and African Studies
- **Hindi-Urdu**
Middle Eastern, South Asian, and African Studies
- **Hungarian**
Italian
- **Italian**
Italian
- **Japanese**
East Asian Languages and Cultures
- **Korean**
East Asian Languages and Cultures
- **Latin**
Classics
- **Persian**
Middle Eastern, South Asian, and African Studies
- **Polish**
Slavic Languages
- **Portuguese**
Latin American and Iberian Cultures
- **Pulaar**
Middle Eastern, South Asian, and African Studies
- **Punjabi**
Middle Eastern, South Asian, and African Studies
- **Romanian**
Language Resource Center
- **Russian**
Slavic Languages
- **Sanskrit**
Middle Eastern, South Asian, and African Studies
- **Serbo-Croatian**
Slavic Languages
- **Spanish**
Latin American and Iberian Cultures
- **Swahili**
Middle Eastern, South Asian, and African Studies
- **Swedish**
Germanic Languages
- **Tamil**
Middle Eastern, South Asian, and African Studies
- **Tibetan**
East Asian Languages and Cultures
- **Turkish, Modern**
Middle Eastern, South Asian, and African Studies
- **Ukrainian**
Slavic Languages
- **Vietnamese**
East Asian Languages and Cultures
- **Wolof**
Middle Eastern, South Asian, and African Studies

- **Yiddish**
Germanic Languages
- **Yoruba**
Language Resource Center
- **Zulu**
Language Resource Center

GLOBAL CORE REQUIREMENT

Chair of the Global Core Requirement

Prof. Patricia Grieve
302 Casa Hispánica
212-854-4338
peg1@columbia.edu

General Information

Office of Academic Planning and Administration
202 Hamilton
212-851-9814
cc-apa@columbia.edu

Global Core Requirement Website (<http://www.college.columbia.edu/core/classes/gc>)

The Global Core requirement asks students to engage directly with the variety of civilizations and the diversity of traditions that, along with the West, have formed the world and continue to interact in it today. Courses in the Global Core typically explore the cultures of Africa, Asia, the Americas, and the Middle East in an historical context. These courses are organized around a set of primary materials produced in these traditions and may draw from texts or other forms of media, as well as from oral sources or performance, broadly defined.

Global Core courses fall into two categories, and can be, on occasion, a hybrid of the two types: those with a comparative, multidisciplinary, or interdisciplinary focus on specific cultures or civilizations, tracing their existence across a significant span of time, and may include Europe and/or the U.S.; and those that address a common theme or set of analytic questions comparatively (and may include Europe and the U.S.). The Global Core requirement consists of courses that examine areas not the primary focus of Literature Humanities and Contemporary Civilization and that, like other Core courses, are broadly introductory, interdisciplinary, and temporally and/or spatially expansive.

Students must complete two courses from the approved list of Global Core courses for a letter grade.

SPRING 2018 APPROVED COURSES

As Spring 2018 schedules become available, more courses will be added to this list. Please check back for additional updates. Last updated on January 16, 2018.

Anthropology

ANTH UN3947 Text, Magic, Performance

Art History and Archaeology

AHIS UN2119 Rome Beyond Rome: Roman Art and Architecture in a Global Perspective (Effective beginning Spring 2018)

AHIS UN2500 The Arts of Africa

AHUM UN2604 Art In China, Japan, and Korea

AHUM UN2901 Masterpieces of Indian Art and Architecture

Center for the Core Curriculum

AFCV UN1020 African Civilizations

LACV UN1020 Primary Texts of Latin American Civilization

Center for the Study of Ethnicity and Race

CSER UN3928 Colonization/Decolonization

Classics

CLCV UN2441 Egypt in the Classical World (Effective beginning Spring 2018 semester)

CSGM UN3567 Thessaloniki Down the Ages

Colloquia and Interdepartmental Seminars

INSM UN3921 Nobility and Civility II

Comparative Literature and Society

CLGM UN3110 The Ottoman Past in the Greek Present (Effective beginning Spring 2018)

CLGM UN3920 The World Responds to the Greeks: Modernity, Postcoloniality, Globality (formerly "The World Responds to the Greeks: Greece Faces East")

East Asian Languages and Cultures

ASCE UN1002 Introduction to Major Topics in Asian Civilizations: East Asia

ASCE UN1359 Introduction to East Asian Civilizations: China

ASCE UN1361 Introduction to East Asian Civilizations: Japan

ASCE UN1363 Introduction to East Asian Civilizations: Korea

AHUM UN1400 Colloquium on Major Texts: East Asia

AHUM UN3830 Colloquium On Modern East Asian Texts

HSEA UN3898 The Mongols in History

EAAS W4160 Cultures of Colonial Korea

EARL GU4312 Tibetan Sacred Space (in Comparative Context) (Effective beginning Spring 2018)

Film

FILM UN2292 Topics in World Cinema: China (Effective Spring 2018)

History

HIST UN2377	INTERNATIONAL & GLOBAL HISTORY SINCE WWII
HIST UN2661	Modern Latin American History (Latin American Civilization II)
HIST GU4811	Encounters with Nature: The History of Environment and Health in South Asia and Beyond (Effective Spring 2017)
Latin American and Iberian Cultures	
SPAN UN3349	Hispanic Cultures I: Islamic Spain through the Colonial Period
SPAN UN3350	Hispanic Cultures II: Enlightenment to the Present
PORT UN3350	Lusophone Africa and Afro Brazilian Culture
PORT UN3490	Brazilian Society and Civilization
Middle Eastern, South Asian, and African Studies	
MDES UN1001	Critical Theory: A Global Perspective (Effective beginning Spring 2018)
ASCM UN2008	Contemporary Islamic Civilization
AHUM UN3399	Colloquium on Major Texts: Middle East and South Asia
MDES UN2650	Gandhi and His Interlocutors
MDES GU4150	Introduction to African Philosophy (Effective beginning Spring 2017)
MDES GU4637	Cinema and Colonialism in South Asia (Effective beginning Spring 2018 semester)
Music	
AHMM UN3320	Introduction To the Musics of East Asia and Southeast Asia
Religion	
RELI UN2309	Hinduism
Slavic Languages	
GEOR GU4042	Cultural History: A Georgian Case Study

FALL 2017 APPROVED COURSES

As Fall 2017 schedules become available, more courses will be added to this list. Please check back for additional updates. Last updated on September 6, 2017.

African-American Studies

AFAS UN1001	Introduction to African-American Studies
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Anthropology (ANTH)

ANTH UN2007	Indian and Nigerian Film Cultures (Effective beginning Fall 2017 semester)
ANTH UN2031	Corpse Life: Anthropological Histories of the Dead [Previously Archaeologies of Death and (Effective beginning Fall 2017)]
ANTH UN3933	Arabia Imagined
ANHS GU4001	The Ancient Empires

Art History and Archaeology (AHIS), (AHUM)

AHIS UN2600	Arts of China
AHUM UN2604	Art In China, Japan, and Korea
AHUM UN2800	Arts of Islam: The First Formative Centuries (circa 700-1000) (Effective beginning Fall 2017 semester)
AHUM UN2901	Masterpieces of Indian Art and Architecture

Center for the Core Curriculum

AFCV UN1020	African Civilizations
LACV UN1020	Primary Texts of Latin American Civilization

Center for the Study of Ethnicity and Race

CSER UN1010	Introduction to Comparative Ethnic Studies
CSER UN3922	Asian American Cinema
CSER UN3926	Latin Music and Identity
CSER UN3928	Colonization/Decolonization

Classics

CSGM UN3567	Thessaloniki Down the Ages
GRKM UN3935	Hellenism and the Topographical Imagination (Effective beginning Fall 2017; formerly GRKM UN3920 "The World Responds to the Greeks")

Colloquia and Interdepartmental Seminars

INSM UN3920	Nobility and Civility
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Comparative Literature and Society

CPLS UN3454	Blood/Lust: Staging the Early Modern Mediterranean [in English]
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East Asian Languages and Cultures

ASCE UN1002	Introduction to Major Topics in Asian Civilizations: East Asia
ASCE UN1359	Introduction to East Asian Civilizations: China
ASCE UN1361	Introduction to East Asian Civilizations: Japan
ASCE UN1365	Introduction to East Asian Civilizations: Tibet
ASCE UN1367	Introduction to East Asian Civilizations: Vietnam (Effective beginning Fall 2017)

ASCM UN2003	Introduction to Islamic Civilization
AHUM UN1400	Colloquium on Major Texts: East Asia
AHUM UN3830	Colloquium On Modern East Asian Texts
EAAS GU4277	Japanese Anime and Beyond: Gender, Power and Transnational Media
EAAS UN3322	East Asian Cinema
EARL GU4310	Life-Writing in Tibetan Buddhist Literature
HSEA GU4847	Modern Japan (Effective beginning Fall 2017)

HSEA GU4880	History of Modern China I
Economics	
ECON GU4325	Economic Organization and Development of Japan
English and Comparative Literature	
ENTA UN3948	African Drama (Offered Fall 2017 as a one-time course)
French and Romance Philology	
CLFR UN3716	Francophone Romance : Love and Desire in French Colonial and Post-Colonial Literatures (Effective beginning Fall 2017 semester)
German	
GERM UN3780	Berlin/Istanbul: Migration, Culture, Values (GER)
History	
HIST UN2580	THE HISTORY OF UNITED STATES RELATIONS WITH EAST ASIA (Effective beginning Fall 2017 semester)
HIST UN2618	The Modern Caribbean (formerly HIST W3618)
HIST UN2660	Latin American Civilization I
HIST UN2719	History of the Modern Middle East (formerly HIST W3719)
HIST UN2764	History of East Africa: Early Time to the Present (Effective beginning Spring 2014: formerly HIST W3764)
HSME UN2810	History of South Asia I: al-Hind to Hindustan (formerly HIST W3810)
Italian	
ITAL GU4022	The Qur'an in Europe (Effective beginning Fall 2017)
Latin American and Iberian Cultures	
SPJS UN3303	Jewish Culture in Translation in Medieval Iberia (Effective beginning Fall 2017 semester)
SPAN UN3349	Hispanic Cultures I: Islamic Spain through the Colonial Period
SPAN UN3350	Hispanic Cultures II: Enlightenment to the Present
PORT UN3490	Brazilian Society and Civilization (Effective beginning Fall 2017 semester)
Middle Eastern, South Asian, and African Studies	
ASCM UN2003	Introduction to Islamic Civilization
ASCM UN2357	Introduction to Indian Civilization
MDES UN3000	Theory and Culture
HSME UN3044	From Colonial to Global Health (Effective beginning Fall 2017 semester)
CLME UN3221	Arabic Literature As World Literature (Effective beginning Fall 2017 semester)
CLME UN3928	Arabic Prison Writing

CLME GU4031	Cinema and Society In Asia and Africa
Music	
AHMM UN3321	Introduction To the Musics of India and West Asia
Religion	
RELI UN2205	Buddhism: Indo-Tibetan
RELI UN2305	Islam
RELI UN2308	Buddhism: East Asian
RELI UN3407	Muslims in Diaspora
RELI GU4304	Krishna (Effective beginning Fall 2017)
Slavic Languages and Cultures	
SLCL UN3001	Slavic Cultures
Sociology	
SOCI UN3324	Global Urbanism
Theatre	
THTR UN3154	Theatre Traditions in a Global Context (formerly THTR UN3000)

ALL APPROVED COURSES: MORNINGSIDE CAMPUS

Not all courses are taught each academic year. Below is the full list of all courses offered on the Morningside Heights campus that are approved for the Global Core Requirement, regardless of semester offered. Last updated on November 17, 2017.

African-American Studies

AFAS UN1001	Introduction to African-American Studies
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Anthropology

ANTH UN1008	The Rise of Civilization
ANTH V1130	Africa and the Anthropologist
ANTH UN2007	Indian and Nigerian Film Cultures (Effective beginning Fall 2017 semester)
ANTH V2013	Africa in the 21st Century: Aesthetics, Culture, Politics
ANTH V2014	Archaeology and Africa: Changing Perceptions of the African Past
ANTH V2020	Chinese Strategies: Cultures in Practice
ANTH V2027	Changing East Asia Foodways
ANTH UN2031	Corpse Life: Anthropological Histories of the Dead [Previously Archaeologies of Death and (Effective beginning Fall 2017)]
ANTH V2035	Introduction to the Anthropology of South Asia
ANTH V2100	Muslim Societies
ANTH UN3300	Pre-Columbian Histories of Native America
ANTH V3465	Women and Gender Politics in the Muslim World

ANTH V3525	Introduction to South Asian History and Culture
ANTH UN3821	Native America
ANTH V3892	Contemporary Central Asia (formerly ANTH V2029)
ANTH UN3933	Arabia Imagined
ANTH UN3947	Text, Magic, Performance
ANHS GU4001	The Ancient Empires
ANTH G4065	Archaeology of Idols

Art History and Archaeology

AHIS UN2119	Rome Beyond Rome: Roman Art and Architecture in a Global Perspective (Effective beginning Spring 2018)
AHIS UN2600	Arts of China
AHIS UN2500	The Arts of Africa
AHUM UN2604	Art In China, Japan, and Korea
AHUM UN2800	Arts of Islam: The First Formative Centuries (circa 700-1000) (Effective beginning Fall 2017 semester)
AHUM UN2802	Arts of Islam: Realignments of Empire and State (Effective Spring 2017)
AHUM UN2901	Masterpieces of Indian Art and Architecture
AHIS W3500	Yoruba and the Diaspora (Effective beginning Fall 2014; formerly AHIS W3898)
AHIS UN3501	African Art: The Next Generation. Focus: Congo (Effective Spring 2017)
AHIS W3832	Sacred Landscapes of the Ancient Andes (Effective beginning Spring 2016)
AHIS Q4570	Andean Art and Architecture (formerly AHIS G4085)

Center for the Core Curriculum

AFCV UN1020	African Civilizations
LACV UN1020	Primary Texts of Latin American Civilization

Center for the Study of Ethnicity and Race

CSER UN1010	Introduction to Comparative Ethnic Studies
CSER W1601	Introduction to Latino/a Studies
CSER W3510	Novels of Immigration, Relocation, and Diaspora (Also offered as ENGL GU4650, effective Spring 2017)
CSER UN3922	Asian American Cinema
CSER UN3926	Latin Music and Identity
CSER UN3928	Colonization/Decolonization
CSER W3961	(Wealth and Poverty in America)

Classics

CLCV UN2441	Egypt in the Classical World (Effective beginning Spring 2018)
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CLCV UN3059	WORLDS OF ALEXANDER THE GREAT (Effective beginning Spring 2017)
CLCV W3111	Plato and Confucius: Comparative Ancient Philosophies (Effective beginning Spring 2015)
CLCV W3244	Global Histories of the Book (Effective beginning Fall 2015)
CSGM UN3567	Thessaloniki Down the Ages (Effective Spring 2017)
CLGM UN3920	The World Responds to the Greeks: Modernity, Postcoloniality, Globality (formerly "The World Responds to the Greeks: Greece Faces East")
GRKM UN3935	Hellenism and the Topographical Imagination (formerly GRKM UN3920 "The World Responds to the Greeks")

Colloquia and Interdepartmental Seminars

INSM UN3920	Nobility and Civility
INSM UN3921	Nobility and Civility II
INSM C3940	Science Across Cultures
INSM W3950	Friendship in Asian and Western Civilization

Comparative Literature and Society

CLGM UN3110	The Ottoman Past in the Greek Present (Effective beginning Spring 2018)
CPLS W3333	East/West Frametale Narratives
CPLS UN3454	Blood/Lust: Staging the Early Modern Mediterranean [in English]
CLGM UN3920	The World Responds to the Greeks: Modernity, Postcoloniality, Globality
CPLS W3945	Transnational Memory Politics and the Culture of Human Rights (Effective beginning Spring 2014)
CPLS W3955	The West in Global Thought
CPLS UN3956	Postcolonial Narrative and the Limits of the Human
CPLS W4100	Andalusian Symbiosis: Islam and the West (Effective beginning Fall 2014)
CPLS GU4111	World Philology (Effective Spring 2017)

East Asian Languages and Cultures

ASCE UN1002	Introduction to Major Topics in Asian Civilizations: East Asia
ASCE UN1359	Introduction to East Asian Civilizations: China
ASCE UN1361	Introduction to East Asian Civilizations: Japan
ASCE UN1363	Introduction to East Asian Civilizations: Korea
ASCE UN1365	Introduction to East Asian Civilizations: Tibet

ASCE UN1367	Introduction to East Asian Civilizations: Vietnam (Effective beginning Fall 2017)
AHUM UN1400	Colloquium on Major Texts: East Asia
EAAS UN2342	Mythology of East Asia
EAAS UN3322	East Asian Cinema (Effective Spring 2017)
EAAS V3350	Japanese Fiction and Film (Effective beginning Fall 2014)
AHUM UN3830	Colloquium On Modern East Asian Texts
HSEA Q3870	Japan Before 1600 (Effective beginning Spring 2015; formerly HSEA W4870)
EAAS UN3927	China in the Modern World
EARL W4127	Mediations, Perceptions, Words: Poetry in Buddhist Literature (Effective beginning Spring 2016)
EAAS W4160	Cultures of Colonial Korea (Effective beginning Spring 2014; formerly EAAS G4160)
EAAS GU4277	Japanese Anime and Beyond: Gender, Power and Transnational Media
EARL GU4310	Life-Writing in Tibetan Buddhist Literature
EARL GU4312	Tibetan Sacred Space (in Comparative Context) (Effective beginning Spring 2018 semester)
HSEA GU4822	Troubled Islands of the Indo Pacific (Effective beginning Spring 2017)
HSEA GU4847	Modern Japan (Effective beginning Fall 2017)
HSEA W4866	Competing Nationalisms in East Asia: Representing Chinese and Tibetan Relations in History (Effective beginning Fall 2015)
HSEA GU4880	History of Modern China I
Economics	
ECON GU4325	Economic Organization and Development of Japan
English and Comparative Literature	
ENTA UN3948	African Drama (Offered Fall 2017 semester as a one-time course)
CLEN W4200	Caribbean Diaspora Literature
ENGL GU4650	Novels of Immigration, Relocation, Diaspora (formerly ENGL W3510)
Film Studies	
FILM UN2292	Topics in World Cinema: China (Effective beginning Spring 2018)
FILM S2295Q	World Cinema: Mexico (Effective beginning Summer 2017)
French and Romance Philology	
CLFR UN3716	Francophone Romance : Love and Desire in French Colonial and Post-Colonial Literatures

Germanic Languages

GERM UN3780	Berlin/Istanbul: Migration, Culture, Values (GER)
History	
HIST W1004	Ancient History of Egypt (Effective beginning Spring 2015)
HIST W1054	Introduction to Byzantine History (Effective beginning Spring 2016)
HIST UN2377	INTERNATIONAL & GLOBAL HISTORY SINCE WWII (Effective Spring 2017)
HIST UN2444	The Vietnam War (Effective beginning Spring 2017)
HIST UN2580	THE HISTORY OF UNITED STATES RELATIONS WITH EAST ASIA (Effective beginning Fall 2017)
HIST UN2618	The Modern Caribbean
HIST UN2657	Medieval Jewish Cultures (formerly HIST W3657)
HIST UN2660	Latin American Civilization I
HIST UN2661	Modern Latin American History (Latin American Civilization II)
HIST W2701	Ottoman Empire (formerly HIST W3701)
HIST UN2719	History of the Modern Middle East (formerly HIST W3719)
HIST UN2764	History of East Africa: Early Time to the Present
HIST W2772	West African History (formerly HIST W3772)
HIST W2803	The Worlds of Mughal India (Effective beginning Spring 2014; formerly HIST W3803)
HSME UN2810	History of South Asia I: al-Hind to Hindustan (formerly HSME W3810)
HSME UN2811	South Asia: Empire and Its Aftermath (formerly HIST UN2811)
HIST W2880	Gandhi's India (formerly HIST W3800)
HIST Q2900	History of the World to 1450 CE (formerly HIST W3902)
HIST W2903	History of the World from 1450 CE to the Present (Effective beginning Fall 2013; formerly HIST W2903)
HIST W2943	Cultures of Empire (formerly HIST W3943)
HIST UN3152	Byzantine Encounters in the Mediterranean and the Middle East (Taught on Morningside going forward, effective Spring 2017)
HIST Q3400	Native American History (formerly HIST W4404)

HIST W3678	Indigenous Worlds in Early Latin America (formerly HIST W4678)	MDES W2041	Introduction to Indian Philosophy (Effective beginning Spring 2015)
HIST UN3766	African Futures (Effective beginning Fall 2017)	ASCM UN2357	Introduction to Indian Civilization
HIST UN3779	Africa and France	MDES UN2650	Gandhi and His Interlocutors
HSEA UN3898	The Mongols in History	MDES UN3000	Theory and Culture
HIST Q3933	Empires and Cultures of the Early Modern Atlantic World (Effective only for Spring 2014; formerly HIST W4103)	CLME W3032	Colonialism: Film, Fiction, History & Theory
HIST W4601	Jews in the Later Roman Empire, 300-600 CE (Effective beginning Fall 2014; renumbered to HIST UN3601, effective Fall 2018)	HSME UN3044	From Colonial to Global Health (Effective beginning Fall 2017 semester)
HIST GU4811	Encounters with Nature: The History of Environment and Health in South Asia and Beyond (Effective beginning Spring 2017 semester)	MDES UN3121	Literature and Cultures of Struggle in South Africa (Effective beginning Spring 2017)
Italian		MDES UN3130	East Africa and the Swahili Coast
ITAL GU4022	The Qur'an in Europe (Effective beginning Fall 2017)	CLME UN3221	Arabic Literature As World Literature (Effective beginning Fall 2017 semester)
Latin American and Caribbean Studies		MDES UN3260	Rethinking Middle East Politics (Effective beginning Spring 2017)
LCRS UN3500	Latin American Cities (Effective beginning Spring 2017)	AHUM UN3399	Colloquium on Major Texts: Middle East and South Asia (Will be renumbered as AHUM UN1399 effective Fall 2018)
Latin American and Iberian Cultures		MDES W3445	Societies & Cultures Across the Indian Ocean (Effective beginning Fall 2013)
SPJS UN3303	Jewish Culture in Translation in Medieval Iberia (Effective beginning Fall 2017 semester)	CLME UN3928	Arabic Prison Writing
SPAN UN3349	Hispanic Cultures I: Islamic Spain through the Colonial Period	CLME GU4031	Cinema and Society In Asia and Africa
PORT UN3350	Lusophone Africa and Afro Brazilian Culture	MDES G4052	Locating Africa in the Early 20th Century World
SPAN UN3350	Hispanic Cultures II: Enlightenment to the Present	MDES GU4150	Introduction to African Philosophy (Effective beginning Spring 2017)
SPAN UN3361	Artistic Humanity (Effective beginning Spring 2017)	CLME GU4226	Arabic Autobiography: Global Dimensions (Effective beginning Spring 2018)
PORT UN3490	Brazilian Society and Civilization (Effective beginning Fall 2017 semester)	CLME GU4231	Cold War Arab Culture
SPAN W3490	Latin American Humanities I: From Pre-Columbian Civilizations to the Creation of New Nations	CLME GU4241	Sufism: Primary Texts and Contexts
SPAN W3491	Latin American Humanities II: From Modernity to the Present [In English]	CLME G4261	Popular Islam: Asia and Africa
Middle Eastern, South Asian, and African Studies		MDES G4326	The Armenian Genocide and the Holocaust: Memory and Representation
MDES UN1001	Critical Theory: A Global Perspective (Effective beginning Spring 2018)	MDES GU4637	Cinema and Colonialism in South Asia (Effective beginning Spring 2018)
ASCM V2001	Introduction to Major Topics in the Civilizations of the Middle East and India	Music	
ASCM UN2003	Introduction to Islamic Civilization	MUSI V2020	Salsa, Soca, and Reggae: Popular Musics of the Caribbean
ASCM UN2008	Contemporary Islamic Civilization	MUSI V2430	Listening and Sound in Cross-Cultural Perspective (Effective beginning Fall 2014; formerly MUSI W4430)
MDES W2030	Major Debates in the Study of Africa (Effective beginning Spring 2014; formerly ANTH V2010)	AHMM UN3320	Introduction To the Musics of East Asia and Southeast Asia
		AHMM UN3321	Introduction To the Musics of India and West Asia

MUSI GU4466 Sound and Image in Modern East Asian Music (Effective Spring 2017)

Religion

RELI UN2205 Buddhism: Indo-Tibetan (effective Fall 2016)

RELI UN2305 Islam

RELI UN2307 Chinese Religious Traditions

RELI UN2308 Buddhism: East Asian

RELI UN2309 Hinduism

RELI V2335 Religion in Black America: An Introduction (formerly RELI V2645)

RELI UN3303 Judaism and Translation in the Medieval and Early Modern Mediterranean (effective Spring 2017)

RELI UN3407 Muslims in Diaspora (Effective beginning Spring 2016; formerly RELI V3307)

RELI UN3425 Judaism and Courtly Literature in Medieval and Early Modern Iberia and Italy (Effective beginning Fall 2016)

RELI Q3511 Tantra in South Asia, East Asia & the West (Effective beginning Spring 2015; formerly RELI V3411)

RELI GU4304 Krishna (Effective beginning Fall 2017)

Slavic Languages

SLCL UN3001 Slavic Cultures

CLRS GU4022 Russia and Asia: Orientalism, Eurasianism, Internationalism

GEOR GU4042 Cultural History: A Georgian Case Study (Effective beginning Spring 2017)

CLRS W4190 Race, Ethnicity, and Narrative, in the Russian/Soviet Empire

Sociology

SOCI UN3324 Global Urbanism

Theatre

THTR UN3154 Theatre Traditions in a Global Context (formerly THTR UN3000)

CSER OC3928 Colonization/Decolonization (Effective beginning Summer 2017; taught in Mexico City)

Columbia in Amman and Paris: Middle Eastern and North African Studies (MENA) Program

MENA OC4100 Migration, Displacement and Diaspora in the French and North African Context (taught in Paris, effective beginning Summer 2017) (formerly Maghreb-Mashrek: East and West)

Columbia Global Seminar in Istanbul

Not offered during the Spring 2018 semester

CLGM OC3920 The World Responds to the Greeks: Modernity, Postmodernity, Globality (Effective beginning Spring 2015; taught in Istanbul)

Columbia in London- Queen Mary University

CLEN OC3500 London in Postcolonial Fiction: "We Are Here Because You Were There" (Effective beginning Fall 2018)

Latin American and Caribbean Studies (Global Scholars Program)

LCRS OC3501 Latin American Cities (Effective beginning Summer 2017)

Columbia Summer Program in Tunis and Istanbul: Democracy and Constitutional Engineering

Not offered during the Spring 2018 semester

POLS OC3545 Comparative Democratic Processes (Effective beginning Summer 2015; taught in Istanbul)

Slavic Languages - Office of Global Programs

Not offered during the Spring 2018 semester

CLSL OC4001 The Muslim and the Christian in Balkan Narratives (Effective beginning Summer 2016; taught in Istanbul)

Reid Hall in Paris

FREN OC3817 Black Paris (Effective Spring 2017; taught in Paris)

FREN OC3821 "Blackness" in French: from Harlem to Paris and Beyond (Effective beginning Summer 2018)

WMST OC3550 Women and Society - The Sex Trade Economy (Effective Spring 2016, will not be offered Spring 2018; taught in Paris)

ALL APPROVED COURSES: OFFERED ABROAD

Not all courses are taught each academic year. Below is the full list of all courses offered abroad through Columbia-sponsored programs that are approved for the Global Core Requirement, regardless of semester offered. For more information, consult the Office of Global Programs (<http://ogp.columbia.edu>). Last updated on March 1, 2018.

Center for the Study of Ethnicity and Race

SCIENCE REQUIREMENT

General Information:

Office of Academic Planning and Administration
202 Hamilton
212-851-9814
cc-apa@columbia.edu

Science Requirement Website (<http://www.college.columbia.edu/core/classes/science.php>)

The objective of the science component of Columbia College's Core Curriculum is identical to that of its humanities and social science counterparts, namely to help students "to understand the civilization of their own day and to participate effectively in it." The science component is intended specifically to provide students with the opportunity to learn what kinds of questions are asked about nature, how hypotheses are tested against experimental or observational evidence, how results of tests are evaluated, and what knowledge has been accumulated about the workings of the natural world.

Three courses bearing at least 3 points each (for a total of at least 10 points) must be completed to meet this portion of the Core Curriculum. All courses used to satisfy the science requirement must be taken for a letter grade.

Students normally take *SCNC CC1000 Frontiers of Science* in their first year in the term in which they are not taking *ENGL CC1010 University Writing*.

For the remainder of the requirement, students may choose any two courses from the list of approved courses below. These courses may be taken in the same department or in different departments. However, at least one course must be taken in the Departments of Astronomy; Biological Sciences; Chemistry; Earth and Environmental Sciences; Ecology, Evolution, and Environmental Biology; Physics; or Psychology.

Students who wish to request an exception to these policies must petition the Committee on Science Instruction (<http://www.college.columbia.edu/academics/petitions>) (202 Hamilton) **prior** to their final term at the College.

GUIDELINES FOR COURSES APPROVED FOR THE SCIENCE REQUIREMENT

Unless otherwise indicated, students may not use Barnard College courses to fulfill the Columbia College science requirement.

Students who wish to have a course not included on the lists below count toward fulfilling the science requirement must petition the Committee on Science Instruction (202 Hamilton) **prior** to registration for the term in which they intend to take the course.

Students should pay careful attention to the prerequisites and instructor approvals required for certain courses. Prerequisite and instructor approval requirements can be found in the course descriptions for each course located in specific departments' sections of this bulletin.

While students are not required to complete a two-term sequence, students may choose to do so. For this reason, the Committee on Science Instruction has indicated recommended sequences below. Unless otherwise noted, the first course in the sequence must be taken before the second course in the sequence.

COURSES DESIGNED FOR NONSCIENCE MAJORS

Astronomy

ASTR UN1234	The Universal Timekeeper: Reconstructing History Atom by Atom
ASTR UN1403	Earth, Moon and Planets (Lecture)
ASTR UN1404	Stars, Galaxies and Cosmology (Lecture)
ASTR UN1420	Galaxies and Cosmology
ASTR UN1404 - ASTR BC1753	Stars, Galaxies and Cosmology (Lecture) and Life in the Universe
ASTR UN1453	Another Earth
ASTR UN1610	Theories of the Universe: From Babylon to the Big Bang
ASTR BC1753	Life in the Universe
ASTR BC1754	Stars, Galaxies, and Cosmology
ASTR UN1836	Stars and Atoms
Recommended Sequences:	
ASTR UN1403 - ASTR UN1404	Earth, Moon and Planets (Lecture) and Stars, Galaxies and Cosmology (Lecture)
ASTR UN1403 - ASTR UN1420	Earth, Moon and Planets (Lecture) and Galaxies and Cosmology
ASTR UN1403 - ASTR UN1836	Earth, Moon and Planets (Lecture) and Stars and Atoms
ASTR BC1753 - ASTR UN1404	Life in the Universe and Stars, Galaxies and Cosmology (Lecture)
ASTR BC1753 - ASTR BC1754	Life in the Universe and Stars, Galaxies, and Cosmology

Biology

BIOL UN1002	Theory and Practice of Science: Biology
BIOL UN1130	Genes and Development

Computer Science

COMS W1001	Introduction to Information Science
COMS W1002	Computing in Context

Earth and Environmental Engineering

EAEE E2100	A better planet by design
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Earth and Environmental Sciences

EESC UN1001	Dinosaurs and the History of Life: Lectures and Lab
EESC UN1003	Climate and Society: Case Studies
EESC UN1011	Earth: Origin, Evolution, Processes, Future
EESC UN1030	Oceanography
EESC UN1053	Planet Earth
EESC UN1201	Environmental Risks and Disasters
EESC UN1401	Dinosaurs and the History of Life: Lectures

EESC UN1411	Earth: Origin, Evolution, Processes, Future: Lectures
EESC UN1600	Earth Resources and Sustainable Development
Ecology, Evolution, and Environmental Biology	
EEEB UN1001	Biodiversity
EEEB UN1011	Behavioral Biology of the Living Primates
EEEB UN1010	Human Origins and Evolution
EEEB S1115Q	The Life Aquatic
Recommended Sequences:	
EEEB UN1001 - EEBB UN3087	Biodiversity and Conservation Biology (see Additional Courses Approved for the Sequence Requirement)
EEEB UN1010 - EEBB UN1011	Human Origins and Evolution and Behavioral Biology of the Living Primates
Electrical Engineering	
ELEN E1101	The digital information age
Food Studies	
FSEB UN1020	Food and the Body (This course is offered through the Ecology, Evolution, and Environmental Biology Department)
FSPH UN1100	FOOD, PUBLIC HEALTH & PUBLIC POLICY
Mathematics	
PHIL UN3411	Symbolic Logic
PHIL GU4424	Modal Logic
Physics	
PHYS UN1001	Physics for Poets
PHYS UN1018	Weapons of Mass Destruction
Psychology	
PSYC UN1001	The Science of Psychology
PSYC UN1010	Mind, Brain and Behavior
Science	
SCNC UN1800	Energy and Energy Conservation
Statistics	
STAT UN1001	Introduction to Statistical Reasoning

ADDITIONAL COURSES APPROVED FOR THE SCIENCE REQUIREMENT

Most of the following courses have required prerequisites and/or require instructor approval. Prerequisite and instructor approval requirements can be found in the course descriptions for each course located in specific departments' sections of the on-line bulletin.

Astronomy^{ASTR}

Any 3-point course numbered 2000 or higher

Biology^{BIOL}

Any 3-point course numbered 2000 or higher

Chemistry^{CHEM}

CHEM UN1403	General Chemistry I (Lecture)
CHEM UN1404	General Chemistry II (Lecture)
CHEM UN1500	General Chemistry Laboratory
CHEM UN1604	Intensive General Chemistry (Lecture)
CHEM UN1507	Intensive General Chemistry Laboratory
Any course numbered 3000 or higher	
Computer Science ^{COMS}	
COMS W1004	Introduction to Computer Science and Programming in Java
COMS W1005	Introduction to Computer Science and Programming in MATLAB
ENGI E1006	Introduction to Computing for Engineers and Applied Scientists (Effective beginning Spring 2017)
COMS W1007	Honors Introduction to Computer Science
Any 3-point course numbered 3000 or higher	
Earth and Environmental Sciences ^{EESC}	
EESC UN2100	Earth's Environmental Systems: The Climate System
EESC UN2200	Earth's Environmental Systems: The Solid Earth System
EESC UN2300	Earth's Environmental Systems: The Life System
EESC UN2330	Science for Sustainable Development
Any course numbered 3000 or higher	
Ecology, Evolution, and Environmental Biology ^{EEEB}	
EEEB UN2001	Environmental Biology I: Elements to Organisms
EEEB UN2002	Environmental Biology II: Organisms to the Biosphere
EEEB UN3087	Conservation Biology
Any course numbered 3000 or higher except W4321 and W4700	
Mathematics ^{MATH}	
Any 3-point MATH course numbered 1100 or higher	
CSPH GU4801	
CSPH G4801	Mathematical Logic I
CSPH GU4802	Math Logic II: Incompleteness
Physics ^{PHYS}	
PHYS UN1201	General Physics I
PHYS UN1202	General Physics II
PHYS UN1401	Introduction To Mechanics and Thermodynamics
PHYS UN1402	Introduction To Electricity, Magnetism, and Optics
PHYS UN1403	Introduction to Classical and Quantum Waves
PHYS UN1601	Physics, I: Mechanics and Relativity
PHYS UN1602	Physics, II: Thermodynamics, Electricity, and Magnetism
Any 3-point course numbered 2000 or higher	

Psychology ^{PSYC}

With prior departmental approval, 3- and 4-point courses numbered in the 22xx, 24xx, 32xx, 34xx, 42xx, and 44xx, as well as some additional courses, may partially fulfill the Science Requirement.

Statistics ^{STAT}

Any 3-point course except STAT W3997

SPECIAL SUMMER PROGRAM

The following special program fulfills two of the three terms of the science requirement.

Earth Institute Center for Environmental Sustainability
EICES

Summer Ecosystem Experiences for Undergraduates (SEE-U).
Locations change yearly and there is rolling admissions. *

* Please check with EICES for details: <http://eices.columbia.edu/education-training/see-u/>

SUMMER SESSION COURSES

Students who wish to take summer courses may do so through the Summer Session offered by the School of Continuing Education. For policies regarding summer study, see the *Academic Regulations*— (<http://bulletin.columbia.edu/columbia-college/regulations/#studyoutsidecolumbiacollege>) Summer Study (<http://bulletin.columbia.edu/columbia-college/regulations/#studyoutsidecolumbiacollege>) section of this Bulletin. For a list of summer courses approved for the science requirement, students should consult the annually updated List of Approved Summer Courses (<http://www.college.columbia.edu/academics/courseselection>).

PHYSICAL EDUCATION REQUIREMENT**General Information**

Physical Education Department
Dodge Physical Fitness Center
212-854-3439

Physical Education Website (<http://perec.columbia.edu>)

Successful completion of two Physical Education Activities is required for the degree. All students are also required to pass a swimming test or take beginning swimming for one term to fulfill the swimming requirement. A waiver of the swimming test requirement may be granted if a student has a disability certified by a medical authority that precludes swimming. Students may also request waivers and accommodations on the grounds of religious observance or gender identity/expression. All requests for waivers and accommodations are reviewed by the Director of Physical Education.

Students may not register for more than one section of physical education each term.

Students who fulfill the attendance participation requirements for the course pass the course. **Students who are absent more than the permissible number of times are given a mark of W (Withdrawal), unless they file a drop form with the Department of Physical Education by the official deadline to drop a course.**

One point of the Physical Education requirement may be a Barnard Physical Education course or a Barnard Dance technique course. No more than 4 points of physical education courses may be counted toward the degree.

A student who intends to participate in an intercollegiate sport should register for the appropriate section of PHED UN1005 Intercollegiate Athletics. Intercollegiate athletes who attend regularly receive 1 point of credit up to a maximum of 4. Student athletes who leave the team in mid-term but still wish to receive academic credit must notify the Physical Education Office and be placed in another physical education activity to complete the attendance requirement. Student athletes are also responsible for fulfilling the swimming requirement.

For more information, visit the Physical Education Department website: perec.columbia.edu

ELIGIBILITY FOR INTERCOLLEGIATE ATHLETICS

Any student in the College who is pursuing the undergraduate program or a combined program toward a first degree is eligible for intercollegiate athletics. To be eligible for athletic activities, the student must make appropriate progress toward the degree as defined by the NCAA, the Ivy League, and Columbia University. These criteria are monitored by the Center for Student Advising and certified by the Office of the Registrar.

Questions about athletic eligibility should be referred to the appropriate advising dean or the compliance office in the Department of Intercollegiate Athletics and Physical Education.

For more information, visit <http://www.gocolumbiaions.com>.

ACADEMIC REGULATIONS

POINTS PER TERM

Full-term enrollment at Columbia College is defined as an academic program carrying 12–18 points of credit. The average load for a Columbia College student is 15–16 points per term.

All Columbia College students are expected to be full-time students and must therefore be registered for a minimum of 12 points of credit per term. Students may not enroll in more than 18 points of credit unless they petition and receive permission to do so. First-year students may not petition to register for more than 18 points in their first semester.

Students are not permitted to enroll as part-time students, and any student who has not registered for at least 12 points by the end of the Change of Program period (<http://bulletin.columbia.edu/columbia-college/academic-calendar>) will be withdrawn from Columbia College. Students in their final term may petition the Committee on Academic Standing to register for fewer than 12 points if they will complete their degree that term, and should consult with their advising deans in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>). They will still be considered full-time students with Columbia College and be responsible for all relevant tuition and fees.

ATTENDANCE

Students are expected to attend all class meetings, laboratory periods and other required events for each course in which they are registered. Instructors may take attendance into account in assessing a student's performance and may require a certain level of attendance for passing a course. Students are held accountable for absences incurred owing to late enrollment. For additional information, see Columbia University Policies (<http://bulletin.columbia.edu/columbia-college/university-policies>)—Religious Holidays (<http://bulletin.columbia.edu/columbia-college/university-policies>).

LENGTH OF CANDIDACY

Students are normally permitted eight terms in which to earn the Bachelor of Arts (B.A.) degree at Columbia College. Students may continue to work for the degree past the eighth term only with advance permission from the Committee on Academic Standing and must first discuss such requests with their advising deans in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>). Study beyond the eighth term is only granted for students who have found themselves in emergent circumstances beyond their control which have prevented them from completing the degree in eight terms. Study beyond the

eighth term is not granted for the purposes of changing or adding a major or concentration.

REGULATIONS FOR TRANSFER STUDENTS

Regulations on Transfer Credit

In order to receive the Columbia College degree, transfer students must complete a minimum of 60 points while enrolled in the College (including credits earned on Columbia-sponsored study abroad programs). Transfer students may apply a maximum of 64 points toward advanced standing at the College. Credit granted on the basis of Advanced Placement, International Baccalaureate and other standardized examinations are counted toward the 64-point maximum, as are credits earned on study-abroad programs outside of Columbia. Credit is not granted for college courses taken while in high school.

Credit Toward the Degree and Core/Major Requirements

Transfer students receive credit for non-Columbia courses that are substantially similar to Columbia College courses only when the grades received are C- or better. Transfer students must supply course descriptions and syllabi for all courses to be considered for transfer credit. Once a transfer student is admitted, a credit review is conducted by the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) and a tentative credit evaluation is sent to the student. A final credit evaluation is conducted once the student has matriculated in Columbia College and has submitted a final official transcript, as well as course descriptions and syllabi, to their advising deans in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>), where all appropriate approvals will be coordinated with the relevant academic departments.

Degree Completion

Transfer students are expected to graduate in eight terms, including terms completed before entering Columbia. Extended time is not granted. Under no circumstances will extended time be granted to enable a student to finish a particular major or concentration. Therefore, transfer students should be especially careful when planning their academic schedule and are strongly urged to do so with the guidance of their advising deans in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) and the relevant departmental director of undergraduate studies (<http://www.college.columbia.edu/academics/majoradvising>).

Some majors may be difficult for transfer students to complete due to the number of credits required, the specific course sequencing, and the number of terms remaining for transfer students to complete all Core and major requirements. There is no guarantee that a transfer student can complete every major and concentration offered, and all transfer students must declare a

major or concentration that they are capable of completing in the time available to them while at Columbia College.

PROGRESS TOWARD THE DEGREE

At the end of each term, the Committee on Academic Standing reviews the records of all students enrolled in Columbia College to determine student standing, and to determine whether academic action is warranted—including academic warning, academic probation, suspension and dismissal.

Academic Probation

Students may be placed on academic probation for the following reasons: do not complete 12 points in a term; have a term or cumulative grade point average below 2.0; fail a Core Curriculum class; or fail to make satisfactory progress toward the degree (taking an average of 15.5 points per term). Students and parents/guardians are notified when students are placed on academic probation or suspension, or are dismissed from the College. The advising deans in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) are available to provide concerted support to help students on academic action return to good standing.

There is no appeal available to students placed on academic warning or academic probation. Academic warning does not remain on students' records. Academic probation remains on students' records.

Students who do not make adequate progress toward the degree will be placed on academic probation, according to the following chart:

Semester	Points for typical progress	Threshold for academic probation
1	12	<12
2	31	<24
3	46	<38
4	62	<52
5	77	<69
6	93	<86
7	108	<105
8	124	

For example, by the end of the first two terms, Columbia College students are expected to have completed 31 points (an average of 15.5 points per term). If they have completed fewer than 24 points, they will be placed on academic probation and should work with their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) to plan ways to return to normal progress toward the degree. No more than eight terms will be granted to a student to complete the degree.

The advising deans in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) offer support to help students on academic action return to good standing.

Parents are notified when students are placed on academic probation.

Students who are on academic probation are not eligible to study abroad.

Academic Suspension/Dismissal

Students who fail to improve after being on academic probation, as well as students with extremely poor records during a single term, may be suspended and required to withdraw from Columbia College for at least one year. Conditions for readmission are specified at the time of suspension. If a student is readmitted after having been suspended and again fails to achieve satisfactory grades or to make normal progress toward the degree, it is likely that he or she will be dismissed from the College. When students are suspended or dismissed, they are notified of their status and the appeals process by email and express mail. The decision of the appeals committee is final.

Academic suspension and academic dismissal remain on students' records. Parents are notified when students are academically suspended or are academically dismissed from the College.

International students with F-1 or J-1 status are not allowed to remain in the United States while suspended or dismissed from the University. Any international student who is dismissed or suspended should immediately contact the International Students and Scholars Office (<http://www.columbia.edu/cu/isso>) (ISSO) (<http://www.columbia.edu/cu/isso>) to discuss available options.

EXAMINATIONS

Midterm Examinations

Midterm examinations are scheduled by each instructor, based on the pedagogical structure of a course. Therefore, while many midterm exams may be scheduled around the mid-point of a term (e.g., late October or mid-March), midterm exams may also fall earlier or later in the term, and a course may require multiple midterm exams. Students should carefully examine the syllabus of each course in which they are registered for details about required midterm exams.

Final Examinations

Final examinations are given at the end of each term. The Master University Examination Schedule is available in Student Services Online (SSOL) (<http://ssol.columbia.edu>). The Projected Exam Schedule is available at the beginning of each term. The confirmed Final Exam Schedule is typically available after the mid-point of the relevant term.

Rescheduling Exams

Examinations are not rescheduled in order to accommodate students' travel plans. Students are expected to remain on campus throughout the final examination period at the end of each semester.

Under certain circumstances, it may be necessary for an instructor to reschedule an exam. Any day or time changed in appointed final exam times must be agreed upon with members of the class. All students unable to take the exam at the new agreed-upon time must be given a make-up exam at a time that they are able to attend.

Student Examination Conflicts

Students may request a change of schedule for a final exam under the following two circumstances:

1. if a student is enrolled in two or more classes whose final exams are scheduled by the Master University Examination Schedule to be held at the same time;
2. if a student has three exams scheduled on any given calendar day (i.e., not a twenty-four hour period).

Students in either circumstance should meet with their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) in order to initiate the process for arranging a make-up exam, no later than two weeks after the final exam schedule is published.

Failure to Complete a Final Exam

If a student does not take a final exam, or begins but does not complete a final exam, a grade of zero or F will be factored for that portion of the final grade. No makeup exams will be offered in these circumstances.

Incompletes

Students facing grave medical or family emergencies at the time of a final exam may petition the Committee on Academic Standing for permission to complete the final exam or paper at a later date. Students will receive a temporary mark of IN (Incomplete) until the work is completed. For more information, see the Grades (<http://bulletin.columbia.edu/columbia-college/regulations/#grades>) section of this Bulletin.

GRADES

Columbia College uses the following system of grading: A, excellent; B, good; C, fair; D, poor but passing; F, failure (a final grade, not subject to reexamination). The grades of A, B, and C may be modified by a plus or minus. Pass (P) is awarded when students receive a C- or higher in a course which they have elected to take on a Pass/D/Fail basis, or when they have passed a course that is offered only on a Pass/Fail basis.

The Committee on Instruction of Columbia College has instructed the Registrar to calculate a cumulative grade point average for external purposes, such as official transcripts. The Registrar also calculates term and cumulative grade point averages for internal purposes, such as determining eligibility for the Dean's List.

Percentage of A Grades Calculation

College transcripts note the percentage of grades in the A-range in all lecture classes with at least twelve students and in all colloquia and seminar classes with at least 23 students, in accordance with the grading policies of the Faculty of Columbia College. (R grades are excluded from this calculation).

When the Registrar computes a student's Columbia College grade point average, only grades earned while enrolled in Columbia College in the Fall and Spring terms (including Columbia-owned study abroad programs), and in the Columbia School of Professional Studies in the Summer Sessions, are counted. Courses are weighted according to the number of credits.

The following scale is used:

Grade	GPA Equivalent
A+	4.33
A	4.0
A-	3.67
B+	3.33
B	3.0
B-	2.67
C+	2.33
C	2.0
C-	1.67
D	1.0
F	0

The Pass/D/Fail Option

All students registered in Columbia College during the regular academic year may elect, in Student Services Online (SSOL) (<https://ssol.columbia.edu>), one course each term during the regular academic year to take on a Pass/D/Fail basis (in addition to any courses that are graded only on a Pass/Fail basis). Students who do not utilize both Pass/D/Fail options during the academic year may elect, in the summer immediately following, to take one Summer Session course on a Pass/D/Fail basis.

Courses used to meet the stated degree requirements (except those only given on a Pass/Fail basis) may not be taken for a Pass/D/Fail grade. All Core Curriculum courses (i.e., *Literature Humanities*, *University Writing*, *Frontiers of Science*, *Contemporary Civilization*, *Art Humanities*, *Music Humanities*, Global Core requirement, science requirement, and foreign language instruction courses) must be taken for a letter grade.

All courses used to meet the requirements of a major or concentration, including related courses, must also be taken for a letter grade, with the possible exception of the first one-term course taken by the student in his or her eventual major (unless otherwise specified by the department).

The purposes of the Pass/D/Fail option are to encourage students to take courses of interest to them outside of their field of specialization and to permit those who have not decided upon

a major to test their talents in a particular field that may be of interest. Instructors are not informed of the student's grading option decision.

Students who wish to exercise the Pass/D/Fail grading option may designate in Student Services Online (SSOL) (<https://ssol.columbia.edu>) a single course for the grade of Pass/D/Fail until the Pass/D/Fail deadline specified on the *Academic Calendar*, i.e., November 16 in Fall 2017 and March 22 in Spring 2018. After that deadline, students wishing to exercise the Pass/D/Fail grading option should consult their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>).

No more than one course may be designated to be taken on a Pass/D/Fail basis at any point in a given semester.

In order to encourage students to engage more fully in the courses they elect to take for a grade of Pass/D/Fail, students are allowed to uncover a grade of Pass in SSOL (<https://ssol.columbia.edu>) until the end of the Change of Program period of the following semester. Students have until the end of the Change of Program period in the spring semester to uncover the grade of a course taken in the previous fall term, and until the end of the change of program period in the fall semester to uncover the grade of a course taken in the previous spring or summer term. Seniors who graduate in May have until June 1 to uncover the grade of a course taken in their final spring semester. Students who wish to uncover a grade of Pass can do so in Student Services Online (SSOL) (<https://ssol.columbia.edu>).

The grade of Pass is not used in calculating grade point average; the grades of D and Fail are used.

The Grade of D

No more than six points of D may be credited toward the degree in any academic year, and no more than a cumulative total of 12 points of D may be credited toward the 124 credits required for the degree credit. The grade of D is awarded only for courses listed in this Bulletin and for other courses taken while the student is enrolled in Columbia College. The decision as to whether or not a D may be used to satisfy the requirements for a major or concentration is made in each relevant academic department. In any given semester, the grade of D precludes the attainment of Dean's List status (see *Academic Honors, Prizes, and Fellowships*—Dean's List (<http://bulletin.columbia.edu/columbia-college/academic-honors-prizes-fellowships>)).

The Mark of W (Withdrawal)

Columbia College students are not permitted to have a course deleted from their academic records after the drop deadline (October 10 for Fall 2017 and February 20 for Spring 2018). If a student withdraws from a course after the drop deadline and no later than the Pass/D/Fail deadline (November 16 for Fall 2017 and March 22 for Spring 2018), the transcript will show a mark of W (indicating official withdrawal) for that course. This is a permanent mark, and will remain on the transcript even if the student repeats the course. Students will earn no points of

academic credit for classes in which they receive the mark of W. In any given semester, the mark of W precludes the attainment of Dean's List status (see *Academic Honors, Prizes, and Fellowships*—Dean's List (<http://bulletin.columbia.edu/columbia-college/academic-honors-prizes-fellowships>)).

Students may not drop or withdraw from a Core Curriculum course (i.e., *Literature Humanities, Frontiers of Science, Contemporary Civilization, Art Humanities, Music Humanities, and University Writing*) after the Core drop deadline (which is also the end of the Change of Program period (<http://bulletin.columbia.edu/columbia-college/academic-calendar>)). This does not apply to courses taken to fulfill the Global Core, science, or foreign language requirements.

Students may not drop or withdraw from any course after the Pass/D/Fail deadline. After that point, a student will receive the letter grade earned in the course.

When considering the option to withdraw from a course, students should be aware that, in order to remain in good academic standing, they must successfully complete no fewer than 12 points in a given term. Students who do not earn at least 12 points per term may face academic probation, suspension, or dismissal. Students who do not make adequate progress toward the degree (an average of 15.5 points per term) may also face academic probation, suspension, or dismissal.

To withdraw from a class, students must first meet with their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>), 403 Lerner, to discuss their plans and then submit a Columbia College Acknowledgment of Course Withdrawal form to their advising dean.

Failure to attend classes or unofficial notification to the instructor does not constitute dropping or withdrawing from a course. Students who stop attending classes without dropping or officially withdrawing are assigned the letter grade earned by factoring a zero or F for any missing work.

The Mark of AR (Administrative Referral)

A mark of AR is given to students as a temporary mark in circumstances when a student's irregular academic behavior in a course merits something other than grades A through F, and is designed to allow an instructor a reasonable default grade for use until an appropriate permanent grade can be submitted. Ultimately, the decision as to what the final grade should be will rest with the individual instructor, and a grade of AR will alert Andrew Plaa, dean of advising in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>), whose staff will follow up with the instructor to help determine what final grade is appropriate.

A mark of AR is also given when a student applies for an Incomplete. If the Incomplete is approved, the instructor will enter an AR, which will subsequently be altered to an IN by the Berick Center for Student Advising.

The Mark of IN (Incomplete)

An IN is a temporary grade designation granted by the Committee on Academic Standing for students who cannot complete their course work or are unable to take a final examination. The only reasons for which an IN will be granted are incapacitating illness (as certified by a healthcare practitioner or by Health Services at Columbia), grave family emergency, or circumstances of comparable gravity.

In order to receive the mark of IN, students must first speak with their advising dean and then petition the Committee on Academic Standing. Petition forms are available in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>). For classes that require a final paper or project, petitions must be submitted no later than the last day of classes. For classes that require a final examination, petitions must be submitted no later than the day before the exam.

To be granted an IN, it is expected that students will have completed all work in the class with the exception of the final paper, project or exam. If a student has not completed all the other work in the class up to the final paper, project or exam, an IN will not be granted. Students may not arrange unofficial incompletes or extended deadlines with their instructors.

Students who are granted an IN are assigned a deadline for completion of the overdue work or a date by which a deferred examination must be taken. Those who fail to meet the assigned deadline or miss the deferred examination will receive the contingency grade indicated by the instructor. All other marks of IN that remain unresolved by the end of one calendar year will be converted to the final grade of F, unless there is a documented reason to do otherwise. Questions may be directed to the advising deans in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>).

Students who receive the grade of IN, **approved in advance** by the Committee on Academic Standing, may be considered for Dean's List only after all IN grades are changed to letter grades (see *Academic Honors, Prizes, and Fellowships*—Dean's List (<http://bulletin.columbia.edu/columbia-college/academic-honors-prizes-fellowships>)).

The Mark of R (Registration Credit)

The R credit option is available only to Columbia College seniors. Students who wish to audit a class can request permission from the Committee on Academic Standing in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) to take a course for R credit. No point credit is given for R credit, and the GPA is unaffected by the mark of R. Students who take a course for R credit must have the permission of the instructor, in addition to that of the Committee on Academic Standing. Students may be required to complete certain work as specified by that instructor. The exact nature of the work should be determined by the instructor when the student petitions for an R for the course. An instructor may fail a student who has not completed assigned work. The deadline for registering for R credit

is the same deadline to drop classes, as specified on the *Academic Calendar* in this Bulletin. Registering for R credit is allowed only when:

1. the courses are in excess of the 124 points required for the B.A. degree;
2. the courses are taken in the last two terms of the student's attendance in Columbia College;
3. the courses are not used to fulfill a requirement for the B.A. degree;
4. the student has the permission of the Committee on Academic Standing and the instructor.

The Mark of YC (Year Course)

A mark of YC is given at the end of the first term of a course in which the full year's work must be completed before a qualitative grade is assigned. The grade given at the end of the second term is the grade for the entire course. In any given semester, the mark of YC precludes the attainment of Dean's List status until the grade for the entire year's coursework is awarded (see *Academic Honors, Prizes, and Fellowships*—Dean's List (<http://bulletin.columbia.edu/columbia-college/academic-honors-prizes-fellowships>)).

Report of Grades

Grades are available on Student Services Online (SSOL) (<https://ssol.columbia.edu>) on the first business day after they are submitted by the instructor. Paper and electronic transcripts may be ordered by currently enrolled students via SSOL. Students who find discrepancies in or have questions about their records should contact the Office of the University Registrar (<http://registrar.columbia.edu>).

LANGUAGE PLACEMENT EXAMINATIONS

First-year students can select appropriate levels in French, German, Hebrew, Italian, Latin, or Spanish on the basis of scores on SAT II: Subject Tests or Advanced Placement examinations. All continuing language students who have not taken one of these tests **must** take a Columbia placement exam in order to enroll in language study beyond the beginning elementary level. The exact exam times and dates are provided in the New Student Orientation Program schedule distributed to incoming students when they arrive on campus. Returning students who are not participating in the New Student Orientation Program should contact departments before the beginning of each term to inquire about placement exam options other than those provided during NSOP.

ADVANCED STANDING

Entering first-year students are subject to all rules for first-year students in their first two terms, regardless of the number of credits earned from approved advanced standing programs.

The College grants up to one semester (16 points) of college-level work completed before matriculation at Columbia College. This work may be done under the College Board Advanced Placement (AP) Program, GCE Advanced Level Examinations, International Baccalaureate Examination, or other national systems.

Entering first-year students are not granted credit for courses taken at other colleges before their graduation from secondary school. Students may receive a maximum of 6 points of credit for college courses taken after graduation from secondary school and prior to matriculation at Columbia. In order to receive this credit, students must submit an official university or college transcript and the syllabus for each relevant course to their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>). Final determination will be made by the dean of advising.

Students who wish to receive advanced credit or exemption for the language requirement may not take courses at Columbia that cover similar or more basic material than the advanced work already completed. Nor may students receive credit for two exams that cover the same material (e.g., Calculus AP and Mathematics GCE Advanced Level Exam). In some cases, credit is awarded only when students successfully complete a higher level course in the same field of study.

The actual determination of advanced credit is made after students matriculate in accordance with departmental and College policies and is awarded upon completion of the first year at Columbia. Students wishing to arrange such credit must meet with their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) and provide the relevant transcript/certificate.

For information about advanced standing for transfer students, see *Academic Regulations*—Regulations for Transfer Students (<http://bulletin.columbia.edu/columbia-college/regulations>).

ADVANCED PLACEMENT (AP) EXAMINATIONS

College Board Advanced Placement (AP) scores cannot be used toward exemption from any of the Core Curriculum courses, the Global Core requirement, or the science requirement; however, scores may be used toward satisfying the foreign language requirement (see *The Core Curriculum*—Foreign Language Requirement (<http://bulletin.columbia.edu/columbia-college/core-curriculum/foreign-language-requirement>)). Each year, individual departments review the College Board AP curriculum and determine appropriate placements, credit, and/or exemptions.

Students entering in the 2017–2018 academic year may be awarded AP credit for the following subjects and should refer to the relevant department sections in this Bulletin for specific information on credit granted, placement, and exemptions:

Subject	Department
Biology	Biological Sciences

Chemistry	Chemistry
Computer Science	Computer Science
Economics	Economics
English	English and Comparative Literature
French	French and Romance Philology
German	German Languages
Government and Politics	Political Science
History	History
Italian	Italian
Latin	Classics
Mathematics	Mathematics
Physics	Physics
Spanish	Latin American and Iberian Cultures
Statistics	Statistics

International Baccalaureate

Entering students are granted six points of credit for each score of six or seven in International Baccalaureate (IB) Higher Level examinations if taken in disciplines offered as undergraduate programs at Columbia College. The maximum number of advanced standing points that can be awarded is 16. Students who wish to receive advanced credit or exemption for the language requirement may not take courses at Columbia that cover similar or more basic material than the advanced work already completed. For further information, students should consult with their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>).

BRITISH ADVANCED LEVEL EXAMINATIONS

Students with grades of A or B on British Advanced Level examinations are granted six points of credit for each taken in the disciplines offered as undergraduate programs at Columbia College. The maximum number of advanced standing points that can be awarded is 16. Students who wish to receive advanced credit or exemption for the language requirement may not take courses at Columbia that cover similar or more basic material than the advanced work already completed. For further information, students should consult with their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>).

OTHER NATIONAL SYSTEMS

Pending review by the appropriate academic department at Columbia, students who complete secondary school work in other national systems may be granted credit in certain disciplines for sufficiently high scores. For further information, students should consult with their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>).

COURSES TAKEN IN OTHER COLUMBIA UNDERGRADUATE SCHOOLS

None of the courses listed in this Bulletin or in the bulletins of Barnard College and the School of General Studies require any special approval for enrollment, unless so indicated in various program descriptions and course descriptions.

The Fu Foundation School of Engineering and Applied Science

A maximum of four courses offered by Columbia Engineering and Applied Science may be taken on a space-available basis. The four-course limit does not apply to students in the Combined Plan program (<http://undergrad.admissions.columbia.edu/learn/academiclife/engineering/combined-plan-program>).

COURSES TAKEN IN THE GRADUATE SCHOOL OF ARTS AND SCIENCES

Courses offered by the Graduate School of Arts and Sciences may be taken by qualified undergraduates with the permission of the director of undergraduate studies in the department in which the course is taught.

COURSES TAKEN IN OTHER DIVISIONS OF THE UNIVERSITY

Students have available to them a number of courses offered by some professional schools of the University and may take a maximum of four courses for elective credit and apply those points toward the 124 points necessary for their degree.

Students who wish to take such a course and not count it toward the 124 points necessary for the undergraduate degree must receive the permission of their advising dean from the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>). In either instance, students **must** follow the policies established by the various professional schools, **must** have the permission of the instructor of the course they wish to take, and in some instances, must have the permission of the school in which the course is offered. Following is a list of schools and programs that allow undergraduates to register for courses, with their policies regarding the enrollment of Columbia College students. Students who wish to take a course in a Columbia school not listed below should first consult with their advising dean in the Berick Center for Student Advising (<https://cc-seas.columbia.edu/csa>).

Graduate School of Architecture, Planning and Preservation

Lectures offered by the Graduate School of Architecture, Planning and Preservation may be taken on a space-available basis by qualified undergraduates. Undergraduates are not allowed to enroll in any seminars or studio courses.

School of the Arts

Graduate courses offered by the School of the Arts may be taken on a space-available basis by qualified undergraduates.

Graduate School of Business

Courses offered by the Graduate School of Business that are designed specifically for undergraduates can be found in *Departments, Programs, and Courses—Business* (<http://bulletin.columbia.edu/columbia-college/departments-instruction/business>). Other Business School courses may only be taken on a space-available basis by seniors who have completed the required prerequisites. Students must have signed permission from the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>). Please note that registration deadlines for these classes are often earlier than the College registration and Change of Program periods.

School of Professional Studies

Columbia College students are not permitted to enroll during the academic year—i.e., Fall and Spring terms—in courses offered through the School of Professional Studies. The School of Professional Studies sponsors the Summer Session at Columbia. For additional information on taking courses at Columbia during the summer, please see the Summer Study (<http://bulletin.columbia.edu/columbia-college/regulations/#summerstudy>) section.

School of International and Public Affairs

Open Enrollment Courses offered by the School of International and Public Affairs are open to all Columbia students, unless the class is full. Students interested in registering for a SIPA Open Enrollment Course may receive permission to enroll by completing a Registration and Drop/Add form and submitting it to the SIPA Registration site on the 6th floor of the International Affairs Building. If the class is not full, approval will be granted.

School of Journalism

Courses offered by the School of Journalism may be taken on a space-available basis. Students must have signed permission from the School of Journalism's Office of the Associate Dean for Faculty and Academic Affairs (<https://journalism.columbia.edu/contact-us?type=96>), Pulitzer Hall.

Law School

Normally, students are not allowed to enroll in courses offered through the Law School. Exceptions to this policy may be granted under the following circumstances:

1. Law School courses may be taken by students in the Accelerated Interdisciplinary Legal Education (AILE) program. Students must have signed permission from the Law School Office of the Assistant Dean of Academic Services, 500 William and June Warren Hall.
2. A small number of seniors are permitted to enroll in one or two seminars, selected by Law School faculty. More

information is available from the Berick Center for Student Advising (<https://cc-seas.columbia.edu/csa>).

Mailman School of Public Health

Courses offered by the Mailman School of Public Health may be taken by qualified undergraduates on a space-available basis with the permission of the department in which the course is taught. Students must complete the Public Health Cross Registration Application Form and receive signed permission from the department, as well as from the School of Public Health's Office of Student Affairs, 722 West 168 Street, Suite 1014. Once School of Public Health permissions are secured, students must also receive signed permission from the Berick Center for Student Advising (<https://cc-seas.columbia.edu/csa>), 403 Lerner, before proceeding to register for the course at the Registrar's Office, 205 Kent.

School of Social Work

Courses offered by the School of Social Work may be taken on a space-available basis.

Teachers College

Normally, students are not allowed to enroll in courses offered by Teachers College. Exceptions to this policy may be granted under the following circumstances:

1. Courses that are not offered at Columbia but are deemed by the student's faculty adviser as essential to a student's undergraduate program of study. Students should submit a petition (<http://www.college.columbia.edu/academics/petitions>) to the dean of academic planning and administration of Columbia College, 202 Hamilton.
2. Instrumental music instruction course (e.g., piano). In this instance, students are charged per credit for the course over and above their Columbia tuition. Students should submit a petition (<http://www.college.columbia.edu/academics/petitions>) to Andrew Plaa, dean of advising in the Berick Center for Student Advising (<https://cc-seas.columbia.edu/csa>), 403 Lerner.

SUMMER STUDY

Columbia Summer Session

Normally, credit for summer school is given to College students only for courses taken in the Columbia Summer Session. Students may apply a maximum of 16 points of credit earned during any Summer Session to the 124 credits needed for the degree, and students cannot take more than eight points in any Summer Session period or in overlapping periods.

All students registered in Columbia College during the regular academic year may elect one course each semester during the regular academic year on a Pass/D/Fail basis (in addition to any courses that are given only on a Pass/D/Fail basis). Students who do not utilize both Pass/D/Fail options during the academic year may elect, in the summer immediately following, to

take one Summer Session course on a Pass/D/Fail basis. For additional information on and restrictions governing Pass/D/Fail credit, see the *Academic Regulations—Exams and Grades* (<http://bulletin.columbia.edu/columbia-college/regulations/#examsandgradestext>) section of this Bulletin.

Students who plan to take any summer courses toward their major or concentration must consult with the Director of Undergraduate Studies of their major department. **Not all courses offered in the Summer Session are accepted by Columbia College for credit.** Students should also consult the annually updated List of Approved Summer Courses (<http://www.college.columbia.edu/academics/courseselection>).

Summer School Classes Taken Outside Columbia

Students are not normally permitted to earn credit toward their degrees outside of Columbia except in the case of approved study abroad programs. **Students who nevertheless wish to request permission to receive credit for summer school courses taken outside Columbia must:**

1. Obtain a copy of Columbia College's Pre-Approval for a Course Taken at Another U.S. Institution form, available in the Berick Center for Student Advising, (<https://cc-seas.columbia.edu/csa>) 403 Lerner.
2. Carefully read the following procedures to apply for such credit. Please note that permission to take classes outside of Columbia is normally given only when a student has fallen behind in credits, when the student wishes to take a language course, or when the summer course is a prerequisite for a course that must be taken in the fall for the student's major or concentration. Students should note that introductory and intermediate language courses are only approved pending the successful completion of the departmental placement test into the next higher level language course. Students are responsible for arranging departmental testing upon return to campus in the fall. If students do not place into the next level of the language course, credit will not be granted. Students who elect to discontinue study of the language or do not take the relevant departmental placement test will not be granted credit for the summer courses taken.
3. Discuss study plans with their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>).
4. Complete the approval request form, outlining their reasons for taking summer courses and listing the specific courses in which they wish to enroll. Once submitted to students' advising deans in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>), requests are then reviewed by the Committee on Academic Standing, which determines whether or not summer school courses are approved for credit. It is strongly advised that students gain pre-approval prior to enrolling in courses at other institutions, as there is no guarantee that requests will be approved, and students will not be reimbursed for any expenditure.

5. Students may not receive credits for study abroad during the summer except in Columbia-sponsored programs or approved foreign-language, archaeology, and field-studies programs. Students seeking summer study abroad credits must receive permission from the Office of Global Programs (<http://www.ogp.columbia.edu>), 606 Kent.
6. Students applying for summer school credit for courses that they wish to use in partial fulfillment of the science or Global Core requirements **must** submit the relevant course approval petition to their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) for approval by the appropriate faculty committee, prior to taking the course. Note that only non-Columbia study abroad courses may be petitioned for use to fulfill the Global Core requirement. Approval to receive College credit for summer school courses does **not** ensure approval of the course to fulfill one of these requirements.

STUDY OUTSIDE COLUMBIA UNIVERSITY

Permission to study at another school for a term or a year is granted only for study at institutions outside of the United States, as part of an approved study abroad program (<http://bulletin.columbia.edu/columbia-college/study-abroad/#sponsoredprogramtext>), or to participate in approved exchange programs (<http://bulletin.columbia.edu/columbia-college/study-abroad/#internationalexchangetext>). Exceptions may be granted for study during the summer. See the Summer Study (<http://bulletin.columbia.edu/columbia-college/regulations/#summerstudy>) section for more information.

Matriculation at another institution renders students ineligible to continue at Columbia. Columbia College students who matriculate at another post-secondary institution and/or are considered a degree-seeking student at a college or university other than Columbia College will be withdrawn from Columbia with no opportunity to return and complete the Columbia College degree.

COURSES TAKEN FOR GRADUATE SCHOOL CREDIT

An undergraduate in the College may take graduate courses at Columbia and apply the earned credit toward a Columbia M.A. or Ph.D. degree, assuming admission to the Graduate School of Arts and Sciences, under the following conditions:

1. The work must be in excess of the 124 points required for the B.A. degree.
2. The student must obtain the approval of both the graduate department(s) offering the course(s) and the undergraduate department in which he or she is majoring or concentrating.
3. A course used to fulfill a requirement for the B.A. degree may not be counted toward graduate credit.
4. The maximum amount of graduate credit that an undergraduate can earn is two Residence Units toward the

Ph.D. degree requirement, and only one Residence Unit which may be applied toward the M.A. degree requirement.

5. Courses that a student completes while registered in the Columbia Summer Session may not be credited toward the completion of degree requirements in the Graduate School of Arts and Sciences.

Students can request a leave of absence during a term or prior to the start of a term. When a student takes a leave of absence during a term, this action is also considered a withdrawal. Withdrawal is defined as the dropping of one's entire program in a given term after the first day of classes of the term and as a result withdrawing from Columbia College. Withdrawing from Columbia College after the start of the semester can have implications for financial aid. Any student withdrawing from Columbia College must notify the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) in writing. **Notification to instructors or failure to attend classes does not constitute an official withdrawal from Columbia College and will result in failing grades in all courses.**

MEDICAL LEAVE OF ABSENCE

A medical leave is granted to a student whose health interferes with successful full-time study. A leave can be granted for a minimum of one term and a maximum of two years.

Unless a student is granted an exception due to extenuating circumstances, a student will be permanently withdrawn after they exceed this maximum time period. Students may only return in the fall or spring term. Only in rare circumstances will students be readmitted from medical leave to enroll in courses for the Columbia Summer Session.

Students must consult with their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) to initiate a leave, and then provide medical documentation to support the request. Medical leaves must be accompanied by an individualized assessment of students' individual healthcare needs.

While on leave, students must be actively engaged in a course of medical treatment that leads to recovery. In addition, students are required to continue to access their Columbia email, which is the official means of communication by the University. As part of their readmission process, students must also provide medical documentation supporting their readmission. All questions can continue to be addressed to students' advising deans in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>).

Academic Standing

Students who leave in good academic standing will return in good academic standing; students who leave on academic action will return on academic action. If a medical leave begins on or before the Columbia College withdrawal deadline, the semester will not appear on the record. If a leave begins after that deadline, courses will remain on the transcript.

Ordinarily, Columbia College students who are authorized to withdraw for medical reasons after the withdrawal deadline will receive a mark of W for each of their courses for the term. These notations indicate an authorized withdrawal from the courses. In rare cases, when a student must leave for medical reasons beyond the relevant deadline, a student and advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) can work together with the faculty to determine whether an Incomplete would be a more appropriate notation on the transcript. In order to be eligible for an Incomplete, the student must have completed all work for the course except the final paper, exam, or project. The student must also obtain the approval of the relevant advising dean(s) in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) as well as the appropriate faculty member(s). Students should consult with their advising deans in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) for more details.

Students who have been approved for authorized Incompletes in the last semester before their medical leave must complete the work of each course upon their return to campus by the end of the Change of Program period. If the work is not completed by the end of the Change of Program period of the term in which the student returns, the grade may convert to the contingency grade or to an F. Due dates of incomplete work should be determined in consultation with the advising dean in the Berick Center for Student Advising upon notification of readmission.

When students depart after the deadlines listed above, they must be aware that they will likely fall behind in points necessary to remain in good academic standing. To determine whether or not they will fall behind, students should remember that Columbia College students should complete an average of 15.5 points per term to remain in good academic standing. Students should consult with their advising deans in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) to learn whether or not they will fall below the “low points threshold” established for Columbia College students and, if so, work with their advising deans and departments to create a reasonable academic plan to ensure the timely completion of their degree.

Students are not permitted to earn transferable credits toward the degree while on medical leave from the University, as the purpose of the leave is to regain full health in order to return and resume full-time study. In some cases, healthcare practitioners may recommend that students take courses at home institutions as part of the recovery process. Those points will not, however, count toward the Columbia degree.

If a student matriculates at another institution in a degree program while on leave from Columbia, the student will be considered to have transferred to another institution and will be permanently withdrawn from Columbia College.

READMISSION FROM MEDICAL LEAVE OF ABSENCE

Students must complete all parts of the following readmission procedures by the following deadlines:

- Fall term readmission – June 1
- Spring term readmission – November 1
- Summer term readmission – not permitted

In order to begin readmission, students must first discuss their plans with their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) and then submit the following letters to their advising dean by email or fax:

1. Request for readmission: This letter should review the circumstances that led to the leave, describe in detail any activities pursued while away, explain why studies can now be successfully resumed, and outline a plan for continued support. The letter should also indicate whether or not campus housing will be required.
2. Medical practitioner support: This letter should describe the treatment prescribed for the student and progress made by the student, provide an evaluation of the student's readiness to return to full-time study at Columbia, and outline the recommended continued care plan.

The Medical Leave Readmission Committee, made up of representatives of Columbia University Health Services and the Berick Center for Student Advising, meets in June and November to consider readmission requests for the Fall and Spring terms, respectively. Committee review is not guaranteed when documentation is submitted after the stated deadlines. Students will receive notification regarding one of the following three outcomes of the committee's assessment of readmission requests:

1. applicants are approved for an interview by a Columbia University Health Services practitioner for final adjudication. Students may then be officially readmitted or denied readmission and will be notified of a decision by the Berick Center for Student Advising by letter and email;
2. additional information is requested;
3. readmission is denied. Students may reapply.

Once officially readmitted, students will be provided an online registration appointment in order to enroll for the coming term. Normally, students will be able to register in late August for the Fall and in mid-January for the Spring term. In addition, students who are guaranteed housing upon readmission may submit a housing application by following the instructions in their readmission letter. Students on leave cannot participate in housing lotteries until formally readmitted.

Students must address all financial or other obligations to the University that are still outstanding from when they took their leave. If a hold has been placed on their registration, this hold must be cleared before they can enroll in classes or move into

housing. If after being readmitted for the following semester, a student cannot register by the end of the Change of Program period of that semester, then they will be placed on another leave of absence.

Students are urged to meet with their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) and a Residential Life staff member, if applicable, during the first two weeks of their return to campus, to ensure a smooth transition back to the campus community.

VOLUNTARY LEAVE OF ABSENCE

A voluntary leave of absence may be granted by the Committee on Academic Standing to undergraduate students who request a temporary withdrawal from Columbia College for a nonmedical reason. Students considering a voluntary leave must discuss this option in advance with their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>).

Voluntary leaves are granted for a period of one to four terms. Students must be in good academic standing at the time of the leave, and must be able to complete the degree in eight semesters.

Students may not take courses for transferable credit while on leave. If a student matriculates at another institution in a degree program while on leave from Columbia, the student will be considered to have transferred to another institution and will be permanently withdrawn from Columbia College. Students who choose to take voluntary leaves are not guaranteed housing upon return to the University. International students should contact the International Students and Scholars Office (<http://www.columbia.edu/cu/isso>) to ensure that a leave will not jeopardize their ability to return to Columbia College.

FAMILY EMERGENCY LEAVE OF ABSENCE

Columbia College students who must leave the university for urgent family reasons that necessitate a semester-long absence (e.g., family death or serious illness in the family) may request an emergency family leave of absence. Documentation of the serious nature of the emergency must be provided. Students must request an emergency family leave of absence from their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>).

When an emergency family leave of absence is granted during the course of the term, the term will be deleted if the leave begins prior to the withdrawal deadline. Normally, if a student leaves after the withdrawal deadline, all courses will receive a mark of W (indicating authorized withdrawal). In certain circumstances, a student may qualify for an Incomplete, which would have to be completed by the end of the Change of Program period of the semester in which the student returns to Columbia. If the Incomplete is not completed by that time, the contingency grade or a W will be inserted as the final grade.

To return to Columbia College, students must notify the Berick Center of Student Advising by June 1 for the Fall term or November 1 for the Spring term. Students must request readmission in writing and submit a statement describing their readiness to return. Once readmission is granted, housing will be guaranteed.

READMISSION

Students seeking readmission to Columbia College must submit evidence that they have achieved the purposes for which they left. Consequently, specific readmission procedures are determined by the reasons for the withdrawal. Policy statements outlining the readmission procedures for voluntary or medical leaves of absences are available in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>). Students should consult their advising dean for further information.

Students who fail to graduate and who have been withdrawn from the College must apply for readmission within a two-year period in order to have an opportunity to complete the degree. To apply for readmission, students must have successfully completed no fewer than 90 points of academic credit and earned a GPA of no less than 2.0. Students must fulfill the degree and major or concentration requirements in place at the point of original matriculation. Readmission will be predicated upon the assessment of the student's ability to successfully complete the degree within one calendar year. Inquiries regarding readmission should be directed to the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>).

Students applying for readmission should complete all parts of the appropriate readmission procedures by June 1 for the Fall term or November 1 for the Spring term. Once an international student with F-1 or J-1 status is readmitted, the student should contact the International Students and Scholars Office (<http://www.columbia.edu/cu/isso>) to obtain a new visa certificate (form I-20 or form DS-2019).

Students may not take courses for transferable credit while on leave. If a student matriculates at another institution in a degree program while on leave from Columbia, the student will be considered to have transferred to another institution and will be permanently withdrawn from Columbia College.

DEGREE REQUIREMENTS

The faculty Committee on Instruction of Columbia College reviews Columbia College degree requirements and curricular matters each year. This Bulletin reflects these faculty recommendations and curricular changes in its annual publication. Columbia College policy requires students to fulfill the general degree requirements as stated in the Bulletin of the first year of their matriculation into Columbia College.

MODIFICATION OF REQUIREMENTS

The requirements for the degree may be modified or waived in individual cases only by the faculty Committee on Instruction acting for the Faculty of Columbia College. Students wishing to

petition the Committee are advised to discuss their requests with their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>).

THE COLUMBIA COLLEGE COMMITTEE ON ACADEMIC STANDING

The Columbia College Committee on Academic Standing (<https://www.cc-seas.columbia.edu/csa/cas>) implements academic policies and regulations for Columbia College students as set forth by the faculty Committee on Instruction, the University Senate or the faculty as a whole. The Committee on Academic Standing (<https://www.cc-seas.columbia.edu/csa/cas>) is expected to uphold the policies and regulations of the Committee on Instruction.

The Committee on Academic Standing (<https://www.cc-seas.columbia.edu/csa/cas>) is composed of advising deans, an associate dean of advising and the dean of advising.

REGISTRATION

Student Service Center

205 Kent
212-854-4400
registrar@columbia.edu

REGISTRATION AND ENROLLMENT

Registration is the systematic process that reserves seats in particular classes for eligible students. It is accomplished by following the procedures announced in advance of each term's registration period. Enrollment is the completion of the registration process and affords the full rights and privileges of student status. Enrollment is accomplished by the payment or other satisfaction of tuition and fees and by the satisfaction of other obligations to the University.

Registration alone does not guarantee enrollment, nor does registration alone guarantee the right to participate in a class. In some cases, students need to obtain the approval of the instructor or of a representative of the department that offers a course. In other cases, students may be required to attend the first few class sessions prior to official registration or to confirm official registration. Please check the course information in the *Departments, Programs, and Courses* section of this Bulletin and the registration instructions contained in the Directory of Classes for all of the approvals required.

To comply with current and anticipated Internal Revenue Service mandates, the University requires all students to report their Social Security numbers at the time of admission. **Newly admitted students who do not have Social Security numbers should obtain one well in advance of first registration.** International students should consult with the International Students and Scholars Office (<http://www.columbia.edu/cu/isso>), located at 524 Riverside Drive (+1-212-854-3587) for more information.

According to University regulations, each person who completes registration is considered a student of the University during the term for which they register, unless the student's connection with the University is officially severed by withdrawal or otherwise. No student registered in any school/college of the University shall at the same time be registered in any other school/college, either of the University or of any other institution, without specific authorization from the dean/director of the school/college in which he or she is first registered.

The privileges of the University are not available to any student until they have completed registration. Typically, a student who is not officially registered for a University course may not attend the course. Some courses may require students to attend the first few class sessions prior to official registration. No student may register after the stated registration period unless he or she obtains

the written consent of the faculty member and the Committee on Academic Standing (<https://www.cc-seas.columbia.edu/csa/cas>).

Students are held accountable for absences incurred owing to late enrollment. The University reserves the right to withhold the privilege of registration or any other University privilege from any person with an unpaid debt to the University. Students are held accountable for absences incurred owing to late enrollment.

All Columbia College students must be enrolled in a minimum of 12 points of credit in any given semester. Each Columbia College student must be registered for at least 12 points by the close of the Change of Program period and those students who are registered for fewer than 12 points by this time will be withdrawn from the College. Graduating seniors who need less than 12 credits to complete their degree can petition the Committee on Academic Standing to enroll in less than 12 points. Questions should be directed to the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>).

Registration and Change of Program Instructions

Registration instructions are announced in advance of each registration period. Students' individual registration times are listed in Student Services Online (SSOL) (<https://ssol.columbia.edu>) and registration dates are listed on the Academic Calendar (<http://bulletin.columbia.edu/columbia-college/academic-calendar>). Students should also consult the Registrar's website (<http://registrar.columbia.edu>) for additional information.

REGISTERING FOR CLASSES

Registration for classes is by appointment online via Student Services Online (SSOL) (<https://ssol.columbia.edu>). Some classes may be blocked for online registration and require written approval; students should check the Directory of Classes for approval information. Courses blocked from online registration require a completed Registration Adjustment form, with all necessary approvals confirmed. A student cannot use the Registration Adjustment form to register for a course if the course is not blocked from online registration or if the student is eligible to join the course waitlist.

Students otherwise unable to register through SSOL must submit a completed Registration Adjustment form to the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>), with all necessary approvals confirmed.

Students are not permitted to register for more than 18 points, and students are not permitted to register for courses whose meeting times overlap. Students are responsible for ensuring that their academic programs are in accordance with these policies. If students are accepted into courses through the waitlist mechanism so that their programs contain more than 18 points and/or overlapping courses, students are required to bring their enrollment down to 18 points or fewer and to resolve the overlaps by dropping courses by the end of the Change of Program

period (<http://bulletin.columbia.edu/columbia-college/academic-calendar>).

The Committee on Academic Standing in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) is tasked with upholding the academic policies of the College and will make changes to students' registration in the event that students fail to ensure that their academic programs comply with the policies of the faculty.

DROPPING COURSES

Students may drop a course online during their assigned registration appointments up until the drop deadline. With the exception of certain Core Curriculum courses (see below), the final dates for dropping courses are Tuesday, October 10 for Fall 2017 and Tuesday, February 20 for Spring 2018.

Columbia College students are not permitted to remove a course from their academic record after the drop deadline. If a student withdraws from a course after the drop deadline and no later than the Pass/D/Fail deadline (November 16 for Fall 2017 and March 22 for Spring 2018), the transcript will show a mark of W (indicating official withdrawal) for that course. The W is a permanent mark and will remain on the transcript even if the student repeats the course. Students will earn no points of academic credit for classes in which they receive the mark of W. In any given semester, the mark of W precludes the attainment of Dean's List status.

To withdraw from a class, students must first meet with their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>), 403 Lerner, to discuss their plans. They must then submit a Columbia College Acknowledgment of Course Withdrawal form to their advising dean in the Berick Center for Student Advising. (<https://www.cc-seas.columbia.edu/csa>)

Students may not drop or withdraw from a Core Curriculum course (i.e., *Literature Humanities*, *Frontiers of Science*, *Contemporary Civilization*, *Art Humanities*, *Music Humanities*, and *University Writing*) after the Core drop deadline, which is also the end of the Change of Program period (September 16 for Fall 2017 and January 26 for Spring 2018). This does not apply to courses taken to fulfill the Global Core, Science, or Foreign Language requirements.

Students may not withdraw from any course after the Pass/D/Fail deadline. After that point, students can only receive the letter grade earned in the course.

When considering the option to drop or withdraw from a course, students should be aware that, in order to remain in good academic standing, they must successfully complete no fewer than 12 points in a given semester. Students who do not earn at least 12 points per term will be placed on academic probation, or be suspended or dismissed. Students who do not make adequate progress to the degree (an average of 15.5 points per term) will also face academic probation, suspension, or dismissal.

Failure to attend classes or giving unofficial notification to the instructor does not constitute dropping or withdrawing from a course. Students who stop attending classes without dropping or officially withdrawing are assigned the letter grade earned by factoring a zero or F for any missing work.

DROPPING CORE COURSES

Students may drop a Core Curriculum course, using the online registration system, no later than the end of the Change of Program period, which is Friday, September 15 for Fall 2017 and Friday, January 26 for Spring 2018. Note that the deadline to drop a Core Curriculum course is a different one from the deadline to drop other courses. Students may also refer to the Core Curriculum website (<http://www.college.columbia.edu/core/reg>) for more information.

Students are not permitted to drop or withdraw from *Literature Humanities*, *Frontiers of Science*, *Contemporary Civilization*, *Art Humanities*, *Music Humanities*, or *University Writing* after these deadlines without the approval of the Committee on Academic Standing (<https://www.cc-seas.columbia.edu/csa/cas>). Students should consult their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) for more information on the petition process.

Students wishing to drop courses counting toward the Global Core, Science, and Foreign Language requirements are bound by the general drop deadlines listed on the Registrar's website (<http://registrar.columbia.edu>), and on the *Academic Calendar* in this Bulletin.

CHANGING GRADING OPTIONS

Students may elect to change their course grading options from letter grading to Pass/D/Fail or from Pass/D/Fail to letter grading by Thursday, November 16 for Fall 2017 and by Thursday, March 22 for Spring 2018.

Please refer to *Academic Regulations—Exams and Grades* (<http://bulletin.columbia.edu/columbia-college/regulations/#examsandgradestext>) listed in this Bulletin for more information regarding this grading option.

STUDY ABROAD

Office of Global Programs (<http://www.ogp.columbia.edu>)
606 Kent
212-854-2559
ogp@columbia.edu

Studying in a foreign country for a semester, a full year, or sometimes a summer, represents a significant enhancement to the Columbia College education. Study abroad expands the walls of the institution and offers students the opportunity to gain first-hand experience of the larger global community of which we are all members. Students engaged in international study discover insights into other cultures, develop new perspectives, and learn to reflect on how their own culture has shaped their understanding of the world. Students interested in studying abroad should visit the Office of Global Programs (<http://www.ogp.columbia.edu>), 606 Kent, as early as possible to discuss their academic goals and to develop a plan for integrating international study into their curriculum.

ELIGIBILITY

The College maintains the authority over students' participation in study abroad programs and upholds standards for all potential candidates. To be eligible for participation in a Columbia-approved study abroad program, students must meet the following criteria:

- Have a minimum GPA of 3.0;
- Make progress toward finishing the Core Curriculum;
- Complete the Core foreign language requirement (i.e., satisfactory completion of the intermediate sequence). Some programs require one or two courses beyond this level, so students may also need to complete advanced language prerequisites;
- Demonstrate academic interest by completing at least one course pertaining to the country or region where the student intends to study;
- Maintain good academic standing. A review of each student's academic and disciplinary records is conducted as part of the required clearance process. Students on academic or disciplinary probation are not permitted to study abroad during the term of their probation.

It is generally possible to arrange for study in most foreign countries through programs sponsored by Columbia or by other American institutions, or through direct application to foreign universities. Such studies may be approved for one to two terms in the junior year or during any summer term.

CREDIT AND GRADING

Students who enroll in the following Columbia-sponsored programs receive direct Columbia credit for their courses. The

grades earned in their studies are reflected on their official transcripts and cumulative GPA:

- Reid Hall in Paris
- The Berlin Consortium for German Studies
- The Kyoto Center for Japanese Studies
- The Columbia in Beijing Program at Tsinghua University
- The Tropical Biology and Sustainability Program in Kenya
- Columbia University in London
- Columbia Global Seminars taught on Columbia-sponsored study abroad programs

Credit from outside approved programs is certified as transfer credit toward the degree when the student returns to the College and upon receipt of appropriate transcripts and other supporting materials. Grades earned during participation in outside approved programs are not reflected on the transcript or the cumulative GPA. College transfer students should note that they are permitted no more than 60 points of outside credit (see *Academic Regulations—Regulations for Transfer Students*).

All students are reminded that the final 30 credits required for the degree must be taken while enrolled in the College for study on Columbia's New York campus or on one of the Columbia-sponsored programs abroad. Any exceptions require special permission from the Committee on Academic Standing.

In addition, the following conditions apply for study abroad:

1. No credit is granted for courses in business, education, journalism, or other subjects that, at Columbia, are typically taught in professional schools.
2. Transfer credit is not awarded for courses taken on a Pass/Fail basis in outside programs. The minimum grade necessary for transfer of credit is C-.

STUDY ABROAD CLEARANCE

Students must be cleared to study on approved programs by the Office of Global Programs (<http://www.ogp.columbia.edu>), 606 Kent, by October 15 for the spring semester and by March 15 for the fall semester/academic year. Students must register with this office before November 15 for the spring semester and April 15 for the fall semester/academic year.

UNDERGRADUATE INTERNATIONAL TRAVEL POLICY

All matriculated undergraduates who wish to participate in Columbia-Led, Columbia-Facilitated and/or Recognized international travel must first be cleared to participate in such program and are then *required* to obtain School Sponsorship (<https://travelpolicy.undergrad.columbia.edu>) at least 4 weeks prior to departure, in accordance with the Undergraduate International Travel Policy (<https://www.cc-seas.columbia.edu/travelpolicy/policy>).

TUITION AND FINANCES

While abroad, students remain enrolled at the College; tuition is paid to Columbia. Columbia, in turn, pays the academic costs of the overseas program. Students are financially responsible for room, board, and any other miscellaneous costs. Students receiving financial aid at Columbia remain eligible for aid when they study abroad with Columbia's approval.

Students may direct financial aid and study abroad inquiries to the Financial Aid and Educational Financing (<https://cc-seas.financialaid.columbia.edu>), 618 Lerner; 212-854-3711; ugrad-finaid@columbia.edu.

Columbia College students who enroll in the Columbia-sponsored programs listed below have the same access to the financial aid they would have if they were enrolled in classes in New York. Students who plan to apply should consult with the Office of Global Programs (<http://www.ogp.columbia.edu>), 606 Kent; 212-854-2559; ogp@columbia.edu.

AFRICA

Kenya: Tropical Biology and Sustainability in Kenya Program

In partnership with Princeton University, Columbia has developed a field semester abroad program in Kenya on Tropical Biology and Sustainability. Operating during the spring semester, this global immersion experience gives students the opportunity to study ecology, evolutionary biology, conservation biology, environmental engineering, and sustainable development in the environmental hub of East Africa. Based at Princeton's Mpala Research Centre in central Kenya, and with support from Columbia's Global Center Africa in Nairobi, students also travel across Kenya to places such as the forested slopes of Mt. Kenya, the wildlife-rich savannas of Laikipia, and the coffee and tea plantations of western Kenya. Students take four three-week course modules taught by Princeton and Columbia faculty who work in Kenya and other parts of East Africa.

Applicants must have completed Environmental Biology I and II, or the equivalent, to be eligible to apply.

For program information, students may consult <http://www.ogp.columbia.edu> and email ogp@columbia.edu.

EAST ASIA

China: Semester or Academic Year in Beijing

This program is designed for students who demonstrate a high level of both written and spoken Mandarin Chinese and who would like to directly enroll in courses at Tsinghua University. The program offers access to a broad range of courses through the Faculty of Humanities and Social Sciences and other schools where participants take classes with Chinese university students. A local faculty member advises students on their academic program and organizes co-curricular activities. Tsinghua University

graduate students are available to tutor students and assist with the transition into the Chinese university system.

Applicants must have the equivalent of three years of college-level Chinese, although more is recommended.

For program information, students may consult <http://www.ogp.columbia.edu> and email beijing@columbia.edu.

Japan: The Kyoto Consortium for Japanese Studies

The Kyoto Consortium for Japanese Studies (KCJS) offers an intensive, two-semester academic program primarily for undergraduates who wish to do advanced work in Japanese language and Japanese studies. The program is open to qualified students who have completed two or more years of college-level Japanese at the time of enrollment. A limited number of students may be admitted for single semester study in the fall or spring.

The KCJS curriculum provides intensive Japanese language study and the opportunity to choose from a broad spectrum of social sciences and humanities courses on premodern and contemporary Japan. The program takes advantage of the numerous social and cultural resources of Kyoto by incorporating into the curriculum field trips, guest speakers, and research projects based on local field work.

For program information, students may consult <http://www.kcjs.columbia.edu> and email kyoto@columbia.edu. Students are also advised to consult with the director of undergraduate studies (<http://www.college.columbia.edu/academics/dus>) in the Department of East Asian Languages and Cultures (<http://ealac.columbia.edu>).

EUROPE

France: Reid Hall in Paris

Established in 1966, the Columbia-Penn Program in Paris at Reid Hall offers semester, academic-year, and summer study-abroad options that challenge students to step outside the boundaries of a traditional French language program and use French as a means to further their understanding of their own area of study. Students with a good command of the French language refine their speaking and writing skills through intensive language training and by taking selected disciplinary courses taught in French specifically for the program at Reid Hall and in the French university system at partner institutions: Institut d'Etudes Politiques (Sciences Po), University of Paris I (Panthéon Sorbonne), University of Paris IV (Sorbonne), University of Paris VII (Denis Diderot), and the École du Louvre. Opportunities for participating in joint honors seminars and directed research are also available.

The minimum prerequisite for the semester or academic-year program is two years of college-level French, although more is recommended.

For program information, students may consult <http://www.ogp.columbia.edu> and email reidhall@columbia.edu.

Germany: The Berlin Consortium for German Studies

The Berlin Consortium for German Studies (BCGS) provides students with the opportunity to enroll in courses at the Freie Universität Berlin (FU Berlin) for the fall semester or a full academic year. The program begins with a six-week intensive language practicum which, in conjunction with a month-long homestay, prepares students for study at the FU Berlin. Upon completion of the practicum, students enroll in one course taught by the BCGS directors on a topic such as cultures, politics, history, literature, theater, or cinema; and for at least two, possibly more, FU Berlin courses for which they meet the prerequisites.

The FU Berlin offers a wide range of courses in the humanities, social sciences, and natural sciences. Students majoring in a variety of disciplines may choose from an array of appropriate courses.

Applicants must have the equivalent of two years of college-level German, although more is recommended.

For program information, students may consult <http://www.bcgscolumbia.edu> and email berlin@columbia.edu. Students are also advised to consult with the director of undergraduate studies (<http://www.college.columbia.edu/academics/dus>) in the Department of Germanic Languages (<http://www.columbia.edu/cu/german>).

United Kingdom: The Oxford/Cambridge Scholars Program

Columbia students interested in spending their junior year at Oxford or Cambridge should apply for admission to the Oxford/Cambridge Scholars Program during the first term of their sophomore year. Application to the program is made through the Office of Global Programs (<http://www.ogp.columbia.edu>), where a preliminary selection of candidates is made. Designated candidates for admissions then apply to one of the participating colleges of Oxford or Cambridge. Criteria for admission include a very strong academic record at Columbia, as well as commitment to a chosen field of study. Application through the Columbia Oxford/Cambridge Scholars Program is the only way the College authorizes study at either university.

For program information, students may consult <http://www.ogp.columbia.edu> and email ogp@columbia.edu.

Columbia in London Program

The Columbia in London Program operates under the direction of Columbia's Department of English and Comparative Literature, in partnership with Queen Mary University of London (QMUL), one of the UK's most prestigious academic institutions.

The program's Global Seminar, *London as Literature*, studies major works of English and Anglophone literature from all periods and genres in a London context. Each fall, the program

will be led by one Columbia faculty member whose research directly engages the literary culture of London. That faculty member will offer a version of the global seminar that will enable participating students to study literary texts in their immediate geographical and cultural settings, transforming their relationship to their objects of study and encouraging them to develop a wider range of reading practices and research methodologies.

In addition to regular class meetings, the Global Seminar will involve regular outings to urban sites, designed to complement and enhance the readings and classroom discussions. Destinations will include the British Library, the British Museum, the Victoria and Albert Museum, the Tate Museums, the Globe Theater, and a host of other London cultural institutions.

In addition to the Global Seminar, students will also enroll alongside local students in courses offered by the host institution. QMUL offers programs across a broad range of disciplines, including physical and natural sciences, business and management, engineering, humanities, and social sciences.

For program information, students may consult <http://www.ogp.columbia.edu> and email ogp@columbia.edu.

Italy: Columbia in Venice: East Meets West

Through Italian language courses, interdisciplinary courses taught by Columbia faculty, and elective courses hosted by Ca' Foscari University, students explore the intersections of how eastern and western cultures understand common traditions through the ancient, medieval, and early modern world. Students choose to take one or both of the Columbia faculty-taught courses that take full advantage of the location in Venice to provide further clarity into the themes and questions explored. The Global Core course, Nobility and Civility, focuses on common human values and universal perennial issues while also recognizing cultural and historical differences. The second course, Boiardo and Ariosto, asks students to consider how two Italian Renaissance epic poets envisioned characters and places linked to East Asia, Northern Africa, and the Middle East. The remaining courses that comprise the academic program include Italian language and one or two Venetian themed English taught elective courses offered by the host institution, Ca' Foscari University.

For program information, students may consult <http://www.ogp.columbia.edu> and email ogp@columbia.edu.

LATIN AMERICA AND THE CARIBBEAN

Cuba: The Consortium for Advanced Studies in Cuba

The Consortium for Advanced Studies Abroad (CASA) program in Cuba is a collaborative initiative involving seven U.S. universities: Brown, Columbia, Cornell, Dartmouth, Johns Hopkins, Northwestern, and the University of Pennsylvania. CASA-Cuba provides students with a unique opportunity to have direct access to Cuba's leading institution of higher learning, the University of Havana, and to Casa de Las Américas, the Cuban

government's premier research institution on Caribbean and Latin American studies, Cuban culture, and the arts. Comprehensive student services support the academic and social experience. The program runs in both fall and spring semesters.

Applicants must have the equivalent of five semesters of college-level Spanish.

For program information, students may consult <http://www.ogp.columbia.edu> and email ogp@columbia.edu.

Summer study abroad provides a meaningful complement to the College curriculum and can help students prepare for semester- or year-long overseas programs.

Columbia College students who enroll in the Columbia-sponsored summer programs listed below earn direct credit for their courses.

AFRICA AND THE MIDDLE EAST

Jordan: The Arabic Language Program in Amman

This nine-week program helps students strengthen their skills in Modern Standard Arabic by offering intensive language training. All skills are emphasized in the classroom and during tutorials. Group excursions, cultural activities, and a week-long travel break give students various perspectives of Jordanian society and different venues in which to practice their Arabic.

For program information, students may consult <http://www.ogp.columbia.edu> and email ogp@columbia.edu.

Jordan/France: The Middle Eastern and North African Studies Program in Amman and Paris

This nine-week program offers a multifaceted introduction to the languages, history, and culture of the Maghreb, emphasizing the region's relations with the Middle East and France. Students take the equivalent of a year of Modern Standard Arabic and receive training in the dialects of the Maghreb. The language program is complemented by a cultural and historical seminar featuring lectures by prominent specialists from Columbia University and partner institutions in the Middle East and France.

For program information, students may consult <http://www.ogp.columbia.edu> and email ogp@columbia.edu.

Tunisia/Turkey: Democracy and Constitutional Engineering in Tunis and Istanbul

This three-week program focuses on the concept of democracy, the challenges of democratic transitions and consolidation, and trade-offs associated with different ways of organizing democratic institutions. The program takes place in Tunis and Istanbul

and enrolls Columbia students alongside students from leading universities in the Middle East, North Africa, and Turkey.

For program information, students may consult <http://www.ogp.columbia.edu> and email ogp@columbia.edu.

EAST ASIA

China: The Chinese Language Program in Beijing

This nine-week program offers three levels of intensive Chinese language studies, from second through fourth year. All four skills are emphasized in the classroom, in drill sections, and through private tutorials. Group excursions in and around Beijing, lectures by local experts, and a week-long travel break give students insight into Chinese society and lifestyle, and provide a variety of environments in which to use their language skills.

For program information, students may consult <http://www.ogp.columbia.edu> and email ogp@columbia.edu.

China: The Business Chinese and Internship Program in Shanghai

This ten-week program is based at Shanghai Jiao Tong University and offers advanced Chinese language students an opportunity to gain firsthand experience in the language, culture, and customs that drive the economic development of the world's most populated nation. Students enroll in six weeks of intensive, personalized instruction in business Chinese language classes and four weeks of field placements in Shanghai offices of local/multinational companies.

For program information, students may consult <http://www.ogp.columbia.edu> and email ogp@columbia.edu.

Japan: The Kyoto Consortium for Japanese Studies Program in Advanced and Classical Japanese

This six- or eight-week program offers intensive training in modern and classical Japanese for students who have completed at least one year or three years of Japanese, or the equivalent.

For program information, students may consult <http://www.ogp.columbia.edu> and email ogp@columbia.edu.

EUROPE

France: Reid Hall in Paris

Summer French Studies in Paris

The six-week program offers modules at several levels designed to allow students to work together in small classes to integrate language and cultural studies and to progress in French while using Paris as a learning lab for language, culture, and extracurricular activities.

For program information, students may consult <http://www.ogp.columbia.edu> and email ogp@columbia.edu.

Art Humanities and Music Humanities in Paris

This six-week program enables students to complete two Core Curriculum (<http://bulletin.columbia.edu/columbia-college/core-curriculum>) courses, *Art Humanities* and *Music Humanities*, in Paris. The program emphasizes the musical and visual cultures of Paris. Day trips to important sites in the region, such as Chartres and Giverny, will complement the excursions to monuments and musical performances within Paris.

For program information, students may consult <http://www.ogp.columbia.edu> and email ogp@columbia.edu.

Greece: Curating the Histories of the Greek Present

This five-week program takes place in various locations in Greece and consists of an intensive curatorial workshop grounded in a seminar highlighting historical, anthropological, and literary approaches to aspects of Greek history and culture. It examines these through the organization of an art exhibition under the general theme of the environment.

For program information, students may consult <http://www.ogp.columbia.edu> and email ogp@columbia.edu.

Italy: The Italian Cultural Studies Program in Venice

This six-week program is based at Ca' Foscari University in Venice and uses an interdisciplinary approach to understanding Italian culture and society through study of its language, literature/film, art history and conservation, and economy. Students are given the opportunity to gain a deeper appreciation of the rich Venetian culture, traditions, and history.

For program information, students may consult <http://www.ogp.columbia.edu> and email ogp@columbia.edu.

LATIN AMERICA

Brazil: The Summer Portuguese Program in Rio de Janeiro

This four-week program is based at the Pontifícia Universidade Católica (PUC-Rio) located in the Gavea district of Rio, and offers intensive language training in Portuguese. All students participate in a Community Involvement Project, which provides an invaluable opportunity to strengthen language proficiency while gaining insight into Brazilian culture and society.

For program information, students may consult <http://www.ogp.columbia.edu> and email ogp@columbia.edu.

Mexico: Colonization and Decolonization in the Making of the Modern World

This four-week program in Mexico City gives students the opportunity to study the dynamics of civilizational contact, exchange, and conflict in the Americas. It offers the Center for the Study of Ethnicity and Race course "Colonization and Decolonization" in a moveable classroom setting to allow students access to sites of historical and architectural significance, including museums, archives, as well as meetings with local scholars and non-governmental organizations.

For program information, students may consult <http://www.ogp.columbia.edu> and email ogp@columbia.edu.

SUMMER STUDY ABROAD APPROVAL

Students seeking to study abroad during the summer must be approved by the Office of Global Programs (<http://www.ogp.columbia.edu>), 606 Kent. Transfer credit for summer classes taken abroad on outside programs is awarded only for foreign-language courses under these conditions:

- Credits for language study at the elementary and intermediate levels are awarded after the student takes a placement exam to determine his/her progress in the language. Advanced foreign-language instruction courses are accepted for academic credit upon review by the appropriate language department.
- The only non-language instruction courses eligible for credit are courses which will satisfy the major or concentration. The courses must be taken abroad in a foreign language and must receive departmental approval to satisfy major or concentration requirements.

Limited exceptions can be made for awarding credit for summer courses taught in English. College credit can be granted provided that the course offers a unique experience, such as a field-studies program or archaeological dig, where the study-abroad site functions as a constituent part of the course, and the program must be approved by the Office of Global Programs (<http://www.ogp.columbia.edu>). Departmental approval is required and the course must satisfy major or concentration requirements.

OTHER OPPORTUNITIES ABROAD

Students interested in non-credited internships and other experiential learning opportunities abroad should inquire with the Center for Career Education (<http://www.careereducation.columbia.edu/students/undergrad>) (East Campus Building, Lower Level).

In order to provide the richest and most immersive experience possible to its students, Columbia has established a network of exchange agreements with international institutions. With an exchange agreement, Columbia students may study at a partner institution; in exchange, students from the foreign institution may study at Columbia. Students take regular courses alongside local students, live in campus housing, have an academic adviser, and have access to all university facilities and resources.

EXCHANGE PROGRAMS

Currently, Columbia has undergraduate exchanges with the following institutions:

- Bocconi University
- Boğaziçi University
- Hong Kong University of Science and Technology
- University College London
- University of Hong Kong
- Waseda University

Students who plan to apply to these programs should consult with the Office of Global Programs (<http://www.ogp.columbia.edu>), 606 Kent; 212-854-2559; ogp@columbia.edu.

CREDIT AND GRADING

As with other types of study abroad programs, all academic work completed abroad counts toward the Columbia degree, and students may take classes toward the major with the department's approval.

TUITION AND FINANCES

Columbia College students who attend these exchange programs have the same access to financial aid they would have if they were enrolled in classes on Columbia's New York campus. Columbia students pay their usual Columbia tuition and are responsible for non-academic costs abroad.

Students may direct financial aid and study abroad inquiries to the Financial Aid and Educational Financing (<https://cc-seas.financialaid.columbia.edu>), 618 Lerner; 212-854-3711; ugrad-finaid@columbia.edu.

SPECIAL PROGRAMS

Preprofessional Advising

Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>)
403 Lerner
212-854-6378
preprofessional@columbia.edu

Medical, dental, and other health professional schools prefer that undergraduates complete a four-year program of study toward the bachelor's degree. All health professional schools require prerequisite coursework, but the specific coursework can vary somewhat from program to program and school to school. This coursework can be completed during the undergraduate years along with the Core Curriculum (<http://bulletin.columbia.edu/columbia-college/core-curriculum>) and the major or concentration.

MAJORS AND CONCENTRATIONS

There is no major preferred by medical school admissions committees. Students are encouraged to major or concentrate in any field that appeals to them. Students concentrating in a non-science area may wish to take one or two extra science courses to demonstrate their interest and aptitude in the sciences. Students should work closely with their advising deans (<https://www.cc-seas.columbia.edu/csa>) and preprofessional advisers (<https://www.cc-seas.columbia.edu/preprofessional>) from the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>), as well as their departmental major adviser in planning a program that meets their interests.

PREMEDICAL REQUIREMENTS

It is very important to note that each medical school in the United States and Canada individually determines its own entrance requirements, including prerequisite coursework or expected competencies. Each medical school also sets its own rules regarding acceptable courses or course equivalents. It is therefore essential that students confirm the premedical requirements for those schools to which they intend to apply.

In addition to medical school course requirements, all medical schools currently require applicants to sit for the Medical College Admissions Test (MCAT) (<https://www.aamc.org/students/applying/mcat>). A new format of this exam was introduced in Spring 2015, for which the recommended preparation is:

- 1 year of General Chemistry and General Chemistry Lab;
- 1 year of Organic Chemistry and Organic Chemistry Labs;
- 1 year of Introductory Biology and Biology Lab;
- 1 year of General Physics and Physics Labs;

- 1 semester of Introductory Psychology;
- 1 semester of Biochemistry

At Columbia, the following courses correspond to the above requirements:

Chemistry

Select one of the following three options:

Option 1:

CHEM UN1403 - CHEM UN1404	General Chemistry I (Lecture) and General Chemistry II (Lecture)
CHEM UN1500	General Chemistry Laboratory

Option 2: for students who place into the accelerated track:

CHEM UN1604	Intensive General Chemistry (Lecture)
CHEM UN1507 or CHEM UN1500	Intensive General Chemistry Laboratory General Chemistry Laboratory

Option 3: available to students depending on results of placement exam:

CHEM UN1507	Intensive General Chemistry Laboratory
CHEM UN2045 - CHEM UN2046	Intensive Organic Chemistry I (Lecture) and Intensive Organic Chemistry II (Lecture) (formerly CHEM W3045-W3046)
CHEM UN2545	Intensive Organic Chemistry Laboratory

Organic Chemistry

CHEM UN2443 - CHEM UN2444	Organic Chemistry I (Lecture) and Organic Chemistry II (Lecture) (formerly CHEM W3443-W3444)
CHEM UN2493 - CHEM UN2494	Organic Chemistry Laboratory I (Techniques) and Organic Chemistry Laboratory II (Synthesis)

Biology

BIOL UN2005 - BIOL UN2006	Introductory Biology I: Biochemistry, Genetics & Molecular Biology and Introductory Biology II: Cell Biology, Development & Physiology
BIOL UN2501	Contemporary Biology Laboratory (or other Biology laboratory approved by premedical adviser)

Physics

Select one of the following three options:

Option 1:

PHYS UN1201 - PHYS UN1202	General Physics I and General Physics II
PHYS UN1291 - PHYS UN1292	General Physics Laboratory and General Physics Laboratory II

Option 2:

PHYS UN1401 - PHYS UN1402	Introduction To Mechanics and Thermodynamics and Introduction To Electricity, Magnetism, and Optics
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Or

PHYS UN1601 - PHYS UN1602	Physics, I: Mechanics and Relativity and Physics, II: Thermodynamics, Electricity, and Magnetism
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Also select one of the following laboratories:

PHYS UN1291 - PHYS UN1292	General Physics Laboratory and General Physics Laboratory II
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PHYS UN1493	Introduction to Experimental Physics
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PHYS UN1494	Introduction to Experimental Physics
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PHYS UN2699	Experiments in Classical and Modern Physics
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PHYS UN3081	Intermediate Laboratory Work
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Option 3:

PHYS UN2801 - PHYS UN2802	Accelerated Physics I and Accelerated Physics II
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Also select one of the following laboratories:

PHYS UN1493	Introduction to Experimental Physics
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PHYS UN1494	Introduction to Experimental Physics
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PHYS UN2699	Experiments in Classical and Modern Physics
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PHYS UN3081	Intermediate Laboratory Work
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Psychology

PSYC UN1001	The Science of Psychology
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While these courses are recommended for MCAT preparation, students should note the following additional information:

- **English:** Most medical schools require one year of English, emphasizing skill acquisition in writing. Columbia College students fulfill this requirement with University Writing (ENGL CC1010) and *Masterpieces of Western Literature and Philosophy (Literature Humanities)* (HUMA CC1001-HUMA CC1002).
- **Mathematics:** Although not required by most medical schools, calculus is required for Columbia chemistry sequences and therefore all premedical students should have successfully completed the equivalent of one semester of Calculus. Medical schools that do have a mathematics requirement typically expect one semester of calculus and one semester of statistics. Any Columbia calculus and statistics classes will meet the requirement and it is sometimes possible to use AP credit toward this requirement.
- **Biochemistry:** An increasing number of medical schools require one semester of biochemistry. While Columbia's introductory biology sequence covers many foundational concepts of biochemistry, it is not guaranteed that medical schools will accept this sequence in fulfillment of a biochemistry requirement.

- **Advanced Biology:** A small number of schools require more than one year of introductory biology and many of these recommend specific advanced level classes.
- **Social and Behavioral Science:** A number of schools have begun to add social and behavioral science courses into their requirements, including, but not limited to, psychology and sociology.

Students should note that medical schools' stated prerequisites are subject to change from year to year and it is the responsibility of students to confirm the prerequisite requirements for the medical schools to which they intend to apply. Most medical schools list their requirements in greater detail on their individual websites. More information can also be found from the Association of American Medical Colleges (AAMC) (<https://services.aamc.org/msar/home/#null>).

BARNARD COURSES

While it is preferred that students complete their premedical requirements with Columbia College courses, students may take premedical requirements at Barnard. However, the Columbia Biology and Chemistry Departments may not accept Barnard courses toward the major or concentration. Students should consult their departmental adviser well in advance of registering for a Barnard course.

STUDENTS WITH ADVANCED PLACEMENT

Advanced Placement (AP) credit is accepted by some schools, but not all. Students are responsible for monitoring the requirements of each school to which they intend to apply. For more information on current AP policies by school, refer to the Medical School Admissions Requirements Chart (https://www.cc-seas.columbia.edu/sites/dsa/files/handbooks/MEDICAL%20SCHOOL%20ADMISSION%20REQUIREMENTS_June_2015%20V3.pdf).

Generally, students with AP credit are strongly advised to take further courses in the field in which they have received such credit.

APPLICATION TO HEALTH PROFESSION PROGRAMS

Students must apply for admission to health profession schools more than one year in advance of the entry date. Students who are interested in going directly on to health profession schools following graduation should complete all prerequisite courses required for the Medical College Admissions Test (MCAT) by the end of the junior year. It is entirely acceptable — and often preferred — for students to take time between undergraduate and health profession school and thus to wait to apply to these schools for one or more years.

Students planning to apply to medical or dental school should be evaluated by the Premedical Advisory Committee prior to application. A Premedical Advisory Committee

application is made available each year in December. For more information regarding this process, please consult with a preprofessional adviser (<https://www.cc-seas.columbia.edu/preprofessional>) in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>), 403 Lerner preprofessional@columbia.edu.

VOLUNTEER PROGRAM

Preprofessional Advising (<https://www.cc-seas.columbia.edu/preprofessional>) maintains an online listing of many different clinical and research volunteer programs across the city. Students may find placements in a variety of different settings including, but not limited to, emergency rooms; intensive care units; research laboratories; outpatient settings; and health clinics. Clinical exploration is viewed by many medical schools as a good test of students' professional motivation and students are strongly encouraged to investigate some of the options available for meeting this expectation before applying to medical school.

ENGINEERING

The Combined Plan (3-2) Program

The Combined Plan (3-2) Program provides students with the opportunity to earn both the B.A. at Columbia College and the B.S. at The Fu Foundation School of Engineering and Applied Science in five years. Columbia College students must apply in their junior year to The Fu Foundation School of Engineering and Applied Science. In order to apply, students must have completed or be in the process of completing the pre-engineering courses including:

Mathematics

MATH UN1101 - MATH UN1102 - MATH UN1201	Calculus I and Calculus II and Calculus III (at a minimum)
MATH UN1202	Calculus IV (required for some programs)
MATH UN2030	Ordinary Differential Equations

Chemistry

Select one of the following three sequences:

CHEM UN1403 - CHEM UN1404	General Chemistry I (Lecture) and General Chemistry II (Lecture)
CHEM UN1604	Intensive General Chemistry (Lecture)
CHEM UN2045 - CHEM UN2046	Intensive Organic Chemistry I (Lecture) and Intensive Organic Chemistry II (Lecture) (formerly CHEM W3045-W3046)

Laboratory requirement depends on specific program

Physics

Select one of the following three sequences:

PHYS UN1401 - PHYS UN1402	Introduction To Mechanics and Thermodynamics and Introduction To Electricity, Magnetism, and Optics
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PHYS UN1601 - PHYS UN1602	Physics, I: Mechanics and Relativity and Physics, II: Thermodynamics, Electricity, and Magnetism
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PHYS UN2801 - PHYS UN2802	Accelerated Physics I and Accelerated Physics II
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Some programs require a third semester of Physics

Laboratory requirement depends on specific program

Computer Science

Select one of the following three courses, depending on program:

ENGI E1006	Introduction to Computing for Engineers and Applied Scientists
COMS W1004	Introduction to Computer Science and Programming in Java
COMS W1005	Introduction to Computer Science and Programming in MATLAB

Economics

ECON UN1105	Principles of Economics
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Students must also complete the requirements for a Columbia College major or concentration, as well as any additional pre-curricular requirements for the specific engineering major (see specific requirements on the Undergraduate Admissions (<http://undergrad.admissions.columbia.edu/apply/combined-plan>) website). In the fourth and fifth years of study, to be completed at The Fu Foundation School of Engineering and Applied Science, requirements for the major at The Fu Foundation School of Engineering and Applied Science must be completed in consultation with the major adviser there. Students with more than 35 transfer credits are not eligible for the program. Housing and financial aid will be continued.

Each fall, Undergraduate Admissions conducts information sessions in which students meet with the Combined Plan Program administrator. For more information, students should contact their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>), 403 Lerner, or email combinedplan@columbia.edu.

The 4-1 Program at Columbia College

The 4-1 Program provides students in The Fu Foundation School of Engineering and Applied Science (SEAS) the opportunity to obtain a B.A. degree from Columbia College with one additional year of study after completion of four years of study and fulfillment of all requirements for the B.S. degree in engineering. SEAS students who are interested in the 4-1 Program must declare their interest in the spring of their sophomore year and plan their next three years of study with the program adviser. The fifth year of study commences in the fall semester and students are required to conclude their studies while enrolled for two full-time semesters.

The program is selective, and admission is based on the following factors:

1. Granting of the B.S. at SEAS at the end of the fourth year;

2. The fulfillment of the Columbia College Core Curriculum (<http://bulletin.columbia.edu/columbia-college/core-curriculum>) requirements by the end of the fourth year at SEAS;
3. Maintaining a minimum GPA of 3.0 in Columbia College Core courses as well as those courses counting toward the Columbia College major;
4. Creating a plan to complete a Columbia College major or concentration by the end of their fifth year that is approved by the appropriate director of undergraduate studies (<http://www.college.columbia.edu/academics/dus>).

For more information, students may contact their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>), 403 Lerner.

THE INTERNATIONAL AFFAIRS FIVE-YEAR PROGRAM

The International Affairs Five-Year Program offers Columbia College students the opportunity to earn both B.A. and M.I.A. degrees in five years. Students apply to the program during their junior year through the School of International and Public Affairs Admissions Office (<https://sipa.columbia.edu/admissions/program-admissions/miampa-admissions>) in the School of International and Public Affairs (SIPA) (<https://sipa.columbia.edu>). Once admitted to the joint program, students complete their senior year at Columbia College, starting in the fall semester, but the bulk of courses taken are graduate-level ones acceptable to SIPA. Admission to the joint program does not constitute admission to SIPA.

To be eligible for the program, students must have been enrolled in Columbia College for at least four semesters by the end of the junior year; have completed a minimum of 93 credits; taken a basic course in economics; achieved competence in a modern foreign language; and completed all Columbia College Core Curriculum (<http://bulletin.columbia.edu/columbia-college/core-curriculum>) requirements and major/concentration requirements, with the exception of six to eight credits, or two courses. These two courses may be taken during the senior year while completing the 24 points required by SIPA. Three points of SIPA requirements may be taken in the junior year. Summer courses between the junior and senior year may be considered. Students must receive the B.A. with a satisfactory GPA. Upon formal admission to SIPA after their senior year, students must apply for housing and financial aid.

For more information, students may contact their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>), 403 Lerner.

THE JUILLIARD SCHOOL

Exceptionally talented Columbia College students have access to instrumental, composition, and voice instruction at The Juilliard School through two distinct programs:

The Cross-Registration Program

Students can be invited to cross-register for weekly instrumental (classical and jazz), composition, and vocal instruction with the Juilliard faculty, after completing the formal application and successfully auditioning at Juilliard. Annual juries are held at the end of each academic year, which determine eligibility to continue in the program. Other types of ensembles or classes at Juilliard are generally not available for cross-registration.

Applicants to the exchange program may be first-year applicants or current students within Columbia College. Students may participate in the program for up to four years of study and have the option of applying to the joint program in their junior year. Columbia College students interested in this program must submit a Juilliard Application for Admission (<https://undergrad.admissions.columbia.edu/apply/first-year/juilliard-exchange>), including pre-screening materials, by the Thursday, December 1 deadline.

The Joint BA/MM Program

Columbia College students already in the exchange program can participate in the joint program that offers students the opportunity to earn a B.A. from Columbia and an M.M. from Juilliard in five years (voice candidates may need six years of study to complete the program depending on preparation). It is recommended that students interested in the program complement their exchange instruction with music classes and participation in ensembles at Columbia. However, exchange participants do not have any specific course requirements at Columbia in order to qualify for admission to the M.M. at Juilliard.

If admitted during their senior year, students normally spend two subsequent years (three for voice majors) primarily at Juilliard, while finishing any remaining undergraduate requirements at Columbia College. Students receiving Columbia financial aid are subject to Juilliard's financial aid policies during their time at Juilliard, and are not eligible for aid from Columbia.

To plan accordingly, students who wish to pursue the joint program should consult with their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>). To apply, Columbia College students must have completed 94 points of coursework, including the Core Curriculum (<http://bulletin.columbia.edu/columbia-college/core-curriculum>) requirements and major or concentration requirements for the B.A. within three years, and have participated in the exchange program for at least one year.

Exchange participants interested in applying for the program must submit the Juilliard Application for Admission (<http://undergrad.admissions.columbia.edu/apply/first-year/juilliard-exchange/#juilliardjoint>) by the Thursday, December 1 deadline. The pre-screening (if applicable) is waived. Live auditions are held at The Juilliard School in early March.

ACCELERATED INTERDISCIPLINARY LEGAL EDUCATION PROGRAM

The Accelerated Interdisciplinary Legal Education (AILE) Program provides Columbia College students with outstanding records the opportunity to earn both B.A. and J.D. degrees in six years. Selected students matriculate at the Law School after their junior year, having completed the required 93 points including the Columbia College Core Curriculum (<http://bulletin.columbia.edu/columbia-college/core-curriculum>) requirements and a concentration. Interested students must submit an application in the spring of their junior year to the Office of Preprofessional Advising (<https://www.cc-seas.columbia.edu/preprofessional>) in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>).

Columbia College may nominate one or two juniors each year for consideration; the final admission determination is made by the Law School Admissions Committee. Transfer students and students with fewer than six semesters of study as Columbia College students on Columbia's New York campus (not abroad) before entering the Law School are not eligible for the program.

Prospective participants in this program must take the Law School Admission Test (LSAT) (<http://www.studentaffairs.columbia.edu/preprofessional/law/applying/lsat.php>) no later than the February administration of the year of intended enrollment. After formal admission to the Law School, the students are withdrawn from the College. In the student's second and third years at the Law School, 12 points of coursework taken only at the Graduate School of Arts and Sciences must be completed. The courses must be approved beforehand by the student's preprofessional adviser. AILE candidates are required to apply for the B.A. degree the term before they expect to graduate.

Students should inform their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) of their plans to graduate in order to be considered for honors and Phi Beta Kappa. AILE students receive Columbia College and Law School degrees at the same time. Once admitted to the Law School, students interested in financial aid and housing should apply through the Law School.

For more information, students may contact Preprofessional Advising (<https://www.cc-seas.columbia.edu/preprofessional>), 403 Lerner, 212-854-6378; preprofessional@columbia.edu.

PUBLIC POLICY AND ADMINISTRATION FIVE-YEAR PROGRAM

The Graduate Program in Public Policy and Administration provides Columbia College students with the opportunity to earn both B.A. and M.P.A. degrees in five years. Students apply to the program during their junior year through the School of International and Public Affairs Admissions Office (<https://sipa.columbia.edu/admissions/program-admissions/miampa-admissions>). Once admitted to the joint program, students

complete their senior year at Columbia College, starting in the Fall semester, but the bulk of courses taken are graduate-level ones acceptable to SIPA. Admission to the joint program does not constitute admission to SIPA.

To be eligible for the program, students must have been enrolled in Columbia College for at least four semesters by the end of the junior year; completed a minimum of 93 credits; taken a basic course in economics; achieved competence in a modern foreign language; and completed all College Core Curriculum (<http://bulletin.columbia.edu/columbia-college/core-curriculum>) requirements and major/concentration requirements, with the exception of 6 to 8 credits, or two courses. These two courses may be taken during the senior year while completing the 24 points required by SIPA. Three points of SIPA requirements may be taken in the junior year. Summer courses between the junior and senior year may be considered. Students must receive the B.A. with a satisfactory GPA. Upon formal admission to SIPA after their senior year, students must apply for housing and financial aid.

For more information, students may contact their advising dean in the Berick Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>), 403 Lerner.

COLUMBIA-HOWARD/SPELMAN EXCHANGE PROGRAMS

Columbia College, in partnership with Barnard College, offers students the opportunity to participate in domestic exchange programs with prominent historically black colleges/universities—Howard University in Washington, D.C., and Spelman College in Atlanta, Georgia. The program permits Columbia students to spend a semester or academic year at Howard or Spelman. In exchange, it allows Howard and Spelman students to spend a semester or academic year at Columbia.

Program participants pay tuition to Columbia College. However, students studying at Howard pay room and board expenses directly to Howard University, and students studying at Spelman College pay room and board expenses to Barnard College.

Courses taken at Howard and Spelman are treated as transfer credit. Transfer credit may be earned for approved courses in which students receive a letter grade of C- or higher. However, grades are not calculated into a student's grade point average. Courses taken to satisfy major requirements must be approved by the appropriate academic department.

To be eligible for participation, students should be juniors in good standing in the College and have a cumulative GPA of 2.8 or higher. Students interested in attending Howard should submit applications by the first week of March for the fall semester and by the first week of November for the spring semester. Students interested in attending Spelman during fall or spring semesters should submit applications by the first week of March.

Applications and additional information may be obtained from the Berick Center for Student Advising

(<https://www.cc-seas.columbia.edu/csa>), 403 Lerner;
212-854-6378; csa@columbia.edu.

ACADEMIC HONORS, PRIZES, AND FELLOWSHIPS

DEAN'S LIST

During each academic term, students who have earned a minimum GPA of 3.6 or better in 12 or more points of letter credit in the preceding term are placed on the Dean's List.

The grade P is considered neutral when the averages are figured, and the dividing factor is reduced by the number of points taken for Pass credit. Students who have received grades of D, F, W (or UW pre-Spring 2014) during the term are not eligible for consideration. In any given semester, the mark of YC (year course) precludes the attainment of Dean's List status until the grade for the entire year's coursework is awarded. Students who receive the grade of IN (incomplete), **approved in advance** by the Committee on Academic Standing, are eligible for Dean's List only after all IN grades are changed to letter grades. Students who have been found responsible by the Office of Student Conduct and Community Standards for a violation of academic integrity will not be eligible for the Dean's List during the term of the sanction.

COLLEGE (LATIN) HONORS

The Bachelor of Arts degree is awarded with honors in three categories (*cum laude*, *magna cum laude*, and *summa cum laude*) to no more than 25% of the graduating class, with no more than 5% *summa cum laude*, and the total of *summa* and *magna cum laude* not exceeding 15%.

College honors is the highest academic recognition awarded by the College. The Committee on Honors, Awards, and Prizes reviews the academic records of the top 35% of the graduating class. Selection is based not on GPA alone, but on the breadth, depth, and rigor of academic program, high quality of academic achievement, departmental recommendations, and outstanding academic work beyond that which is required for the degree. Students may not apply for honors nor may they solicit faculty for recommendations.

There is no separate consideration of honors for October or February graduates. Each spring, the Committee on Honors, Awards, and Prizes considers the October and February graduates along with those who are degree candidates for May. The report of those graduating with honors is in the May Class Day program. The honor is noted on the diploma and transcript. October and February graduates may ask the Registrar to add an honors notation to an already issued diploma.

The Committee on Honors, Awards, and Prizes considers both academic standing and disciplinary standing within the College when awarding College honors.

VALEDICTORIAN AND SALUTATORIAN

The Committee on Honors, Awards, and Prizes reviews the academic records of the most exceptional students nominated by the faculty for Valedictorian and Salutatorian. Selection is based not on GPA alone, but on the breadth, depth, rigor of academic program, high quality of academic achievement, departmental recommendations, and outstanding academic work beyond that which is required for the degree.

The Committee on Honors, Awards, and Prizes considers both academic standing and disciplinary standing within the College when awarding Valedictorian and Salutatorian.

DEPARTMENTAL HONORS

Departmental honors may be established and awarded by any Columbia College department or academic program, and is recorded on a student's final transcript. Students should consult with their director of undergraduate studies (<http://www.college.columbia.edu/academics/dus>) no later than the beginning of the first term of their senior year if they wish to be considered for departmental honors. Students who are awarded departmental honors are notified by their department in mid-May. Not all departments and programs offer departmental honors.

College guidelines for departmental honors include the following four criteria:

Departmental honors are awarded to no more than 10%, or, in small departments, one member, of the graduating majors (including all October, February, and May degrees);

A grade point average (GPA) of at least 3.6 in major courses is expected for a student to be considered for departmental honors;

An honors thesis or equivalent project of high quality should be required by each department or academic program in order to receive departmental honors;

Academic departments and programs consider both academic standing and disciplinary standing within the College when awarding departmental honors.

PHI BETA KAPPA

This academic society was founded in 1776 to recognize and celebrate friendship, morality, and learning. The Columbia College Delta chapter was formed in 1869. Each year, 10% of the senior class are inducted into Phi Beta Kappa (<https://www.pbk.org/web>) by faculty who are members of the society. Two percent are elected in November and the other eight percent are elected in the spring. Selection is based not only on academic achievement, but also on evidence of intellectual promise,

character, and achievement outside the classroom. Academic achievement is measured by strength and rigor of program, as well as by grades and faculty recommendations. Students may not apply for Phi Beta Kappa nor may they solicit faculty for recommendations.

As with graduation honors, October and February graduates are considered along with May graduates. Election to Phi Beta Kappa is noted on a student's transcript.

The faculty Phi Beta Kappa selection committee considers both academic standing and disciplinary standing within the College when electing new members to the society.

While prizes are typically awarded annually, they are done so at the discretion of the respective selection committees. Hence, should a selection committee decide, in a particular year, that there are no suitable candidates; the prize will not be awarded. Unless otherwise noted, these prizes are awarded to Columbia College students only.

GENERAL PRIZES

ALUMNI ASSOCIATION ACHIEVEMENT AWARD

(1947) A trophy, in the form of a Columbia lion, awarded annually to the member of the senior class who is judged to be most outstanding for qualities of mind, character, and service to the College.

ALUMNI PRIZE

(1858) Awarded annually by the Alumni Association to the senior judged by classmates to be the most faithful and deserving.

CHARLES H. BJORKWALL PRIZE

(1937) Established by Ottilie Emma Bjorkwall in memory of her brother, Dr. Charles H. Bjorkwall. Awarded annually to a member of the senior class for unselfish service to the College community.

EDWARD SUTLIFF BRAINARD MEMORIAL PRIZE

(1920) Established by Miss Phebe Sutliff in memory of her nephew, Edward Brainard Sutliff, CC'21. Awarded annually to the member of the graduating class who is judged by classmates to be most worthy of distinction for qualities of mind and character.

JAMES CHRISTOPHER CARALEY MEMORIAL PRIZE

(1984) Established in memory of James Christopher Caraley, 1959–1979, CC'81, by his family and friends. Awarded annually to that member of the junior class who has demonstrated the greatest commitment to the value of preservation of the natural environment or of world peace and order.

ROBERT LINCOLN CAREY MEMORIAL PRIZE

(1967) A trophy, in the form of a lion, awarded annually by the Alumni Association to the senior who, through a combination of leadership qualities as exercised in the non-athletic extracurricular program of Columbia College and outstanding achievement in the academic program of the College, best exemplifies the ideals

that Robert Lincoln Carey sought to engender in the students of Columbia College.

STANLEY I. FISHEL/ZETA BETA TAU PRIZE

Established in honor of Stanley I. Fishel, CC'34, who was president of ZBT while at Columbia and later national president, and who believed in the important role fraternities can play in the development of undergraduates. Awarded to an undergraduate fraternity member who has demonstrated leadership, academic achievement, and participation in athletics or other campus activities.

RICHARD H. FOX MEMORIAL PRIZE

(1927) Established by Mr. and Mrs. Leon S. Fox in memory of their son, Richard H. Fox, CC'21. Awarded to the senior who, in the judgment of the King's Crown Advisory Committee, has shown to the College the greatest interest and helpfulness. The student must have participated in some nonathletic activities and must be one who combines intelligence with a kindly interest in his or her fellows.

ROBERT SHELLOW GERDY PRIZE

(1969) Established by Mr. and Mrs. Irving Gerdy in memory of their son, Robert Shellow Gerdy, CC'39. Awarded to that member of the graduating class who, throughout the undergraduate years, has made a significant contribution as a member of the staff of one or more College student publications, especially *Jester*, *Columbia Review*, and *Spectator*.

ROBERT HARRON AWARD

(1972) Established by his friends in memory of Robert Harron. Awarded annually to a member of the junior class for qualities of grace and generosity.

KING'S CROWN AWARD

(1916) Gold and silver insignia in the form of King's Crowns, each distinguished by a device symbolic of a particular activity, awarded annually by the King's Crown Advisory Committee in recognition of significant participation in any activity under its jurisdiction. Conferred each spring on the basis of written nominations solicited from the governing board of each eligible organization.

MILCH PRIZE

(1948) Established by Dr. and Mrs. Henry Milch. Awarded annually to the member of the junior class who, by leadership in extracurricular as well as scholastic activities, has, in the judgment of teachers and classmates, done the most to enhance the reputation of Columbia College.

LEONARD A. PULLMAN MEMORIAL PRIZE

(1965) A certificate and the inscription of the student's name on a plaque in Alfred Lerner Hall, awarded annually to a member of the senior class who displays those qualities of outstanding scholarship and significant service to the College exemplified in the life of Leonard Pullman, CC'62. The recipient must occupy a position of responsibility in a nonathletic Columbia College activity.

CHARLES M. ROLKER, JR. PRIZE

(1909) Established by Mrs. C. M. Rolker in memory of her son, Charles M. Rolker, Jr., CC 1907. Awarded annually to the member of the graduating class who is judged by classmates to be most worthy of special distinction because of scholarship, participation in student activities, or in any combination thereof.

VAN AM PRIZE

(1925) Established by the Class of 1898 on the occasion of its twenty-fifth anniversary. Awarded to the member of the sophomore class who is most distinguished for service, character, and courtesy in relations with faculty members, fellow students, and visitors. A donation is presented to the student activity of the winner's choice.

GENERAL ACADEMIC PRIZES**ALBERT ASHER GREEN MEMORIAL PRIZE**

(1913) Established by Mr. and Mrs. Asher Green in memory of their son, Albert Asher Green, CC 1914. Awarded to the senior who has been a student in good standing in the College for at least three years and who has made the best record of scholarship.

DAVID B. TRUMAN ALUMNI AWARD

(1970) Established in honor of David B. Truman, former Dean of the College. A lion trophy donated annually by the Alumni Association to the Columbia College student who has made the most distinguished contribution to the academic affairs of the College.

PRIZES IN THE CORE CURRICULUM**JOSHUA A. FEIGENBAUM PRIZE IN LITERATURE HUMANITIES**

(2004) Established by Joshua Feigenbaum and awarded to a student who is judged by the faculty to have exhibited excellence in Literature Humanities.

WALLACE A. GRAY PRIZE IN LITERATURE HUMANITIES

(2004) Established in memory of the late Professor Wallace Gray and awarded annually to the Columbia College undergraduate who is judged by the faculty to have written the best essay in Literature Humanities.

DEAN HAWKES MEMORIAL PRIZE IN THE HUMANITIES

(1943) Established by a committee of the Class of 1943 in memory of Dean Herbert E. Hawkes. Awarded annually to the member of the junior class who is judged to be the most deserving on the basis of work in the humanities.

JONATHAN THRONE KOPIT PRIZE IN LOGIC AND RHETORIC

(1997) Established by Mrs. Ina Cohen in memory of her husband, Jonathan Throne Kopit, CC'68. Awarded annually to the Columbia College student who, in the opinion of the departmental committee, has made the most significant progress in University Writing.

JAMES P. SHENTON PRIZE IN CONTEMPORARY CIVILIZATION

(2004) Established by the Committee on the Core and the Office of the Dean of the College in memory of Professor James P. Shenton, CC'49 and GSAS'55. Awarded annually to the Columbia College undergraduate who is judged by the faculty to have written the best essay in Contemporary Civilization.

PRIZES IN THE HUMANITIES**SENIOR THESIS PRIZE IN ART HISTORY AND ARCHAEOLOGY**

(2002) Established as a gift from Philip E. Aarons, CC'73 and LAW'76, in recognition of an outstanding senior thesis by a major in the Department of Art History and Archaeology.

CHARLES PATERNO BARRATT-BROWN MEMORIAL PRIZE

(2000) Established by his parents and his sister in honor of Charles Paterno Barratt-Brown, CC'83. Awarded to a Columbia College senior who is judged by the English Department to have excelled in critical writing in any scholarly field.

DINO BIGONGIARI PRIZE

(1954) Established by the former students and friends of Professor Dino Bigongiari, awarded annually to the senior who has written an outstanding essay on Italian civilization or whose work in the regular Italian courses is judged most worthy of distinction.

BUNNER PRIZE

(1896) Established by friends of the late Henry Cuyler Bunner. Awarded to the candidate for a degree in Columbia University who has submitted the best essay on a topic dealing with American literature. The topic to be selected in connection with course or seminar work in American literature and approved by the chairman of the Bunner Prize Committee.

DOUGLAS GARDNER CAVERLY PRIZE

(1994) Established in memory of Douglas Gardner Caverly, CC'68, by his family and friends, and awarded for outstanding performance by a graduating major in Classics.

DEUTSCHER VEREIN PRIZE IN GERMAN

(1917) Awarded annually to the junior or senior who submits the winning essay on a prescribed topic in German literature.

EARLE PRIZE IN CLASSICS

(1907) Established in memory of Mortimer Lamson Earle, CC 1886, lecturer and professor in the Department of Classics. Awarded for excellence in sight translation of passages of Greek and Latin. Only candidates for the degree of Bachelor of Arts may compete.

JAMES GUTMANN PRIZE IN PHILOSOPHY

(1987) Established in honor of James Gutmann, this prize is awarded to a graduating Columbia College senior in Philosophy who plans to pursue graduate work in the field.

JOHN VINCENT HICKEY PRIZE

(2004) Established by Dr. Helene J.F. de Aguilar in honor of her brother, John Vincent Hickey. Awarded annually to the Columbia College undergraduate who is judged by the Department of English and Comparative Literature to have submitted the best essay on Irish, English, or American poetry.

ADAM LEROY JONES PRIZE IN LOGIC

(1934) Established by Mrs. Adam Leroy Jones in memory of her husband, who was Associate Professor of Philosophy and Director of University Admissions, 1909–1934. Awarded to a student in the College for the best essay on any topic in the philosophy of science or in the foundation of logic. It may be either a topic connected with seminar work in the Department of Philosophy or one approved by the Jones Prize Committee.

HELEN AND HOWARD R. MARRARO PRIZE

(1972) Established in honor of Professor Howard R. Marraro. Awarded to an undergraduate of high academic distinction and promise in an area of study concerned with Italian culture, including art, music, comparative literature, history, economics, government, or in any other academic discipline.

BENJAMIN F. ROMAINE PRIZE FUND

(1922) Gift of Benjamin F. Romaine to provide an annual prize for proficiency in Greek language and literature.

ERNEST STADLER PRIZE FOR THE EXCELLENCE IN THE STUDY OF CLASSICAL ANTIQUITY

(2006) Established by Dr. Richard A. Brooks, CC'53, and Dr. Eva Stadler Brooks, BC'53, in memory of Dr. Stadler Brooks' father, Ernest Stadler, who had a life-long commitment to the study of classical antiquity. The prize may be awarded annually to a graduating senior of Columbia College who is judged by the faculty to have demonstrated academic excellence through course work and the writing of a senior essay on some aspect of the history or culture of the classical world.

SUSAN HUNTINGTON VERNON PRIZE

(1941) Established by a member of the noted family of Hispanophiles to encourage young women in humanistic pursuits at the college level. Currently offered by the Department of Latin American and Iberian Cultures and the Hispanic Institute of Columbia University to the Columbia College senior who has most demonstrated excellence in the study of Spanish language and Spanish and Latin American literatures and cultures.

PRIZES IN THE SOCIAL SCIENCES

CHARLES A. BEARD PRIZE IN POLITICAL SCIENCE

(1963) Established by the Honorable Albert Levitt. Awarded to the student who writes the best paper in political science during the academic year.

CHARLES A. BEARD PRIZE IN HISTORY

(2003) Established by the History Department for a senior thesis of superior distinction in any historical field and period.

CARL B. BOYER MEMORIAL PRIZE

(1978) Established by Mrs. Carl B. Boyer in memory of her husband. Awarded annually to the Columbia undergraduate

who writes the best essay on any topic in the history of science or mathematics as judged by a faculty committee.

CHANLER HISTORICAL PRIZE

(1877) Established at the bequest of J. Winthrop Chanler, CC 1847. Awarded to the senior who submits the best essay on a topic dealing with the history of civil government in America. The topic to be selected in conjunction with seminar work in one of the social science departments and approved by the chairperson of the Chanler Prize Committee.

TARAKNATH DAS FOUNDATION AWARD

(1957) Awarded annually to a student in Columbia College, the School of General Studies, or Barnard College for excellence in Asian studies, particularly in the history and culture of India.

ALBERT MARION ELSBERG PRIZE

(1912) Established by Mrs. Albert Elsberg in memory of her son, Albert Marion Elsberg. Awarded to a student with sophomore, junior, or senior standing who has demonstrated excellence in modern history.

LILY PRIZE IN HISTORY

Established by Professor James P. Shenton, CC'49 and GSAS'55, in honor of his mother. Awarded by the History Department for academic achievement in the study of history other than that of the United States.

GARRETT MATTINGLY PRIZE

(2003) Established by the History Department for a senior thesis of superior distinction in any historical field and period.

SANFORD S. PARKER PRIZE

(1980) Funded by the family and friends in memory of Sanford S. Parker, CC'37. Awarded to a Columbia College senior going on to graduate study in economics who shows promise of doing original work and has already demonstrated boldness of thought and a commitment to excellence, whose interests are wide, heart kind, and spirit generous.

ROMINE PRIZE

(1996) Established by John Romine in honor of his brother, David Estabrook Romine. Awarded to two undergraduate students who have done exemplary work in the field of economics.

GRANT SQUIRES PRIZE IN SOCIOLOGY

Established by Grant Squires (Class of 1885) and awarded annually to a senior, majoring in sociology, in recognition of an outstanding and innovative scholarship representing original investigation of a sociological character or a significant use of sociological knowledge for the public good.

CAROLINE PHELPS STOKES PRIZE

(1910) Established at the bequest of Caroline Phelps Stokes. Awarded to a student who has been a degree candidate for at least one academic year at Columbia College or Barnard College, and who has written the best essay on any topic concerning the rights of man. The topic to be selected in

connection with course or seminar work and approved by the Stokes Prize Committee.

ALAN J. WILLEN MEMORIAL PRIZE

(1968) Established by classmates and friends of Alan J. Willen, CC'64, in his memory. Awarded to the Columbia College student who writes the best seminar paper on a contemporary American political problem. The selection is made jointly by representatives of the Departments of History and Political Science.

MYRA KRAFT PRIZE FOR SUPERIOR ACADEMIC ACHIEVEMENT IN THE STUDY OF HUMAN RIGHTS

(2013) Established to honor the memory of Myra Kraft, beloved wife of Robert Kraft, CC'63 and Trustee Emeritus, this prize is awarded to the Columbia College student majoring in Human Rights who has the highest grade point average and a superior record of academic achievement in Human Rights.

PRIZES IN THE NATURAL AND PHYSICAL SCIENCES

RICHARD BERSOHN PRIZE

(2009) Established by Professor Louis Brus, who was a student of Professor Bersohn, this prize may be awarded to the Columbia College, General Studies, or SEAS student majoring in the chemical sciences who is deemed by the faculty to have demonstrated outstanding achievement as a scholar and as a researcher.

THE BRIDGES AND STURTEVANT PRIZE IN BIOLOGICAL SCIENCES

(2012) Established in honor of Calvin Bridges and Alfred Sturtevant whose pioneering studies as Columbia College undergraduates—using the fruit fly *Drosophila melanogaster* in Thomas Hunt Morgan's laboratory—laid the basis for our understanding of genes and the way they behave. The prize may be awarded annually to a graduating senior whose experimental or computational research is deemed by the faculty to have been both highly original and fruitful.

COMPUTER SCIENCE DEPARTMENT AWARD

Awarded to a degree candidate for scholastic achievements as a computer science major and as acknowledgment of his or her contributions to the Department of Computer Science and to the University as a whole.

THOMAS J. KATZ PRIZE

(2009) Established by friends and colleagues of Professor Katz, this prize may be awarded to the Columbia College, General Studies, or SEAS student majoring in the chemical sciences who is deemed by the faculty to have demonstrated outstanding achievement as a scholar and as a researcher.

ALFRED MORITZ MICHAELIS PRIZE

(1926) Established by Mrs. Jeanette Michaelis in memory of her son, Alfred Moritz Michaelis, CC 1920. Awarded to the member of the graduating class who has completed with the most proficiency the sequence of courses in physics that corresponds

most nearly to the sequence given by the late Professor George V. Wendell.

RUSSELL C. MILLS AWARD

(1992) Established in memory of Russell C. Mills, a Ph.D. candidate in Computer Science who exemplified academic excellence and intellectual curiosity, and presented annually to the senior in Computer Science whose course work and projects stand out as the best in the class.

PROFESSOR VAN AMRINGE MATHEMATICAL PRIZE

(1910) Established by George G. DeWitt, CC 1867. Awarded to three College students (a first-year, a sophomore, and a junior) who are deemed most proficient in the mathematical subjects designated during the year of the award.

JOHN DASH VAN BUREN, JR. PRIZE IN MATHEMATICS

(1906) Established by Mrs. Louise T. Hoyt in memory of her nephew, John Dash Van Buren, Jr., CC 1905. Awarded to the degree candidate who writes the best examination on subjects prescribed by the Department of Mathematics.

PRIZES IN THE CREATIVE AND PERFORMING ARTS

ACADEMY OF AMERICAN POETS POETRY PRIZE

(1956) Awarded by the Academy to the poet who has written the best poem or group of poems submitted during the academic year. Manuscripts should normally be submitted to the Department of English and Comparative Literature before April 1.

SEYMOUR BRICK MEMORIAL PRIZE

(1969) Established by Mrs. Seymour Brick and her son, Richard, in honor of their husband and father, Seymour Brick, CC'34. Awarded to the Columbia College student who submits the best one-act or full-length play as judged by the Department of English and Comparative Literature.

KAREN OSNEY BROWNSTEIN WRITING PRIZE

(1991) Established by Neill H. Brownstein, CC'66, in memory of Karen Osney Brownstein. Awarded to a graduating senior in Columbia College who has written a single piece or a body of work so distinguished in its originality of concept and excellence of execution that it fairly demands the award, support, and recognition the prize intends.

GEORGE WILLIAM CURTIS PRIZE

(1902) Established by the late Samuel Putnam Avery, CC 1896, an associate of George William Curtis. Awarded to students in the College for excellence in the public delivery of English orations.

ARTHUR E. FORD POETRY PRIZE

(1980) Established by Mrs. Doris Ford in memory of Arthur E. Ford. Awarded annually to the senior who submits the best collection of poems.

PHILOLEXIAN CENTENNIAL WASHINGTON PRIZE

(1902) Gift of J. Ackerman Coles, CC 1864. Awarded once every four years to the student in the college who shall be deemed

most worthy, upon delivery of an original address on a subject concerning public affairs.

PHILOLEXIAN PRIZE FUND

(1904) A gift of the Philolexian Society, the income from which shall be used for prizes in Columbia College for debating, essays, short stories, and poetry.

AUSTIN E. QUIGLEY PRIZE

(2010) The Austin E. Quigley prize for outstanding artistic and intellectual achievement may be awarded to a Columbia College senior majoring in Drama and Theatre Arts. Named in honor of Columbia College's dean from 1995-2009, the prize is funded by Nobel Laureate Richard Axel, CC'67 and University Professor of Biochemistry and Molecular Biophysics.

THE LOUIS SUDLER PRIZE IN THE ARTS

(1983) Awarded annually to a senior who, in the opinion of the Faculty, has demonstrated excellence of the highest standards of proficiency in performance or execution or in the field of composition in one of the following general areas of performing and creative arts: music, theatre, painting, sculpture, design, architecture, or film.

VAN RENSSELAER PRIZE

(1926) Gift of Maximilian Foster. Awarded to the candidate for a degree in Columbia University who is the author of the best example of English lyric verse. Material must be submitted to the Department of English and Comparative Literature by April 1.

GEORGE EDWARD WOODBERRY PRIZE

(1935) Established by the Woodberry Society of New York. Awarded every second year to an undergraduate student in Columbia University for the best original poem.

FELLOWSHIPS FOR GRADUATE STUDY

HARRY J. CARMAN FELLOWSHIP

(1949) Established from the gifts of former friends and students of Dean Carman. Awarded to no more than two graduating seniors for advanced study.

JARVIS AND CONSTANCE DOCTOROW FELLOWSHIP

(2005) Established by the Jarvis and Constance Doctorow Foundation. Awarded to a graduating senior, this fellowship provides a stipend for one year of graduate study at St. Edmund Hall, Oxford.

HENRY EVANS TRAVELLING FELLOWSHIP

(1928) Gift of Mrs. Henry Evans in memory of her husband, Henry Evans, CC 1881. Awarded to a graduating senior, with preference given to the student planning to undertake a research project of a creative nature that requires travel rather than formal graduate study.

HOLTHUSEN-SCHINDLER ENDOWMENT FUND

(2000) Established as a bequest from the estate of Lenore S. Holthusen, the widow of Hen Holthusen, LAW 1917, to provide financial support in the form of scholarships to worthy graduates

of Columbia College who continue their education at the Law School of Columbia University.

EURETTA J. KELLETT FELLOWSHIPS

(1932) Established at the bequest of Eurette Jane Schlegel. Awarded annually and for two consecutive years to two graduating seniors of the College who have shown exceptional proficiency in the study of the liberal arts, for study at Oxford or Cambridge University.

SPECIAL UNDERGRADUATE FELLOWSHIPS

BECKMAN SCHOLARS PROGRAM

(2015) Columbia College is one of 12 institutions nationwide selected to receive the Arnold and Mabel Beckman Foundation's Beckman Scholars Program Award (<http://www.beckman-foundation.com/beckman-scholars>) to support outstanding undergraduate sophomores majoring in biology, chemistry, chemical physics, biophysics, or neuroscience and behavior. Beckman Scholars, selected by a faculty committee, will engage in summer undergraduate research in one of the labs of the Beckman Scholar Program faculty and will present their work at the annual Arnold and Mabel Beckman Foundation Symposium.

BEESEN GLOBAL EXPERIENCE TRAVEL/RESEARCH FELLOWSHIPS

Established to provide opportunities for non-native French undergraduate students of Columbia and Barnard to study or research in Paris during the summer, each fellowship provides monetary support to fellows to defray travel and living expenses. The fellowship's intent is to give Columbia University students the opportunity to pursue intellectual goals, gain valuable research and study experience, learn French in Paris, and engage with the Parisian community.

THE CLASS OF 1939 SUMMER RESEARCH FELLOWSHIP

(1989) Established by the Class of 1939 in honor of the fiftieth anniversary of its graduation. Awarded to students in their sophomore or junior year to pursue independent research or to work in on-going laboratory projects over the summer.

HARVEY KRUEGER GLOBAL EXPERIENCE FELLOWSHIP

Established to encourage Columbia College students to engage in study abroad or independent research projects in Israel or Poland, each fellowship provides funds for students to pursue research, participate in study abroad programs, or qualify as assistants in on-going laboratory projects over the summer at a location of their choosing in Israel or Poland. The fellowship's intent is to give CC students the opportunity to pursue intellectual goals and gain valuable international experience.

HERBERT DERESIEWICZ SUMMER RESEARCH FELLOWSHIP

(2011) Established in memory of Professor Herbert Deresiewicz, a long time SEAS faculty member and department chairman who held a deep and abiding love for undergraduate teaching,

the Herbert Deresiewicz Summer Research Fellowship provides support for a Columbia College or SEAS student who is a U.S. citizen or permanent resident, and whose interest in science has been kindled by his or her experiences at Columbia. The recipient, selected by a faculty committee, will engage in full-time laboratory research on the Morningside Heights campus in one of the following Columbia University academic departments: Biological Sciences, Biomedical Engineering, Chemistry, or Chemical Engineering.

SOLOMON AND SEYMOUR FISHER CIVIL LIBERTIES FELLOWSHIP

(1989) Gift of Solomon Fisher, CC'36, and Seymour Fisher, CC'45. Awarded annually to a Columbia College student to work during the summer in the Legal Department of the American Civil Liberties Union National Office in New York City.

KLUGE FELLOWS SUMMER RESEARCH GRANT

(1988) Endowment gift of John Kluge, CC'37. Administered by the Columbia University Scholars Program (CUSP) Summer Enhancement Fellowships (<https://www.cc-seas.columbia.edu/scholars/fellowships>), grants are awarded competitively to students from underrepresented groups to pursue an independent research project during the summer under the sponsorship of a faculty member. The application process includes a series of seminars and workshops.

RICHARD LEWIS KOHN TRAVELLING FELLOWSHIP

(1959) Established from gifts of various donors. Awarded annually to a well-qualified student to supplement work in the College with study during the junior year in Great Britain, preferably at the University of London. First consideration is given to students majoring or concentrating in political science or economics.

MYRA KRAFT PRIZE FOR EXCEPTIONAL PRACTICAL EXPERIENCE IN HUMAN RIGHTS ADVOCACY

(2013) Established to honor the memory of Myra Kraft, beloved wife of Robert Kraft, CC'63 and Trustee Emeritus, this prize is awarded to the rising Columbia College senior majoring in Human Rights who submits the best proposal for a summer or one-term human rights internship.

MELLON MAYS UNDERGRADUATE FELLOWSHIP

(1996) Awarded in the spring semester of the sophomore year to minority students, and other undergraduates with a demonstrated commitment to racial diversity, who wish to pursue a Ph.D. and whose intellectual and social commitments embody those of the late Dr. Benjamin Mays. The Fellowship provides a two-year academic enhancement program funded by the Andrew W. Mellon foundation.

NOBUHISA AND MARCIA ISHIZUKA GLOBAL FELLOWSHIP IN EAST ASIAN STUDIES

Provides funding for one Columbia College each year for an international experience studying Japanese language and culture, or other East Asian languages and cultures. The fellowship's intent is to promote students' study and research activities in Japan

PRESIDENTIAL GLOBAL FELLOWSHIP

Funded by a grant from President Lee C. Bollinger, the Presidential Global Fellowship offers first-year undergraduates (CC, SEAS, GS) who are seeking to develop a strong global foundation and a deeper understanding of the world around them with a unique opportunity to enrich their Columbia education beginning in the summer after their first year. The Fellowship provides funding for participation on a Columbia summer study abroad program to a highly select group of intellectually curious students who are able to imagine how an overseas experience can influence their examination of critical issues and who are committed to finding meaningful ways to engage a broad range of global topics throughout their undergraduate career.

SANFORD S. PARKER PRIZE SUMMER FELLOWSHIPS

(1980) Funded by the family and friends of Sanford S. Parker, CC'37. Awarded to Columbia College juniors in order to conduct summer research projects. Recipients will show promise of doing original work, and demonstrate boldness of thought and a commitment to excellence.

RICHARD AND BROOKE KAMIN RAPAPORT SUMMER MUSIC PERFORMANCE FELLOWSHIP

(1993) Gift of Richard A. Rapaport, CC'69, and Brooke Kamin Rapaport, to create a summer opportunity for continuing Columbia College students who are particularly gifted in musical performance, composition, or conducting.

EDWIN ROBBINS ACADEMIC RESEARCH AND PUBLIC SERVICE FELLOWSHIP

(1991) Established by Edwin Robbins, CC'53. A stipend awarded each summer to four Columbia College students majoring in political science or history who intend to conduct research into important political or policy making matters, or who will be working as interns, without compensation, in a governmental office, agency, or other public service organization.

ARTHUR ROSE TEACHING ASSISTANTSHIP

(1958) Gift of Mr. and Mrs. Bennett Rose in memory of their son, Arthur Rose. Awarded to a senior in the College who is to assist the work of a member of the faculty in one of the departments that contribute to the courses in Contemporary Civilization and the Humanities.

THE PHYLLIS STEVENS SHARP FELLOWSHIP IN AMERICAN POLITICS

(2005) Established in 2005, the Phyllis Stevens Sharp Endowment Fund provides stipends to Political Science students to support research in American politics or policy making or otherwise uncompensated internships in a government office, agency, or other organization serving the public.

SUMMER UNDERGRADUATE RESEARCH FELLOWSHIP

Offered to a select group of motivated undergraduate students who will benefit from the opportunity for hands-on biology related laboratory research on either the Morningside campus

or in the biomedical labs at Columbia's Health Sciences. The fellowship provides for one summer of fulltime research.

RICHMOND B. WILLIAMS TRAVELLING FELLOWSHIP

(1988) Established at the bequest of Richmond B. Williams, CC'25. Awarded to a Columbia College junior English major for a summer research project requiring foreign travel. The recipient of the fellowship must register for an independent research course in the fall to write up the results of the summer's work.

SPECIAL ENDOWMENTS

**CLASS OF 1954 URBAN NEW YORK PROGRAM
ENDOWMENT**

(1981) The Urban New York Program is sponsored by Barnard College, Columbia College, and The Fu Foundation School of Engineering and Applied Science and has been endowed by the Class of 1954. The program enables students and faculty to jointly experience cultural events in New York City twice during the academic year.

**ARNOLD I. KISCH, M.D., AND VICTORIA L. J.
DAUBERT, PH.D., ENDOWMENT**

(1993) Created for students to experience opera in New York City within the Urban New York Program.

STANDARDS AND DISCIPLINE

As members of the Columbia University community, all Columbia College students are expected to uphold the highest standards of integrity, civility, and respect. Students are therefore expected to conduct themselves in an honest, civil, and respectful manner in all aspects of their lives. Students who violate these standards of behavior interfere with their ability, and the ability of others, to take advantage of the full complement of University life, and are subject to Dean's Discipline.

The continuance of each student upon the rolls of the University, the receipt of academic credits, graduation, and the conferring of any degree or the granting of any certificate are strictly subject to the disciplinary powers of the University. Although ultimate authority on matters of students' discipline is vested in the Trustees of the University, the Dean of Columbia College and his staff are given responsibility for establishing standards of behavior for Columbia College students beyond the regulations included in the Statutes of the University and for defining procedures by which discipline will be administered.

A full list of behavioral and academic violations can be found through Student Conduct and Community Standards (<http://studentconduct.columbia.edu>).

BEHAVIORAL VIOLATIONS

Behavioral violations of University policy include, but are not limited to, the following:

- knowingly or recklessly endangering the health or safety of others;
- participating in any activity involving arson, firecrackers, explosives, or firearms;
- throwing or dropping items out of University buildings;
- threatening, harassing, or abusing others, whether directly or indirectly, in person or via electronic means;
- manufacturing, possessing, using, or distributing illegal drugs;
- intentionally or recklessly destroying, damaging, or stealing property;
- failing to respond to legitimate requests from University officials;
- violating any local, State, or Federal laws.

ACADEMIC INTEGRITY

Academic integrity defines an intellectual community and its educational mission. As members of such a community, Columbia College students are expected to honor intellectual work and respect its origins. A Columbia College education has two complementary elements: mastery over intellectual material within

a discipline and overall development of moral character and personal ethics.

Engaging in violations of academic integrity severely inhibits a student's opportunity to mature academically, professionally, and socially. Consequently, a violation of academic integrity is one of the most serious offenses a student can commit at the University.

Violations of academic integrity may be intentional or unintentional and can include, but are not limited, to:

1. plagiarism (the use of words, phrases, or ideas belonging to another, without properly citing or acknowledging the source);
2. self-plagiarism (the submission of one piece of work in more than one course without explicit permission of the instructors involved);
3. cheating on examinations, tests, or homework assignments;
4. violating the limits of acceptable collaboration in coursework established by a faculty member or department;
5. receiving unauthorized assistance on an assignment;
6. copying computer programs;
7. obtaining advance knowledge of exams or other assignments without permission;
8. unauthorized distribution of assignments and exams;
9. facilitating academic dishonesty by enabling another to engage in such behavior;
10. lying to an instructor or University officer;
11. falsification, forgery, or misrepresentation of information in coursework or lab work, and on any applications, petitions, or documents submitted to Columbia College or a University official;
12. fabrication of credentials in materials submitted to the University for administrative or academic review.

DEAN'S DISCIPLINE OVERVIEW

It is expected that all students act in an honest way and respect the rights of others at all times. Dean's Discipline is the process utilized by Columbia College to investigate and respond to allegations of behavioral or academic misconduct. The Dean's Discipline process aims to educate students about the impact their behavior may have on their own lives as well as on the greater community and, as a result, is not meant to be an adversarial or legal process.

The process is initiated when an allegation is reported that a student has violated Columbia College or University policies. Students may be subject to Dean's Discipline for any activity that occurs on or off campus that impinges on the rights of other students and community members. This also includes violations of local, State, or Federal laws.

Student Conduct and Community Standards (<http://studentconduct.columbia.edu>) is responsible for all disciplinary affairs concerning Columbia College students that are not reserved to some other body.

Columbia College students are expected to familiarize themselves with the Handbook of Standards and Discipline (<http://www.columbia.edu/cu/studentconduct/documents/SandDFall2016.pdf>) and the comprehensive list of policies and expectations available on the Student Conduct and Community Standards (<http://studentconduct.columbia.edu>) website.

COLUMBIA UNIVERSITY POLICIES

Since policies and procedures are subject to change, please check the Columbia University website (<http://www.columbia.edu>) for the most current information.

RESERVATION OF UNIVERSITY RIGHTS

This Bulletin is intended for the guidance of persons applying for or considering application for admission to Columbia University and for the guidance of Columbia students and faculty.

In general, the Bulletin sets forth the manner in which the University intends to proceed with respect to the matters set forth herein, but the University reserves the right to depart without notice from the terms of this Bulletin. The Bulletin is not intended to be, and should not be, regarded as a contract between the University and any student or other person.

Valuable information to help students, faculty, and staff understand some of the policies and regulations of the University can now be found in Essential Policies for the Columbia Community (<http://www.essential-policies.columbia.edu>), which includes information on the following:

- Policy on Access to Student Records under the Federal Family Educational Rights and Privacy Act (FERPA) of 1974, as Amended
- Social Security Number Reporting
- University Regulations (Including Rules of University Conduct)
- Student Email Communication Policy
- Information Technology Policies
- International Travel Planning Policy
- Policies on Alcohol and Drugs
- Policies and Procedures on Nondiscrimination and Harassment
- Gender-Based Misconduct Policies for Students
- Protection of Minors
- Non-Retaliation Policy
- University Event Policies
- Policy on Partisan Political Activity
- Crime Definitions in Accordance with the Federal Bureau of Investigation's Uniform Crime Reporting Program
- Use of Hoverboards on University Campus and Property
- Use of Unmanned Aircraft Systems on University Campus and Property

- Voluntary Leave of Absence Policy
- Involuntary Leave of Absence Policy
- Military Leave of Absence Policy
- Essential Resources:
 - Campus Safety and Security
 - Disability Services
 - Ombuds Office
 - Transcripts and Certifications
- Central Administration of the University's Academic Programs
- Consumer Information
- Additional Policy Sources for the Columbia Community

IMMUNIZATION REQUIREMENTS

Measles, Mumps, and Rubella (MMR)

New York State Public Health Law 2165 requires that all students provide documentation of immunization for measles, mumps, and rubella (MMR) before registering for classes in their first term of study. There are several ways to provide documentation. In all cases, the Columbia University MMR form must be completed and submitted to the Columbia Health Immunization Compliance Office (<http://health.columbia.edu/students/immunization-compliance-requirements/immunization-compliance-requirements>) upon acceptance to a program of study at Columbia, and no later than 30 days before the registration of classes (see the specific term deadline listed on the *Academic Calendar* in this Bulletin).

Immunization documentation and health forms must be faxed, mailed or delivered in person. The Immunization Compliance Office is unable to accept documentation via email for privacy and security reasons. The blood test and MMR immunizations can be obtained at Columbia Health (<http://health.columbia.edu>).

For information about these requirements visit the Columbia Health Insurance and Immunization Compliance website (<http://health.columbia.edu/insurance-and-immunization-compliance-offices>), 212-854-7210, or email immunizationcompliance@columbia.edu.

Meningococcal Meningitis Decision

New York State Public Health Law 2167 requires that students receive information from their institutions about meningococcal meningitis and the vaccine that protects against most strains of the disease that can occur on university campuses.

Columbia students must make an informed decision about being vaccinated and certify their decision on (<https://ssol.columbia.edu/ssv/crt/menIntro.html>)line (<https://ssol.columbia.edu/ssv/crt/menIntro.html>). Full instructions are given online, and the process takes two to three minutes to complete. Students must formally indicate their decision about being vaccinated before they are permitted to register for classes.

Immunizations Recommendations

Columbia Health (<http://health.columbia.edu>) recommends that students receive all routine childhood vaccinations, an updated tetanus booster, vaccination for Hepatitis B (three-dose series), and varicella (chicken pox). These vaccines are available at Columbia Health (<http://health.columbia.edu>).

Students paying the Columbia Health and Related Services Fee are not charged for the following vaccines when administered at Columbia Health:

1. Measles, Mumps and Rubella (MMR);
2. Hepatitis A;
3. Hepatitis B;
4. Hepatitis Combination A and B;
5. Influenza;
6. Meningococcal Meningitis;
7. Pneumococcal (if clinically indicated);
8. Tetanus-Diphtheria;
9. Tetanus-Diphtheria-Pertussis;
10. Varicella

For all other vaccinations, students are charged for the cost of the vaccine. Vaccinations are available to students not paying the Columbia Health Fee for a minimal fee.

For more information, visit the Columbia Health website (<http://health.columbia.edu/getting-care/service-fees>) or email immunizationcompliance@columbia.edu.

UNDERGRADUATE INTERNATIONAL TRAVEL POLICY

Effective February 2017 for all international travel beginning on or after Tuesday, May 2, 2017

All matriculated undergraduates participating in Columbia-Led, Columbia-Facilitated and/or Recognized international travel **will be required to obtain School Sponsorship** at least 4 weeks prior to departure.

Application for School Sponsorship is comprised of the following steps. All steps must be completed prior to travel departure:

1. Complete and Submit a **School Sponsorship Request Form** - including all travel destinations and side trips while abroad.
2. Complete **Pre-Departure Orientation**.
3. Abide by all University requirements, including:
 - a. Register all travel with the University's international travel assistance services – International SOS (ISOS).
 - b. Maintain a health insurance policy that will also provide coverage outside the U.S. for routine, urgent, and emergent care.

4. Complete a **Risk, Waiver and Release Form**, which must be signed by the undergraduate.

Undergraduates are expected to begin the application for School Sponsorship **as soon as an opportunity that would require international travel has been secured, and submit a completed application no later than 4 weeks prior to departure.**

Once School Sponsorship is approved and issued, undergraduates may continue their work with a sponsoring unit/program to begin/continue their preparation for a specific Columbia-Led, Columbia-Facilitated and/or Recognized travel program.

Undergraduates are required to immediately notify the Undergraduate Travel Review Committee should any changes to their location occur during the duration of their travel so their travel registry file may be updated.

The undergraduate schools reserve the right to revoke sponsorship, support and funding if the Undergraduate Travel Review Committee determines after review that the travel would be imprudent, based on assessment of the risk variables involved and/or the particular facts of the application. The purchase of travel protection insurance is strongly recommended to potentially mitigate financial loss in case of trip cancellation or interruption.

If a country or region is placed on the medium, high, or extreme risk list during travel, the Undergraduate Travel Review Committee will assess the risks of remaining in or departure from the country or region. Undergraduates will be advised of the risks and, if necessary, provided a recommended course of action. The undergraduate schools reserve the right to revoke sponsorship, support and funding should the undergraduate not follow the recommendations of the Undergraduate Travel Review Committee.

Link to the full policy: <https://www.cc-seas.columbia.edu/travelpolicy/policy>.

RELIGIOUS HOLIDAYS

It is the policy of the University to respect its members' religious beliefs. In compliance with New York State law, each student who is absent from school because of his or her religious beliefs will be given an equivalent opportunity to register for classes or make up any examination, study, or work requirements that he or she may have missed because of such absence on any particular day or days.

No student will be penalized for absence due to religious beliefs, and alternative means will be sought for satisfying the academic requirements involved.

Officers of Administration and of Instruction responsible for scheduling of academic activities or essential services are expected to avoid conflict with religious holidays as much as possible. If a suitable arrangement cannot be worked out between the student and the instructor involved, they should consult the appropriate dean or director. If an additional appeal is needed, it may be taken to the Provost.

GRADUATION

The B.A. degree is awarded three times during the year: in February, May, and October. There is one University Commencement ceremony in May (see *Academic Calendar*).

Application or Renewal of Application for the Degree

The Application for the Degree is available on the Registrar's website. Students may complete the degree application form (http://registrar.columbia.edu/sites/default/files/content/degree-app-updated_nov-2015.pdf) electronically and submit it to diplomas@columbia.edu. Alternative instructions for submitting the application for the degree are on the form itself.

General deadlines for applying for graduation are September 1 for October degrees; November 1 for February degrees; and December 1 for May degrees. When a deadline falls on a weekend or holiday, the deadline moves to the next business day. Students who fail to earn the degree by the conferral date for which they applied must file another application for a later conferral date.

Diplomas

There is no charge for the preparation and conferral of an original diploma. Students' names will be printed exactly as they appear on their transcript. Students are advised to check their transcript, and if errors are found, they may email the Office of the University Registrar at registrar@columbia.edu.

If students wish to change their name, they must submit the Name Change Affidavit (<http://registrar.columbia.edu/content/name-change-affidavit>). The affidavit must be notarized and filed by the application deadline.

If a graduate's Columbia diploma is lost or damaged, there will be a charge of \$100 for a replacement diploma. Note that replacement diplomas carry the signatures of current University officials. Applications for replacement diplomas are available through the Office of the University Registrar (<http://registrar.columbia.edu/registrar-forms/application-replacement-diploma>).

Additional Information:

- Application for Degree or Certificate — University Registrar (<http://www.columbia.edu/cu/registrar/docs/forms/app-for-deg-or-cert.html>)
- Graduation and Diplomas — University Registrar (<http://registrar.columbia.edu/students/graduation-and-diplomas>)
- Commencement Week (<http://www.columbia.edu/cu/ceremonies/commencement>)
- GradZone (<https://www.cc-seas.columbia.edu/gradzone>)

POLICY ON ACADEMIC CONCERNS, COMPLAINTS, AND GRIEVANCES

Columbia University is committed to fostering intellectual inquiry in a climate of academic freedom and integrity. Its members,

students, and faculty alike, are expected to uphold these principles and exhibit tolerance and respect for others. The following procedures are part of a process to ensure that student concerns about experiences in the classroom or with faculty are addressed in an informed and appropriate manner.

When a student believes that a faculty member has failed to meet his or her obligations in an instructional setting, the student has two principal sources of immediate assistance: the University's Ombuds Office (<http://ombuds.columbia.edu>) and the professional staff of the school in which the student is enrolled.

The Ombuds Office (<http://ombuds.columbia.edu>) is available to help students find solutions to a wide range of problems arising in the context of their association with the University, including those which involve faculty misconduct in an instructional setting. Students may wish to consult with the Ombuds Office (<http://ombuds.columbia.edu>) before taking their concerns to the school, or they may wish to consult with the Ombuds Office (<http://ombuds.columbia.edu>) at any time in the course of their discussions with school officials or, eventually, with members of the Vice President's Grievance Committee.

Like the Ombuds Office (<http://ombuds.columbia.edu>), Columbia College has a professional staff ready to help students with concerns and complaints of many kinds, including those which involve faculty misconduct in an instructional setting. The staff works with students and faculty to resolve such issues, but should resolution not be possible the student may avail herself or himself of the school's grievance procedures. Experience has shown that most student concerns are best resolved in a collaborative way at the school level, starting with the student's advising dean. Columbia College students can learn more about how to initiate a concern, complaint, or grievance on the Columbia College website (<http://www.college.columbia.edu/academics/complaints>).

If the instructor at issue is a member of the Arts and Sciences faculty, the student may also consult grievance procedures available through the office of the Vice President for Arts and Sciences. These grievance procedures are intended to complement, not substitute for, the procedures available in each of the schools, and they treat a considerably more limited range of issues. They are designed to address only those cases involving professional misconduct by a faculty member of Arts and Sciences in an instructional setting in which there were significant irregularities or errors in applying school procedures. Information on this process can be found on the Faculty of the Arts and Sciences website (<http://fas.columbia.edu/faculty-resources/student-grievance-policy>).

If the instructor at issue is not a member of the Arts and Sciences faculty, the student should consult the instructor's particular school for its procedures.

Columbia College students with thoughts on ways to clarify or enhance these procedures should contact Columbia College Academic Planning and Administration at cc-apa@columbia.edu.

Time Frame for Proceedings

A student should ordinarily bring any concern or complaint within 30 days of the end of the term in which the offending conduct occurred or by the beginning of the following term. The school process will ordinarily take 30 days.

Confidentiality

At every level, those involved recognize and respect a student's need for confidentiality when addressing certain kinds of concerns. If the student wishes complete confidentiality, concerns may be raised with the University's Ombuds Office, a neutral office that can receive complaints of any kind for the University and that offers a range of options and communication channels. Students, however, must be aware that the Ombuds Office (<http://ombuds.columbia.edu>) has no authority to adjudicate a complaint; it is there as a confidential resource to students, faculty, and administrators to advise on various avenues of redress and to mediate disputes, if both parties agree.

NOTICE OF NON-DISCRIMINATION

Columbia University is committed to providing a learning, living, and working environment free from unlawful discrimination and to fostering a nurturing and vibrant community founded upon the fundamental dignity and worth of all of its members. Consistent with this commitment, and with all applicable laws, it is the policy of the University not to tolerate unlawful discrimination in any form and to provide persons who feel that they are victims of discrimination with mechanisms for seeking redress.

The University prohibits any form of discrimination against any person on the basis of race, color, sex, gender, pregnancy, religion, creed, marital status, partnership status, age, sexual orientation, gender identity, gender expression, national origin, disability, military status, or any other legally protected status in the administration of its educational policies, admissions policies, employment, scholarship and loan programs, and athletic and other University-administered programs.

Nothing in this policy shall abridge academic freedom or the University's educational mission. Prohibitions against discrimination and discriminatory harassment do not extend to statements or written materials that are relevant and appropriately related to the subject matter of courses.

Inquiries or complaints regarding any form of discrimination or harassment may be directed to:

Title IX Coordinator/Section 504 Officer for Columbia University

Office of Equal Opportunity and Affirmative Action (<http://eoaa.columbia.edu>)
103 Low Library

212-854-5511

Department of Education

Office for Civil Rights (New York Office)
OCR.NewYork@ed.gov

646-428-3800

STUDENT POLICIES AND PROCEDURES ON DISCRIMINATION AND HARASSMENT, GENDER-BASED MISCONDUCT POLICIES FOR STUDENTS AND CONSENSUAL ROMANTIC AND SEXUAL RELATIONSHIPS

Columbia University is committed to providing a learning, living, and working environment free from discrimination, harassment and gender-based and sexual misconduct. Consistent with this commitment and with applicable laws, the University does not tolerate discrimination, harassment, or gender-based sexual misconduct in any form and it provides students who believe that they have been subjected to conduct or behavior of this kind with mechanisms for seeking redress. All members of the University community are expected to adhere to the applicable policies, to cooperate with the procedures for responding to complaints of discrimination, harassment and gender-based and sexual misconduct, and to report conduct or behavior they believe to be in violation of these policies to the Office of Equal Opportunity and Affirmative Action (<http://eoaa.columbia.edu>) or the Gender-Based Misconduct Office (<http://sexualrespect.columbia.edu/gender-based-misconduct-policy-students>) within Student Conduct and Community Standards. For additional information on these issues, policies, and resources, please visit the Sexual Respect website (<https://titleix.columbia.edu>).

Complaints against students for gender-based misconduct are processed in accord with the (<http://sexualrespect.columbia.edu/gender-based-misconduct-policy-students>) Gender-Based Misconduct Policies for Students (<http://studentconduct.columbia.edu/gbm.html>). (<http://sexualrespect.columbia.edu/gender-based-misconduct-policy-students>) Students who attend Barnard College and Teachers College as well as Columbia University are covered by these policies. The use of the term "gender-based misconduct" includes sexual assault, sexual harassment, gender-based harassment, stalking, and intimate partner violence. Columbia University's Sexual Respect Online (<http://www.sexualrespect.columbia.edu>) provides additional information and resources for students, faculty, and staff.

Complaints against students for other forms of discrimination and harassment are processed in accord with the Student Policies and Procedures on Discrimination and Harassment (http://eoaa.columbia.edu/files/eoaa/content/student_policies_procedures_discrim_harass_final_april_2013.pdf) and

should be filed with the Dean of Students of the school in which the accused student is enrolled.

Complaints against employees and third parties affiliated with the University for discrimination and harassment are processed in accord with the Employment Policies and Procedures on Discrimination and Harassment. (<http://eoaa.columbia.edu/eoaa-policies-and-procedures>) (<http://www.essential-policies.columbia.edu/policies-and-procedures-discrimination-and-harassment>) The use of the term “discrimination and harassment” includes discrimination, discriminatory harassment, gender-based harassment, stalking, intimate partner violence, sexual harassment, and sexual assault.

Columbia University maintains policies regarding consensual romantic and sexual relationships between faculty and students, and staff and students.

The Faculty-Student Relationship Policy (<http://eoaa.columbia.edu/eoaa-policies-and-procedures/consensual-romantic-and-sexual-relationship>) states that no faculty member shall exercise academic or professional authority over any student with whom he or she has or previously has had a consensual romantic or sexual relationship. This policy covers all officers of instruction, research and the libraries, including student officers of instruction and research and teaching assistants.

The Staff-Student Relationship Policy (<http://eoaa.columbia.edu/eoaa-policies-and-procedures/consensual-romantic-and-sexual-relationship>) states that no staff member at Columbia should participate in the supervision, employment actions, evaluation, advising or mentoring of any Columbia University student with whom that staff member has or has had a consensual romantic or sexual relationship, except in unusual circumstances, where explicit advance authorization has been obtained.

For further information and assistance, contact:

Office of Equal Opportunity and Affirmative Action

2690 Broadway
103 Low Library
eoaa.columbia.edu
212-854-5511

Title IX Coordinator/Section 504 Officer for Columbia University

Office of Equal Opportunity and Affirmative Action
2690 Broadway
103 Low Library
eoaa.columbia.edu
212-854-5511

Gender-Based Misconduct Office

612 West 115th St.
Watson Hall
8th Flr.
sexualrespect.columbia.edu/gender-based-misconduct-policy-students
212-854-1717

Additional Resources

Columbia offers a number of confidential resources to students who believe they were subjected to discrimination, harassment or gender-based or sexual misconduct and who do not wish to report to the University:

Sexual Violence Response and Rape Crisis/Anti-Violence Support Center (Confidential)

24/7/365 Helpline
health.columbia.edu/sexual-violence-response
212-854-HELP (4357)

Medical Services (Confidential)

health.columbia.edu/emergency
212-854-7426

Counseling and Psychological Services

2920 Broadway
Lerner Hall, 8th Fl.
health.columbia.edu/counseling-and-psychological-services
(<https://health.columbia.edu/counseling-and-psychological-services>)
(212) 854-2878

Ombuds Office

2920 Broadway
710 Lerner Hall
ombuds.columbia.edu
212-854-1493

Office of the University Chaplain

1200 Amsterdam Ave.
660 Schermerhorn Extension
ouc.columbia.edu
212-854-1234

DEPARTMENTS, PROGRAMS, AND COURSES

This section contains a description of the curriculum of each department in the College, along with information regarding degree requirements for majors and concentrators, specific course information—including descriptions and registration information, elective courses, and suggestions about courses and programs in related fields.

Columbia College students should use the school bulletin for academic planning purposes, as not all courses listed on the University-wide *Directory of Classes* and *Vergil* are open to Columbia College students.

The College reserves the right to withdraw or modify the courses of instruction or to change the instructors at any time.

- African-American Studies (p. 149)
- American Studies (p. 151)
- Ancient Studies (p. 153)
- Anthropology (p. 155)
- Archaeology (p. 158)
- Architecture (p. 160)
- Art History and Archaeology (p. 162)
- Astronomy (p. 167)
- Biological Sciences (p. 169)
- Business (p. 175)
- Chemistry (p. 178)
- Classics (p. 185)
- Colloquia, Interdepartmental Seminars, and Professional School Offerings (p. 189)
- Comparative Literature and Society (p. 190)
- Computer Science (p. 193)
- Creative Writing (p. 200)
- Dance (p. 202)
- Drama and Theatre Arts (p. 206)
- Earth and Environmental Sciences (p. 210)
- East Asian Languages and Cultures (p. 217)
- Ecology, Evolution, and Environmental Biology (p. 221)
- Economics (p. 229)
- Education (p. 239)
- English and Comparative Literature (p. 243)
- Ethnicity and Race Studies (p. 247)
- Film and Media Studies (p. 250)
- French and Romance Philology (p. 252)
- Germanic Languages (p. 256)
- History (p. 259)
- History and Philosophy of Science (p. 263)
- Human Rights (p. 264)
- Italian (p. 266)
- Jazz Studies (p. 269)
- Jewish Studies (p. 271)
- Language Resource Center (p. 273)
- Latin American and Caribbean Studies (p. 274)
- Latin American and Iberian Cultures (p. 276)
- Linguistics (p. 280)
- Mathematics (p. 283)
- Medieval and Renaissance Studies (p. 288)
- Middle Eastern, South Asian, and African Studies (p. 289)
- Music (p. 293)
- Philosophy (p. 297)
- Physical Education and Intercollegiate Athletics (p. 300)
- Physics (p. 302)
- Political Science (p. 305)
- Psychology (p. 313)
- Regional Studies (p. 320)
- Religion (p. 321)
- Slavic Languages (p. 324)
- Sociology (p. 328)
- Statistics (p. 330)
- Sustainable Development (p. 336)
- Urban Studies (p. 340)
- Visual Arts (p. 342)
- Women's and Gender Studies (p. 344)

AFRICAN-AMERICAN STUDIES

Institute for Research in African-American Studies: 758 Schermerhorn Extension; 212-854-7080
<http://iraas.columbia.edu/>

Director of the Institute for Research in African-American Studies: Prof. Farah J. Griffin; 758 Schermerhorn Extension; 212-854-7080; fjg8@columbia.edu

Director of Undergraduate Studies: Prof. Josef Sorett; 758 Schermerhorn Extension 212-851-4141; js3119@columbia.edu

Assistant Director: Shawn Mendoza; 758 Schermerhorn Extension; 212-854-8789; sm322@columbia.edu

Administrative Assistant: Sharon Harris; 758 Schermerhorn Extension; 212-854-7080; sh2004@columbia.edu

The Institute for Research in African-American Studies was established at Columbia in 1993, expanding the University's commitment to this field of study. The African-American studies curriculum explores the historical, cultural, social, and intellectual contours of the development of people of African descent. The curriculum enables students to master the basic foundations of interdisciplinary knowledge in the humanities and social sciences in the black American, Caribbean, and sub-Saharan experience.

Courses examine the cultural character of the African diaspora; its social institutions and political movements; its diversity in thought, belief systems, and spiritual expressions; and the factors behind the continuing burden of racial inequality. During their junior and senior years of study, students focus their research within a specific discipline or regional study relevant to the African diaspora.

Students should consider a major in African-American studies if they are interested in careers where strong liberal arts preparation is needed, such as fields in the business, social service, or government sectors. Depending on one's area of focus within the major, the African-American studies program can also prepare individuals for career fields like journalism, politics, public relations, and other lines of work that involve investigative skills and working with diverse groups. A major in African-American studies can also train students in graduate research skills and methods, such as archival research, and is very useful for individuals who are considering an advanced graduate degree such as the Ph.D.

DEPARTMENTAL HONORS

The requirements for departmental honors in African-American studies are as follows:

1. All requirements for major must be completed by graduation date;
2. Minimum GPA of 3.6 in the major;

3. Completion of senior thesis—due to the director of undergraduate studies on the first Monday in April.

A successful thesis for departmental honors must be selected as the most outstanding paper of all papers reviewed by the thesis committee in a particular year. The Thesis Evaluation Committee is comprised of department faculty and led by the director of undergraduate studies. The thesis should be of superior quality, clearly demonstrating originality and excellent scholarship, as determined by the committee. Normally no more than 10% of graduating majors receive departmental honors in a given academic year.

THE AFRICAN-AMERICAN STUDIES THESIS

Although the senior thesis is a prerequisite for consideration for departmental honors, all African-American studies majors are strongly encouraged to consider undertaking thesis work even if they are ineligible or do not wish to be considered for departmental honors. The senior thesis gives undergraduate majors the opportunity to engage in rigorous, independent, and original research on a specific topic of their choosing, the result of which is a paper of 35-60 pages in length.

The senior thesis must be written under the supervision of at least one faculty member. Should the thesis writer elect to have more than one thesis adviser (either from the outset or added on during the early stages of research), these faculty in the aggregate comprise the Thesis Committee, of which one faculty member must be designated chair. In either case, it is incumbent upon the thesis writer to establish with the thesis chair and committee a reasonable schedule of deadlines for submission of outlines, chapters, bibliographies, drafts, etc.

In many cases, thesis writers may find that the most optimal way in which to complete a thesis is to formally enroll in an AFAS independent study course with their thesis adviser as the instructor. **All students interested in writing a thesis should notify the director of undergraduate studies and submit the name of the faculty adviser ideally by October 1, but certainly no later than the end of the fall semester.** In close consultation with the thesis adviser, students develop a viable topic, schedule of meetings, bibliography, and timeline for completion (including schedule of drafts and outlines).

SENIOR FACULTY

- Robert Gooding-Williams (Philosophy)
- Steven Gregory (Anthropology)
- Farah J. Griffin (English and Comparative Literature)
- Samuel K. Roberts (History)
- Josef Sorett (Religion)
- Sudhir A. Venkatesh (Sociology)

JUNIOR FACULTY

- Kevin Fellezs (Music)

- Frank Guridy (History)

RESEARCH FELLOWS

- Marcellus Blount (English and Comparative Literature)
- Fredrick C. Harris (Political Science)
- Carl Hart (Psychology)
- Obery Hendricks (Religion/African-American Studies)
- Kellie E. Jones (Art History and Archaeology)
- Natasha Lightfoot (History)
- Mignon Moore(sociology-Barnard)
- David Scott (Anthropology)
- Mabel Wilson (Architecture, Planning and Preservation)

AFFILIATED FACULTY

- Vanessa Agard-Jones (Anthropology)
- Belinda Archibong (Economics)
- Christopher Brown (History)
- Maguette Camara (Dance, Barnard)
- Tina Campt (Africana & Womens Studies , Barnard College)
- Mamadou Diouf (Middle Eastern, South Asian, and African Studies)
- Ann Douglas (English and Comparative Literature)
- Barbara Fields (History)
- Eric Foner (History)
- Saidiya Hartman (English and Comparative Literature)
- Ousmane Kane (School of International and Public Affairs)
- Rashid Khalidid (History)
- George E. Lewis (Music)
- Mahmood Mamdani (Anthropology)
- Gregory Mann (History)
- Alondra Nelson (Sociology; Women's and Gender Studies)
- Gary Okihiro (School of International and Public Affairs)
- Robert O'Meally (English and Comparative Literature)
- David Scott (Anthropology)
- Susan Strum (Law School)

MAJOR IN AFRICAN-AMERICAN STUDIES

Please note that as of December 2017 Major Requirements have changed. Please consult with the department if there are any questions. The major should be arranged in consultation with the director of undergraduate studies. Students interested in majoring should plan their course of study no later than the end of their sophomore year. A minimum of 27 points is required for the major as follows:

AFAS UN1001	Introduction to African-American Studies
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AFAS UN3936	Black Intellectuals Seminar
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A new course "Major Debates in African-American Studies" will replace this course in 2018-2019

One senior research seminar

A minimum of four courses in the governed electives category, which provides an interdisciplinary background in the field of African-American studies. Such electives must be drawn from at least three different departments. Of these, one must be a literature course; one must be a history course; and one must focus primarily on cultures and societies located in Africa or within the African diaspora outside of the United States, such as the Caribbean or Latin America.

Five courses must be taken within a designated area of study, preferably within a distinct discipline (e.g., anthropology, English, sociology, political science, history). Students may also select their five courses within a distinct regional or geographical area within the African diaspora (e.g., sub-Saharan Africa). One of these five courses must be a seminar.

CONCENTRATION IN AFRICAN-AMERICAN STUDIES

Please note that as of December 2017 Concentration Requirements have changed. Please consult with the department if there are any questions. A minimum of 19 points is required for the concentration. All students must take the introductory course, AFAS UN1001 Introduction to African-American Studies. Within the governed elective category, a minimum of 9 points must be taken. Of these, one course must be selected from the humanities; one course must be in the social sciences; and one must focus primarily on non-U.S. cultures and societies within the African diaspora and sub-Saharan Africa. Additionally, a minimum of 12 points must be acquired from courses within a designated area of study, such as a specific discipline or a regional area (e.g., Africa). One of the courses taken to fulfill either the governed electives category or the designated area of study category must be either AFAS UN3936 Black Intellectuals Seminar (This course will be replaced by "Major Debates in African-American Studies" in 2018-2019) or a research seminar.

AMERICAN STUDIES

Program Office: 319-321 Hamilton; 212-854-6698
<http://www.columbia.edu/cu/amstudies/>

Director: Prof. Casey N. Blake, 321 Hamilton; 212-854-6698;
 cb460@columbia.edu

Associate Director: Prof. Robert Amdur, 311 Hamilton;
 212-854-4049; rla2@columbia.edu

Assistant Director: Angela Darling, 319 Hamilton;
 212-854-6698; amd44@columbia.edu

Administrative Assistant: Laken King, 319 Hamilton;
 212-854-6698; lk2639@columbia.edu

American studies offers students the opportunity to explore the experience and values of the people of the United States as embodied in their history, literature, politics, art, and other enduring forms of cultural expression. The program seeks to prepare students to confront with historical awareness the pressing problems that face our society. The program takes advantage of Columbia's location by involving students with the life of the city—working with community service organizations such as the Double Discovery Center, which serves New York City high school students; and by inviting leading figures in the local political and cultural scene to participate in colloquia, public conferences, and classroom discussions. It is an interdisciplinary program designed to be open and flexible while taking seriously the challenge of striving for a liberal education that helps prepare students for responsible citizenship.

ADVISING

DEPARTMENTAL HONORS

Students with a 3.6 minimum GPA in the major and an outstanding senior project are considered for honors. Normally no more than 10% of graduating majors receive departmental honors in a given year.

DEPARTMENT FACULTY

Casey N. Blake

Lynne Breslin

Andrew Delbanco

Todd Gitlin

Hilary Hallett

Michael Hindus

Thai Jones

Adam Kirsch

Roger Lehecka

Paul Levitz

Roosevelt Montas

Valerie Paley

Robert Pollack

Ross Posnock

Cathleen Price

Benjamin Rosenberg

James Shapiro

Maura Spiegel

Tamara Tweel

AFFILIATED FACULTY

- Rachel Adams (English and Comparative Literature)
- Courtney Bender (Religion)
- Casey N. Blake (History; American Studies)
- Jeremy Dauber (Germanic Languages)
- Andrew Delbanco (English and Comparative Literature; American Studies)
- Eric Foner (History)
- Todd Gitlin (Journalism; Sociology)
- Farah Griffin (English and Comparative Literature)
- Frank Guridy (History)
- Ira Katznelson (Political and History)
- Alice Kessler-Harris (History)
- Shamus Khan (Sociology)
- Rebecca Kobrin (History)
- Roosevelt Montás (Core and American Studies)
- Ross Posnock (English and Comparative Literature; American Studies)
- Wayne Proudfoot (Religion)
- Jonathan Rieder (Sociology, Barnard)
- Maura Spiegel (English and Comparative Literature)

GUIDELINES FOR ALL AMERICAN STUDIES MAJORS AND CONCENTRATORS

Declaring the Major or Concentration

Although students generally declare their major or concentration in the spring of their sophomore year, students may want to take electives early on in areas that interest them but that later connect with the American studies major.

Grading

A grade lower than C- cannot be counted toward the major or concentration in American studies. A grade of C- can be counted only with the approval of the director or associate director. Pass/

D/Fail courses do not count toward the major or concentration unless the course was taken before the student declared the major or concentration.

MAJOR IN AMERICAN STUDIES

A minimum of nine courses is required to complete the major.

Please note that as of January 2018 Major requirements have changed, beginning with the Class of 2020. Please consult with the department if there are any questions.

Two American Studies Core courses.

The following two courses are ordinarily required:

AMST UN1010	Introduction to American Studies
HIST UN2478	U.S. Intellectual History, 1865 To the Present
or AMST UN3930	Topics in American Studies

Please note, the AMST UN3930 section MUST be Freedom and Citizenship in the U.S. to count towards the core course requirement

Two seminars in American Studies

AMST UN3930	Topics in American Studies
AMST UN3931	Topics in American Studies

Additional Courses

Four courses drawn from at least two departments, one of which must be in History and one of which must deal primarily with some aspect of American experience before 1900. (A course in U.S. History before 1900 would fulfill both requirements.)

Senior Research Project

The final requirement for the major in American Studies is completion of a senior essay, to be submitted in the spring of senior year. Alternatively, students may fulfill this requirement by taking an additional seminar in which a major paper is required or by writing an independent essay under the supervision of a faculty member. Seniors who wish to do a senior research project are required to take the Senior Project Colloquium AMST UN3920 in the fall of the senior year.

Please note, the AMST UN3930 section MUST be Freedom and Citizenship in the U.S. to count towards the core course requirement

Additional Courses

Select five additional courses drawn from at least two departments, one of which must be in History, and one of which must deal with the period before 1900.

CONCENTRATION IN AMERICAN STUDIES

A minimum of 7 courses is required to complete the concentration. Please note that as of January 2018 Concentration requirements have changed, beginning with the Class of 2020. Please consult with the department if there are any questions.

Two American Studies Core courses.

The following are ordinarily required:

AMST UN1010	Introduction to American Studies
HIST UN2478	U.S. Intellectual History, 1865 To the Present
or AMST UN3930	Topics in American Studies

ANCIENT STUDIES

Program Office: 617 Hamilton; 212-854-3902;
classics@columbia.edu
<http://www.columbia.edu/cu/classics/>

Director of Undergraduate Studies: Prof. Katharina Volk, 601 Hamilton; 212-854-5683; kv2018@columbia.edu

Director of Academic Administration and Finance: Juliana Driever, 617 Hamilton; 212-854-2726; jd2185@columbia.edu (gww1@columbia.edu)

The purpose of this program is to enable the student to explore the cultural context of the ancient Mediterranean as a whole while concentrating on one specific Mediterranean or Mesopotamian culture. Central to the concept of the program is its interdisciplinary approach, in which the student brings the perspectives and methodologies of at least three different disciplines to bear on his or her area of specialization.

Faculty participating in the program are scholars specializing in all aspects of ancient culture and civilization from the Departments of Anthropology; Art History and Archaeology; Classics; History; Middle Eastern, South Asian, and African Studies; Philosophy; and Religion, ensuring that a wide variety of approaches are available.

Course offerings vary year to year. Students are required to discuss their program prior to or during registration. The culmination of the ancient studies major comes in the senior year, when students with different areas of specialization come together to share their ideas in the senior seminar and then to write a substantial piece of original research. Students should think about topics for their senior paper during the junior year and find a faculty adviser at the beginning of the fall term of their senior year, after consulting with the director of undergraduate studies.

In the senior year, students register for ANCS UN3995 during the fall, and ANCS UN3998 Directed Research In Ancient Studies is usually taken during the spring. Sections should be arranged directly with the academic departmental administrator after finding a faculty adviser.

GUIDELINES FOR ALL ANCIENT STUDIES MAJORS

Grading

Advanced placement credits and courses passed with a grade of D may not be counted toward the major.

Courses

In an interdisciplinary program, courses that are available may on occasion have a substantial overlap in content. Since credit cannot be given twice for the same work, no courses may be counted

toward the major that overlap significantly with courses already taken or in progress.

It is the student's responsibility to discuss his or her program with the director of undergraduate studies well in advance and to provide him or her with all the necessary information on the courses concerned, since failure to do so may result in a course not being counted after it has already been taken.

Any course in the Department of Classics may be credited toward the major.

MAJOR IN ANCIENT STUDIES

The major in ancient studies requires 12 courses (a minimum of 36 points), two of which must be:

Major Seminar

ANCS UN3995	The Major Seminar
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Senior Thesis

ANCS UN3998	Directed Research In Ancient Studies
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The selected program of study for the major must collectively satisfy the following criteria:

Language Study *

Select two courses of an ancient language at or above the intermediate level, i.e., 1200-level or above.

Fundamental Breadth **

Select two introductory courses on some aspect of the ancient Mediterranean. Some examples include:

HIST UN1010	The Ancient Greeks 800-146 B.C.E.
AHIS UN3248	Greek Art and Architecture
AHIS UN3250	Roman Art and Architecture
PHIL UN2101	The History of Philosophy I: Presocratics to Augustine
CLLT UN3132	Classical Myth

Advanced Study

Select two advanced courses on the ancient Mediterranean, typically at the 3000- or 4000-level.

Cultural Concentration

Select four courses on the culture of the language chosen, including one history course.

- * The minimum language requirement must be completed by the end of the first semester of the student's senior year, so that the student is equipped to use sources in the original language in their thesis. Students are strongly urged to begin study of an ancient language as soon as possible and to complete more than the minimum requirements, since the best way to gain an understanding of a culture is through the actual words of its people. Those considering graduate work on the ancient world should also be aware that most graduate schools require more than two years of undergraduate language training for admission.
The language offered in fulfillment of this requirement should generally match the student's area of cultural concentration; special arrangements are available with other universities for students whose cultural concentration require languages not normally taught at Columbia.
Students entering with expertise in their chosen languages are placed in advanced courses as appropriate but are still required to complete at least two semesters of language courses at Columbia; exceptions to this policy may be made in the case of languages not normally taught at Columbia. Language courses at the 1100-level may not be counted toward the major. Language courses, including those at the 1100-level, must be taken for a letter grade.
- ** Relevant introductory courses are offered by the Department of Classics or from offerings in the Programs or Departments of Ancient Studies, Art History and Archaeology, History, Philosophy, or Religion. Students should confirm a course's relevance with the director of undergraduate studies as soon as possible.

ANTHROPOLOGY

Departmental Office: 452 Schermerhorn; 212-854-4552
<http://www.columbia.edu/cu/anthropology>

Directors of Undergraduate Studies:

Professor Catherine Fennell; 959 Schermerhorn Extension; 212 854-4752; ckf2106@columbia.edu; Office Hours: TBA

Professor John Pemberton; 858 Schermerhorn Extension; 212 854-7463; jp373@columbia.edu; Office Hours: Tuesdays 2:30-4:30

Departmental Consultants:

Archaeology: Prof. Zoë Crossland, 965 Schermerhorn Extension; 212-854-7465; zc2149@columbia.edu

Biological/Physical Anthropology: Prof. Ralph Holloway, 856 Schermerhorn Extension; 212-854-4570; rlh2@columbia.edu

Anthropology at Columbia is the oldest department of anthropology in the United States. Founded by Franz Boas in 1896 as a site of academic inquiry inspired by the uniqueness of cultures and their histories, the department fosters an expansiveness of thought and independence of intellectual pursuit.

Cross-cultural interpretation, global socio-political considerations, a markedly interdisciplinary approach, and a willingness to think otherwise have formed the spirit of anthropology at Columbia. Boas himself wrote widely on pre-modern cultures and modern assumptions, on language, race, art, dance, religion, politics, and much else, as did his graduate students including, most notably, Ruth Benedict and Margaret Mead.

In these current times of increasing global awareness, this same spirit of mindful interconnectedness guides the department. Professors of anthropology at Columbia today write widely on colonialism and postcolonialism; on matters of gender, theories of history, knowledge, and power; on language, law, magic, mass-mediated cultures, modernity, and flows of capital and desire; on nationalism, ethnic imaginations, and political contestations; on material cultures and environmental conditions; on ritual, performance, and the arts; and on linguistics, symbolism, and questions of representation. Additionally, they write across worlds of similarities and differences concerning the Middle East, China, Africa, the Caribbean, Japan, Latin America, South Asia, Europe, Southeast Asia, North America, and other increasingly transnational and technologically virtual conditions of being.

The Department of Anthropology traditionally offered courses and majors in three main areas: sociocultural anthropology, archaeology, and biological/physical anthropology. While the sociocultural anthropology program now comprises the largest part of the department and accounts for the majority of faculty and course offerings, archaeology is also a vibrant program within anthropology whose interests overlap significantly with those of sociocultural anthropology. Biological/physical anthropology has shifted its program to the Department of Ecology, Evolution,

and Environmental Biology. The Anthropology Department enthusiastically encourages cross-disciplinary dialogue across disciplines as well as participation in study abroad programs.

SOCIOCULTURAL ANTHROPOLOGY

At the heart of sociocultural anthropology is an exploration of the possibilities of difference and the craft of writing. Sociocultural anthropology at Columbia has emerged as a particularly compelling undergraduate liberal arts major. Recently, the number of majors in sociocultural anthropology has more than tripled.

Students come to sociocultural anthropology with a wide variety of interests, often pursuing overlapping interests in, for example, performance, religion, writing, law, ethnicity, mass-media, teaching, language, literature, history, human rights, art, linguistics, environment, medicine, film, and many other fields, including geographical areas of interest and engagement. Such interests can be brought together into provocative and productive conversation with a major or concentration in sociocultural anthropology. The requirements for a major in sociocultural anthropology reflect this intellectual expansiveness and interdisciplinary spirit.

ARCHAEOLOGY

Archaeologists study the ways in which human relations are mediated through material conditions, both past and present. Particular emphases in the program include the development of ancient states and empires, especially in the indigenous Americas; the impact of colonial encounters on communities in the American Southwest, the Levant and Africa; and human-animal relations in prehistory, religion and ritual, and the archaeology of the dead.

Themes in our teaching include the political, economic, social, and ideological foundations of complex societies; and archaeological theory and its relationship to broader debates in social theory, technology studies, and philosophy. Faculty members also teach and research on questions of museum representations, archaeological knowledge practices, and the socio-politics of archaeology. The program includes the possibility of student internships in New York City museums and archaeological fieldwork in the Americas and elsewhere.

ADVISING

Majors and concentrators should consult the director of undergraduate studies when entering the department and devising programs of study. Students may also seek academic advice from any anthropology faculty member, as many faculty members hold degrees in several fields or positions in other departments and programs at Columbia. All faculty in the department are committed to an expansiveness of thought and an independence of intellectual pursuit and advise accordingly.

HONORS THESIS

Anthropology majors with a minimum GPA of 3.6 in the major who wish to write an honors thesis for departmental honors consideration may enroll in ANTH UN3999 The Senior Thesis Seminar in Anthropology. Students should have a preliminary concept for their thesis prior to course enrollment. Normally no more than 10% of graduating majors receive departmental honors in a given academic year.

PROFESSORS

- Nadia Abu El-Haj (Barnard)
- Lila Abu-Lughod
- Partha Chatterjee
- Myron L. Cohen
- Terence D'Altroy
- Steven Gregory
- Ralph L. Holloway
-
- Claudio Lomnitz
- Mahmood Mamdani
- Brinkley Messick
- Rosalind Morris
- Elizabeth Povinelli
- Nan Rothschild (Barnard, *emerita*)
- David Scott, Department Chair
- Lesley A. Sharp (Barnard)
- Michael Taussig
- Paige West (Barnard)

ASSOCIATE PROFESSORS

- Zoe Crossland
- Catherine Fennell
- Severin Fowles (Barnard)
- Marilyn Ivy
- Brian Larkin (Barnard)
- John Pemberton
- Audra Simpson

ASSISTANT PROFESSORS

- Vanessa Agard-Jones
- Naor Ben-Yehoyada
- Hannah Rachel Chazin
- Maria Jose de Abreu
-
-

LECTURERS

- Ellen Marakowitz
- Karen Seeley

ADJUNCT RESEARCH SCHOLAR GUIDELINES FOR ALL ANTHROPOLOGY MAJORS AND CONCENTRATORS

Grading

No course with a grade of D or lower can count toward the major or concentration. Only the first course that is to count toward the major or concentration can be taken Pass/D/Fail.

Courses

Courses offered in other departments count toward the major and concentration only when taught by a member of the Department of Anthropology. Courses from other departments not taught by anthropology faculty must have the approval of the director of undergraduate studies in order to count toward the major or concentration.

MAJOR IN ANTHROPOLOGY

The requirements for this program were modified on January 29, 2016.

The program of study should be planned as early as possible in consultation with the director of undergraduate studies.

The anthropology major requires 30 points in the Department of Anthropology.

Sociocultural Focus

Students interested in studying sociocultural anthropology are required to take the following courses:

ANTH UN1002	The Interpretation of Culture
ANTH UN2004	Introduction to Social and Cultural Theory
ANTH UN2005	Ethnographic Imagination

Archaeology Focus

Students interested in studying archaeological anthropology are required to take the following courses:

ANTH UN1002	The Interpretation of Culture
ANTH UN2004	Introduction to Social and Cultural Theory
ACLG UN2028	Pasts, Presents & Futures: An Introduction to 21st Century Archaeology

NOTE: Students wishing to pursue an interdisciplinary major in archaeology should see the *Archaeology* section of this Bulletin.

Biological/Physical Focus

Students interested in studying this field should refer to the major in evolutionary biology of the human species in the Department of Ecology, Evolution, and Environmental Biology.

**CONCENTRATION IN
ANTHROPOLOGY**

The anthropology concentration requires 20 points in the Department of Anthropology.

Sociocultural Focus

Students interested in studying sociocultural anthropology are required to take the following course:

ANTH UN1002	The Interpretation of Culture
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Archaeology Focus

Students interested in studying archaeological anthropology are required to take the following course:

ACLG UN2028	Pasts, Presents & Futures: An Introduction to 21st Century Archaeology
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Biological/Physical Focus

Students interested in pursuing study in this field should refer to the concentration in evolutionary biology of the human species in the Department of Ecology, Evolution, and Environmental Biology.

ARCHAEOLOGY

The Columbia Center for Archaeology (<http://www.columbia.edu/cu/archaeology>): 965 Schermerhorn Extension

Director of Undergraduate Studies: Prof. Terence D'Altroy, 961 Schermerhorn; 212-854-2131; tnd1@columbia.edu

Archaeology is the study of the material conditions inhabited and acted upon by people in the past and present. Investigation of the past through the study of material remains is entangled with historiography, politics, and individual and collective memory, and is implicated in the production of present-day identities. Archaeology has come to mean many things to different generations of scholars, yet all approaches share in common a focus on the physical remains of the past and on the interpretive acts that enliven these remains and are challenged by them.

At Columbia, archaeology is a multidisciplinary field practiced by faculty and students in the humanities, social sciences, and natural sciences. At present, there are faculty in the Departments of Anthropology; Art History and Archaeology; Classics; East Asian Languages and Cultures; Historic Preservation; History; Middle Eastern, South Asian, and African Studies; as well as in the Center for Environmental Research and Conservation, the Institute for Research on Women and Gender, and the Lamont-Doherty Earth Observatory, all of whom conduct research on prehistory, ancient society, or historical archaeology.

Among locations in which students and faculty are conducting or participating in field programs are Argentina, Peru, Central America, the North American Southwest, New York City, upstate New York, the UK, France, Italy, Greece, Turkey, Egypt, Yemen, Israel, Palestine, and Madagascar. Archaeologists at Columbia also work with professionals at a wide range of institutions in New York. Among the institutions at which students in particular programs may conduct research, or work on internships, are the American Museum of Natural History, the Brooklyn Museum, the Metropolitan Museum of Art, the Museum of the City of New York, the National Museum of the American Indian, the New York Botanical Garden, and the South Street Seaport Museum.

DEPARTMENTAL HONORS

For the requirements for departmental honors, please check with the program advisers. Normally no more than 10% of graduating majors receive departmental honors in a given academic year.

PROFESSORS

- Zainab Bahrani
- Terence D'Altroy
- William V. Harris
- Holger Klein
- Feng Li

- Kristina Milnor (Barnard)
- Stephen Murray
- Esther Pasztory (*emerita*)
- Nan Rothschild (Barnard, *emerita*)
- Marc Van De Microop

ASSOCIATE PROFESSORS

- Francesco Benelli
- Zoë Crossland
- Francesco de Angelis
- Severin Fowles (Barnard)
- Ioannis Mylonopoulos

ASSISTANT PROFESSORS

- Ellen Morris (Barnard)
- Marco Maiuro

ADJUNCT/VISITING PROFESSORS

- Brian Boyd
- Megan O'Neil (Barnard)
- Walter Pitman
- Adam Watson
- Norman Weiss
- George Wheeler

LECTURERS

- Clarence Gifford
- Jill Shapiro

ON LEAVE

- Prof. Crossland (2015-2016)

GUIDELINES FOR ALL ARCHAEOLOGY MAJORS AND CONCENTRATORS

Courses

It is recommended that archaeology students consider introductory courses in Earth and environmental sciences, environmental biology, and/or chemistry for their Core Curriculum science requirement.

For information on upper-level graduate courses and courses in historic preservation, please see the program advisers. Decisions about upper-level, related, or seminar courses that are not on this list and their applicability to the major or concentration in archaeology should be made in consultation with the program advisers.

Graduate Study

Students intending to pursue graduate degrees in archaeology should be aware that a reading knowledge of two languages

is often required as part of graduate study. Further, although language courses do not count toward the major or concentration, students are encouraged to acquire language training that is relevant to their particular interests in archaeology.

MAJOR IN ARCHAEOLOGY

Please read *Guidelines for all Archaeology Majors and Concentrators* above.

The program of study should be planned as early as possible with the program advisers, preferably before the end of the sophomore year and no later than the beginning of the junior year. The major in archaeology requires a total of 30 points within the major and 9 points of related courses as follows:

Two introductory courses:

ACLG UN2028	Pasts, Presents & Futures: An Introduction to 21st Century Archaeology
ANTH UN1008	The Rise of Civilization
or ANTH UN1007	The Origins of Human Society

Select two upper-level courses from different regions of the world, in addition to three other upper-level courses, planned in consultation with the program advisers.

Participation of four to six weeks in field projects with which Columbia University is affiliated, independent study in excavation or other field projects, or relevant museum internship and/or lab work.*

Select one laboratory course in archaeology or its equivalent in the field, as approved by the program advisers.

The capstone seminar in archaeology:

ANTH UN3993	World Archaeologies/Global Perspectives
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Select 9 points of related courses, planned with the program advisers in accordance with the student's interests.

A senior thesis is recommended for students planning to pursue a graduate degree. ***

- * The field, school, project, or internship must be approved in advance by the program advisers, and arrangements should be made in advance with the director of undergraduate studies for credits to be accepted as part of the degree. For more information, see the Center for Archaeology (<http://www.columbia.edu/cu/archaeology>) website.
- ** Taught alternate years, preferably taken in the junior or senior year, or a substitute seminar to be decided with the advance approval of the director of undergraduate studies. Students who are writing a thesis may substitute a thesis seminar for this requirement.

*** Topics should be discussed with a faculty adviser during the junior year, allowing time for planning, research, and travel during the following summer. In the senior year, students may register for two semesters of senior thesis study with their adviser, e.g., ANTH UN3997 Supervised Individual Research Course In Anthropology or ANTH UN3999 The Senior Thesis Seminar in Anthropology, to cover the writing of the thesis. The final draft of the thesis must be submitted by March 25. (See the Center for Archaeology (<http://www.columbia.edu/cu/archaeology>) webpages for more information.)

CONCENTRATION IN ARCHAEOLOGY

Please read *Guidelines for all Archaeology Majors and Concentrators* above.

The program of study should be planned with the program advisers. The concentration in archaeology requires a total of 21 points from within anthropology, art history and archaeology, and other approved departments, with no more than four courses being taken within any single department. Requirements for the concentration are as follows:

Select one of the following introductory courses:

ANTH UN1007	The Origins of Human Society
ANTH UN1008	The Rise of Civilization
ACLG UN2028	Pasts, Presents & Futures: An Introduction to 21st Century Archaeology

Select one seminar or colloquium in the Departments of Anthropology, Art History and Archaeology, Classics, or History, as approved by the program advisers.

Select three upper-level courses, including at least one from two different regions of the world.

Select one related course, planned with the program advisers in accordance with the student's interests.

ARCHITECTURE

Departmental Office:

500 The Diana Center

212-854-8430

architecture.barnard.edu (<https://architecture.barnard.edu>)

architecture@barnard.edu

Director of Undergraduate Studies:

Professor Karen Fairbanks

(212) 854-8431

kfairban@barnard.edu

Department Assistant:

Rachel Garcia-Grossman

(212) 854-8430

rgarciag@barnard.edu

THE DEPARTMENT OF ARCHITECTURE

Mission

The Architecture major establishes an intellectual context for students to interpret the relation of form, space, program, materials and media to human life and thought. Through the Architecture curriculum, students participate in the ongoing shaping of knowledge about the built environment and learn to see architecture as one among many forms of cultural production. At the same time, the major stresses the necessity of learning disciplinary-specific tools, methods, terms and critiques. Thus, work in the studio, lecture or seminar asks that students treat architecture as a form of research and speculation which complement the liberal arts mission of expansive thinking.

Undergraduate Study in Architecture

Studying Architecture at Barnard College, Columbia College, and General Studies leads to a liberal arts degree – a Bachelor of Arts with a major in Architecture, and Barnard College is the administrative location for all undergraduate architecture studies at Columbia University and its partner institutions. A liberal arts education in architecture holds a unique position in academia and in relation to the discipline. If the goal of a professional education in architecture is to enable students to participate directly in the world as an architect – a liberal arts education asks that students consider the broader and myriad conditions in which architecture is conceived and practiced and, in turn, to understand how architecture inevitably alters those conditions. Students are asked to confront and interpret the complex social, cultural, political, and environmental processes that weave through architectural design and urbanism. The purpose of an undergraduate liberal arts degree in architecture is to educate students to think about the world through architecture.

The Architecture curriculum introduces design at a variety of scales, acknowledging that integrated design thinking is effective for problem solving at any scale and in any discipline. Students

will experiment with full-scale installations and devices and make small-scale models of urban conditions from which they extract, interpret and invent new possibilities of inhabitation and use. The curriculum intentionally balances the traditions of handcrafted representation with evolving digital technologies of architectural design and communication.

The Architecture major complements, and makes great use of its University setting. With access to superb libraries, research centers, graduate programs, and abundant intellectual resources, our students have the opportunity to follow their creative instincts to great depth and breadth – and they do. The major depends on New York City as more than a convenient site for many design and research projects and frames the City as one of the key social and architectural, and thus didactic, markers of Modernity. Architecture students study with peers from countries around the world in one of the most diverse cities in the world. A large majority of the Architecture students expand their education by interning in Architecture or a related field during their undergraduate studies. Alumni of the Department are leaders in architecture and design fields around the world. The faculty teaching in the undergraduate program are dedicated teachers who are also at the forefront of practice and research and are similarly drawn to New York City as a nexus of global design thinking.

Students interested in obtaining a professional degree in Architecture continue on to graduate programs after their undergraduate degree, and students from the Barnard-Columbia program have enjoyed enormous success in their admissions to the most competitive graduate programs in the country. Students who study Architecture as undergraduates have also pursued graduate degrees in a variety of disciplines including Urban Planning, Law, and Media and Communications.

Student Learning Outcomes

Students in the Architecture Majors who fully engage with the curriculum should be able to complete the following outcomes:

- Apply integrated design thinking to specific problems in and beyond the discipline;
- Visually communicate architectural concepts and research using discipline-specific techniques in multiple media;
- Verbally present independent, group or assigned research, in multiple media formats;
- Organize and concisely write in a variety of formats including reports, case studies, synthetic overviews, etc.;
- Understand and critically interpret major buildings and themes of Architectural history and theory;
- Be intellectually prepared for graduate studies in architecture and related disciplines.

Departmental Honors

Senior requirements (a portfolio and research paper from a previous architecture course) are used to award departmental honors. Students must have a grade point average of at least 3.6 in classes for the major. Normally no more than 10% of

the graduating majors in the department each year receive departmental honors.

Professors of Professional Practice:

Kadambari Baxi and Karen Fairbanks (Chair)

Assistant Professor:

Ralph Ghoché

Term Assistant Professor of Professional Practice:

Ignacio G. Galan

Adjunct Professors:

Joeb Moore

Madeline Schwartzman

Suzanne Stephens

Adjunct Assistant Professors:

Severino Alfonso Dunn

Marcelo Lopez-Dinardi

Carrie Norman

Ana Penalba

Todd Rouhe

Brad Samuels

Fred Tang

Irina Verona

MAJOR IN ARCHITECTURE

The major in architecture requires a total of 14 courses, distributed as follows:

Studio Courses

Four studio courses, to be taken one per semester (studio courses have limited enrollment and priority is given to Architecture majors):

ARCH UN3101	Architectural Representation: Abstraction
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ARCH UN3103	Architectural Representation: Perception
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ARCH UN3201	Architectural Design, I
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ARCH UN3202	Architectural Design, II
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Required History/Theory Courses *

Five elective courses following the distribution requirement below:

ARCH UN3117	Perceptions of Architecture
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One course with a topic that is pre-1750

One course with a topic that is post-1750

Two electives (it is suggested that one of these be on a non-western topic)

Senior Courses *

ARCH UN3901	Senior Seminar
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Either a second Senior Seminar (from our program), a seminar from a related department (and related to student's disciplinary specialization/cluster), Architectural Design III, or Independent Research

Cluster of Related Courses

Three courses that relate to a single topic or theme that is relevant to architecture. Courses for the cluster may be taken in any department and may not overlap with any other courses for the major (e.g. history/theory courses or senior courses). All cluster courses should be selected in consultation with a major adviser.

Senior Requirements

Portfolio

Research Paper from Senior Seminar or Senior Course

* These are courses offered by the architecture department or other applicable departments offered within the University. Students should consult the program office for a list of applicable courses each semester.

ART HISTORY AND ARCHAEOLOGY

Departmental Office: 826 Schermerhorn; 212-854-4505
<http://www.columbia.edu/cu/arthistory/>

Director of Undergraduate Studies: Prof. Avinoam Shalem,
 814 Schermerhorn; 212-854-5681; as4501@columbia.edu
 (kej2110@columbia.edu)

Director of Art Humanities: Prof. Matthew McKelway,
 919 Schermerhorn; 212-854-3182; mpm8@columbia.edu

Coordinator for Undergraduate Programs: Emily Benjamin,
 826 Schermerhorn; 212-854-4505; eb3061@columbia.edu

The goal of the major in the Department of Art History and Archaeology is to explore the history of art, architecture, and archaeology across a broad historical, cultural, geographic, and methodological spectrum.

Department courses take advantage of the extraordinary cultural resources of New York City and often involve museum assignments and trips to local monuments. The department offers a major and concentration in art history and in the history and theory of architecture, and a combined major in art history and visual arts.

At the heart of the major is AHIS UN3000 Majors' Colloquium: the Literature and Methods of Art History, which introduces different methodological approaches to art history and critical texts that have shaped the discipline. The colloquium also prepares students for the independent research required in seminars and advanced lecture courses, and should be taken during the junior year.

Surveys and advanced lecture courses offered by Barnard and Columbia cover the spectrum of art history from antiquity to the present and introduce students to a wide range of materials and methodologies. Limited-enrollment seminars have a narrower focus and offer intensive instruction in research and writing. The opportunity for advanced research with a senior thesis is available to students who qualify.

The major readily accommodates students who wish to study abroad during junior year. Courses taken at accredited programs can generally count as transfer credits toward the major, but students must gain the approval of the director of undergraduate studies. Similarly, any transfer credit for the major must be approved by the director of undergraduate studies. Generally no more than 12 points of transfer credit are applicable to the major. The form to petition for transfer credit can be found on the department website (<http://www.columbia.edu/cu/arthistory/undergraduate/forms.html>). Eligible Art History courses taken at Reid Hall and through the Berlin Consortium are counted as Columbia courses, not transfer courses.

All newly declared majors and concentrators should visit the department office and speak with the undergraduate program coordinator about the requirements and their planned curriculum.

The director of undergraduate studies regularly communicates with majors by e-mail to announce departmental events, museum internships, and other news. **Students who do not receive these messages should email the undergraduate program coordinator.** The director of undergraduate studies is also available to talk to students about their professional goals and plans to study abroad.

COURSE INFORMATION

Lectures

Attendance at the first class meeting is recommended.

Colloquia

For information about enrollment in the required colloquium *AHIS UN3000 Majors' Colloquium: the Literature and Methods of Art History*, students should consult the department during the registration period in the semester prior to the one in which the course is offered. Interested students must sign up using an online form; majors will be informed of the sign-up dates and deadline via the majors mailing list. Enrollment is limited and admission is at the discretion of the instructor. It is recommended that students sign up for the colloquium in their junior year.

Seminars

Seminars require an application which is due in the departmental office in 826 Schermerhorn before the registration period in the semester prior to the one in which the course is offered (April for fall courses, November for spring courses). The required application form is available in PDF format on the departmental website (<http://www.columbia.edu/cu/arthistory/undergraduate/forms.html>). Students should wait list the seminars to which they apply on SSOL.

Bridge Seminars

Bridge seminars are open to graduate and undergraduate students. As with other seminars, they require an application, which are due in the semester prior to the semester in which the course is offered (August for fall courses, December for spring courses). The required application form is available in PDF format on the department website (<http://www.columbia.edu/cu/arthistory/undergraduate/forms.html>).

Bridge Lectures

Bridge lectures are open to graduate and advanced undergraduate students. They do not require an application.

Travel Seminar

In the spring, one or more undergraduate seminars in the Department of Art History and Archaeology may be designated as a travel seminar. Travel seminars receive funding to sponsor travel

over the spring break to a distant site related to the subject matter of the seminar.

STUDY ABROAD

Reid Hall, Paris

For information about the Columbia University in Paris Art History Program at Reid Hall, including summer session courses, visit the Office of Global Programs (<http://ogp.columbia.edu>) website.

Summer Program in Italy: Archaeological Fieldwork at Hadrian's Villa

Columbia University offers a four-week summer program that provides undergraduate and graduate students with the opportunity to excavate and learn together at Hadrian's Villa, a UNESCO World Heritage site near Rome and the most important Roman villa. It synthesizes Roman, Greek, and Egyptian architectural and artistic traditions and has attracted scholarly attention for centuries. For more information, visit the program website (http://columbia.studioabroad.com/index.cfm?FuseAction=Programs.ViewProgram&Program_ID=10577).

Columbia Summer Program in Venice

The Department of Art History and Archaeology and the Department of Italian offer a summer program based at Co' Foscari University in Venice. The program uses an interdisciplinary approach to understanding Italian culture through study of its language, literature/film, architecture, art history and conservation, and economy. Students have the opportunity to gain a deeper appreciation of the rich Venetian culture, traditions and history. The program is open to qualified undergraduate and graduate students from the U.S. and Italy. For more information, visit the program website (http://columbia.studioabroad.com/index.cfm?FuseAction=Abroad.ViewLink&Parent_ID=3D708992-BCDE-E7F3-57371CF1854BF98A&Link_ID=BD582BB6-BCDE-E7F3-50ED440855275AC0&Program_ID=10436).

Columbia Summer Program in Greece

The Department of Art History and Archaeology and the Program in Hellenic Studies offer a new summer program in Athens. "Curating the Histories of the Greek Present" examines aspects of Greek history and culture through the organization of an art exhibition under the general theme of the environment. The project is structured around classroom seminars, museum and site visits, walking tours, and workshop sessions in which students will learn about and gain experience in all stages of curating an exhibition. For more information, visit the program website (http://columbia.studioabroad.com/index.cfm?FuseAction=Programs.ViewProgram&Program_ID=10911).

DEPARTMENTAL HONORS

In order to qualify for departmental honors, students must write a senior thesis and have a GPA of at least 3.7 in the major.

The faculty of the Department of Art History and Archaeology submits recommendations to the College Committee on Honors, Awards, and Prizes for confirmation. Normally no more than 10% of graduating majors receive departmental honors in a given academic year.

SENIOR THESIS PRIZE

A prize is awarded each year to the best senior honors thesis written in the Department of Art History and Archaeology.

PROFESSORS

- Alexander Alberro (Barnard)
- Zainab Bahrani
- Barry Bergdoll
- Michael Cole
- Jonathan Crary
- Vidya Dehejia
- David Freedberg
- Robert E. Harrist, Jr.
- Anne Higonnet (Barnard)
- Holger Klein
- Rosalind Krauss
- Branden Joseph
- Matthew McKelway
- Stephen Murray
- Jonathan Reynolds (Barnard)
- Simon Schama
- Avinoam Shalem
- Zoë Strother

ASSOCIATE PROFESSORS

- Francesco de Angelis
- Noam M. Elcott
- Elizabeth Hutchinson (Barnard)
- Kellie Jones
- Ioannis Mylonopoulos

ASSISTANT PROFESSORS

- Diane Bodart
- Meredith Gamer
- Eleonora Pistis
- Michael Waters

ADJUNCT FACULTY

- Dawn Delbanco
- Rosalyn Deutsche (Barnard)
- John Rajchman
- Stefaan Van Liefferinge

LECTURERS

- Talia Andrei
- Frederique Baumgartner
- Marta Becherini
- Colby Chamberlain
- Miriam Chusid
- Huffa Frobes-Cross
- Alessandra Di Croce
- Daniel Greenberg
- Yoko Hara
- Alexandra Helprin
- Page Knox
- Janet Kraynak
- Sandrine Larrive-Bass
- Martina Mims
- Irina Oryshkevich
- Olivia Powell
- Maria Gonzalez Pendas
- Elizabeth Perkins
- Michael Sanchez
- Rachel Silveri
- Susan Sivard
- Caroline Wamsler

ON LEAVE

- Profs. Alberro, Mylonopoulos, Strother (2017-2018)
- Profs. Bergdoll, Elcott, Gamer, Kraynak (Fall 2017)
- Profs. Dehejia, Krauss (Spring 2018)
- Prof. Bergdoll (Reid Hall, Spring 2018)

GUIDELINES FOR ALL ART HISTORY AND ARCHAEOLOGY MAJORS, CONCENTRATORS, AND INTERDEPARTMENTAL MAJORS

Courses

HUMA UN1121 Masterpieces of Western Art (Art Humanities) does not count toward the majors or concentrations, and no credit is given for Advanced Placement exams.

Grading

Courses in which a grade of D has been received do not count toward the major or concentration requirements.

Only the first course a student takes in the department may be taken for a grade of Pass/D/Fail. Classes taken in the Architecture or Visual Arts departments to fulfill the studio requirement may be taken for a grade of Pass/D/Fail.

Senior Thesis

The senior thesis project consists of a research paper 35-45 pages in length. It is a year-long project, and students writing a thesis must register for *AHIS UN3002 Senior Thesis* for the fall and spring terms. Much of the fall semester is devoted to research, and the spring semester to writing.

All thesis writers are required to participate in class and, on alternate weeks, meet as a group or individually with the instructor. Group meetings are designed as a series of research and writing workshops geared toward students' research projects. Students receive a total of six credits for successful completion of the thesis and class.

In order to apply, students follow a selection process similar to the one currently used for seminars. Students must identify a thesis topic and secure a faculty adviser in the Department of Art History and Archaeology. Applications must indicate the subject of the thesis, a short annotated bibliography, and the name and the signature of the adviser, followed by a one-page statement (400 words) outlining the topic, goals, and methodology of the thesis.

The application deadline is set for August before the senior year. Please check the department website (<http://www.columbia.edu/cu/arhistory/undergraduate/senior-thesis.html>) for exact dates. Applications may be delivered in person or emailed to the coordinator for undergraduate programs. The director of undergraduate studies, in consultation with the thesis adviser, reviews the applications.

Students who intend to write a thesis should begin formulating a research topic and approaching potential faculty sponsors during the spring of the junior year. Currently, the department offers the Summer Research Travel Grant fellowship, which supports thesis-related research and travel during the summer. Additional senior thesis research funding during the academic year is administered through Columbia College and General Studies.

Senior thesis applications may be found at: <http://www.columbia.edu/cu/arhistory/undergraduate/forms.html>

Summer Research Travel Grant

The department offers the Summer Research Travel Grant, which may be used for travel to museums, building sites, libraries, archives, and other places of interest relevant to the thesis project. Students normally use these funds to conduct research during the summer before senior year.

Travel grant applications require a carefully edited thesis proposal, itemized budget, and supporting letter from a faculty sponsor. Applications are due in April of the student's junior year. Students will be notified of deadlines as they become available. Please contact the coordinator for undergraduate programs with any questions.

MAJOR IN ART HISTORY

Please read *Guidelines for all for Art History and Archaeology Majors, Concentrators, and Interdepartmental Majors* above.

The year-long senior thesis project (for qualified students; see below) *AHIS UN3002 Senior Thesis* may substitute for one elective lecture course. Seminars may substitute for lecture courses and may count toward fulfillment of the distribution requirements. Barnard Art History courses count toward the majors and concentration requirements.

The requirements for the major are as follows:

AHIS UN3000 Majors' Colloquium: the Literature and Methods of Art History

Seven 3-point lecture courses in Art History:

At least one course in three of four historical periods, listed below

An additional two courses in two different world regions, listed below

Two additional lectures of the student's choice

Two seminars in art history

A studio course taken in the Visual Arts or Architecture departments (which may be taken Pass/D/Fail)

Historical Periods

- Ancient (pre-400 CE/AD)
- 400-1400
- 1400-1700
- 1700-Present

World Regions

- Africa
- Asia
- Europe/North America/Australia
- Latin America
- Middle East

NOTE: These chronological divisions are approximate. In case of ambiguities, please contact the director of undergraduate studies.

MAJOR IN HISTORY AND THEORY OF ARCHITECTURE

Please read *Guidelines for all for Art History and Archaeology Majors, Concentrators, and Interdepartmental Majors* above.

Majors can take advantage of one of the strengths of the department by focusing on architectural history. This track combines an introductory studio in architectural design with a slightly modified program in art history. Courses in the Department of Architecture may substitute for up to two courses in art history, with approval of the director of undergraduate studies.

The requirements for the major are as follows:

AHIS UN3000 Majors' Colloquium: the Literature and Methods of Art History

Seven lecture courses in art history, one of which must be AHIS UN1007 Introduction to Architecture, and three of which must focus on architectural history. Courses must cover four of five general areas:

Ancient Mediterranean

Medieval Europe

Renaissance and Baroque

18th-20th century

Non-Western

At least one seminar in art history or architectural history

Architectural Studio:

ARCH UN1020 Introduction To Architectural Design and Visual Culture

NOTE: These chronological divisions are approximate. In case of ambiguities, please contact the director of undergraduate studies.

MAJOR IN ART HISTORY AND VISUAL ARTS

Please read *Guidelines for all for Art History and Archaeology Majors, Concentrators, and Interdepartmental Majors* above.

Students interested in the combined major should contact the coordinator for undergraduate programs in the Art History department, as well as the director of undergraduate studies in the Visual Arts department.

Up to two 3-point courses in art history may be replaced by a related course in another department, with approval of the adviser. The combined major requires the completion of sixteen or seventeen courses. It is recommended that students interested in this major begin working toward the requirements in their sophomore year.

The requirements for the major are as follows:

AHIS UN3000 Majors' Colloquium: the Literature and Methods of Art History

Seven 3-point lecture courses in art history:

At least one course in three of four historical periods, as listed below

An additional two courses in two different world regions, as listed below

Two additional lectures of the student's choice

21 points in Visual Arts covering:

VIAR UN1000 Basic Drawing

VIAR UN2300 Sculpture I

Five additional VIAR 3-point studio courses (15 points)

In the senior year, students must complete either a seminar in the Department of Art History and Archaeology or a senior project in visual arts (pending approval by the Visual Arts Department).

NOTE: These chronological divisions are approximate. In case of ambiguities, please contact the director of undergraduate studies.

Historical Periods

- Ancient (pre-400 CE/AD)
- 400-1400
- 1400-1700
- 1700-present

World Regions

- Africa
- Asia
- Europe/North America/Australia
- Latin America
- Middle East

CONCENTRATION IN ART HISTORY

Please read *Guidelines for all for Art History and Archaeology Majors, Concentrators, and Interdepartmental Majors* above.

The requirements for the concentration are as follows:

Seven 3-point lecture courses in art history:

At least one course in three of four historical periods, listed below

An additional two courses in two different world regions, listed below

Two additional lectures of the student's choice

NOTE: These chronological divisions are approximate. In case of ambiguities, please contact the director of undergraduate studies.

Historical Periods

- Ancient (pre-400 CE/AD)
- 400-1400
- 1400-1700
- 1700-present

World Regions

- Africa
- Asia
- Europe/North America/Australia
- Latin America
- Middle East

Concentrators are not required to take the majors colloquium, a seminar, or a studio course.

CONCENTRATION IN HISTORY AND THEORY OF ARCHITECTURE

Please read *Guidelines for all for Art History and Archaeology Majors, Concentrators, and Interdepartmental Majors* above.

The requirements for the concentration are as follows:

Seven courses in art history, including four in architectural history. Courses must cover four of five general areas, as described for the major:

Ancient Mediterranean

Medieval Europe

Renaissance and Baroque

18th-20th century

Non-Western

Concentrators are not required to take the majors colloquium, a seminar, or a studio course.

ASTRONOMY

Departmental Office: 1328 Pupin; 212-854-3278
http://www.astro.columbia.edu

Director of Undergraduate Studies:

Fall 2016: Prof. Frederik B.S. Paerels, 1022 Pupin;
212-854-0181; frits@astro.columbia.edu

Astronomy is, at once, the oldest science and one of the most vibrant fields of modern research. Its goal is to construct testable, quantitative, coherent models of the universe (the UNItY of the diVERSE) and its contents—galaxies, stars, and planets. The department offers two majors, both of which require a solid grounding in the mathematics and physics necessary for the pursuit of the discipline.

The astrophysics major is designed as preparation for graduate study and consists of a standard physics major sequence; a yearlong introduction to astrophysics (typically taken in the sophomore year, but open to first-years with adequate preparation in calculus and physics); and two required courses covering advanced topics in astronomy. Research, in the form of summer internships and/or term-time independent projects, which can lead to a senior thesis, is strongly encouraged. For a research thesis, students should enroll in the parallel, two-semester sequence *ASTR UN3997-ASTR UN3998 Independent Research*, preferably in their senior year. Students begin the research project in the fall and complete the written thesis in the spring. *ASTR UN3997* and *ASTR UN3998* cannot be repeated for credit.

The astronomy major provides a basis for further study in the field, but is also designed to be compatible with liberal arts students who pursue other careers and those wishing to combine astronomy with related sciences other than physics, such as chemistry or geology. It requires only two physics courses beyond the introductory sequence and can be completed easily if begun in the sophomore year.

The department offers numerous introductory astronomy courses at the 1000-level that do not have prerequisites. The calculus-based *ASTR UN2001 Introduction To Astrophysics, I-ASTR UN2002 Introduction To Astrophysics, II* sequence is recommended for astronomy majors and concentrators and is required for astrophysics majors.

Most 3000-level courses, as well as *ASTR GU4260 Modeling the Universe*, are offered every other year. Students should inquire with the director of undergraduate studies if they have specific questions on the course schedule. *ASTR UN3996 Current Research in Astrophysics* is a one-point course offered in the fall, designed to introduce majors to research methods and topics. It requires students to attend the department colloquia and a seminar designed to help students understand the colloquium topic. The 3000-level courses need not be taken in any particular order.

PROFESSORS

- James Applegate
- Greg Bryan
- Zoltan Haiman
- Jules P. Halpern
- David J. Helfand
- Kathryn Johnston (Chair)
- Laura Kay (Barnard)
- Jeremiah P. Ostriker
- Frederik B. S. Paerels
- Joseph Patterson
- Mary E. Putman
- David Schiminovich
- Edward A. Spiegel (*emeritus*)
- Jacqueline van Gorkom

ASSOCIATE PROFESSOR

- Marcel Agüeros

ASSISTANT PROFESSORS

- David Kipping
- Lorenzo Sironi

ADJUNCT PROFESSOR

- Michael Shara (Hayden Planetarium)

ADJUNCT ASSOCIATE PROFESSORS

- Mordecai-Mark MacLow (Hayden Planetarium)
- Rebecca Oppenheimer (Hayden Planetarium)
- Caleb Scharf

ON LEAVE

- Profs. Bryan, Patterson, Ostriker, Schiminovich, (*Fall 2017*)
- Profs. Applegate, van Gorkom (*Spring 2018*)

GUIDELINES FOR ALL ASTRONOMY MAJORS, CONCENTRATORS, AND INTERDEPARTMENTAL MAJORS

Courses in which the grade of D has been received do not count toward the major or concentration requirements.

MAJOR IN ASTRONOMY

The major requirements, to be planned with the director of undergraduate studies, are as follows:

Mathematics

Calculus sequence through MATH UN1202 Calculus IV or MATH UN1208 Honors Mathematics IV

Astronomy

Select one of the following options:

Option 1:

Two 3-point 1000-level astronomy courses

12 points in astronomy at the 2000-level or above

Option 2:

ASTR UN2001 Introduction To Astrophysics, I
 - ASTR UN2002 and Introduction To Astrophysics, II

9 points in astronomy at the 3000-level or above

Physics

Select one of the following physics sequences:

Sequence 1:

PHYS UN1401 Introduction To Mechanics and
 - PHYS UN1402 Thermodynamics
 - PHYS UN1403 and Introduction To Electricity,
 Magnetism, and Optics
 and Introduction to Classical and
 Quantum Waves

Sequence 2:

PHYS UN1601 Physics, I: Mechanics and Relativity
 - PHYS UN1602 and Physics, II: Thermodynamics,
 - PHYS UN2601 Electricity, and Magnetism
 and Physics, III: Classical and
 Quantum Waves

Sequence 3:

PHYS UN2801 Accelerated Physics I
 - PHYS UN2802 and Accelerated Physics II

Additional Physics Courses

Two physics courses at the 3000-level or above

Students contemplating graduate study are advised to include at least two of these physics courses:

PHYS UN3003 Mechanics
 PHYS UN3007 Electricity and Magnetism
 PHYS GU4021 Quantum Mechanics
 - PHYS GU4022 and Quantum Mechanics II

One of these may be substituted for 3 points of astronomy.

MAJOR IN ASTROPHYSICS

Students considering an Astrophysics major are encouraged to meet with the director of undergraduate studies. If possible, it is useful to start the physics sequence in the first year.

Mathematics

Calculus sequence through MATH UN1202 Calculus IV or MATH UN1208 Honors Mathematics IV

Astronomy

ASTR UN2001 Introduction To Astrophysics, I
 - ASTR UN2002 and Introduction To Astrophysics, II

6 points in astronomy at the 3000-level or above

Physics

Select one of the following physics sequences:

Sequence 1:

PHYS UN1401
 - PHYS UN1402
 - PHYS UN1403

Introduction To Mechanics and Thermodynamics and Introduction To Electricity, Magnetism, and Optics and Introduction to Classical and Quantum Waves

Sequence 2:

PHYS UN1601 Physics, I: Mechanics and Relativity
 - PHYS UN1602 and Physics, II: Thermodynamics,
 - PHYS UN2601 Electricity, and Magnetism
 and Physics, III: Classical and
 Quantum Waves

Sequence 3:

PHYS UN2801 Accelerated Physics I
 - PHYS UN2802 and Accelerated Physics II

Additional Physics Courses

PHYS UN3003 Mechanics
 PHYS UN3007 Electricity and Magnetism
 PHYS UN3008 Electromagnetic Waves and Optics
 PHYS GU4021 Quantum Mechanics
 - PHYS GU4022 and Quantum Mechanics II

OR

PHYS BC3006 Quantum Physics
 - PHYS GU4023 and Thermal and Statistical Physics

CONCENTRATION IN ASTRONOMY

An extra 3 points of physics can substitute for 3 points of astronomy, as long as the course submitted is at the equivalent or higher level. The concentration requirements are as follows:

Mathematics

9 points of mathematics

Astronomy

15 points of astronomy, nine of which must be at or above the 2000-level

Physics

9 points of physics

BIOLOGICAL SCIENCES

Departmental Office: 600 Fairchild, 212-854-4581;
mes2314@columbia.edu; biology@columbia.edu

Director of Undergraduate Studies, Undergraduate Programs and Laboratories:

Prof. Deborah Mowshowitz, 744D Mudd;
212-854-4497; dbm2@columbia.edu

Biology Major and Concentration Advisers:

For a list of current biology, biochemistry, biophysics, and neuroscience and behavior advisers, please visit <http://biology.columbia.edu/programs/advisors>

- A-H: Prof. Daniel Kalderon, 1013 Fairchild; ddk1@columbia.edu
- I-P: Prof. Alice Heicklen, 744B Mudd; ah2289@columbia.edu
- Q-Z: Prof. Harmen Bussemaker, 607E Fairchild; hjb2004@columbia.edu
- Backup Advisor: Prof. Deborah Mowshowitz, 744D Mudd; 212-854-4497; dbm2@columbia.edu

Biochemistry Advisers:

Biology: Prof. Brent Stockwell, 1208 Northwest Corner Building; 212-854-2948; stockwell@biology.columbia.edu

Chemistry: Prof. Virginia Cornish, 1209 Northwest Corner Building; 212-854-5209; vc114@columbia.edu

Biophysics Adviser: Prof. Ozgur Sahin, 908 Northwest Corner Building; os2246@columbia.edu

Neuroscience and Behavior Advisers:

Biology: Prof. Jian Yang, 917A Fairchild; 212-854-6161; jy160@columbia.edu
or Prof. Deborah Mowshowitz, 744D Mudd;
212-854-4497; dbm2@columbia.edu

Psychology:

(A-S) Professor Caroline Marvin, 317 Schermerhorn Ext, 854-0166, cbm2118@columbia.edu

(T-Z) Professor Sarah Woolley, 402B Schermerhorn, 851-9421, sw2277@columbia.edu

On-Line Resources:

- *FAQs for first-year students:* <http://www.columbia.edu/cu/biology/ug/advice/faqs/firstyr.html>
- *FAQs for prospective majors:* <http://www.columbia.edu/cu/biology/ug/advice/faqs/major.html>
- *Checklist of major requirements:* <http://biology.columbia.edu/programs/major-requirements>
- *Additional course information:* <http://biology.columbia.edu/courses>
-
-

The department offers broad training in basic biological disciplines, with an emphasis in cell and molecular biology. Students have many opportunities to participate in ongoing projects in research laboratories. All the biology-related majors require one year of introductory biology, plus additional courses as detailed in the major requirements and listed on the websites provided above.

For the first term of their introductory biology sequence, students may take either BIOL UN2005 Introductory Biology I: Biochemistry, Genetics & Molecular Biology, which has a prerequisite of chemistry, or EEEB UN2001 Environmental Biology I: Elements to Organisms, which does not require chemistry. EEEB UN2001 Environmental Biology I: Elements to Organisms may be taken in the first year.

BIOL UN2005 Introductory Biology I: Biochemistry, Genetics & Molecular Biology should be taken later, after general chemistry. For more details, see *Introductory Courses* under *Requirements* —Major in Biology. All students interested in biology are encouraged to take BIOL UN1908 First-Year Seminar in Modern Biology in the fall semester of their first year.

Premedical students should consult with their advising dean or the preprofessional office for relevant details of medical school requirements. Students interested in graduate school should consult the biology career adviser, Dr. Chloe Bulinski.

Nonscience majors who wish to take a biology course to fulfill the science requirement are encouraged to take BIOL UN1130 Genes and Development. They may also take, with the instructor's permission, BIOL UN3208 Introduction to Evolutionary Biology or EEEB UN2001 Environmental Biology I: Elements to Organisms.

Interested students should consult listings in other departments for courses related to biology. For courses in environmental studies, see listings for Earth and environmental sciences or for ecology, evolution, and environmental biology. For courses in human evolution, see listings for anthropology or for ecology, evolution, and environmental biology. For courses in the history of evolution, see listings for history and for philosophy of science. For a list of courses in computational biology and genomics, visit <http://systemsbiology.columbia.edu/courses>.

ADVANCED PLACEMENT

The department grants 3 credits for a score of 5 on the AP Biology exam. Placement is determined by the department. Students with a 5 on the AP are encouraged to take BIOL UN2005 Introductory Biology I: Biochemistry, Genetics & Molecular Biology and BIOL UN2006 Introductory Biology II: Cell Biology, Development & Physiology, but are not required to do so. For details, visit <http://www.columbia.edu/cu/biology/ug/faqs.html>.

TRANSFER CREDIT

ADVISING

Current and prospective biology majors and concentrators whose last names begin with A-H should consult with Prof. Kalderon. Students whose last names begin with I-P should consult with Prof. Hecklen. Students whose last names begin with Q-Z should consult with Prof. Bussemaker. Current and prospective biochemistry majors should consult with Prof. Stockwell for biology course advising and Prof. Cornish for chemistry course advising. Current and prospective biophysics majors should consult with Prof. Sahin. Students who cannot contact their adviser should consult with Prof. Mowshowitz.

For additional information, including office hours, please visit <http://biology.columbia.edu/programs/advisors>.

A-E: Professor Carl Hart, 401D Schermerhorn Hall;
212-854-5313; chair@psych.columbia.edu

F-Q: Professor Caroline Marvin, 355B Schermerhorn Ext;
212-854-3608; cbm2118@columbia.edu

R-Z: Professor Don Hood, 415 Schermerhorn;
212-854-4587; dch3@columbia.edu

SUMMER UNDERGRADUATE RESEARCH FELLOWSHIP (SURF) PROGRAM

First-year students, sophomores, and juniors are eligible for the department's paid internship program (SURF). This program is competitive; the department cannot assure every eligible student a place in any given summer.

Students apply to the program early in the spring term. A faculty committee headed by Dr. Alice Hecklen then matches selected students to appropriate labs. The deadline for SURF applications is at the beginning of the spring semester.

SURF students must submit a report on their work at the end of the summer session and participate in the following year's annual Undergraduate Research Symposium. Although it does not carry any academic credit, SURF can be used toward the lab requirement for majors and toward graduation with honors. For detailed information on all summer research programs and how to apply, please visit the SURF website (<http://www.columbia.edu/cu/biology/ug/surf>).

Current detailed descriptions of the SURF program and the application procedure are available at SURF's website, <http://www.columbia.edu/cu/biology/ug/surf/>. For more information on the Amgen Scholarship Program, please visit <http://www.columbia.edu/cu/biology/ug/amgen/>. Applications to all of these programs are through SURF.

DEPARTMENTAL HONORS

Students must apply for departmental honors. Applications are due no later than one day after spring break of their senior year. For details, please visit the departmental website at <http://biology.columbia.edu/programs/honors-biological-sciences>. (<http://biology.columbia.edu/programs/honors-biological-sciences>)

PROFESSORS

- J. Chloë Bulinski
- Harmen Bussemaker
- Martin Chalfie
- Lawrence A. Chasin
- Julio M. Fernandez
- Stuart Firestein
- Joachim Frank
- Tulle Hazelrigg
- John Hunt
- Daniel Kalderon
- Darcy B. Kelley
- James L. Manley
- Ann McDermott (Chemistry)
- Robert E. Pollack
- Carol L. Prives
- Ron Prywes
- Molly Przeworski
- Michael P. Sheetz
- Brent Stockwell
- Liang Tong
- Alexander A. Tzagoloff
- Jian Yang
- Rafael Yuste

ASSOCIATE PROFESSORS

- Songtao Jia
- Ozgur Sahin
- Guy Sella

ASSISTANT PROFESSORS

- Lars Dietrich
- Raju Tomer

LECTURERS

- Claire Elise Hazen
- Alice Hecklen
- Mary Ann Price
- Lili Yamasaki

ADJUNCT FACULTY

- Ava Brent-Jamali

- Lewis Brown
- Nataliya Galifianakis
- Jay Hammel
- Danny Nam Ho
- John Loike
- Deborah B. Mowshowitz
- Solomon Mowshowitz
- Vincent R. Racaniello
-

GUIDELINES FOR ALL BIOLOGICAL SCIENCES MAJORS, CONCENTRATORS, AND INTERDEPARTMENTAL MAJORS

Returning students should check the departmental website for any last-minute changes and/or additional information. See especially undergraduate updates and list of department courses. All major and concentration requirements are detailed on the website and links provided below.

Exceptions to Requirements

Students must get written permission in advance for any exceptions to the requirements listed below. For the exceptions to be applied toward graduation, the student must notify the biology department in one of the following two ways:

1. The student can file a completed paper planning form, signed by a faculty adviser, in the biology department office at 600 Fairchild;
2. The faculty member approving the exception can send an e-mail explaining the exceptions to mes2314@columbia.edu.

Grade Requirements for the Major

A grade of C- or higher must be earned and revealed on your transcript for any course – including the first – to be counted toward the major or concentration requirements. The grade of P is not acceptable. A course that was taken Pass/D/Fail may be counted if and only if the P is uncovered by the Registrar's deadline.

Courses

Courses with the subject code *HPSC* or *SCNC* do not count toward the majors or concentrations.

MAJOR IN BIOLOGY

General Information

The requirements for the biology major include courses in biology, chemistry, physics, and mathematics.

The required biology courses are one year of introductory biology, two core courses in biology or biochemistry, two 3-point electives

in biology or biochemistry, and an appropriate lab experience. See below for details.

The required courses outside the biology department are chemistry through organic (plus labs), one year of college-level physics (plus lab), and the completion of one year of college-level mathematics (usually calculus).

Alternative sequences to the above may be arranged in special circumstances, but only with the permission of the director of undergraduate studies or a departmental adviser obtained in advance; for example, certain courses listed in the *Summer Term Bulletin*, the *School of General Studies Bulletin*, and the *Barnard College Bulletin* may be applied toward the major. In addition, selected courses at the Columbia-Presbyterian Medical Center are open to advanced undergraduates. Credit toward the major for courses not listed in the *Columbia College Bulletin* must be discussed in advance with the director of undergraduate studies or a departmental adviser. Students are responsible for notifying the department of all exceptions either in writing or by e-mail as explained above.

Alternative programs must be arranged in advance with the director of undergraduate studies. Students planning graduate work in biology should keep in mind that physical chemistry and statistics are important for many graduate programs.

Introductory Courses

The usual one-year introductory biology sequence is BIOL UN2005 Introductory Biology I: Biochemistry, Genetics & Molecular Biology-BIOL UN2006 Introductory Biology II: Cell Biology, Development & Physiology, taken in the sophomore year, or EEBB UN2001 Environmental Biology I: Elements to Organisms-BIOL UN2006 Introductory Biology II: Cell Biology, Development & Physiology, which may be taken in the first year.

Other sequences require permission in advance from the director of undergraduate studies or departmental advisers. Students with a strong background in chemistry or molecular biology may take BIOL UN2005 Introductory Biology I: Biochemistry, Genetics & Molecular Biology-BIOL UN2006 Introductory Biology II: Cell Biology, Development & Physiology in their first year; the permission of one of the instructors is required.

Premedical students usually take BIOL UN2005 Introductory Biology I: Biochemistry, Genetics & Molecular Biology-BIOL UN2006 Introductory Biology II: Cell Biology, Development & Physiology after a year of general chemistry; premedical students interested in the environmental sciences may take EEBB UN2001 *Environmental Biology I: Elements to Organisms* followed by BIOL UN2006 Introductory Biology II: Cell Biology, Development & Physiology.

Students with advanced placement in biology are expected but not required to take EEBB UN2001 Environmental Biology I: Elements to Organisms or BIOL UN2005 Introductory Biology I: Biochemistry, Genetics & Molecular Biology as their initial

biology course, because BIOL UN2005 Introductory Biology I: Biochemistry, Genetics & Molecular Biology-BIOL UN2006 Introductory Biology II: Cell Biology, Development & Physiology is taught at a level of detail and depth not found in most advanced placement courses.

Students who wish to skip BIOL UN2005 Introductory Biology I: Biochemistry, Genetics & Molecular Biology and start with a higher-level biology course may do so, but they must obtain permission in advance from the director of undergraduate studies. For additional information, see FAQs for first-year students at <http://www.columbia.edu/cu/biology/ug/advice/faqs/firstyr.html>.

Core Courses

Two out of the following five departmental core courses are required:

BIOL UN3022	Developmental Biology
BIOL UN3031	Genetics
BIOL UN3041	Cell Biology
BIOC UN3501	Biochemistry: Structure and Metabolism
BIOC UN3512	Molecular Biology

Laboratory Courses

A laboratory experience in biology is required. It may be fulfilled by completing any one of the following options:

Option 1:

Select one of the following 5-point laboratory courses:

BIOL UN3050	Project Laboratory In Protein Biochemistry
BIOL UN3052	Project Laboratory in Molecular Genetics
BIOL UN3058	Project Laboratory in Microbiology

Option 2:

BIOL UN2501	Contemporary Biology Laboratory
Select an additional 3-point lab such as BIOL UN3040 or a Barnard lab.	

Option 3:

Two terms of BIOL UN3500 taken for a letter grade, including the submission of a satisfactory research report at the end of each semester

Option 4:

Completion of all the requirements for one session of the Summer Undergraduate Research Fellowship (SURF). An additional semester of BIOL UN3500 in the same research lab is recommended but not required. Summer lab work under other auspices may not be substituted for the SURF Program.

The laboratory fee (\$150) partially covers the cost of nonreturnable items. This fee is charged for all lab courses, including BIOL UN3500 Independent Biological Research.

Upper-Level Elective Courses

Select two additional courses, carrying at least 3 points each, from any of the 3000- or 4000- level lecture courses. BIOL UN3500 Independent Biological Research cannot be used as one of the courses to satisfy the upper-level elective course requirement.

Chemistry

All majors must take chemistry through organic including labs. One of the following three groups of chemistry courses is required:

Option 1:

CHEM UN1403 - CHEM UN1404	General Chemistry I (Lecture) and General Chemistry II (Lecture)
CHEM UN1500	General Chemistry Laboratory
CHEM UN3443 - CHEM UN2444	Organic Chemistry I (Lecture) and Organic Chemistry II (Lecture)
CHEM UN2493	Organic Chemistry Laboratory I (Techniques)
CHEM UN2494	Organic Chemistry Laboratory II (Synthesis)

Option 2:

For students who qualify for intensive chemistry	
CHEM UN1604 - CHEM UN2507	Intensive General Chemistry (Lecture) and Intensive General Chemistry Laboratory
CHEM UN1507	Intensive General Chemistry Laboratory
CHEM UN3443 - CHEM UN2444	Organic Chemistry I (Lecture) and Organic Chemistry II (Lecture)
CHEM UN2545	Intensive Organic Chemistry Laboratory

Option 3:

For students who qualify for first year organic chemistry	
CHEM UN2507	Intensive General Chemistry Laboratory
CHEM UN3045 - CHEM UN3046	Intensive Organic Chemistry I (Lecture) and Intensive Organic Chemistry II (Lecture)

Physics

Students must take two terms of physics including the accompanying labs. The usual choices are PHYS UN1201-PHYS UN1202 General Physics II and PHYS UN1291-PHYS UN1292 General Physics Laboratory II. Higher-level physics sequences are also acceptable. The 1400-level sequence is recommended for students who plan to take three terms of physics.

Mathematics

Two semesters of calculus or honors mathematics are required. Students may substitute one semester of statistics for one semester of calculus with an adviser's permission. For students

with AP credit, completion of MATH UN1102 Calculus II, MATH UN1201 Calculus III, or MATH UN1207 Honors Mathematics A is sufficient. However, students with AP credit are encouraged to take additional courses in mathematics or statistics at Columbia.

For more details on the biology major requirements, visit <http://biology.columbia.edu/pages/biology-major-requirements>.

MAJOR IN BIOCHEMISTRY

The required basic courses for the biochemistry major are chemistry through organic, including laboratory, and one year each of physical chemistry, physics, calculus, biology, and biochemistry/molecular biology.

The required additional courses are three lecture courses chosen from mathematics, chemistry, and biology, and two upper-level laboratory courses.

For more details, see the *Chemistry* section in this Bulletin or visit <http://biology.columbia.edu/pages/biochemistry-major-requirements>.

<http://biology.columbia.edu/pages/biochemistry-major-requirements>

MAJOR IN BIOPHYSICS

The requirements for the biophysics major are as follows:

One year of introductory biology:

BIOL UN2005	Introductory Biology I:
- BIOL UN2006	Biochemistry, Genetics & Molecular Biology and Introductory Biology II: Cell Biology, Development & Physiology

Select at least one of the following laboratory courses:

BIOL UN3050	Project Laboratory In Protein Biochemistry
BIOL UN3052	Project Laboratory in Molecular Genetics
BIOL UN3058	Project Laboratory in Microbiology
BIOL UN3500	Independent Biological Research

One course in biochemistry or molecular biology:

BIOC UN3501	Biochemistry: Structure and Metabolism
or BIOC UN3512	Molecular Biology

Select one of the following options:

Option 1 - Genetics:

BIOL UN3031	Genetics
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Option 2 - Neurobiology:

BIOL UN3004	Neurobiology I: Cellular and Molecular Neurobiology
or BIOL UN3005	Neurobiology II: Development & Systems

Option 3 - Developmental Biology:

BIOL UN3022 Developmental Biology

Select one of the following sequences to be completed at the end of sophomore year:

PHYS UN1403	Introduction to Classical and Quantum Waves
- PHYS UN1402	and Introduction To Electricity, Magnetism, and Optics
- PHYS UN1403	and Introduction to Classical and Quantum Waves
- PHYS UN1494	and Introduction to Experimental Physics

PHYS UN1601	Physics, I: Mechanics and Relativity
- PHYS UN1602	and Physics, II: Thermodynamics, Electricity, and Magnetism
- PHYS UN2601	and Physics, III: Classical and Quantum Waves
- PHYS UN2699	and Experiments in Classical and Modern Physics

PHYS UN2801	Accelerated Physics I
- PHYS UN2802	and Accelerated Physics II
- PHYS UN3081	and Intermediate Laboratory Work

Select any two physics courses at the 3000-level or above, chosen in consultation with the adviser.

Calculus through MATH UN1202 or MATH UN1208, and MATH V3027

Chemistry through organic including labs; see biology major for options

Select one additional course at the 3000- or 4000-level in either physics or biology.

For more details, see the *Physics* section in this Bulletin or visit <http://biology.columbia.edu/pages/biophysics-major-requirements>.

<http://biology.columbia.edu/pages/biophysics-major-requirements>.

MAJOR IN NEUROSCIENCE AND BEHAVIOR

In addition to one year of general chemistry, ten courses are required to complete the major in neuroscience and behavior—five in biology and five in psychology.

For more details, see the *Psychology* section in this Bulletin or visit <http://biology.columbia.edu/pages/neuroscience-and-behavior-major-requirements>.

CONCENTRATION IN BIOLOGY

Students who wish to concentrate in biology must design their programs in advance with the director of undergraduate studies or a departmental adviser.

The requirement for the concentration is 22 points in biology or biochemistry, with at least five courses chosen from the courses listed in the Biological Sciences section of the Bulletin. Additional

courses in physics, chemistry, and mathematics are required as detailed below.

A project laboratory and BIOL UN2501 Contemporary Biology Laboratory may **not** both be counted toward the 22-point total. See the biology major requirements for additional information.

The requirements for the concentration in biology are as follows:

BIOL UN2005	Introductory Biology I: Biochemistry, Genetics & Molecular Biology
or EEEB UN2001	Environmental Biology I: Elements to Organisms
BIOL UN2006	Introductory Biology II: Cell Biology, Development & Physiology
Select at least one of the following core courses:	
BIOL UN3022	Developmental Biology
BIOL UN3031	Genetics
BIOL UN3041	Cell Biology
BIOL UN3501	Biochemistry: Structure and Metabolism
BIOL UN3512	Molecular Biology
One of these options to fulfill the lab requirement:	
BIOL UN2501	Contemporary Biology Laboratory (plus second course including laboratory work, usually BIOL UN3040)
BIOL UN3050	Project Laboratory In Protein Biochemistry
BIOL UN3052	Project Laboratory in Molecular Genetics
BIOL UN3058	Project Laboratory in Microbiology

One or two additional biology or biochemistry lecture courses, level 3000 or above, to reach the total Biology credits of 22 points required for the concentration. Either UN2501 or a five-point lab course, but not both, may count towards the 22 point total.

Chemistry through organic including labs; see biology major for options

One year of physics, including laboratory; see biology major for options

One year of college-level mathematics (ordinarily this should be calculus); see biology major for options

For more details, visit <http://biology.columbia.edu/pages/biology-concentration-requirements>.

MAJOR IN ENVIRONMENTAL BIOLOGY

For a description of the environmental biology major, see the *Ecology, Evolution, and Environmental Biology* section in this Bulletin.

BUSINESS

Program Manager: Cara Mandarino, 104 Uris; 212-854-0140; MendelsonCenter@gsb.columbia.edu

<http://www8.gsb.columbia.edu/mendelson>

The collaboration between the faculty of Arts and Sciences and Columbia Business School offers students access to the ideas and expertise of the faculty of a top-ranked professional school recognized for its excellence in graduate business education through a series of elective courses. These courses, designed by Business School faculty specifically for undergraduates, build upon the strong liberal arts education at Columbia. Students learn how finance is directly connected to the fundamental principles of economics; that marketing utilizes concepts from psychology; and how management depends upon principles developed in psychology and sociology.

Students can take advantage of the opportunity to enhance their experience by participating in co-curricular activities, such as Business School faculty lecture series, industry panels, informal mentoring/networking activities with MBA students and alumni, in addition to research opportunities with Business School faculty.

This curricular and co-curricular programming capitalizes on the Business School's ability to connect academic theory with real-world practice, providing students with the opportunity to develop key leadership skills, an entrepreneurial mindset, and the ability to innovate.

Eligibility:

- To be eligible to earn a Special Concentration in Business Management, students must apply to the program in the spring semester of their sophomore or junior years, and they must be accepted through a process governed by the Columbia Business School. Beginning with the Special Concentration cohort of 2017-2018 (i.e., students accepted via the application process of Spring 2017), the program will accept up to 45 qualified candidates each year. The size of the program may be reviewed from time to time by Columbia College and Columbia Business School and adjusted, if desired by both schools.
- For students who entered Columbia College in, or before, Fall 2016: Students who have not been accepted into the Special Concentration program may have the option to "shadow" the Special Concentration in Business Management by taking the required courses if space is available in those courses. Students who "shadow" the program will not be given priority registration in any courses that count toward the Special Concentration. If a student is able to take all of the courses, she or he will be allowed to declare retroactively the Special Concentration and have the program noted on their transcript.
- The shadowing option is no longer available for students who entered Columbia College in, or before, Fall 2016.

APPLICATION REQUIREMENTS

To apply for the special concentration in business management, students must meet these three requirements:

1. Sophomore or junior standing;
2. Have a cumulative GPA of 3.4 or higher;
3. Have received a B+ or better in at least one, but preferably two, of the following three prerequisite courses, i.e. in statistics, economics, and psychology. Students who completed only one prerequisite at the time of application must be currently enrolled in at least one other; acceptance is conditional on achieving a grade of B+ or higher in the second course.

Statistics Prerequisite

Select one of the following:

STAT UN1001	Introduction to Statistical Reasoning
STAT UN1101	Introduction to Statistics
STAT UN1201	Calculus-Based Introduction to Statistics
PSYC UN1610	Introductory Statistics for Behavioral Scientists
SOCI UN3020	Social Statistics

Economics Prerequisite

ECON UN1105	Principles of Economics
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Psychology/Sociology Prerequisite

Select one of the following:

PSYC UN1001	The Science of Psychology
PSYC UN1010	Mind, Brain and Behavior
SOCI UN1000	The Social World

Application Components

1. Application form
2. Current class schedule, including a brief description of how all concentration requirements will be completed
3. Official transcript
4. Resume

Benefits for Admitted Students

While students may complete the special concentration requirements without applying to the program, the following benefits are available to students admitted through the application process:

1. Guaranteed enrollment in popular undergraduate business courses (must reserve in advance through program manager);
2. Access to special guest speaker presentations at the Business School, including business leader or faculty presentations exclusively for admitted students;
3. Formal and informal networking opportunities with Business School students, faculty, and alumni.

CURRENT FACULTY

- Tomomichi Amano (<https://www8.gsb.columbia.edu/cbs-directory/detail/ta2508>)
- Ming Deng (<https://www8.gsb.columbia.edu/cbs-directory/detail/md2012>)
- Bennett Chiles (<https://www8.gsb.columbia.edu/cbs-directory/detail/md2012>)
- Amol Sarva (<https://www8.gsb.columbia.edu/cbs-directory/detail/as311>)
- Kairong Xiao (<https://www8.gsb.columbia.edu/cbs-directory/detail/kx2139>)

AFFILIATED FACULTY

- Andrew Hertzberg (<http://www0.gsb.columbia.edu/faculty/ahertzberg>)
- Roger Mesznik
- Ernesto Reuben (<http://www8.gsb.columbia.edu/cbs-directory/detail/er2520>)
- Aaron Wallen (<http://www4.gsb.columbia.edu/cbs-directory/detail/5845593/Aaron+Wallen>)
- Keith Wilcox (<http://www4.gsb.columbia.edu/cbs-directory/detail/7520565/Keith%20Wilcox>)
- Emily Breza (<http://www0.gsb.columbia.edu/faculty/ebreza>)
- Stephan Meier (<http://www8.gsb.columbia.edu/cbs-directory/detail/sm3087>)
- Ran Kivetz (<http://www4.gsb.columbia.edu/cbs-directory/detail/494949/Kivetz>)
- Bruce Kogut (<http://www8.gsb.columbia.edu/cbs-directory/detail/bk2263>)

GUIDELINES FOR ALL BUSINESS MANAGEMENT SPECIAL CONCENTRATORS

The business management special concentration is not a stand-alone concentration: it is intended to complement the disciplinary specialization and methodological training inherent in a major. In addition to the special concentration requirements, students must complete a major or a full concentration.

Students who matriculated at Columbia in Fall 2012 and beyond must earn a minimum GPA of 3.0 in prerequisite, core, and elective courses. Students who matriculated before Fall 2012 must either adhere to the above requirement or previous requirement of B+ or better in at least two of the prerequisites and a minimum GPA of 3.0 in core and elective classes.

Students who do not meet course prerequisites or who do not receive a passing grade do not receive credit for that course towards the special concentration. All courses must be taken for a

letter grade. Only prerequisites may be double counted for other majors or concentrations. The core classes **cannot** be double counted. Electives may be double counted if a student's major allows double counting.

For information about this special concentration, including the application process, visit <http://www8.gsb.columbia.edu/mendelson>.

SPECIAL CONCENTRATION IN BUSINESS MANAGEMENT

Please read *Guidelines for all Business Management Special Concentrators* above.

The requirements for the special concentration in business management are as follows:

Prerequisites

Select one of the following Statistics courses:

STAT UN1001	Introduction to Statistical Reasoning
STAT UN1101	Introduction to Statistics
STAT UN1201	Calculus-Based Introduction to Statistics
PSYC UN1610	Introductory Statistics for Behavioral Scientists
SOCI UN3020	Social Statistics

Select the following Economics course:

ECON UN1105	Principles of Economics
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Select one of the following Psychology/Sociology courses:

PSYC UN1001	The Science of Psychology
PSYC UN1010	Mind, Brain and Behavior
SOCI UN1000	The Social World

Core

Select one of the following Financial Core courses:

ECON GU4280	Corporate Finance
BUSI UN3013	Financial Accounting

Select two of the following Managerial Core courses:

BUSI UN3701	Strategy Formulation
BUSI UN3021	Marketing Management
BUSI UN3703	Leadership in Organizations

Electives

Select two of the following courses:

BUSI UN3702	Venturing to Change the World
BUSI UN3704	Making History Through Venturing
ECON UN3025	Financial Economics
ECON UN3265	The Economics of Money and Banking
PSYC UN2235	Thinking and Decision Making
PSYC UN2630	Social Psychology
PSYC UN2640	Introduction to Social Cognition
SOCI UN2240	Economy and Society
SOCI UN3490	Mistake, Misconduct, Disaster

SOCI W3670	Culture, Markets, and Consumption
SOCI S3675Q	Organizing Innovation
SOCI G4032	Sociology of Labor Markets
POLS V3615	Globalization and International Politics
PSYC BC1136	Social Psychology
PSYC BC1138	Social Psychology
PSYC BC2151	Organizational Psychology

NOTE: Students may not receive credit for two or more of PSYC BC1136 Social Psychology, *PSYC BC1138 Social Psychology*, and PSYC UN2630 Social Psychology.

CHEMISTRY

Undergraduate Office: 340 Havemeyer; 212-854-2163

Departmental Office: 344 Havemeyer; 212-854-2202
<http://www.columbia.edu/cu/chemistry/>

Director of Undergraduate Studies: Prof. Karen Phillips,
 422 Havemeyer; 212-851-7534; kep12@columbia.edu
 (kep12@chem.columbia.edu)

Program Manager for Undergraduate Studies: Dr.
 Vesna Gasperov, 211A Havemeyer; 212-854-2017;
vg2231@columbia.edu

Biochemistry Advisers:

Biology: Prof. Brent Stockwell, 1208 Northwest Corner Building;
 212-854-2919; stockwell@biology.columbia.edu

Chemistry, the study of molecules, is a central science interesting for its own sake but also necessary as an intellectual link to the other sciences of biology, physics, and environmental science. Faculty find the various disciplines of chemistry fascinating because they establish intellectual bridges between the macroscopic or human-scale world that we see, smell, and touch, and the microscopic world that affects every aspect of our lives. The study of chemistry begins on the microscopic scale and extends to engage a variety of different macroscopic contexts.

Chemistry is currently making its largest impact on society at the nexus between chemistry and biology and the nexus between chemistry and engineering, particularly where new materials are being developed. A typical chemistry laboratory now has more computers than test tubes and no longer smells of rotten eggs.

The chemistry department majors are designed to help students focus on these new developments and to understand the factors influencing the nature of the discipline. Because the science is constantly changing, courses change as well, and while organic and physical chemistry remain the bedrock courses, they too differ greatly from the same courses 40 years ago. Many consider biochemistry to be a foundation course as well. Although different paths within the chemistry major take different trajectories, there is a core that provides the essential foundation students need regardless of the path they choose. Students should consider majoring in chemistry if they share or can develop a fascination with the explanatory power that comes with an advanced understanding of the nature and influence of the microscopic world of molecules.

Students who choose to major in chemistry may elect to continue graduate study in this field and obtain a Ph.D. which is a solid basis for a career in research, either in the industry or in a university. A major in chemistry also provides students with an astonishing range of career choices such as working in the chemical or pharmaceutical industries or in many other businesses where a technical background is highly desirable. Other options include becoming a financial analyst for a technical company, a

science writer, a high school chemistry teacher, a patent attorney, an environmental consultant, or a hospital laboratory manager, among others. The choices are both numerous and various as well as intellectually exciting and personally fulfilling.

ADVANCED PLACEMENT

The department grants advanced placement (AP) credit for a score of 4 or 5. The amount of credit granted is based on the results of the department placement exam and completion of the requisite course. Students who are placed into CHEM UN1604 Intensive General Chemistry (Lecture) are granted 3 points of credit; students who are placed into CHEM UN2045 Intensive Organic Chemistry I (Lecture)-CHEM UN2046 Intensive Organic Chemistry II (Lecture) are granted 6 points of credit. In either case, credit is granted only upon completion of the course with a grade of C or better. Students must complete a department placement exam prior to registering for either of these courses.

PROGRAMS OF STUDY

The Department of Chemistry offers four distinct academic major programs for undergraduates interested in professional-level training and education in the chemical sciences: chemistry, chemical physics, biochemistry and environmental chemistry. For students interested in a program of less extensive study and coursework, the department offers a concentration in chemistry.

COURSE INFORMATION

The results of the placement exam are used to advise students which track to pursue. The Department of Chemistry offers three different tracks. Students who wish to take Track 2 or 3 classes must take the placement exam. Students who wish to pursue Track 1 classes do not need to take the placement exam.

TRACK INFORMATION

In the first year, Track 1 students with one year of high school chemistry take a one-year course in general chemistry, and the one-term laboratory course that accompanies it. In the second year, students study organic chemistry, and take organic chemistry laboratory.

Students who qualify by prior examination during orientation week can place into the advanced tracks. There are two options. Track 2 students take, in the fall term, a special one-term intensive course in general chemistry in place of the one-year course. In the second year, students study organic chemistry and take organic chemistry laboratory. Track 3 students take a one-year course in organic chemistry for first-year students and the one-term intensive general chemistry laboratory course. In the second year, students enroll in physical chemistry and the organic chemistry laboratory course.

Additional information on the tracks can be found in the *Requirements* section.

ADDITIONAL COURSES

First-year students may also elect to take CHEM UN2408. This seminar focuses on topics in modern chemistry, and is offered to all qualified students.

Biochemistry (BIOC UN3501, BIOC UN3512) is recommended for students interested in the biomedical sciences.

Physical chemistry (CHEM UN3079-CHEM UN3080), a one-year program, requires prior preparation in mathematics and physics. The accompanying laboratory is CHEM UN3085-CHEM UN3086.

Also offered are a senior seminar (CHEM UN3920); advanced courses in biochemistry, inorganic, organic, and physical chemistry; and an introduction to research (CHEM UN3098).

SAMPLE PROGRAMS

Some *typical* programs are shown below. Programs are crafted by the student and the director of undergraduate studies to meet individual needs and interests.

Track 1

First Year

CHEM UN1403 General Chemistry I (Lecture)
CHEM UN1404 General Chemistry II (Lecture)
CHEM UN1500 General Chemistry Laboratory
CHEM UN2408 First-Year Seminar in Chemical Research
Calculus and physics as required.

Second Year

CHEM UN2443 Organic Chemistry I (Lecture)
CHEM UN2444 Organic Chemistry II (Lecture)
CHEM UN2493 Organic Chemistry Laboratory I (Techniques)
CHEM UN2494 Organic Chemistry Laboratory II (Synthesis)
Calculus and physics as required.

Third Year

CHEM UN3079 Physical Chemistry I
BIOC UN3501 Biochemistry: Structure and Metabolism
CHEM UN3546 Advanced Organic Chemistry Laboratory
CHEM UN3080 Physical Chemistry II
CHEM UN3098 Supervised Independent Research

Fourth Year

CHEM UN3085 Physical and Analytical Chemistry Laboratory I
CHEM UN3086 Physical and Analytical Chemistry Laboratory II
CHEM UN3920 Senior Seminar in Chemical Research
CHEM GU4071 INORGANIC CHEMISTRY
Advanced courses (4000-level or higher)

Track 2

First Year

CHEM UN1507 Intensive General Chemistry Laboratory

CHEM UN2045 Intensive Organic Chemistry I (Lecture)
CHEM UN2046 Intensive Organic Chemistry II (Lecture)
CHEM UN2408 First-Year Seminar in Chemical Research
Calculus and Physics as required.

Second Year

CHEM UN3079 Physical Chemistry I
CHEM UN3080 Physical Chemistry II
CHEM UN2545 Intensive Organic Chemistry Laboratory
CHEM UN3546 Advanced Organic Chemistry Laboratory
Calculus and physics as required.

Third Year

BIOC UN3501 Biochemistry: Structure and Metabolism
CHEM UN3085 Physical and Analytical Chemistry Laboratory I
CHEM UN3086 Physical and Analytical Chemistry Laboratory II
CHEM UN3098 Supervised Independent Research
CHEM GU4071 INORGANIC CHEMISTRY

Fourth Year

CHEM UN3920 Senior Seminar in Chemical Research
Advanced courses (4000-level or higher)

Track 3

First Year

Calculus and physics as required.
CHEM UN1507 Intensive General Chemistry Laboratory
CHEM UN1604 Intensive General Chemistry (Lecture)
CHEM UN2408 First-Year Seminar in Chemical Research

Second Year

CHEM UN2443 Organic Chemistry I (Lecture)
CHEM UN2444 Organic Chemistry II (Lecture)
CHEM UN2493 Organic Chemistry Laboratory I (Techniques)
CHEM UN2494 Organic Chemistry Laboratory II (Synthesis)
Calculus and physics as required.

Third Year

CHEM UN3079 Physical Chemistry I
BIOC UN3501 Biochemistry: Structure and Metabolism
CHEM UN3546 Advanced Organic Chemistry Laboratory
CHEM UN3080 Physical Chemistry II
CHEM UN3098 Supervised Independent Research

Fourth Year

CHEM UN3085 Physical and Analytical Chemistry Laboratory I
CHEM UN3086 Physical and Analytical Chemistry Laboratory II
CHEM UN3920 Senior Seminar in Chemical Research
CHEM GU4071 INORGANIC CHEMISTRY
Advanced courses (4000-level or higher)

PROFESSORS

- Bruce J. Berne

- Ronald Breslow
- Louis E. Brus
- Virginia W. Cornish
- Kenneth B. Eisenthal
- Richard A. Friesner
- Ruben Gonzalez
- Laura Kaufman
- James L. Leighton
- Ann E. McDermott
- Jack R. Norton
- Colin Nuckolls
- Gerard Parkin
- David R. Reichman
- Tomislav Rovis
- Brent Stockwell
- James J. Valentini
- Xiaoyang Zhu

ASSOCIATE PROFESSORS

- Angelo Cacciuto
- Luis Campos
- Tristan Lambert
- Wei Min
- Jonathan Owen
- Dalibor Sames
- Latha Venkataraman

ASSISTANT PROFESSORS

- Xavier Roy

SENIOR LECTURER

Karen Phillips

LECTURERS

- Luis Avila
- Robert Beer
- John Decatur
- Charles E. Doubleday
- Sarah Hansen
- Fay Ng
- Ruben Savizky

ASSOCIATES

- Anna Ghurbanyan
- Danielle Sedbrook
- Joseph Ulichny

GUIDELINES FOR ALL CHEMISTRY MAJORS, CONCENTRATORS, AND INTERDEPARTMENTAL MAJORS

Students majoring in chemistry or in one of the interdepartmental majors in chemistry should go to the director of undergraduate studies or the undergraduate program manager in the Department of Chemistry to discuss their program of study. Chemistry majors and interdepartmental majors usually postpone part of the Core Curriculum beyond the sophomore year.

Chemistry Tracks

All students who wish to start with Track 2 or 3 courses must take a placement exam. The results of the placement exam are used to advise students which track to pursue. Unless otherwise specified below, all students must complete one of the following tracks:

Track 1

CHEM UN1403	General Chemistry I (Lecture)
CHEM UN1404	General Chemistry II (Lecture)
CHEM UN1500	General Chemistry Laboratory
CHEM UN2443	Organic Chemistry I (Lecture)
CHEM UN2444	Organic Chemistry II (Lecture)
CHEM UN2493	Organic Chemistry Laboratory I (Techniques)
CHEM UN2494	Organic Chemistry Laboratory II (Synthesis)

Track 2

CHEM UN1500	General Chemistry Laboratory
CHEM UN1604	Intensive General Chemistry (Lecture)
CHEM UN2443	Organic Chemistry I (Lecture)
CHEM UN2444	Organic Chemistry II (Lecture)
CHEM UN2493	Organic Chemistry Laboratory I (Techniques)
CHEM UN2494	Organic Chemistry Laboratory II (Synthesis)

Track 3

CHEM UN1507	Intensive General Chemistry Laboratory
CHEM UN2045	Intensive Organic Chemistry I (Lecture)
CHEM UN2046	Intensive Organic Chemistry II (Lecture)
CHEM UN2545	Intensive Organic Chemistry Laboratory

Physics Sequences

The requirements for the physics sequences were modified on December 5, 2014. Students who declared before this date should contact the director of undergraduate studies for the department in order to confirm their correct course of study.

Unless otherwise specified below, all students must complete one of the following sequences:

Sequence A

For students with limited background in high school physics:

PHYS UN1401	Introduction To Mechanics and Thermodynamics
PHYS UN1402	Introduction To Electricity, Magnetism, and Optics
PHYS UN1403	Introduction to Classical and Quantum Waves

For chemistry majors, the following laboratory courses are recommended, NOT required. For chemical physics majors, the following laboratory courses are required:

PHYS UN1493	Introduction to Experimental Physics
PHYS UN2699	Experiments in Classical and Modern Physics
PHYS UN3081	Intermediate Laboratory Work

Sequence B

PHYS UN1601	Physics, I: Mechanics and Relativity
PHYS UN1602	Physics, II: Thermodynamics, Electricity, and Magnetism
PHYS UN2601	Physics, III: Classical and Quantum Waves
or PHYS UN3081	Intermediate Laboratory Work

For chemistry majors, the following laboratory courses are recommended NOT required. For chemical physics majors, the following laboratory courses are required:

PHYS UN2699	Experiments in Classical and Modern Physics
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Sequence C

For students with advanced preparation in physics and mathematics:

PHYS UN2801	Accelerated Physics I
- PHYS UN2802	and Accelerated Physics II

For chemistry majors, the following laboratory courses are recommended NOT required. For chemical physics majors, the following laboratory courses are required:

PHYS UN2699	Experiments in Classical and Modern Physics
or PHYS UN3081	Intermediate Laboratory Work

MAJOR IN CHEMISTRY

Select one of the tracks outlined above in *Guidelines for all Chemistry Majors, Concentrators, and Interdepartmental Majors* and complete the following lectures and labs.

Chemistry

Select one of the chemistry tracks outlined above.

CHEM UN2408	First-Year Seminar in Chemical Research (Recommended NOT required)
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CHEM UN3079	Physical Chemistry I
CHEM UN3080	Physical Chemistry II
CHEM UN3085	Physical and Analytical Chemistry Laboratory I
CHEM UN3086	Physical and Analytical Chemistry Laboratory II
CHEM UN3546	Advanced Organic Chemistry Laboratory
CHEM UN3920	Senior Seminar in Chemical Research

CHEM GU4071	INORGANIC CHEMISTRY
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Select one course from the following:

CHEM UN3098	Supervised Independent Research
OR Chemistry courses numbered CHEM GU4000 or above	

Physics

Select one of the physics sequences outlined above in the Guidelines section.

Mathematics

Select one of the following sequences:

Four semesters of calculus:	
MATH UN1101	Calculus I
- MATH UN1102	and Calculus II
- MATH UN1201	and Calculus III
- MATH UN1202	and Calculus IV
Two semesters of honors mathematics:	
MATH UN1207	Honors Mathematics A
- MATH UN1208	and Honors Mathematics B

MAJOR IN BIOCHEMISTRY

Select one of the tracks outlined above in *Guidelines for all Chemistry Majors, Concentrators, and Interdepartmental Majors* and complete the following lectures and labs.

Chemistry

Select one of the chemistry tracks outlined above.

CHEM UN2408	First-Year Seminar in Chemical Research (Recommended NOT required)
CHEM UN3079	Physical Chemistry I
CHEM UN3080	Physical Chemistry II

Biology

BIOL UN1908	First-Year Seminar in Modern Biology (Recommended NOT required)
BIOL UN2005	Introductory Biology I: Biochemistry, Genetics & Molecular Biology
BIOL UN2006	Introductory Biology II: Cell Biology, Development & Physiology
BIOC UN3501	Biochemistry: Structure and Metabolism

BIOC UN3512	Molecular Biology
Select one of the following laboratory courses:	
BIOL UN3050	Project Laboratory In Protein Biochemistry
BIOL UN3052	Project Laboratory in Molecular Genetics
BIOL UN3500	Independent Biological Research

Physics

Select one of the following physics sequences:

Sequence A:	
PHYS UN1201	General Physics I
- PHYS UN1202	and General Physics II
Sequence B:	
PHYS UN1401	Introduction To Mechanics and Thermodynamics
- PHYS UN1402	and Introduction To Electricity, Magnetism, and Optics
- PHYS UN1403	and Introduction to Classical and Quantum Waves (PHYS UN1403 is recommended NOT required)
Sequence C:	
PHYS UN1601	Physics, I: Mechanics and Relativity
- PHYS UN1602	and Physics, II: Thermodynamics, Electricity, and Magnetism
- PHYS UN2601	and Physics, III: Classical and Quantum Waves (PHYS UN2601 is recommended but not required)
Sequence D:	
PHYS UN2801	Accelerated Physics I
- PHYS UN2802	and Accelerated Physics II

Mathematics

Select one of the following sequences:

Two semesters of calculus:	
MATH UN1101	Calculus I
- MATH UN1102	and Calculus II
- MATH UN1201	and Calculus III
- MATH UN1202	and Calculus IV

Two semesters of honors mathematics:	
MATH UN1207	Honors Mathematics A
- MATH UN1208	and Honors Mathematics B
AP credit and one term of calculus (Calculus II or higher)	

Additional Courses

Select one of the following additional laboratory courses:

BIOL UN3040	Lab in Molecular Biology
- BIOL UN2501	and Contemporary Biology Laboratory
BIOL UN3050	Project Laboratory In Protein Biochemistry
BIOL UN3052	Project Laboratory in Molecular Genetics
BIOL UN3500	Independent Biological Research
CHEM UN3085	Physical and Analytical Chemistry Laboratory I
CHEM UN3086	Physical and Analytical Chemistry Laboratory II
CHEM UN3098	Supervised Independent Research

CHEM UN3546	Advanced Organic Chemistry Laboratory
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Select any three courses from the following:

CHEM GU4071	INORGANIC CHEMISTRY
CHEM GU4102	Chemistry for the Brain
CHEM GU4147	Advanced Organic Chemistry
BIOC GU4323	BIOPHYSICAL CHEMISTRY I
BIOC GU4324	Biophysical Chemistry II
MATH UN3027	Ordinary Differential Equations
or MATH UN2030	Ordinary Differential Equations

One additional semester of calculus

One additional semester of honors math:

MATH UN1207	Honors Mathematics A
or MATH UN1208	Honors Mathematics B

Any biology course at the 3000/4000 level for 3 or more points. The following are recommended:

BIOL UN3004	Neurobiology I: Cellular and Molecular Neurobiology
or BIOL UN3005	Neurobiology II: Development & Systems
BIOL UN3008	The Cellular Physiology of Disease
BIOL UN3022	Developmental Biology
BIOL UN3034	Biotechnology
BIOL UN3041	Cell Biology
BIOL UN3073	Cellular and Molecular Immunology
BIOL GU4065	Molecular Biology of Disease
BIOL GU4300	Drugs and Disease

MAJOR IN CHEMICAL PHYSICS

Select one of the tracks outlined above in *Guidelines for all Chemistry Majors, Concentrators, and Interdepartmental Majors* and complete the following lectures and labs.

Chemistry

Select one of the chemistry tracks outlined above.

CHEM UN3079	Physical Chemistry I
CHEM UN3080	Physical Chemistry II
CHEM UN3085	Physical and Analytical Chemistry Laboratory I
CHEM UN3086	Physical and Analytical Chemistry Laboratory II
CHEM UN3098	Supervised Independent Research
CHEM UN3920	Senior Seminar in Chemical Research
CHEM GU4221	Quantum Chemistry
or PHYS GU4021	Quantum Mechanics

Physics

Select one of the physics sequences outlined above in *Guidelines for all Chemistry Majors, Concentrators and Interdepartmental Majors*. For the chemical physics major, one lab MUST be completed for the sequence chosen.

Complete the following lectures:

PHYS UN3003	Mechanics
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PHYS UN3007	Electricity and Magnetism
PHYS UN3008	Electromagnetic Waves and Optics

Mathematics

Select one of the following sequences:

Four semesters of calculus:

MATH UN1101	Calculus I
- MATH UN1102	and Calculus II
- MATH UN1201	and Calculus III
- MATH UN1202	and Calculus IV

Two semesters of honors mathematics:

MATH UN1207	Honors Mathematics A
- MATH UN1208	and Honors Mathematics B
- MATH UN3027	and Ordinary Differential Equations

Two semesters of advanced calculus:

MATH UN1202	Calculus IV
- MATH UN3027	and Ordinary Differential Equations

MAJOR IN ENVIRONMENTAL CHEMISTRY

The requirements for this program were modified on February 1, 2016. Students who declared this program before this date should contact the director of undergraduate studies for the department in order to confirm their correct course of study.

Select one of the tracks outlined above in *Guidelines for all Chemistry Majors, Concentrators, and Interdepartmental Majors* and complete the following lectures and labs.

Chemistry

Select one of the chemistry tracks outlined above. A second semester of Organic Chemistry lecture is recommended NOT required.

CHEM UN3079	Physical Chemistry I
CHEM GU4071	INORGANIC CHEMISTRY

The following courses are recommended NOT required:

CHEM UN2408	First-Year Seminar in Chemical Research
CHEM UN3920	Senior Seminar in Chemical Research

Earth and Environmental Science

Select two of the following three courses:

EESC UN2100	Earth's Environmental Systems: The Climate System
EESC UN2200	Earth's Environmental Systems: The Solid Earth System
EESC UN2300	Earth's Environmental Systems: The Life System

Additional course required:

EESC UN3101	Geochemistry for a Habitable Planet
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Select one of the following labs:

EESC BC3016	Environmental Measurements
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CHEM UN3085	Physical and Analytical Chemistry Laboratory I
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Select one option for Independent Research in Environmental Chemistry:

EESC BC3800 - EESC BC3801	Senior Research Seminar and Senior Research Seminar
CHEM UN3098	Supervised Independent Research (It is strongly recommended to take CHEM UN3920 if taking CHEM UN3098)

Physics

Select one of the following physics sequences:

Sequence A:

PHYS UN1201 - PHYS UN1202	General Physics I and General Physics II
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Sequence B:

PHYS UN1401 - PHYS UN1402 - PHYS UN1403	Introduction To Mechanics and Thermodynamics and Introduction To Electricity, Magnetism, and Optics and Introduction to Classical and Quantum Waves (Recommended NOT required)
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Sequence C:

PHYS UN1601 - PHYS UN1602 - PHYS UN2601	Physics, I: Mechanics and Relativity and Physics, II: Thermodynamics, Electricity, and Magnetism and Physics, III: Classical and Quantum Waves (Recommended, not required)
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Sequence D:

PHYS UN2801 - PHYS UN2802	Accelerated Physics I and Accelerated Physics II
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Mathematics

Two semesters of calculus:

MATH UN1101	Calculus I
MATH UN1102	Calculus II
MATH UN1201	Calculus III
MATH UN1202	Calculus IV

Additional Courses

Select any two of the following:

Chemistry:

CHEM UN3080	Physical Chemistry II
CHEM GU4103	Organometallic Chemistry
CHEM GU4147	Advanced Organic Chemistry

Earth and Environmental Science:

EESC BC3017	Environmental Data Analysis
EESC BC3025	Hydrology
EESC GU4008	Introduction to Atmospheric Science

EESC GU4009	Chemical Geology
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EESC GU4040	Climate Thermodynamics and Energy Transfer
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EESC GU4050	Global Assessment and Monitoring Using Remote Sensing
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EESC GU4600	Earth Resources and Sustainable Development
EESC GU4835	Wetlands and Climate Change
EESC GU4885	The Chemistry of Continental Waters
EESC GU4888	Isoptope Geology II
EESC GU4924	Introduction to Atmospheric Chemistry
EESC GU4925	Principles of Physical Oceanography
EESC GU4926	Principles of Chemical Oceanography
Earth and Environmental Engineering:	
EAEE E4001	Industrial ecology of earth resources
EAEE E4003	Introduction to aquatic chemistry
Mathematics:	
One additional semester of calculus	

CONCENTRATION IN CHEMISTRY

No more than four points of CHEM UN3098 Supervised Independent Research may be counted toward the concentration.

Select one of the three chemistry tracks listed below.

PHYS UN1201	General Physics I
- PHYS UN1202	and General Physics II

Two semesters of calculus

Chemistry Tracks

Track 1

CHEM UN1403	General Chemistry I (Lecture)
CHEM UN1404	General Chemistry II (Lecture)
CHEM UN1500	General Chemistry Laboratory

Select 22 points of chemistry at the 2000-level or higher (excluding W2408).

Track 2

CHEM UN1500	General Chemistry Laboratory
or CHEM UN1507	Intensive General Chemistry Laboratory
CHEM UN1604	Intensive General Chemistry (Lecture)

Select 22 points of chemistry at the 2000-level or higher (excluding W2408).

Track 3

CHEM UN1507	Intensive General Chemistry Laboratory
CHEM UN2045	Intensive Organic Chemistry I (Lecture)
CHEM UN2046	Intensive Organic Chemistry II (Lecture)

Select 18 points of chemistry at the 2000-level or higher (excluding W2408).

CLASSICS

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<http://www.columbia.edu/cu/classics/>

Director of Undergraduate Studies (Classics): Prof. Katharina Volk; 212-854-5683; kv2018@columbia.edu

Director of Undergraduate Studies (Modern Greek Studies):
Prof. Nikolas Kakkoufa; 212-854-3902; nk2776@columbia.edu

Director of Academic Administration and Finance: Juliana Driever; 212-854-2726; jd2185@columbia.edu
(wdd3@columbia.edu)

When one visits Rome or Athens, they also visit the many layers of physical, historical, and cultural development that have contributed to the complex evolution of those cities. When one tours the Roman Forum or the Greek Parthenon, they set foot on monuments whose physical impressiveness symbolizes political strength and historical importance; in a very physical way they experience the past. When one studies Latin and Greek language and culture, they embark on a tour of an alternative kind, making their way through texts and other cultural forms—such as paintings, sculptures, and philosophical ideas—that bring them directly into contact with the Greco-Roman past. Literature, philosophy, history, art and architecture, linguistics, papyrology, religion: all (and more) are branches of investigation to which the modern student of classics/classical studies has access through the surviving literary and material evidence.

But when one studies in the original language Virgil's *Aeneid*, say, or Plato's philosophical writings, they find that ancient Greek or Latin literature deals with issues and ideas that are, for us, of central contemporary importance: e.g., How can I be happy? What is the best political constitution for our (or any) state? What responsibilities do I have to the society in which I live? What national significance is served or owed by literature?

The study of Greek and Latin language and culture concentrates in one main area (ancient Greece and Rome) and on many of the questions that are of direct pertinence to the ways in which modern lives are shaped and lived; at the same time, Greco-Roman literature and philosophy, so fundamental to the later development of the Western tradition, boast works of great intrinsic worth and interest. While all Columbia students get an introduction to classical texts in *Literature Humanities* and *Contemporary Civilization*, classics/classical studies provides a more advanced study of ancient cultural issues and habits of mind already sampled in the Core.

Study abroad in Greece or Italy offers a variety of educational experiences that are continuous with those of the major, enriching both linguistic expertise and cultural awareness. Students in classics have the opportunity to take part in archaeological digs abroad and, on occasion, to assist faculty in research projects that

require, for example, bibliographical collection or the checking of research data.

Many majors pursue graduate study in classics and classical studies. Upon earning their graduate degrees, they often embark on teaching careers in universities, colleges, and high schools. Many graduating majors also enter a number of other professional fields, among them law, banking, accountancy, publishing, and museum-work. Employers tend to find that students in classics are articulate on paper, as well as orally; are organized of mind; and have good skills in general reasoning, an ability developed by the study of Greek and Latin language. In effect, the study of classics opens up a wide array of options, both in education and in the wider world.

The program of the department aims for a comprehensive understanding of classical literature and culture, and the mastery of Greek and Latin on which such understanding depends. Careful study of the language occupies the largest part of the first-year courses and is not omitted in the more advanced courses. Although literature becomes the chief subject only in the advanced courses, important authors like Homer, Plato, and Virgil are studied as literary texts already in the intermediate courses. A wide variety of courses are offered in translation.

Through a joint program with Barnard, the department offers a broad range of subjects. The department annually offers four advanced courses in each language (at the 3000- or 4000- level), the content of which changes each year in order to provide a curricular range and to balance authors and genres over a two-year period.

Opportunities for individual projects of reading and research are available. Students are also permitted to take graduate courses if they are sufficiently prepared. Additionally, they can supplement their studies within the department through work in other departments, such as art history and archaeology, history, philosophy, and the other departments of languages and literature.

It is not necessary to have previously studied either language in order to major in it. A student starting Greek or Latin at Columbia can meet all the requirements of a major within an ordinary undergraduate program.

IN FULFILLMENT OF THE LANGUAGE REQUIREMENT

Students beginning the study of Greek or Latin at Columbia must take four terms of either of the following two-year sequences:

Greek

GREK UN1101 - GREK UN1102	Elementary Greek I and Elementary Greek II
GREK UN2101 - GREK UN2102	Intermediate Greek I Attic Prose and Intermediate Greek II: Homer

Latin

LATN UN1101 - LATN UN1102	Elementary Latin I and Elementary Latin II
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LATN UN2101 Intermediate Latin I
- LATN UN2102 and Intermediate Latin II

With the permission of the director of undergraduate studies, GREK UN2102 Intermediate Greek II: Homer may be taken before GREK UN2101 Intermediate Greek I Attic Prose.

The intensive elementary courses GREK UN1121 Intensive Elementary Greek and LATN UN1121 Intensive Elementary Latin may be substituted for the two-term *UN1101-UN1102* sequence. The intensive intermediate courses GREK S1221 and LATN S1221 may be substituted for the two-term *UN2101-UN2102* sequence.

LATN UN2101 Intermediate Latin I should be taken before LATN UN2102 Intermediate Latin II.

For students with secondary-school training in Greek or Latin, the director of undergraduate studies determines, on the basis of records and test scores, what further work is needed to fulfill the language requirement.

ADVANCED PLACEMENT

The department grants 3 credits for a score of 5 on the Latin AP exam, which also satisfies the foreign language requirement, upon successful completion (with a grade of B or higher) of a Latin class at the 3000-level or higher.

MAJOR PROGRAM

The department offers a major in classics and a major track in classical studies. The major in classics involves the intensive study of both Greek and Latin, as well as their cultural matrix; the track in classical studies offers a more interdisciplinary approach. The major in classics is recommended for students planning to continue the study of classics in graduate school. The department also participates in the interdepartmental ancient studies program and offers a concentration in classics; these are all described below.

The major in classics and the track in classical studies are designed in part to build on the experience of the ancient world that undergraduates have acquired at Columbia in the Core Curriculum (especially in *Literature Humanities*). The major in classics is structured on the principle of gradual and closely monitored linguistic progress from the elementary (1100-level) to the advanced (3000- and 4000-levels) and ultimately to the literature survey courses (*GU4105-GU4106*) in Greek and/or Latin.

Those majors intending to embark on graduate study in classics are especially encouraged to undertake, in their senior year, an independent research project (*UN3998*). This option is designed to allow students to personalize their experience in the major by conducting advanced study in a specialized area under the guidance of the specializing faculty member of their choice.

UN3998 is required in the classical studies track. Otherwise, students in classical studies are not required to take advanced courses beyond *UN3996 The Major Seminar*, but are expected to

follow a coherent plan of study by taking a sequence of cognate courses in different but related departments (e.g., art history and archaeology, history, etc.).

The director of undergraduate studies is responsible for overseeing the path of study followed by each student in classics or classical studies. Through close interaction with the director of undergraduate studies, as well as with other faculty members where appropriate, each major is strongly encouraged to debate the strengths and weaknesses of his or her own trajectory of study even as the requirements for the major are being completed.

Students should contact the director of undergraduate studies with any questions about the classics majors and course offerings. The director of undergraduate studies can provide students with a worksheet to help in planning their progress toward major requirements.

PROFESSORS

- Kathy Eden
- Helene P. Foley (Barnard)
- Carmela V. Franklin
- Stathis Gourgouris
- John Ma
- Kristina Milnor (Barnard)
- Seth R. Schwartz
- Deborah T. Steiner
- Karen Van Dyck
- Katharina Volk
- Gareth D. Williams (Acting Chair)
- Nancy Worman (Barnard)
- James E. G. Zetzel

ASSOCIATE PROFESSORS

- Marcus Folch
- Joseph Howley
- Elizabeth Irwin
- Ellen Morris (Barnard)

LECTURERS

- Dimitrios Antoniou
- Caitlin Gillespie
- Nikolas Kakkoufa
- Darcy Krasne
- Elizabeth Scharffenberger

MAJOR IN CLASSICS

The major in classics involves a program in both Greek and Latin languages and literatures, and in Greek and Roman civilization. Students generally emphasize the study of one of the languages (the primary language), but significant study of the other (secondary) language is required as well.

The major requires the completion of 11 courses (a minimum of 34 points) and must include the following:

1. In a primary language:
 - Four courses at or above the UN2100-level;
 - *The Major Seminar UN3996*;
 - Two courses from the following four advanced options: GU4105, GU4106, GU4139, UN3998 (any others may count toward the four upper level requirement).
2. In a secondary language:
 - Two courses at or above the UN2100-level.
3. Two ancient culture courses, including:
 - One course in the culture of the primary language;
 - One course in any aspect of ancient history or culture (*HIST*, *AHIS*, *PHIL*, *CLLT*, *CLCV*). All substitutions must be approved by the director of undergraduate studies.

The classical languages follow a standard track of elementary (1100-level) and intermediate (2100-level) levels, followed by 3000- and 4000-level classes that may generally be taken in any order.

Although it is easier to complete the major if at least one classical language is begun no later than the first year, it is possible to begin one classical language in the sophomore year and the other in the junior year and still complete the major.

Those planning to go on to graduate study in classics are urged to take both terms of GU4105-GU4106 if possible, to write a senior research thesis, and to acquire a reading knowledge of German and preferably also of French (Italian is also useful).

To be eligible for departmental honors and prizes, students must take UN3998.

MAJOR TRACK IN CLASSICAL STUDIES

The major track in classical studies requires the completion of 11 courses (a minimum of 35 points) and must include the following:

1. Five courses, at or above the UN1102-level, in either or both Latin and Greek;
2. *The Major Seminar UN3996*;
3. Four classes in Ancient History, Art, Philosophy, Religion, and Civilization. Note that certain courses may be 6 credits, e.g., ICCS's *City of Rome* course, and may count as two courses towards this requirement. Students in doubt about a course's relevance should confirm it with the director of undergraduate studies as soon as possible;
4. *Senior Thesis UN3998*, completed on a chosen aspect of Greek or Roman civilization under the direction of a faculty member (3 points).

Summer courses 1221/1221 are counted as four credits for the purposes of major requirements.

MAJOR IN ANCIENT STUDIES

Students interested in a major in ancient studies should see the *Ancient Studies* section in this Bulletin.

CONCENTRATION IN CLASSICS

Students who declared this program before this date should contact the director of undergraduate studies for the department in order to confirm their correct course of study.

The concentration in classics is designed for those who cannot fit the complete major into their undergraduate schedule, but still wish to take a substantial program in Greek and Latin.

The concentration requires the completion of seven courses (a minimum of 21 points) and must include the following:

1. In a primary language, six courses distributed as follows:
 - Five courses above the 1100-level, three of which must be 3000- or 4000-level;
 - One course from the following three advanced options: GU4105, GU4106, GU4139.
2. One course in Ancient History or Classical Civilization (3 points).

SPECIAL CONCENTRATION IN HELLENIC STUDIES

The courses in the Hellenic Studies program are designed to develop the student's proficiency in aspects of Modern Greek culture, language, and history. The minimum credit requirement for the Hellenic Studies Concentration is 21 credits and includes:

1. Modern Greek language and culture courses (Elementary, Intermediate, Advanced, Conversation I & II, Reading in Greek; minimum 8 credits). Students will work with undergraduate advisor to determine their level of the language,
2. Modern Greek Studies interdepartmental courses (CLGM, CSGM, HSGM; minimum 12 credits). The program of study should be planned as early as possible with the Director of Undergraduate Studies. Students meet with the Director of Undergraduate Studies each semester in order to obtain program approval. Opportunities exist for study abroad in Greece, Cyprus and Turkey for the summer or an academic term for credit. Students work closely with the concentration advisor on the selection of the foreign schools and the transfer of credit.

Students may also wish to write a Senior Thesis which will substitute one Modern Greek Studies interdepartmental seminar. While not required for graduation, the thesis enables a student to be considered for departmental honors. It is advisable to begin

planning for the thesis during the student's junior year. Interested students should identify a potential faculty advisor.

COLLOQUIA, INTERDEPARTMENTAL SEMINARS, AND PROFESSIONAL SCHOOL OFFERINGS

Occasionally, and for a variety of reasons, faculty offer courses outside of the existing structure of Arts and Sciences academic departments. Such courses may be colloquia: team-taught interdisciplinary courses; interdepartmental seminars explicitly offered by two or more academic departments; or undergraduate-specific courses offered by faculty outside of the Arts and Sciences. All of these courses may be counted toward the undergraduate degree, but it is for the faculty of each department or program to determine whether or not they can count toward a major or concentration.

COMPARATIVE LITERATURE AND SOCIETY

Program Office: B-101 Heyman Center, East Campus;
212-854-4541; icls@columbia.edu
<http://icls.columbia.edu>

Director: Prof. Lydia Liu, 407 Kent Hall; 212-854-5631;
ll2410@columbia.edu

Associate Director: Associate Prof. Anupama Rao, Barnard Hall
2nd Floor, Lefrak 226; 212-854-8547; arao@barnard.edu

Director of Undergraduate Studies: Associate Prof. Madeleine
Dobie, 510 Philosophy; 212-854-9874; mld2027@columbia.edu

**Director of Medicine, Literature and Society Major
track:** Assistant Prof. of Medicine Rishi Goyal; B106 Heyman
Center, East Campus; 212-854-4541; rkg6@columbia.edu

Assistant Director: Sarah Monks, B-102 Heyman Center, East
Campus; 212-854-8850; sm3373@columbia.edu

Established at Columbia in 1998, the Institute for Comparative Literature and Society (ICLS) (<http://icls.columbia.edu>) promotes a global perspective in the study of literature and its social context. Committed to cross-disciplinary study of literary works, the Institute brings together the rich resources of Columbia in the various literatures of the world; in the social sciences; in art history, architecture, and media; and in the medical humanities.

The major program at ICLS allows qualified students to study literature, culture, and society with reference to material from several national traditions, or in combination of literary study with comparative study in other disciplines in the humanities and social sciences. Under the guidance of the director of undergraduate studies, students select courses offered by participating departments.

The program is designed for students whose interest and expertise in languages other than English permit them to work comparatively in several national or regional cultures. The course of study differs from that of traditional comparative literature programs, both in its cross-disciplinary nature and in its expanded geographic range, including not just European, but also Asian, Middle Eastern, African, and Latin American cultures.

The program includes course work in the social sciences, and several core courses are jointly taught by faculty from different disciplines. Students thus explore a variety of methodological and disciplinary approaches to cultural and literary artifacts in the broadest sense. The cross-disciplinary range of the program includes visual and media studies; law and the humanities; medicine and the humanities; and studies of space, cities, and architecture. As a major or concentration, this program can be said to flow naturally from Columbia's Core Curriculum, which

combines literature, art, philosophy, and social thought, and consistently attracts some of Columbia's most ambitious and cosmopolitan students.

Students can choose to complete the major in Comparative Literature and Society (CLS) or the major track in Medicine, Literature, and Society (MLS). Currently, the MLS track is not available for the concentration.

Given the wide variety of geographic and disciplinary specializations possible within the major and concentration, students construct their course sequence in close collaboration with the director of undergraduate studies. All students, however, share the experience of taking the course CPLS UN3900 Introduction to Comparative Literature and Society in their sophomore year, as well as the required senior seminar in the fall of their last year in the program. The ICLS major and concentration are designed for students interested in the cross-disciplinary and cross-cultural study of texts, traditions, media, and discourses in an increasingly transnational world.

Students planning to apply for admission to the CLS major, the MLS major track, or the CLS concentration should organize their course of study in order to complete the following prerequisites by the end of the sophomore year:

1. Preparation to undertake advanced work in one foreign language, to be demonstrated by completion of two introduction to literature courses, typically numbered 3333-3350.
2. Completion of at least four terms of study of a second foreign language or two terms in each of two foreign languages.
3. Enrollment in CPLS UN3900 Introduction to Comparative Literature and Society in the spring semester of the sophomore year.

Information about admission requirements and application to the major or concentration can be found at http://icls.columbia.edu/academics/undergraduate/the_undergraduate_program. Students are advised to meet with the director of undergraduate studies before submitting the statement of purpose for the application.

DEPARTMENTAL HONORS

To be eligible for departmental honors, students must have a minimum grade point average of 3.6 for courses in the major. Departmental honors will be conferred only on students who have submitted a superior senior thesis that clearly demonstrates originality and excellent scholarship. Note that the senior thesis is not required for the major. For information on the honors program, see http://icls.columbia.edu/academics/undergraduate/undergraduate_departmental_honors.

EXECUTIVE COMMITTEE OF ICLS

Gil Anidjar (Religion; Middle Eastern, South Asian, and African Studies)

Bruno Bosteels (Latin American and Iberian Cultures)

Jean Louise Cohen (Political Science)

Patricia A. Dailey (English and Comparative Literature)
 Souleymane Bachir Diagne (French and Romance Philology)
 Mamadou Diouf (Middle Eastern, South Asian, and African Studies)
 Madeleine Dobie (French and Romance Philology)
 Brent Hayes Edwards (English and Comparative Literature, Jazz)
 Stathis Gourgouris (Classics, English and Comparative Literature)
 Rishi Kumar Goyal (Emergency Medicine)
 Bernard Harcourt (Columbia Law School)
 Lydia H. Liu (East Asian Languages and Cultures)
 Anupama P Rao (History, Barnard)
 Jesus R. Velasco (Latin American and Iberian Cultures)
 Alessandra Russo (Latin American and Iberian Cultures)
 Felicity Scott (Graduate School of Architecture and Public Planning)
 Oliver Simons (Germanic Languages)
 Gayatri Chakravorty Spivak (University Professor of the Humanities)
 Dennis Tenen (English and Comparative Literature)
 Nadia Urbinati (Political Science)

GUIDELINES FOR ALL ICLS MAJORS AND CONCENTRATORS

An application worksheet can be found on our website (<http://icls.columbia.edu/programs/undergraduate-admissions>). Applications are due in early January of a student's sophomore year. At the time of application, students interested in the major (including the major track in Medicine, Literature, and Society) or concentration must have met these requirements:

1. Foreign language 1: four semesters of language training (or equivalent) and two semesters of introductory literature courses, typically numbered 3330-3350;
2. (CLS Majors only) Foreign language 2: four semesters of one language or two semesters of two languages;
3. CPLS UN3900 Introduction to Comparative Literature and Society, usually taken in the spring of the sophomore year;
4. A GPA of at least 3.5;
5. A focus statement, 1-2 pages in length. The focus is a period, theme, problem, movement, etc., that is explored from an interdisciplinary and/or a comparative perspective. Faculty understand that this statement is a work in progress, but that it serves as a useful guide to students' academic pursuits and course selection.

MAJOR IN COMPARATIVE LITERATURE AND SOCIETY

The major in Comparative Literature and Society requires a minimum of 42 points, or 14-15 courses. Note that language courses taken to fulfill the application requirements 1 and 2 above do not count toward the major or concentration. In the description below, "affiliated disciplines" refers to the humanities (except the language and literature departments), the social

sciences (history, anthropology, political science, etc.), law, and architecture:

1. CPLS UN3900 Introduction to Comparative Literature and Society, required for all majors and normally taken in the spring of the sophomore year;
2. Advanced courses as follows (please note that one course may be used to fulfill two of the advanced course requirements):
 - Two courses with a *CPLS* designator. *CLxx* courses, i.e., courses designated as comparative in nature by various language and literature departments, may count for the major with director of undergraduate studies' approval
 - Two seminars (discussion-driven courses at the 3000- or 4000-level), chosen from among the affiliated disciplines
 - Two courses requiring readings in a language other than English, preferably conducted in the target language and for which written assignments are composed in the language as well
 - Three courses in a single national or regional literature and/or culture, chosen from any discipline or school
 - Four courses in literature or any of the affiliated disciplines and related to the student's historical or thematic focus;
3. CPLS UN3991 Senior Seminar in Comparative Literature and Society;
4. Senior thesis (optional).

MAJOR TRACK IN MEDICINE, LITERATURE, AND SOCIETY

The major track in Medicine, Literature, and Society requires 39 points. Note that language courses taken to fulfill the application requirements 1 above do not count toward the required points for the major. Students interested in the track are strongly encouraged to fulfill their science requirement with classes in human biology (e.g., *Human Species, Genes and Development*) or human psychology (e.g., *Mind, Brain, and Behavior*).

1. CPLS UN3900 Introduction to Comparative Literature and Society, required for all ICLS majors and normally taken in the spring of the sophomore year
2. Advanced courses as follows (please note that one course may be used to fulfill two of the advanced course requirements):
 - **Three courses** within a given department/discipline that address the student's focused interest (Literature and Medicine; Medical Anthropology; History of Medicine/Public Health) but most importantly develop the methodological skills of that discipline
 - **Three courses** with a *CPLS* designator, or courses designated as comparative in nature by the various language-literature or social science departments (i.e., *CL--* courses)
 - **Two courses** requiring readings in a language other than English, preferably conducted in the target language

and for which written assignments are composed in the language as well

- **Four courses** in interdisciplinary studies that address the nexus of the student's interests (Literature and Medicine; Medical Anthropology; History of Medicine/ Public Health) OR an individual area of specialization (e.g., Disability Studies; Neuroscience and the Human; Technology Studies; Discourses of the Body; Biopolitics; Bioethics; etc.)
- **one course** of engaged service learning/independent project (this may be fulfilled by appropriate study abroad and/or study elsewhere in the US)

3. CPLS UN3992 Senior Seminar in Medicine, Literature, and Society or CPLS UN3991 Senior Seminar in Comparative Literature and Society

1. Senior thesis (optional).

CONCENTRATION IN COMPARATIVE LITERATURE AND SOCIETY

The concentration in Comparative Literature and Society requires a total of 36 points, or 12 courses in comparative literature and society as follows:

1. *CPLS UN3900 Introduction to Comparative Literature and Society*, normally taken in the spring of the sophomore year;
2. Advanced courses as follows:
 - Two courses with a *CPLS* designator. *CLxx* courses, i.e., courses designated as comparative in nature by the various language and literature departments, may count for the major with director of undergraduate studies' approval
 - Two seminars (discussion-driven courses at the 3000- or 4000-level), chosen from among the affiliated disciplines
 - One to two courses requiring readings in a language other than English, preferably conducted in the target language and for which written assignments are composed in the language as well
 - Two to three courses in a single national or regional literature and/or culture, chosen from any discipline or school
 - Two to four courses in literature or any of the affiliated disciplines and related to the student's historical or thematic focus.

COMPUTER SCIENCE

Departmental Office: 450 Computer Science Building;
212-939-7000
<http://www.cs.columbia.edu/>

Director of Undergraduate Studies: Dr. Jae Woo Lee, 715
CEPSR; 212-939-7066; jae@cs.columbia.edu

The majors in the Department of Computer Science provide students with the appropriate computer science background necessary for graduate study or a professional career. Computers impact nearly all areas of human endeavor. Therefore, the department also offers courses for students who do not plan a computer science major or concentration. The computer science majors offer maximum flexibility by providing students with a range of options for program specialization. The department offers four majors: computer science; information science; data science; and computer science-mathematics, offered jointly with the Mathematics Department.

COMPUTER SCIENCE MAJOR

Students study a common core of fundamental topics, supplemented by a track that identifies specific areas for deeper study. The foundations track prepares students for advanced work in fundamental, theoretical, and mathematical aspects of computing, including analysis of algorithms, scientific computing, and security. The systems track prepares students for immediate employment in the computer industry as well as advanced study in software engineering, operating systems, computer-aided digital design, computer architecture, programming languages, and user interfaces. The intelligent systems track provides specialization for the student interested in natural language processing and systems capable of exhibiting “human-like” intelligence. The applications track is for students interested in the implementation of interactive multimedia content for the Internet and wireless applications. The vision, graphics, interaction, and robotics track exposes students to computer vision, graphics, human-computer interaction, and robotics.

A combination track is available to students who wish to pursue an interdisciplinary course of study combining computer science and another field in the arts, humanities, mathematics, natural sciences, or social sciences. A student planning a combination track should be aware that one additional course is required to complete this option.

INFORMATION SCIENCE MAJOR

Information science is an interdisciplinary major designed to provide a student with an understanding of how information is organized, accessed, stored, distributed, and processed in strategic segments of today’s society. Recent years have seen an explosive growth of on-line information, with people of all ages and all walks of life making use of the World Wide Web and other information in digital form.

This major puts students at the forefront of the information revolution, studying how on-line access touches on all disciplines and changing the very way people communicate. Organizations have large stores of in-house information that are crucial to their daily operation. Today’s systems must enable quick access to relevant information, must ensure that confidential information is secure, and must enable new forms of communication among people and their access to information.

The information science major can choose a scientific focus on algorithms and systems for organizing, accessing, and processing information, or an interdisciplinary focus in order to develop an understanding of, and tools for, information modeling and use within an important sector of modern society such as economics or health.

ADVANCED PLACEMENT

The department grants 3 points for a score of 4 or 5 on the AP Computer Science exam along with exemption from COMS W1004 Introduction to Computer Science and Programming in Java. However, we still recommend that you take COMS W1004 or W1007 even if you have credits from the CS AP exam. COMS W1007 Honors Introduction to Computer Science is recommended if you scored 5 on the AP exam, and COMS W1004 is recommended if you scored 4.

PRE-INTRODUCTORY COURSES

COMS W1004 is the first course in the Computer Science major curriculum, and it does not require any previous computing experience. Before taking COMS W1004, however, students have an option to start with one of the pre-introductory courses: ENGI E1006 or COMS W1002.

ENGI E1006 Introduction to Computing for Engineers and Applied Scientist is a general introduction to computing for STEM students. ENGI E1006 is in fact a required course for all engineering students. COMS W1002 Computing In Context is a course primarily intended for humanities majors, but it also serves as a pre-introductory course for CS majors. ENGI E1006 and COMS W1002 do not count towards Computer Science major.

LABORATORY FACILITIES

The department has well-equipped lab areas for research in computer graphics, computer-aided digital design, computer vision, databases and digital libraries, data mining and knowledge discovery, distributed systems, mobile and wearable computing, natural language processing, networking, operating systems, programming systems, robotics, user interfaces, and real-time multimedia.

Research labs contain several large Linux and Solaris clusters; Puma 500 and IBM robotic arms; a UTAH-MIT dexterous hand; an Adept-1 robot; three mobile research robots; a real-time defocus range sensor; interactive 3-D graphics workstations with 3-D position and orientation trackers; prototype wearable computers, wall-sized stereo projection systems; see-through head-mounted displays; a networking testbed with three Cisco

7500 backbone routers, traffic generators; an IDS testbed with secured LAN, Cisco routers, EMC storage, and Linux servers; and a simulation testbed with several Sun servers and Cisco Catalyst routers. The department uses a SIP IP phone system. The protocol was developed in the department.

The department's computers are connected via a switched 1Gb/s Ethernet network, which has direct connectivity to the campus OC-3 Internet and internet 2 gateways. The campus has 802.11b/g wireless LAN coverage.

The research facility is supported by a full-time staff of professional system administrators and programmers.

PROFESSORS

- Alfred V. Aho
- Peter K. Allen
- Peter Belhumeur
- Steven M. Bellovin
- David Blei
- Michael J. Collins
- Steven K. Feiner
- Luis Gravano
- Julia Hirschberg
- Gail E. Kaiser
- John R. Kender
- Kathleen R. McKeown
- Vishal Misra
- Shree K. Nayar
- Jason Nieh
- Steven M. Nowick
- Christos Papadimitriou
- Kenneth A. Ross
- Henning G. Schulzrinne
- Rocco A. Servedio
- Salvatore J. Stolfo
- Jeannette Wing
- Mihalis Yannakakis

ASSOCIATE PROFESSORS

- Alexandr Andoni
- Luca Carloni
- Xi Chen
- Stephen A. Edwards
- Roxana Geambasu
- Eitan Grinspun
- Tony Jebara
- Angelos D. Keromytis
- Martha Allen Kim
- Tal Malkin
- Itsik Pe'er

- Daniel S. Rubenstein
- Simha Sethumadhavan
- Junfeng Yang

ASSISTANT PROFESSORS

- Allison Breton Bishop
- Augustin Chaintreau
- Lydia Chilton
- Yaniv Erlich
- Ronghui Gu
- Daniel Hsu
- Suman Jana
- Carl Vondrick
- Omri Weinstein
- Eugene Wu
- Changxi Zheng

SENIOR LECTURER IN DISCIPLINE

- Adam Cannon
- Jae Woo Lee

LECTURER IN DISCIPLINE

Daniel Bauer
Paul Blaer
Ansaf Salleb-Aouissi
Nakul Verma

ASSOCIATED FACULTY

- Shih-Fu Chang
- Matei Ciocarlie
- Edward G. Coffman Jr. (*emeritus*)
- Eleni Drinea
- Jonathan Gross (*emeritus*)
- Andreas Mueller
- Clifford Stein
- Steven H. Unger (*emeritus*)
- Vladimir Vapnik
- Henryk Wozniakowski (*emeritus*)
- Yechiam Yemini (*emeritus*)

SPECIAL RESEARCH SCIENTISTS

Henryk Wozniakowski (*emeritus*)

SENIOR RESEARCH SCIENTISTS

- Moti Yung

RESEARCH SCIENTISTS

Smaranda Muresan*
Owen Rambow

ASSOCIATED RESEARCH SCIENTISTS

- Giuseppe DiGuglielmo
- Hiroshi Sasaki
- Eran Tromer

GUIDELINES FOR ALL COMPUTER SCIENCE MAJORS AND CONCENTRATORS

Courses

Students may receive credit for only one of the following two courses:

- COMS W1004 Introduction to Computer Science and Programming in Java
- COMS W1005 Introduction to Computer Science and Programming in MATLAB.

Students may receive credit for only one of the following three courses:

- COMS W3134 Data Structures in Java
- COMS W3136 Data Structures with C/C++
- COMS W3137 Honors Data Structures and Algorithms

However, COMS W1005 and COMS W3136 cannot be counted towards the Computer Science major, minor, and concentration.

Transfer Credit

As a rule, no more than 12 transfer credits are accepted toward the major.

Grading

A maximum of one course worth no more than 4 points passed with a grade of D may be counted toward the major or concentration.

MAJOR IN COMPUTER SCIENCE

Please read *Guidelines for all Computer Science Majors and Concentrators* above.

All majors should confer with their program adviser each term to plan their programs of study. Students considering a major in computer science are encouraged to talk to a program adviser during their first or second year. A typical program of study is as follows:

Program of Study

Computer Science Core (22-24 points)

For students who declare in Spring 2014 and beyond:

ENGI E1006	Introduction to Computing for Engineers and Applied Scientists (recommended but not required)
First Year	
COMS W1004	Introduction to Computer Science and Programming in Java
or COMS W1007	Honors Introduction to Computer Science
Sophomore Year	
COMS W3134	Data Structures in Java
or COMS W3137	Honors Data Structures and Algorithms
COMS W3157	Advanced Programming
COMS W3203	Discrete Mathematics: Introduction to Combinatorics and Graph Theory
Junior and Senior Year	
Select the remaining required core courses:	
COMS W3261	Computer Science Theory
CSEE W3827	Fundamentals of Computer Systems
Select one of the following courses:	
MATH UN2010	Linear Algebra
APMA E2101	Introduction to Applied Mathematics
APMA E3101	Linear Algebra
STAT GU4001	Introduction to Probability and Statistics

For students who declared prior to Spring 2014:

First Year	
COMS W1004	Introduction to Computer Science and Programming in Java
Sophomore Year	
COMS W1007	Honors Introduction to Computer Science
COMS W3137	Honors Data Structures and Algorithms
COMS W3157	Advanced Programming
COMS W3203	Discrete Mathematics: Introduction to Combinatorics and Graph Theory
Junior and Senior Year	
COMS W3261	Computer Science Theory
CSEE W3827	Fundamentals of Computer Systems

In addition to the CS Core (22-24 points), all CS majors must complete the Calculus Requirement (3 points) and a Track Requirement (15 or 18 points). The CS major therefore requires 40-45 points total.

Mathematics (3 points)

Calculus II or Calculus III.

Note that Calculus III does NOT depend on Calculus II. You can take either Calculus II or III, but we recommend Calculus III, which covers topics that are a bit more relevant for upper-level Computer Science courses.

If you have received equivalent credits for Calculus I & II already (through AP Calculus exam for example), you are not required to take any more Calculus courses. But we recommend taking one more semester of Calculus, either Math UN1201 Calculus III or APAM E2000 Multivariate Calculus for Engineers and Scientists. APAM E2000 covers relevant topics from Calculus III and IV.

Track Requirement (15 or 18 points)

Students must select one of the following six upper-level tracks. Each track, except the combination track, requires five courses consisting of required, elective breadth, and elective track courses. The combination track requires a selection of six advanced courses: three 3000- or 4000-level computer science courses and three 3000- or 4000-level courses from another field. The elective breadth requirement in each track can be fulfilled with any 3-point computer science 3000-level or higher course that is not a computer science core course or a technical elective course in that track. In addition to the breadth elective, the track requirements are as follows:

Foundations Track (15 points)

For students interested in algorithms, computational complexity, and other areas of theoretical Computer Science.

Note: Students who declared their Computer Science major prior to Fall 2016 may also count COMS 4241, COMS 4205, COMS 4281, COMS 4444, COMS 4771, and COMS 4772 as track elective courses.

Required Courses

CSOR W4231	Analysis of Algorithms I
COMS W4236	Introduction to Computational Complexity

Track Electives

Select 2 from:

MATH UN3020	Number Theory and Cryptography
MATH UN3025	Making, Breaking Codes
COMS W4203	Graph Theory
MATH GU4032	Fourier Analysis
MATH GU4041	Introduction to Modern Algebra I
MATH GU4042	Introduction to Modern Algebra II
MATH GU4061	Introduction To Modern Analysis I
MATH GU4155	Probability Theory
COMS W4252	Introduction to Computational Learning Theory
COMS W4261	Introduction to Cryptography
APMA E4300	Computational Math: Introduction to Numerical Methods

IEOR E4407	Game Theoretic Models of Operations
CSPH G4802	Math Logic II: Incompleteness
COMS E6232	Analysis of Algorithms, II
MATH G6238	Enumerative Combinatorics
COMS E6253	Advanced Topics in Computational Learning Theory
COMS E6261	Advanced Cryptography
EEOR E6616	Convex optimization
IEOR E6613	Optimization, I
IEOR E6614	Optimization, II
IEOR E6711	Stochastic models, I
IEOR E6712	Stochastic models, II
ELEN E6717	Information theory
ELEN E6718	Error Correcting Codes: Classical and Modern

Adviser Approved:

COMS W3902	Undergraduate Thesis
COMS W3998	Undergraduate Projects in Computer Science
COMS W4901	Projects in Computer Science
COMS W4995	Special topics in computer science, I
COMS E6998	Topics in Computer Science

One Breadth Course

Any 3-point COMS 3000- or 4000-level course except those courses in the CS core or in the required or elective courses for this track

Software Systems Track (15 points)

For students interested in networking, programming languages, operating systems, and software systems.

Required Courses

COMS W4115	Programming Languages and Translators
COMS W4118	Operating Systems I
CSEE W4119	Computer Networks

Track Electives

Select 1 from:

Any COMS W41xx course	
COMS W4444	Programming and Problem Solving
Any COMS W48xx course	
Adviser Approved:	
COMS W3902	Undergraduate Thesis
COMS W3998	Undergraduate Projects in Computer Science
COMS W4901	Projects in Computer Science
COMS W4995	Special topics in computer science, I
COMS W4996	Special topics in computer science, II

Any COMS E68XX course

Any COMS E61XX course

One Breadth Course

Any 3-point COMS 3000- or 4000-level course except those courses in the CS core or in the required or elective courses for this track

Intelligent Systems Track (15 points)

For students interested in machine learning, robotics, and systems capable of exhibiting “human-like” intelligence.

Required Courses

Select two of the following courses:

COMS W4701	Artificial Intelligence
COMS W4705	Natural Language Processing
COMS W4706	Spoken Language Processing
COMS W4731	Computer Vision
COMS W4733	Computational Aspects of Robotics
COMS W4771	Machine Learning

Track Electives

Select 2 from:

COMS W4252	Introduction to Computational Learning Theory
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Any COMS W47xx course

Any COMS E67XX course

Adviser Approved:

COMS W3902	Undergraduate Thesis
COMS W3998	Undergraduate Projects in Computer Science
COMS W4901	Projects in Computer Science
COMS W4995	Special topics in computer science, I
COMS E6998	Topics in Computer Science

One Breadth Course

Any 3-point COMS 3000- or 4000-level course except those courses in the CS core or in the required or elective courses for this track

Applications Track (15 points)

For students interested in interactive multimedia applications for the internet and wireless networks.

Required Courses

COMS W4115	Programming Languages and Translators
COMS W4170	User Interface Design

Track Electives

Select 2 from:

Any COMS W41xx course

Any COMS W47xx course

Adviser Approved:

COMS W3902	Undergraduate Thesis
COMS W3998	Undergraduate Projects in Computer Science
COMS W4901	Projects in Computer Science
COMS W4995	Special topics in computer science, I

Any COMS E69XX course

One Breadth Course

Any 3-point COMS 3000- or 4000-level course except those courses in the CS core or in the required or elective courses for this track

Vision, Graphics, Interaction, and Robotics Track (15 points)

For students interested in computer vision, graphics, and advanced forms of human computer interaction.

Required Courses

Select two of the following courses:

COMS W4160	Computer Graphics
COMS W4167	Computer Animation
COMS W4731	Computer Vision

Track Electives

Select 2 from:

COMS W4162	Advanced Computer Graphics
COMS W4170	User Interface Design
COMS W4172	3D User Interfaces and Augmented Reality
COMS W4701	Artificial Intelligence
COMS W4733	Computational Aspects of Robotics
COMS W4735	Visual Interfaces to Computers
COMS W4771	Machine Learning

Adviser Approved:

COMS W3902	Undergraduate Thesis
COMS W3998	Undergraduate Projects in Computer Science
COMS W4901	Projects in Computer Science
COMS W4995	Special topics in computer science, I

Any COMS E69XX course

One Breadth Course

Any 3-point COMS 3000- or 4000-level course except those courses in the CS core or in the required or elective courses for this track

Combination Track (18 points)

For students who wish to combine computer science with another discipline in the arts, humanities, social or natural sciences. A coherent selection of six upper-level courses is required: three from computer science and three from another discipline.

The courses should be planned with and approved by the student's CS faculty advisor by the first semester of the junior year. The six courses are typically 4000-level elective courses that would count towards the individual majors. Moreover, the six courses should have a common theme. The combination track is not available to those students who pursue double majors.

MAJOR IN COMPUTER SCIENCE—MATHEMATICS

For a description of the joint major in computer science—mathematics, see the *Mathematics* section in this bulletin.

MAJOR IN INFORMATION SCIENCE

Please read *Guidelines for all Computer Science Majors and Concentrators* above.

The major in information science requires a minimum of 33 points including a core requirement of five courses.

The elective courses must be chosen with a faculty adviser to focus on the modeling and use of information within the context of a disciplinary theme. After discussing potential selections students prepare a proposal of study that must be approved by the faculty adviser. In all cases the six courses must be at the 3000-level or above with at least three courses chosen from computer science. Following are some example programs. For more examples or templates for the program proposal, see a faculty adviser.

Note: In most cases additional courses will be necessary as prerequisites in order to take some of the elective courses. This will depend on the student's proposed program of study.

Core Requirement

COMS W1001 Introduction to Information Science

or COMS W1002 Computing in Context

COMS W1004 Introduction to Computer Science and Programming in Java

COMS W1007 Honors Introduction to Computer Science

COMS W3134 Data Structures in Java

STAT GU4001 Introduction to Probability and Statistics

Following are some suggested programs of instruction:

Information Science and Contemporary Society

Students may focus on how humans use technology and how technology has changed society.

The requirements include:

COMS W4111 Introduction to Databases

COMS W4170 User Interface Design

COMS W4701 Artificial Intelligence

COMS W3410 Computers and Society

SOCI UN3010 Methods for Social Research

SOCI UN3960 Law, Science, and Society

Information Science and the Economy

Students may focus on understanding information modeling together with existing and emerging needs in economics and finance as well as algorithms and systems to address those needs.

The requirements include:

COMS W4111 Introduction to Databases

COMS W4701 Artificial Intelligence

COMS W4771 Machine Learning

ECON UN3412 Introduction To Econometrics

ECON UN3025 Financial Economics

ECON UN3265 The Economics of Money and Banking

Information Science and Health Sciences

Students may focus on understanding information modeling together with existing and emerging needs in health sciences, as well as algorithms and systems to address those needs.

The requirements include:

COMS W4111 Introduction to Databases

COMS W4170 User Interface Design

COMS W4701 Artificial Intelligence

BINF G4001 Introduction To Computer Applications In Health Care and Biomedicine

BIOL W4037 Bioinformatics of Gene Expression

ECBM E3060/E4060 Introduction to genomic information science and technology

MAJOR IN DATA SCIENCE

Please read *Guidelines for all Computer Science Majors and Concentrators* above.

In response to the ever growing importance of "big data" in scientific and policy endeavors, the last few years have seen an explosive growth in theory, methods, and applications at the interface between computer science and statistics. The statistics and computer science departments have responded with a joint-major that emphasizes the interface between the disciplines.

Prerequisites (15 points)

MATH UN1101 Calculus I

MATH UN1102 Calculus II

MATH UN1201 Calculus III

MATH UN2010 Linear Algebra

Select one of the following courses:

STAT UN1001 Introduction to Statistical Reasoning

STAT UN1101 Introduction to Statistics

STAT UN1201 Calculus-Based Introduction to Statistics

Statistics (12 points)

STAT GU4203 PROBABILITY THEORY

STAT GU4204 Statistical Inference

STAT GU4205 Linear Regression Models

STAT GU4241 Statistical Machine Learning

or COMS W4771 Machine Learning

Computer Science (12 points)

Select one of the following courses:

COMS W1004	Introduction to Computer Science and Programming in Java
COMS W1005	Introduction to Computer Science and Programming in MATLAB
COMS W1007	Honors Introduction to Computer Science
ENGI E1006	Introduction to Computing for Engineers and Applied Scientists
Select one of the following courses:	
COMS W3134	Data Structures in Java
COMS W3136	Data Structures with C/C++
COMS W3137	Honors Data Structures and Algorithms
Two required courses:	
COMS W3203	Discrete Mathematics: Introduction to Combinatorics and Graph Theory
CSOR W4231	Analysis of Algorithms I
Electives (15 points)	
Select two of the following courses:	
STAT UN3106	Applied Data Mining
STAT GU4206	Statistical Computing and Introduction to Data Science
STAT GU4224	Bayesian Statistics
STAT GU4243	Applied Data Science
STAT Q4242	Advanced Machine Learning
Select three of the following courses:	
COMS W3261	Computer Science Theory
COMS W4111	Introduction to Databases
COMS W4130	Principles and Practice of Parallel Programming
COMS W4236	Introduction to Computational Complexity
COMS W4252	Introduction to Computational Learning Theory
Any COMS W47xx course EXCEPT W4771	

CONCENTRATION IN COMPUTER SCIENCE

Please read *Guidelines for all Computer Science Majors and Concentrators* above.

For students who declare in Spring 2014 and beyond:

The concentration in computer science requires a minimum of 22-24 points, as follows:

COMS W1004	Introduction to Computer Science and Programming in Java
or COMS W1007	Honors Introduction to Computer Science
COMS W3134	Data Structures in Java
or COMS W3137	Honors Data Structures and Algorithms
COMS W3157	Advanced Programming

COMS W3203	Discrete Mathematics: Introduction to Combinatorics and Graph Theory
COMS W3261	Computer Science Theory
CSEE W3827	Fundamentals of Computer Systems (or any 3 point 4000-level computer science course)
Select one of the following courses:	
MATH UN2010	Linear Algebra
MATH V2020	Honors Linear Algebra
APMA E2101	Introduction to Applied Mathematics
APMA E3101	Linear Algebra
STAT GU4001	Introduction to Probability and Statistics
SIEO W3600	Introduction to Probability and Statistics

For students who declared prior to Spring 2014:

The concentration requires a minimum of 23 points, as follows:

COMS W1004	Introduction to Computer Science and Programming in Java
COMS W1007	Honors Introduction to Computer Science
COMS W3137	Honors Data Structures and Algorithms
COMS W3157	Advanced Programming
COMS W3261	Computer Science Theory
CSEE W3827	Fundamentals of Computer Systems (or any 3-point 4000-level computer science course)

CREATIVE WRITING

Undergraduate Creative Writing Program Office: 609 Kent;
212-854-3774

<http://arts.columbia.edu/writing/undergraduate>

Director of Undergraduate Studies: Prof. Heidi Julavits, 609 Kent; 212-854-3774; hj26@columbia.edu

Executive Committee on Undergraduate Creative Writing:

Prof. Timothy Donnelly, Poetry (Chair), 415 Dodge;
212-854-4391; td28@columbia.edu

Prof. Margo Jefferson, Nonfiction, 609 Kent; 212-854-3774;
mlj4@columbia.edu

Prof. Heidi Julavits, Fiction, 609 Kent; 212-854-3774;
hj26@columbia.edu

Prof. Dorothea "Dottie" Lasky, Poetry, 609 Kent; 212-854-3774;
dsl2121@columbia.edu

Prof. Sam Lipsyte, Fiction, 609 Kent; 212-854-3774;
sam.lipsyte@columbia.edu

Prof. Alan Ziegler, Fiction, 415 Dodge; 212-854-4391;
az8@columbia.edu

The Creative Writing Program in The School of the Arts combines intensive writing workshops with seminars that study literature from a writer's perspective. Students develop and hone their literary technique in workshops. The seminars (which explore literary technique and history) broaden their sense of possibility by exposing them to various ways that language has been used to make art. Related courses are drawn from departments such as English, comparative literature and society, philosophy, history, and anthropology, among others.

Students consult with faculty advisers to determine the related courses that best inform their creative work. The creative writing major is by application only. For details, see the Creative Writing website: <http://arts.columbia.edu/writing/undergraduate>.

PROFESSORS

- Margo L. Jefferson
- Benjamin Marcus
- Alan Ziegler

ASSOCIATE PROFESSORS

- Susan Bernofsky
- Timothy Donnelly
- Heidi Julavits
- Ben Metcalf
- Deborah Paredez
- Sam Lipsyte

ASSISTANT PROFESSORS

- Alexandra Kleeman
- Dorothea "Dottie" Lasky

- Victor LaValle

ADJUNCT PROFESSORS

- Kathleen Alcott
- Anelise Chen
- Patty Yumi Cottrell
- Diana Delgado
- Alex Dimitrov
- Anaïs Duplan
- Joseph Fasano
- Sarah Gerard
- Emily Gould
- Elizabeth Greenwood
- Elianna Kan
- Jordan Kisner
- Marie Myung-Ok Lee
- Hilary Leichter
- Marni Ludwig
- John Vincler
- Kate Zambreno

GRADUATE FACULTY FELLOWS

- Tyler Curtis
- Moeko Fujii
- Theresa Hottel
- Trenton Pollard
- Nicola Sebastian
- Sihan Tan
- Rashida Williams

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MAJOR IN CREATIVE WRITING

The major in creative writing requires a minimum of 36 points: five workshops, four seminars, and three related courses.

Workshop Curriculum (15 points)

Students in the workshops produce original works of fiction, poetry, or nonfiction, and submit them to their classmates and instructor for a close critical analysis. Workshop critiques (which include detailed written reports and thorough line-edits) assess the mechanics and merits of the writing pieces. Individual instructor conferences distill the critiques into a direct plan of action to improve the work. Student writers develop by practicing the craft under the diligent critical attention of their peers and instructor, which guides them toward new levels of creative endeavor.

Creative writing majors select 15 points within the division in the following courses. One workshop must be in a genre other than the primary focus. For instance, a fiction writer might take four fiction workshops and one poetry workshop.

Beginning Workshop

Designed for students who have little or no previous experience writing literary texts in a particular genre.

WRIT UN1100 Beginning Fiction Workshop

WRIT UN1200 Beginning Nonfiction Workshop

WRIT UN1300 Beginning Poetry Workshop

Intermediate Workshop

Permission required. Admission by writing sample. Enrollment limited to 15. Course may be repeated in fulfillment of the major.

WRIT UN2100 Intermediate Fiction Workshop

WRIT UN2200 Intermediate Nonfiction Workshop

WRIT UN2300 Intermediate Poetry Workshop

Advanced Workshop

Permission required. Admission by writing sample. Enrollment limited to 15. Course may be repeated in fulfillment of the major.

WRIT UN3100 Advanced Fiction Workshop

WRIT UN3200 Advanced Nonfiction Workshop

WRIT UN3300 Advanced Poetry Workshop

Senior Creative Writing Workshop

Seniors who are creative writing majors are given priority. Enrollment limited to 12, by instructor's permission. The senior workshop offers students the opportunity to work exclusively with classmates who are at the same high level of accomplishment in the major. This course is only offered by graduate faculty professors.

WRIT UN3101 Senior Fiction Workshop

WRIT UN3201 Senior Nonfiction Workshop

WRIT UN3301 Senior Poetry Workshop

Seminar Curriculum (12 points)

The creative writing seminars form the intellectual ballast of our program. Our seminars offer a close examination of literary techniques such as plot, point of view, tone, and voice. They seek to inform and inspire students by exposing them to a wide variety of approaches in their chosen genre. Our curriculum, via these seminars, actively responds not only to historical literary concerns, but to contemporary ones as well. Extensive readings are required, along with short critical papers and/or creative exercises. By closely analyzing diverse works of literature and participating in roundtable discussions, writers build the resources necessary to produce their own accomplished creative work.

Creative writing majors select 12 points within the division. Any 4 seminars will fulfill the requirement, no matter the student's chosen genre concentration. Below is a sampling of our seminars.

The list of seminars currently being offered can be found in the "Courses" section.

These seminars offer close examination of literary techniques such as plot, point of view, tone, suspense, and narrative voice. Extensive readings are required, along with creative exercises.

FICTION

WRIT UN3121 Fiction Seminar: How To Build A Person

WRIT UN3117 Fiction Seminar: The Here & Now

WRIT UN3122 First Novels: How They Work

WRIT UN3120 Fiction Seminar: The Craft Of Writing Dialogue

NONFICTION

WRIT UN3213 Nonfiction Seminar: The Literary Reporter

WRIT UN3215 Nonfiction Seminar: Learning to See: Writing The Visual

WRIT UN3216 Nonfiction Seminar: Truths & Facts

WRIT UN3217 Science and Sensibility

POETRY

WRIT UN2311 Poetry Seminar: Traditions in Poetry

WRIT UN3313 Poetry Seminar: The Crisis of the I

WRIT UN3314 Poetry Seminar: 21st Century American Poetry and Its Concerns

WRIT GU4310 Poetry Seminar - Witness, Record, Document: Poetry & Testimony

CROSS GENRE

WRIT GU4011 Cross Genre Seminar: Imagining Berlin

WRIT GU4012 Cross Genre Seminar: Diva Voice, Diva Style, Diva Lyrics

WRIT UN3016 Cross Genre Seminar: Walking

WRIT UN3013 Cross-Genre Seminar: Process Writing & Writing Process

Related Courses (9 points)

Drawn from various departments, these courses provide concentrated intellectual and creative stimulation, as well as exposure to ideas that enrich students' artistic instincts. Courses may be different for each student writer. Students should consult with faculty advisers to determine the related courses that best inform their creative work.

DANCE

310 Barnard Hall

212-854-2995

dance@barnard.edu

Department Assistant: Diane Roe

THE DEPARTMENT OF DANCE

Mission

The Barnard College Department of Dance, located in a world dance capital, offers an interdisciplinary program that integrates the study of dance within a liberal arts setting of intellectual and creative exploration. The major builds upon studio courses, the Department's productions at Miller Theater, New York Live Arts, and other venues, as well as a rich array of dance studies courses, allowing students' creative work to develop in dialogue with critical inquiry into the history, culture, theory and forms of western and non-western performance, typically enhanced by study in other disciplines. Students work with accomplished artists whose work enriches contemporary American dance; they also study with outstanding research scholars.

Making, thinking about, and writing about art are an essential part of the liberal arts education. For this reason, the Department of Dance offers technique courses for students of all levels of expertise, while opening its other courses to majors and non-majors alike, who may also audition for its productions. The Department partners with cultural institutions in New York City to connect students with the professional world.

The Department of Dance is fully accredited and in good standing with the National Association of Schools of Dance.

Student Learning Outcomes for the Major and Concentration

Students graduating with a major in Dance should be able to attain the following outcomes:

- Apply critical thinking, reading, and writing skills to dance-related texts and choreography.
- Develop the knowledge and research skills to explore the dance past in writing, orally, and in performance.
- Present interpretations of dance-related texts orally, in writing, and in performance.
- Apply library, archival, and internet research skills to dance scholarship and choreography.
- Demonstrate improved efficiency and expressivity in dance technique.
- Demonstrate growing technical understanding and fluency in dance technique.
- Create original dances, dance/theater works or dance-based, mixed media works.

- Collaborate with an artist in the creation of original dance works.
- Participate in the creative process through the creation and interpretation of choreography.
- Apply interdisciplinary research methods to dance scholarship and choreography.
- Apply historical research methods to dance scholarship and choreography.
- Demonstrate conceptual and methodological approaches for studying world dance forms through research and writing.
- Demonstrate the ability to understand cultural and historical texts in relation to dance forms.
- Apply anatomical knowledge to movement and movement concepts.
- Evaluate the theoretical and artistic work of peers.
- Communicate with an audience in oral presentations and dance performance.
- Understand and interpret the language and form of an artist's choreography.
- Solve technical problems in dance movement.
- Apply musical knowledge to movement and choreography.
- Design choreographic movement and structures.

Dance Technique Courses

Level I courses, except for global and somatic courses, have no prerequisite and students receive a Pass/Fail grade. All other courses must be taken for a letter grade and require a placement audition (held at the first meeting of classes) or the permission of the instructor. These courses may be taken to fulfill the physical education requirement.

Ballet

Technique of classical ballet emphasizing proper alignment and graduated study of its vocabulary. Artistry of articulation, phrasing, dynamics, and nuance in the broad range of classical materials are addressed at each level.

Modern

The study of contemporary dance based on the work of the 20th and 21st century innovators. Aesthetic principles of modern dance will be taught with increased technical demands required at each successive level.

Global and Somatic Forms

The study of dance forms including classical Spanish, Jazz, Tap, West African, Afro-Cuban, and Indian.

Assistant Professor of Professional Practice: Gabri Christa
Term Associate Professor of Professional Practice: Marjorie Folkman

Chair, Senior Associate: Katie Glasner

Associate Professor: Paul Scolieri

Associate Professor of Professional Practice: Colleen Thomas-Young

Assistant Professor: Seth Williams

Adjunct Faculty: Cynthia Anderson, Jennifer Archibald, Rebecca Bliss, Siobhan Burke, Maguette Camara, Antonio Carmena, Mary Carpenter, Uttara Coolawala, Molissa Fenley, Caroline Fermin, Allegra Kent, Katiti King, Melinda Marquez, Vincent Mc Closkey, Jodi Melnick, Margaret Morrison, Brian Reeder, Leigh Schanfein, Kathryn Sullivan, Caitlin Trainor, Ashley Tuttle, Andrea Weber

Artists in Residence: Katie Dorn, Shannon Gillen, Sharon Milanese, Okwui Okpokwasili, Claudia Schreier

Technical Director and Lighting Designer: Tricia Toliver

Music Director: Robert Boston

Administrative Assistant: Diane Roe

MAJOR IN DANCE (FOR STUDENTS ENTERING IN FALL 2011 OR LATER)

Majors must complete eleven academic courses (six required, five elective) and a minimum of eight 1-point technique courses. All majors write a senior thesis as part of their coursework.

The required courses for the major in dance are distributed as follows:

Dance History

The following two courses in Dance History must be completed before the fall of the senior year:

DNCE BC2565	World Dance History	3
DNCE BC3001	Western Theatrical Dance from the Renaissance to the 1960s	3

Movement Science

Select one or more of the following:

DNCE BC2501	Biomechanics for the Dancer: Theory and Practice	3
DNCE BC2561	Kinesiology: Applied Anatomy for Human Movement	3
DNCE BC2562	Movement Analysis	3

Composition

One course in Composition must be completed before the fall of the senior year.

DNCE BC2564	Dance Composition: Content	3
DNCE BC3565	Composition: Collaboration and the Creative Process	3
DNCE BC3566	Composition: Site Specific and Experimental Methods	3
DNCE BC2563	Composition: Form, Dance/Theater	3

Senior Work

Seniors planning to write a combined thesis must request approval from both departments and notify the Registrar. All majors must complete two semesters of senior work. The following course, which culminates in a 25-30-page written thesis and an oral presentation to the Department at the end of the semester, is required of all seniors:

DNCE BC3591	Senior Seminar in Dance	4
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In addition, all majors must take one of the following two courses, depending on whether the senior requirement is completed with a creative project or a two-semester written thesis:

DNCE BC3592	Senior Project: Research for Dance	4
DNCE BC3593	Senior Project: Repertory for Dance	3

Students who are double majors may request permission to write a two-semester combined thesis.

Electives

Five additional 3- or 4-point courses, chosen in consultation with the major advisor, are required. Electives may be chosen from among the departmental offerings listed above or below, including additional coursework in Composition, Movement Science, and/or Senior Work beyond the major requirement.

History/Criticism:

DNCE BC2570	Dance in New York City
DNCE BC2575	Choreography for the American Musical
DNCE BC2580	Tap as an American Art Form
DNCE BC3000	From Page to Stage: Interactions of Literature and Choreography
DNCE BC3200	Dance in Film
DNCE BC3567	Dance of India
DNCE BC3570	Latin American and Caribbean Dance: Identities in Motion
DNCE BC3575	George Balanchine and the Reinvention of Modern Ballet
DNCE BC3576	Dance Criticism
DNCE BC3577	Performing the Political: Embodying Change in American Performance
DNCE BC3578	Traditions of African-American Dance
DNCE BC3580	History of Social Dancing: Dance Craze from the Waltz to Flash Mobs
DNCE BC3583	Gender and Historical Memory in American Dance of the 1930's to the Early 1960's
DNCE BC3980	Performing the Political: Embodying Change in American Performance
DNCE BC3981	Inventing American Modern Dance: Ruth St. Denis and Ted Shawn
DNCE BC3982	Diaghilev's Ballets Russes and Its World

Studio/Performance:

DNCE BC2555	Ensemble Dance Repertory (Modern Dance)
DNCE BC2556	Ensemble Dance Repertory: Ballet
DNCE BC2557	Evolution of Spanish Dance Style
DNCE BC2558	Tap Ensemble
DNCE BC2567	Music for Dance
DNCE BC3571	Solo Repertory: Performance Styles

DNCE BC3601 - DNCE BC3604	Rehearsal and Performance in Dance and Rehearsal and Performance in Dance
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Overview of Major Requirements (11 total, plus 8 technique courses)

- 1 Movement Science
- 1 Composition
- 2 History
- 1 Senior Seminar
- 1 Senior Project (Research in Dance or Repertory for Dance)
- 5 Electives
- 8 Technique Courses

MAJOR IN DANCE (FOR STUDENTS DECLARING A MAJOR BEFORE FALL 2011)

Majors must fulfill an eleven-course requirement, including the DNCE BC3591 Senior Seminar in Dance and either Senior Project: Research in Dance (DNCE BC3592 Senior Project: Research for Dance) or DNCE BC3593 Senior Project: Repertory for Dance, in addition to taking a minimum of eight 1-point technique courses.

To fulfill the distribution requirements, one course must be taken in each of the following four areas:

Movement Science

DNCE BC2501	Biomechanics for the Dancer: Theory and Practice	3
DNCE BC2561	Kinesiology: Applied Anatomy for Human Movement	3
DNCE BC2562	Movement Analysis	3

Composition

DNCE BC3566	Composition: Site Specific and Experimental Methods	3
DNCE BC2563	Composition: Form, Dance/Theater	3
DNCE BC2564	Dance Composition: Content	3
DNCE BC3565	Composition: Collaboration and the Creative Process	3

History

DNCE BC2565	World Dance History	3
DNCE BC3001	Western Theatrical Dance from the Renaissance to the 1960s	3

Writing

DNCE BC2570	Dance in New York City	3
DNCE BC3570	Latin American and Caribbean Dance: Identities in Motion	3
DNCE BC3574	Inventing the Contemporary: Dance Since the 1960s	3
DNCE BC3576	Dance Criticism	3

DNCE BC3577	Performing the Political: Embodying Change in American Performance	3
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Electives

In consultation with the major advisor, an additional five courses should be chosen from the courses listed above or below:

History/Criticism:

DNCE BC2575	Choreography for the American Musical
DNCE BC2580	Tap as an American Art Form
DNCE BC3000	From Page to Stage: Interactions of Literature and Choreography
DNCE BC3567	Dance of India
DNCE BC3575	George Balanchine and the Reinvention of Modern Ballet
DNCE BC3577	Performing the Political: Embodying Change in American Performance
DNCE BC3578	Traditions of African-American Dance
DNCE BC3980	Performing the Political: Embodying Change in American Performance
DNCE BC3982	Diaghilev's Ballets Russes and Its World

Studio/Performance:

DNCE BC2555	Ensemble Dance Repertory (Modern Dance)
DNCE BC2556	Ensemble Dance Repertory: Ballet
DNCE BC2558	Tap Ensemble
DNCE BC2567	Music for Dance
DNCE BC3571	Solo Repertory: Performance Styles
DNCE BC3572	Dance Production
DNCE BC3601 - DNCE BC3604	Rehearsal and Performance in Dance and Rehearsal and Performance in Dance

Senior Work

All dance majors must complete two semesters of senior work. DNCE BC3591 Senior Seminar in Dance given in the fall semesters, requires a 25-30 page written thesis and an oral presentation to the Department at the end of the semester. The second semester is usually a performance project for which the student registers in DNCE BC3593 Senior Project: Repertory for Dance. Students may also choose to do a two-semester thesis, registering in DNCE BC3592 Senior Project: Research for Dance. Students who are double majors may request permission to do a two-semester combined thesis.

Overview of Major Requirements (11 total, plus 8 technique classes)

- 1 Movement Science
- 1 Composition

- 1 History
- 1 Writing
- 1 Senior Seminar
- 1 Senior Project (Research in Dance or Repertory for Dance)
- 5 Electives
- 8 Technique Classes

CONCENTRATION IN DANCE

The concentration in dance is identical to the major except that only two electives are required.

For the major requirements, please see above.

Overview of Concentration Requirements (8 total, plus 8 technique classes)

- 1 Movement Science
- 1 Composition
- 2 History
- 1 Senior Seminar
- 1 Senior Project (Research in Dance or Repertory for Dance)
- 2 Electives
- 8 Technique Classes

DRAMA AND THEATRE ARTS

507 Milbank Hall

212-854-2080

212-280-8764 (fax)

Department Administrator: Mike Cavalier

Faculty Department Assistant: Coretta Grant

The Barnard and Columbia undergraduate theatre program engages the disciplines of drama, theatre, and performance studies as a distinctive mode of intellectual and artistic inquiry. Majors take foundational coursework in the literary, cultural, and embodied traditions of western and nonwestern performance as well as in the practices of acting, directing, design, and playwriting. All majors then specialize in a specific area and undertake advanced thesis work, leading either to a formal essay of original research, or to an artistic project (in acting, design, directing, dramaturgy, playwriting, or solo performance) that combines the practices of research and artistic creation.

While Barnard and Columbia students fulfill the overall graduation requirements of their respective institutions, major requirements for the Barnard Major in Theatre/Columbia Major in Drama and Theatre Arts are identical, and the majority of required coursework is offered through the Barnard College Department of Theatre. Barnard and Columbia students receive their degrees from their respective colleges of Columbia University.

The Department's season of productions in the Minor Latham Playhouse and the Glicker-Milstein Black Box Theatre is a crucible of investigation: the place where professional directors and designers collaborate with undergraduates, using a wide range of classic and contemporary plays and performance practices to shape insights unique to theatrical inquiry today. Whether it's Shakespeare or Soyinka or Caryl Churchill, or the directing, solo performance, and playwriting theses in the Senior Thesis Festival, Department of Theatre productions are both a learning process and a scene of encounter, where perceptions are shaped for the attention and creative response of a larger public.

Students interested in majoring in Theatre should consider taking three or four of the required classes in their first two years of study: Theatre History I, Theatre History II and/or a course fulfilling the "world theatre" requirement, and at least one class in acting, design, directing, or playwriting (preferably in the area you might choose as areas of specialization). Students thinking about a research focus might consider an additional dramatic literature class early in their studies; students thinking about an acting or design focus, for example, might consider additional classes in those areas in the second or third year of study.

Students declare the major in the spring semester of the sophomore year. The major requirements are spelled out below, and the process for choosing a thesis area as well: all Theatre/

Drama and Theatre Arts majors complete a thesis as a capstone to their work in the degree. For more information about the major, please contact any full-time faculty member (see Faculty pages).

Barnard students must make an appointment or come by the office of the Department Chair to have the major-declaration form signed, and will have a major adviser from the Department faculty; Columbia students are encouraged to meet with members of the faculty to discuss the degree. All majors should introduce themselves to the Theatre Administrator in 507 Milbank Hall; he will add names to the departmental listserv, and help students to keep up to date in important information about studying in the Department.

STUDENT LEARNING OBJECTIVES

Upon completion of the major, successful students will be able to attain the following objectives:

- Assess critically the artistic ambitions of contemporary theatrical performance, and of literary, critical and theoretical issues involved in the interpretation of dramatic literature and theatrical performance;
- Create with proficiency in at least one area of creative work in the field: critical/research writing, acting, directing, design, playwriting, and dramaturgy.

Areas of Concentration

Drama and Theatre Studies Student Learning Objectives

Students successfully completing drama and theatre studies coursework, or concentrating in drama and theatre studies, should be able to attain the following objectives:

1. Write clearly about dramatic literature, and about performance, including where applicable film performance;
2. Synthesize and evaluate contemporary criticism and research scholarship in writing;
3. Know specific authors, movements, periods, styles, and ideological structures in the history of drama, theatre, and performance (i.e., Shakespeare, American drama, Performative Cultures of the Third Reich, Black Theatre);
4. Use critical, theoretical, and historical concepts in the analysis of drama and performance.

Acting Student Learning Objectives

Students successfully completing a concentration in acting should be able to attain the following objectives:

1. Analyze dramatic texts and apply the analysis to developing a performable role/character;
2. Synthesize external elements with external elements (social mores, environment, historical context, status relationship to others) and internal elements (center of gravity, personal rhythm, speed, tempo) toward the expression of a character's physicality and emotionality;

3. Recognize and apply the fundamental concepts of character development: objectives, obstacles, actions, given circumstances;
4. Develop vocal, physical and emotional awareness and imagination, and to explore techniques available to aid the actor in applying these elements in a conscious way during rehearsal and performance.

Design Student Learning Objectives

Students successfully completing a concentration in design should be able to attain the following objectives:

1. Analyze dramatic texts and translate that analysis into documents used in the production process (breakdowns, plots, etc.);
2. Collect images and texts that provide insight into the developing design idea, and accurately communicate historical and stylistic choices;
3. Demonstrate fluency with the craft of a design field – e.g. sketching, model making, drafting, sound and lighting plots, and associated software;
4. Perform collaboratively, adapting and informing their designs with ideas generated through conversation with colleagues, classmates, and advisors.

Directing Student Learning Objectives

Students successfully completing a concentration in directing should be able to attain the following objectives:

1. Recognize the different demands of different configurations of stage space;
2. Apply compositional tools;
3. Define production style and its influence on performance choices;
4. Communicate effectively with actors;
5. Analyze the historical, social, and aesthetic elements of a dramatic text as the basis for a directorial conception.

Dramaturgy Student Learning Objectives

Students successfully completing a concentration in dramaturgy should be able to attain the following objectives:

1. Apply important critical and theoretical concepts to the analysis of dramatic writing and theatrical performance;
2. Synthesize and evaluate contemporary research scholarship and apply it to a specific production, including biographical, historical, and interpretive information;
3. Write clearly and effectively about the goals of a production, its critical contexts and purposes;
4. Communicate the critical stakes of a performance to a director and cast; to be able to work with a director in fashioning those stakes;
5. Edit dramatic scripts for production.

Playwriting Student Learning Objectives

Students successfully completing a concentration in playwriting should be able to attain the following objectives:

1. Create an individual theatrical voice in writing;
2. Construct dramatic and theatrical events onstage;
3. Communicate supportive critique to fellow writers;
4. Interpret plot and story, and to employ language and spectacle creatively;
5. Recognize dramatic structures, and be able to shape and hold an audience's attention.

Chair: W.B. Worthen (Alice Brady Pels Professor in the Arts, Co-Director of Undergraduate Studies, Drama and Theatre Arts)

Assistant Professors: Shayoni Mitra, Hana Worthen

Assistant Professors of Professional Practice: Sandra Goldmark, Alice Reagan

Adjunct Lecturers: Betsy Adams, Mana Allen, Linda Bartholomai, Andy Bragen, Grant Chapman, Kyle deCamp, Crystal Finn, Sharon Fogarty, Mikhael Tara Garver, Tuomas Hiltunen, Anne Kenney, Jimmy King, Stacey McMath, Suman Mukherjee, Piia Mustamäki, Fitz Patton, Rita Pietropinto, Wendy Waterman

Affiliated Faculty:

Associate Professor: Maja Horn (Spanish and Latin American Cultures)

Senior Lecturers: Pam Cobrin (English, Director, Writing Program), Patricia Denison (English, Co-Director of Undergraduate Studies, Drama and Theatre Arts)

Other officers of the University offering courses listed below:

Professors: Austin E. Quigley, Julie Stone Peters

Professor of Professional Practice: Steven Chaikelson

Assistant Professor: Katherine Biers

Department Administrator: Mike Cavalier

Technical Director: Greg Winkler

Production Manager: Michael Banta

Costume Shop Manager: Kara Feely

Faculty Department Assistant: Coretta Grant

REQUIREMENTS FOR THE MAJOR

Download the Theatre major self-audit form (https://theatre.barnard.edu/sites/default/files/inline/selfaudit2012_revised_12-12-12.doc)

Students intending to major in Theatre should consult with the Department Chair in their sophomore year or earlier to plan a program: this consultation is required for Barnard students and strongly recommended for Columbia students. Twelve courses and one senior thesis (in Performance or in Research) are required as follows:

Dramatic Literature and Theatre History

World theatre and performance histories:

THTR UN3150	Western Theatre Traditions: Classic to Romantic
Select one of the following:	
THTR UN3000	Theatre Traditions in a Global Context
THTR V3155	Traditional Indian Theatre
THTR V3156	Modern Asian Performance
Select one course in drama, theatre, and performance theories: 4	
THTR V3165	Theories of Performance Studies
THTR V3166	Drama, Theatre, and Theory
ENTA UN3701	Drama, Theatre, Theory
Select one course in Shakespeare	
Select two courses in dramatic literature, theatre studies, or performance studies, taken in the Theatre Department or in another department with advisor's approval. One course must be a seminar	
Theatre Practice	
Select one of the following courses in theatre design:	
THTR UN3132	
THTR V3132	Sound Design
THTR V3133	Costume Design
THTR V3134	Lighting Design
THTR UN3135	
THTR V3510	Problems in Design
THTR V3203	Collaboration: Directing and Design (may be counted if not counted toward directing)
Select one of the following courses in acting:	
THTR V2007	Scene Lab
THTR UN3004	Acting Lab
THTR UN3006	Advanced Acting Lab
Select one of the following courses in directing:	
THTR UN3200	Directing I
THTR V3203	Collaboration: Directing and Design (may be counted if not counted toward Design)
Concentration	
All majors must take an additional two courses in the field of the senior thesis: acting, directing, design, dramaturgy, playwriting, or research. See below.	
Senior Thesis	
All students must take either THTR V3997 or THTR V3998:	
THTR UN3997	Senior Thesis: Performance (acting, design, directing, dramaturgy, or playwriting) *
THTR UN3998	Senior Thesis: Research **

* Prior to completing the Senior Thesis: Performance, majors must take an additional two courses in the field of the thesis (acting, design, dramaturgy, directing, playwriting). Courses in acting, design, and directing are offered through the Department of Theatre. Courses in playwriting are offered through the Department of Theatre; courses offered through the Barnard Department of English may be taken as well with advisor approval. For theses in Directing, students must take Dramaturgy prior to the thesis year. For theses in Dramaturgy, students take two courses in drama, theatre, or performance research; these courses may be drawn from courses in dramatic literature, theatre studies, and global performance traditions offered in the Theatre department, or from dramatic literature courses offered in other departments with adviser's approval. Dramaturgy concentrators may substitute one course in playwriting for one of these two courses. Students taking a Solo Performance thesis are required to have taken the Solo Performance course prior to the thesis semester (spring), among the three required courses in acting.

** Prior to completing the Senior Thesis: Research, majors must take an additional two courses in drama, theatre, or performance research; these courses may be drawn from courses in dramatic literature, theatre studies, and global performance traditions offered in the Theatre department, or from dramatic literature courses offered in other departments with adviser's approval. These courses should be discussed with the student's major advisor, as well as with the sponsor of the thesis.

Production Crew

Theatre majors planning on completing a Senior Thesis in Performance (acting, design, directing, dramaturgy, playwriting, solo performance) are required to complete a run crew assignment and a crew head assignment prior to their final semester; to be in the strongest position for the thesis, ideally these assignments are completed during the junior year. Please see the section on Production Crew (<http://theatre.barnard.edu/department-and-production-information/#productioncrew>) for more information.

Studio Courses

Please note that for Barnard students there is a limit on studio courses. Theatre majors may take 24 studio points in Theatre and an additional six in another discipline for a total of 30 studio points. Theatre Department studio courses are:

THTR V2003	Voice and Speech	2
THTR V2004	Movement for Actors	2
THTR UN2005	Acting Workshop	3
THTR V2007	Scene Lab	3
THTR UN2120		3
THTR UN3004	Acting Lab	3
THTR V3005		3
THTR UN3006	Advanced Acting Lab	3
THTR UN3122		1-3
THTR UN3172		1-3

Graduate Courses

Only under special circumstances, and with the permission of the instructor, can undergraduates take graduate classes.

EARTH AND ENVIRONMENTAL SCIENCES

Departmental Offices:

556-7 Schermerhorn; 212-854-4525
106 Geoscience, Lamont-Doherty Earth Observatory;
845-365-8550
<http://eesc.columbia.edu>

Chair of Department

Prof. Sidney Hemming, sidney@ldeo.columbia.edu

Directors of Undergraduate Studies

Prof. Meredith Nettles, Lamont-Doherty Earth Observatory; 845-365-8613; 557 Schermerhorn Extension; nettlm@ldeo.columbia.edu (sidney@ldeo.columbia.edu)
Prof. Hugh Ducklow, Lamont-Doherty Earth Observatory; 845-365-8167; 557 Schermerhorn Extension; hducklow@ldeo.columbia.edu

Senior Administrative Manager: Carol Mountain, 557 Schermerhorn Extension; 212-854-9705; 107 Geoscience, Lamont-Doherty Earth Observatory; 845-365-8551; carolm@ldeo.columbia.edu

Business Manager: Sally Odland, 108 Geoscience, Lamont-Doherty Earth Observatory; 845-365-8633; odland@ldeo.columbia.edu

The undergraduate major in Earth and environmental sciences provides an understanding of the natural functioning of our planet and considers the consequences of human interactions with it. Our program for majors aims to convey an understanding of how the complex Earth system works at a level that encourages students to think creatively about the Earth system processes and how to address multidisciplinary environmental problems. The breadth of material covered provides an excellent background for those planning to enter the professions of law, business, diplomacy, public policy, teaching, journalism, etc. At the same time, the program provides sufficient depth so that our graduates are prepared for graduate school in one of the Earth sciences. The program can be adjusted to accommodate students with particular career goals in mind.

The department's close affiliations with the Lamont-Doherty Earth Observatory, the American Museum of Natural History (AMNH), NASA's Goddard Institute for Space Studies (GISS), the Earth Institute at Columbia (EI), and several departments within the Fu Foundation School of Engineering and Applied Sciences afford opportunities for student participation in a wide variety of current research programs. Summer employment, research, and additional educational opportunities are available at

Lamont and GISS. The department encourages majors to become involved in a research project by their junior year.

All majors and concentrators, when planning their programs of study, should regularly consult the directors of undergraduate studies and make themselves aware of the requirements for their particular program.

PROGRAMS OF STUDY

Environmental Science Major

The environmental science major curriculum provides an introduction to a variety of fields of study relevant to the environment. Environmental science majors are required to take three semesters of introductory courses and to develop a grounding in basic physics, chemistry, biology, and mathematics. Here, students may select courses depending on their interest. With this introduction to the Earth's environment and equipped with a knowledge of the basic sciences, students are prepared to choose a set of upper-level courses in consultation with an undergraduate adviser. All environmental science majors are required to complete a research project, providing a practical application of mastered course work. This research culminates in a senior thesis. The research and the thesis are usually done at Lamont-Doherty Earth Observatory with guidance from a faculty member or a research scientist. However, other options are also possible.

Environmental science majors have an option to complete the special concentration in environmental biology for environmental science majors.

Earth Science Major

The major in Earth science follows a similar rationale but is designed to allow students to pursue particular fields of the Earth sciences in greater depth. Compared with the environmental science major, one fewer introductory course is required, while one additional advanced course should be part of the plan of study. The Earth science major also offers the possibility of in-depth field experience through a six- to eight-week geology summer field course, arrangements for which are made through another university. The research and senior thesis capstone requirements are the same as for the environmental science major. The geology summer field course may be used as an alternative means of fulfilling the capstone requirement in the Earth science major.

Concentrations

The program for concentrators serves students who want more exposure to Earth and environmental science than is provided by introductory-level courses. The program aims to provide concentrators with experience in data analysis and a thorough introduction to the Earth's systems.

The concentrations in environmental science and in Earth science are designed to give students an understanding of how the Earth works and an introduction to the methods used to investigate

Earth processes, including their capabilities and limitations. Concentrators often join the social professions (e.g., business, law, medicine, etc.) and take with them a strong scientific background. They take the same introductory courses as the majors, but fewer basic science and upper-level courses are required.

In addition to the environmental science and Earth science concentrations, the department sponsors a special concentration which must be done in conjunction with the environmental biology major. Students should be aware that they must complete the environmental biology major in order to receive credit for the special concentration. There is also a special concentration in environmental biology for environmental science majors sponsored by the Department of Ecology, Evolution, and Environmental Biology.

DEPARTMENTAL HONORS

The Department of Earth and Environmental Science awards departmental honors to the major or majors in Earth science or environmental science judged to have the best overall academic record. The award is accorded to no more than 10% of the graduating class, or one student in the case of a class smaller than 10. A grade point average of at least 3.6 in the major and a senior thesis or equivalent research of high quality are required. Students who wish to be considered should contact the director of undergraduate studies early in their senior year.

PROFESSORS

- Wallace S. Broecker
- Nicholas Christie-Blick
- Joel E. Cohen
- Peter B. de Menocal
- Hugh Ducklow
- Sonya Dyhrman
- Peter Eisenberger
- Göran Ekström
- Arlene M. Fiore
- Steven L. Goldstein
- Arnold L. Gordon
- Kevin L. Griffin
- Sidney R. Hemming (Chair)
- Peter B. Kelemen (Associate Chair)
- Galen McKinley
- Jerry F. McManus
- William H. Menke
- John C. Mutter
- Paul E. Olsen
- Stephanie L. Pfirman (Barnard)
- Terry A. Plank
- Lorenzo M. Polvani
- G. Michael Purdy
- Peter Schlosser

- Christopher H. Scholz
- Adam H. Sobel
- Sean C. Solomon
- Marc Spiegelman
- Martin Stute (Barnard)
- Maria Tolstoy
- Renata Wentzcovich

ASSOCIATE PROFESSORS

- Bärbel Hönlisch
- Kerry Key
- Meredith Nettles

ASSISTANT PROFESSORS

- Ryan Abernathey
- Jacqueline Austermann
- Jonathan Kingslake

ADJUNCT PROFESSORS

- Robert F. Anderson
- W. Roger Buck IV
- Denton Ebel
- John J. Flynn
- James Gaherty
- Lisa M. Goddard
- Arthur Lerner-Lam
- Alberto Malinverno
- Douglas G. Martinson
- Ronald L. Miller
- Mark A. Norell
- Dorothy M. Peteet
- Maureen Raymo
- Andrew Robertson
- Joerg M. Schaefer
- Christopher Small
- Taro Takahashi
- Minfang Ting
- Felix Waldhauser
- Spahr C. Webb
- Gisela Winckler

ADJUNCT ASSOCIATE PROFESSORS

- Natalie Boelman
- Alessandra Giannini
- Andrew Juhl

LECTURERS

- Pietro Ceccato
- Andreas Turnherr

- Kevin Uno

ASSOCIATES

- Erin Coughlin
- Brian Kahn
- Andrew Kruczkiewicz

EMERITUS

- Mark Cane
- James Hays
- Paul Richards
- Lynn Sykes
- David Walker

GUIDELINES FOR ALL EARTH AND ENVIRONMENTAL SCIENCES MAJORS, CONCENTRATORS, AND SPECIAL CONCENTRATORS

Advising

All majors and concentrators, when planning their programs of study, should regularly consult the directors of undergraduate studies, who can be contacted through the department office on the fifth floor of Schermerhorn. The requirements are different for each major and concentration and must be met in conjunction with the general requirements for the bachelor's degree. Declaration of the major must be approved by the department and filed in the departmental office.

Substitutions and Exceptions

1. Higher-level courses may be used to satisfy supporting mathematics and science requirements for students with Advanced Placement preparation with the permission of the major adviser.
2. In addition to the courses listed for the depth, and breadth and related courses requirements, several graduate-level courses offered in the department as well as several advanced courses offered at Barnard may be substituted with the permission of the major adviser.
3. 1000-level courses in the Earth and Environmental Sciences Department can not be used toward meeting the requirements of any of the majors, concentrations, or special concentrations.
4. The following courses are not suitable for undergraduates and can not be used toward meeting any of the requirements for the majors, concentrations, or special concentrations:

EESC W4001	
EESC GU4400	Dynamics of Climate Variability and Climate Change
EESC GU4401	Quantitative Models of Climate-Sensitive Natural and Human Systems
EESC GU4930	Earth's Oceans and Atmosphere

EESC GU4404

Regional Climate and Climate Impacts

Grading

A grade of C- or better must be obtained for a course to count toward the majors, concentrations, or special concentrations. The grade of P is not acceptable, but a course taken Pass/D/Fail may be counted if and only if the P is uncovered by the Registrar's deadline.

MAJOR IN EARTH SCIENCE

Please read *Guidelines for all Earth and Environmental Sciences Majors, Concentrators, and Special Concentrators* above.

The major in Earth science requires a minimum of 45.5 points, distributed as follows:

Foundation Courses

EESC UN2100	Earth's Environmental Systems: The Climate System
EESC UN2200	Earth's Environmental Systems: The Solid Earth System

Students who wish to take both EESC UN2100 Earth's Environmental Systems: The Climate System and EESC UN2300 Earth's Environmental Systems: The Life System can include one of these under breadth and related fields below.

Supporting Mathematics and Science Courses

One semester of Calculus at the level of Calculus I or higher (3 credits)

MATH UN1101	Calculus I
Select one of the following three-course sequences:	
CHEM UN1403 - CHEM UN1404 - PHYS UN1201	General Chemistry I (Lecture) and General Chemistry II (Lecture) and General Physics I
CHEM UN1403 - PHYS UN1201 - PHYS UN1202	General Chemistry I (Lecture) and General Physics I and General Physics II

Capstone Experience

Select one of the following:

EESC BC3800 - EESC UN3901	Senior Research Seminar and Environmental Science Senior Seminar
EESC BC3801 - EESC UN3901	Senior Research Seminar and Environmental Science Senior Seminar
A six to eight week summer geology field course	

Breadth and Related Fields Requirement

A minimum of 6 points (two courses) chosen with the major adviser are required.

Breadth and related field courses are science courses relevant for an Earth science major that do not require an Earth science background. Several such courses are offered at the *2000*-, *3000*- and *4000*-level in the department and at Barnard. Examples include:

EESC UN2100	Earth's Environmental Systems: The Climate System
EESC UN2300	Earth's Environmental Systems: The Life System
EESC UN3010	Field Geology
EESC BC3017	Environmental Data Analysis
EESC GU4050	Global Assessment and Monitoring Using Remote Sensing
EESC GU4600	Earth Resources and Sustainable Development
EESC GU4917	Earth/Human Interactions
EAEE E2002	Alternative energy resources

Also included among breadth and related fields courses are science, mathematics, statistics, and engineering courses offered by other departments that count toward fulfilling degree requirements in those departments.

Depth Requirement

A minimum of 12 points (four courses) chosen with the major adviser to provide depth in the field of Earth science.

These courses build on the foundation and supporting courses listed above and provide a coherent focus in some area of Earth science. Students should include at least one of the following in their course of study:

EESC UN3101	Geochemistry for a Habitable Planet
or EESC UN3201	Solid Earth Dynamics

Areas of focus include one of the courses listed above and three or more additional courses. Students are not required to specialize in a focus area, but examples are given below for those who choose to do so.

Geological Science

EESC GU4090	Introduction to Geochronology and Thermochronology
EESC GU4113	Introduction to Mineralogy
EESC GU4223	Sedimentary Geology
EESC GU4230	Crustal Deformation
EESC GU4701	Introduction to Igneous Petrology
EESC GU4887	Isotope Geology I
EESC GU4947	Plate Tectonics

It is strongly recommended that students focusing in geological science take the summer geology field course as their capstone experience.

Geochemistry

EESC UN3015	The Earth's Carbon Cycle
EESC BC3016	Environmental Measurements

EESC BC3200	Ecotoxicology
EESC GU4090	Introduction to Geochronology and Thermochronology
EESC GU4113	Introduction to Mineralogy
EESC GU4701	Introduction to Igneous Petrology
EESC GU4885	The Chemistry of Continental Waters
EESC GU4887	Isotope Geology I
EESC GU4926	Principles of Chemical Oceanography

It is recommended that students focusing in geochemistry take CHEM UN1403-CHEM UN1404 General Chemistry I and II, and PHYS UN1201 General Physics I as their supporting science sequence.

Atmosphere and Ocean Science

EESC GU4008	Introduction to Atmospheric Science
EESC GU4920	Paleoceanography
EESC GU4924	Introduction to Atmospheric Chemistry
EESC GU4925	Principles of Physical Oceanography
EESC GU4926	Principles of Chemical Oceanography

It is recommended that students focusing on atmosphere and ocean science also take a course in fluid dynamics and a course in differential equations.

Solid Earth Geophysics

EESC GU4230	Crustal Deformation
EESC GU4300	The Earth's Deep Interior
EESC GU4937	Cenozoic Paleogeography
EESC GU4947	Plate Tectonics
EESC GU4949	Introduction to Seismology

It is recommended that students focusing in solid Earth geophysics take PHYS UN1201-PHYS UN1202 General Physics I and II, and CHEM UN1403 General Chemistry I as their supporting science sequence and also take MATH UN1201 Calculus II.

Climate

EESC UN3015	The Earth's Carbon Cycle
EESC BC3025	Hydrology
EESC GU4008	Introduction to Atmospheric Science
EESC GU4330	Introduction to Terrestrial Paleoclimate
EESC GU4835	Wetlands and Climate Change
EESC GU4920	Paleoceanography
EESC GU4924	Introduction to Atmospheric Chemistry
EESC GU4925	Principles of Physical Oceanography
EESC GU4937	Cenozoic Paleogeography

Paleontology

EESC GU4223	Sedimentary Geology
EESC GU4550	Plant Ecophysiology

EESC GU4920	Paleoceanography
EESC GU4924	Introduction to Atmospheric Chemistry
EESC GU4937	Cenozoic Paleoceanography

It is recommended that students focusing in paleontology take EESC UN2300 Earth's Environmental Systems: The Life System, as one of their foundation courses.

MAJOR IN ENVIRONMENTAL SCIENCE

Please read *Guidelines for all Earth and Environmental Sciences Majors, Concentrators, and Special Concentrators* above.

The major in environmental science requires a minimum of 47 points, distributed as follows:

Foundation Courses

EESC UN2100	Earth's Environmental Systems: The Climate System
EESC UN2200	Earth's Environmental Systems: The Solid Earth System
EESC UN2300	Earth's Environmental Systems: The Life System

Supporting Mathematics and Science Courses

One semester of Calculus at the level of Calculus I or higher (3 credits)

MATH UN1101	Calculus I
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Select one of the following three-course sequences:

CHEM UN1403 - CHEM UN1404 - PHYS UN1201	General Chemistry I (Lecture) and General Chemistry II (Lecture) and General Physics I
CHEM UN1403 - PHYS UN1201 - PHYS UN1202	General Chemistry I (Lecture) and General Physics I and General Physics II
CHEM UN1403 - EEEB UN2001 - PHYS UN1201	General Chemistry I (Lecture) and Environmental Biology I: Elements to Organisms and General Physics I

Capstone Experience

EESC BC3800 or EESC BC3801	Senior Research Seminar
EESC UN3901	Environmental Science Senior Seminar

Breadth and Related Fields Requirement

A minimum of 6 points (two courses) chosen with the major adviser are required.

Breadth and related field courses are science courses relevant for an environmental science major that do not require an environmental science background. Several such courses are

offered at the 2000-, 3000- and 4000-level in the department and at Barnard. Examples include:

EESC BC3017	Environmental Data Analysis
EESC GU4050	Global Assessment and Monitoring Using Remote Sensing
EESC GU4600	Earth Resources and Sustainable Development
EESC GU4917	Earth/Human Interactions
EESC UN3010	Field Geology

Also included among breadth and related fields courses are science, mathematics, statistics, and engineering courses offered by other departments that count toward fulfilling degree requirements in those departments.

Depth Requirement

A minimum of 9 points (three courses) chosen with the major adviser to provide depth in the field of environmental science.

These courses build on the foundation and supporting courses listed above and provide a coherent focus in some area of environmental science. Students should include at least one of the following in their course of study:

EESC UN3101	Geochemistry for a Habitable Planet
or EESC UN3201	Solid Earth Dynamics

Areas of focus include one of the courses listed above and two or more additional courses. Students are not required to specialize in a focus area, but examples are given below for those who choose to do so.

Environmental Geology

EESC GU4076	Geologic Mapping
EESC GU4480	Paleobiology and Earth System History
EAEE E3221	Environmental geophysics

It is recommended that students focusing in environmental geology also take EESC W4050 Remote Sensing.

Environmental Geochemistry

EESC UN3015	The Earth's Carbon Cycle
EESC GU4885	The Chemistry of Continental Waters
EESC GU4887	Isotope Geology I
EESC GU4924	Introduction to Atmospheric Chemistry
EESC GU4888	Isotope Geology II
EESC GU4926	Principles of Chemical Oceanography

Hydrology

EESC GU4076	Geologic Mapping
EESC GU4835	Wetlands and Climate Change
EESC GU4885	The Chemistry of Continental Waters
EESC BC3025	Hydrology

EAEE E3221	Environmental geophysics
Climate Change	
EESC UN3015	The Earth's Carbon Cycle
EESC GU4008	Introduction to Atmospheric Science
EESC GU4330	Introduction to Terrestrial Paleoclimate
EESC GU4480	Paleobiology and Earth System History
EESC GU4835	Wetlands and Climate Change
EESC GU4920	Paleoceanography
It is recommended that students focusing in environmental geology also take EESC GU4050 Remote Sensing.	
Energy and Resources	
EESC GU4076	Geologic Mapping
EESC GU4701	Introduction to Igneous Petrology
EAEE E2002	Alternative energy resources

CONCENTRATION IN EARTH SCIENCE

Please read *Guidelines for all Earth and Environmental Sciences Majors, Concentrators, and Special Concentrators* above.

The concentration in Earth science requires a minimum of 25 points, distributed as follows:

Foundation Courses

EESC UN2100	Earth's Environmental Systems: The Climate System
or EESC UN2300	Earth's Environmental Systems: The Life System
EESC UN2200	Earth's Environmental Systems: The Solid Earth System

Supporting Mathematics and Science Courses

Two science or mathematics courses (6-7 points) selected from among those listed for the Earth science major above.

Depth and Breadth and Related Fields Requirements

A minimum of 10 points (typically three courses) is required as follows:

EESC UN3101	Geochemistry for a Habitable Planet
or EESC UN3201	Solid Earth Dynamics

One additional course chosen from those listed under Depth Requirement for the earth science major above.

The third course selected from those listed under either Depth Requirement or Breadth and Related Fields Requirement for the earth science major above.

CONCENTRATION IN ENVIRONMENTAL SCIENCE

Please read *Guidelines for all Earth and Environmental Sciences Majors, Concentrators, and Special Concentrators* above.

The concentration in environmental science requires a minimum of 25.5 points, distributed as follows:

Foundation Courses

EESC UN2100	Earth's Environmental Systems: The Climate System
EESC UN2200	Earth's Environmental Systems: The Solid Earth System
EESC UN2300	Earth's Environmental Systems: The Life System

Supporting Mathematics and Science Courses

Two science or mathematics courses (6-7 points) selected from among those listed for the environmental science major above.

Depth and Breadth and Related Fields Requirements

A minimum of 6 points (two courses) is required as follows:

EESC UN3101	Geochemistry for a Habitable Planet
or EESC UN3201	Solid Earth Dynamics

One additional course selected from those listed under either Depth Requirement or Breadth and Related Fields Requirement for the environmental science major above.

SPECIAL CONCENTRATION IN ENVIRONMENTAL SCIENCE FOR MAJORS IN ENVIRONMENTAL BIOLOGY

Please read *Guidelines for all Earth and Environmental Sciences Majors, Concentrators, and Special Concentrators* above.

The Department of Earth and Environmental Sciences sponsors a special concentration which must be done in conjunction with the environmental biology major. Students should be aware that they must complete the environmental biology major in order to receive credit for the special concentration.

The special concentration in environmental science requires a minimum of 31.5 points, distributed as follows:

Introductory Environmental Science (13.5 points)

EESC UN2100	Earth's Environmental Systems: The Climate System
EESC UN2200	Earth's Environmental Systems: The Solid Earth System

EESC UN2300	Earth's Environmental Systems: The Life System
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Introductory Science (6 points)

Two courses in chemistry, physics, mathematics, or environmental biology from the supporting mathematics and science list for the environmental science major above.

Advanced Environmental Science (12 points)

Four courses at the 3000-level or above chosen from those recommended for the environmental science major above.

Advanced courses used to fulfill requirements in the environmental biology major cannot count toward requirements for the special concentration.

SPECIAL CONCENTRATION IN ENVIRONMENTAL BIOLOGY FOR MAJORS IN ENVIRONMENTAL SCIENCE

Please read *Guidelines for all Earth and Environmental Sciences Majors, Concentrators, and Special Concentrators* above.

The Department of Ecology, Evolution, and Environmental Biology sponsors a special concentration which must be done in conjunction with the environmental science major. Students should be aware that they must complete the environmental science major in order to receive credit for the special concentration.

The special concentration in environmental biology requires a minimum of 39 points, distributed as follows:

Introductory Environmental Biology and Environmental Science (17 points)

EEEB UN2001	Environmental Biology I: Elements to Organisms
EESC UN2100	Earth's Environmental Systems: The Climate System
EESC UN2200	Earth's Environmental Systems: The Solid Earth System
EEEB UN2002	Environmental Biology II: Organisms to the Biosphere

Introductory Science (13 points)

Select one of the following chemistry sequences:

CHEM UN1403 - CHEM UN1404	General Chemistry I (Lecture) and General Chemistry II (Lecture)
CHEM UN1604 - CHEM UN2507	Intensive General Chemistry (Lecture) and Intensive General Chemistry Laboratory

One term of statistics such as the following:

STAT UN1101	Introduction to Statistics
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STAT UN1201	Calculus-Based Introduction to Statistics
BIOL BC2286	Statistics and Research Design
EEEB UN3005	Introduction to Statistics for Ecology and Evolutionary Biology
EEEB UN3087	Conservation Biology

Advanced Environmental Biology (9 points)

Three additional advanced EEBB courses (3000-level and above), each chosen from a different curricular area (evolution/genetics, ecology/behavior/conservation, anatomy/physiology/diversity, biology laboratory courses).

Advanced courses used to fulfill requirements in the environmental science major cannot count toward requirements for the special concentration.

Sustainable Development

Students interested in sustainable development should refer to the *Sustainable Development* section in this Bulletin.

EAST ASIAN LANGUAGES AND CULTURES

Departmental Office: 407 Kent; 212-854-5027
ealac.columbia.edu/

Director of Undergraduate Studies: Prof. Paul Anderer, 414 Kent; 212-854-1525; pja1@columbia.edu

The program in East Asian studies offers a wide range of courses in a variety of disciplines, as well as training in the Chinese, Japanese, Korean, and Tibetan languages. The program is designed to provide a coherent curriculum for undergraduates wishing to major in East Asian studies, with disciplinary specialization in anthropology, art history, economics, history, literature, philosophy, political science, sociology, or religion. The department also offers a series of introductory and thematic courses especially designed for students seeking to acquire some knowledge of East Asia as part of their broader undergraduate experience.

ADMISSION TO LANGUAGE COURSES

All students wishing to enter the language program at another point besides the first term of the first level must pass a language placement test before registering. The language placement exams are held during the change of program period, the week before classes begin.

Students who have been absent from the campus for one term or more must take a placement test before enrolling in a language course beyond the first term of the first level.

Students who wish to place out of the Columbia College Foreign Language Requirement for a language taught in the department of East Asian Languages and Cultures must consult with the director of the relevant language program. The names of the directors, and additional information about East Asian language programs, can be accessed via the department website at ealac.columbia.edu.

LANGUAGE LABORATORY

An additional hour of study in the language laboratory is required in first-year Japanese (JPNS UN101 and JPNS UN1102).

JPNS UN1101	First-Year Japanese I
- JPNS UN1102	and First-Year Japanese II

Students taking these courses must attend all assigned language laboratory sessions. Grades for written and oral work in the language laboratory and for additional work in oral drill sessions count as 10% of the final grade in the course. Assignments of laboratory hours are made during the first session of the regular classes.

COURSE NUMBERING

The following are general guidelines to the numbering of department courses open to undergraduates. Students with questions about the nature of a course should consult with the instructor or the director of undergraduate studies.

- *1000-level:* Introductory-level undergraduate courses and first-year language courses
- *2000-level:* Intermediate-level undergraduate courses and second-year language courses
- *3000-level:* Advanced-level undergraduate courses and third-year language courses
- *4000-level:* Advanced courses geared toward undergraduate students available to graduate students or geared toward both undergraduate and graduate students, fourth-year and above language courses

STUDY ABROAD

East Asian Studies majors or concentrators who plan to spend their junior spring abroad must contact the director of undergraduate studies for information about course selection in the sophomore year.

The Kyoto Center for Japanese Studies

The Kyoto Center offers Columbia students the opportunity to study in Japan in a program combining intensive instruction in the Japanese language with courses taught in English on a wide range of topics in Japanese studies. Students should have at least the equivalent of two years of Japanese by the time of their departure. The program is most appropriate for the junior year, although other arrangements are considered.

East Asian Studies majors or concentrators who opt to spend their junior spring at the Kyoto Center must take the required disciplinary and senior thesis-related courses in the spring of their sophomore year (contact the director of undergraduate studies for details). For further information about the Kyoto Center, please consult Robin Leephaibul: rl2705@columbia.edu.

GRADING

Courses in which the grade of D or P has been received do not count toward the major or concentration requirements.

DEPARTMENTAL HONORS

Departmental honors are conferred only on East Asian Studies majors who have earned a grade point average of at least 3.6 for courses in the major, have pursued a rigorous and ambitious program of study, and have submitted senior theses of superior quality, clearly demonstrating originality and excellent scholarship. Qualified seniors are nominated by their thesis advisers. Normally no more than 10% of graduating majors receive departmental honors in a given academic year. Concentrators are not eligible for departmental honors.

SPECIAL SERVICE PROFESSORS

- William Theodore de Bary (John Mitchell Mason Professor and Provost Emeritus of the University)
- Donald Keene (Shincho Professor Emeritus)

PROFESSORS

- Paul Anderer
- Charles Armstrong (History)
- Bernard Faure
- Carol Gluck (History)
- Robert E. Harrist Jr. (Art History)
- Robert Hymes
- Dorothy Ko (Barnard History)
- Feng Li
- Lydia Liu
- Rachel McDermott (Barnard)
- Matthew McKelway (Art History)
- Wei Shang
- Haruo Shirane (Chair)
- Tomi Suzuki
- Madeleine Zelin

ASSOCIATE PROFESSORS

- Lisbeth Kim Brandt
- Michael Como (Religion)
- Theodore Hughes
- Adam McKeown (History)
- Eugenia Lean
- David Lurie
- David (Max) Moerman (Barnard)
- Lien-Hang Nguyen (History)
- Gregory Pflugfelder
- Jonathan Reynolds (Art History, Barnard)
- Gray Tuttle

ASSISTANT PROFESSORS

- Nicholas Barlett (Barnard)
- Jue Guo (Barnard)
- Luran Hartley
- Harrison Huang
- Jungwon Kim
- Paul Kreitman
- Ying Qian
- Zhaohua Yang (Religion)

ADJUNCT FACULTY

- Robert Barnett
- Itsuki Hayashi
- Laurel Kendall

- Tuo Li
- Morris Rossabi
- Conrad Schirokauer

SENIOR LECTURERS

- Shigeru Eguchi
- Ling Yan
- Lening Liu
- Yuan-Yuan Meng
- Fumiko Nazikian
- Miharuru Nittono
- Carol Schulz
- Zhirong Wang

LECTURERS

- Pema Bhum
Yu-Shan Chen
- Eunice Chung
- Lingjun Hu
- Tianqi Jiang
- James Lap
- Beom Lee
- Kyoko Loetscher
- Keiko Okamoto
- Jisuk Park
- Shaoyan Qi
- Zhongqi Shi
- Sunhee Song
- Naofumi Tatsumi
- Sonam Tsering
- Asami Tsuda
- Hailong Wang
- Xiaodan Wang
- Chen Wu
- Jia Xu
- Hyunkyu Yi

ON LEAVE

Harrison Huang
Eugenia Lean
Gregory Pflugfelder

MAJOR IN EAST ASIAN STUDIES

The requirements for this program were modified in the Spring 2017 semester. Students who declared an EAS major before this semester have the option of following the old or the new requirements. If you have any questions, please contact the Director of Undergraduate Studies.

Prerequisite

Students must meet the following prerequisite prior to declaring the East Asian Studies major: two years of Chinese, Japanese, Korean, or Tibetan, or the proficiency equivalent (to be demonstrated by placement examination).

Language Requirement

Third-year Chinese, Japanese, Korean, or Tibetan (completion of the UN3005-UN3006 level in Chinese, Japanese, or Korean; TIBT UN3611-UN3612 level in Tibetan), or the proficiency equivalent (to be demonstrated by placement examination).

Students of Chinese may also complete UN3003-UN3004 to meet the third-year requirement.

One of the following sequences (in the target language):

CHNS UN3003	Third-Year Chinese I (N)
- CHNS UN3004	and Third-Year Chinese II (N)

Or, for heritage students:

CHNS UN3005	Third-Year Chinese I (W)
- CHNS UN3006	and Third-Year Chinese II (W)

JPNS UN3005	Third-Year Japanese I
- JPNS UN3006	and Third-Year Japanese II

KORN UN3005	Third-Year Korean I
- KORN UN3006	and Third-Year Korean II

TIBT UN3611	Third Year Modern Colloquial Tibetan I
- TIBT UN3612	and Third Year Modern Colloquial Tibetan II

Students who test out of three years or more of a language must take an additional year of that language or another East Asian language at Columbia in order to satisfy the language requirement.

Introductory Courses

Students are required to take:

AHUM UN1400	Colloquium on Major Texts: East Asia
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Students must also select two of the following:

ASCE UN1359	Introduction to East Asian Civilizations: China
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ASCE UN1361	Introduction to East Asian Civilizations: Japan
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ASCE UN1363	Introduction to East Asian Civilizations: Korea
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ASCE UN1365	Introduction to East Asian Civilizations: Tibet
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ASCE UN1367	Introduction to East Asian Civilizations: Vietnam
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First-year students and sophomores, prior to declaring an East Asian studies major, are strongly urged to take one or more of the introductory courses.

Methodology Course

All majors must also take EAAS UN3990 Approaches to East Asian Studies which is offered every spring.

Elective Courses

For students must take four elective courses in East Asian studies, to be chosen in consultation with the DUS. Two of these courses must be EALAC or AMEC courses. Courses in a second East Asian language (one year minimum) or a classical East Asian language (one semester minimum) may be used to fulfill one elective course.

Senior Thesis Program

East Asian Studies majors who wish to write a senior thesis apply to the EALAC Senior Thesis Program at the end of their junior year. Students must have a minimum grade point average of 3.6 in courses taken in the major at the time of the application. Students interested in applying to the Senior Thesis Program should submit the EALAC Senior Thesis Program Application (see Undergraduate Planning Sheets and Forms (<http://ealac.columbia.edu/undergraduate/planning-sheets-forms>)) to the DUS by Monday, May 1, 2017. Decisions will be made by the week of May 15th.

All potential thesis writers are required to enroll in the Senior Thesis Research Workshop (EAAS UN3999) in the fall of the senior year. Students who perform satisfactorily in this workshop, successfully complete a thesis proposal, and find a faculty adviser will then write the Senior Thesis itself in the spring semester under the direction of the adviser and a graduate student tutor (EAAS UN3901).

The senior thesis typically consists of about 30-35 pages of text (double-spaced, normal typeface and margins) and 5-8 pages of references. Under no circumstances should a thesis exceed a total of 50 pages (including references), without the special permission of the faculty adviser.

Successful completion of the thesis by the April 1 deadline in the spring semester will be necessary but not sufficient for a student to receive departmental honors. Normally no more than 10% of graduating majors receive departmental honors in a given academic year; as such, not all thesis writers will receive honors.

CONCENTRATION IN EAST ASIAN STUDIES

Prerequisite

Students must meet the following prerequisite prior to declaring the East Asian Studies concentration: two years of Chinese, Japanese, Korean, or Tibetan, or the proficiency equivalent (to be demonstrated by placement examination).

Language Requirement

Third-year Chinese, Japanese, Korean, or Tibetan (completion of the UN3005-UN3006 level in Chinese, Japanese, or Korean; TIBT UN3611-UN3612 level in Tibetan), or the proficiency equivalent (to be demonstrated by placement examination).

Students of Chinese may also complete UN3003-UN3004 to meet the third-year requirement.

One of the following sequences (in the target language):

CHNS UN3003	Third-Year Chinese I (N)
- CHNS UN3004	and Third-Year Chinese II (N)

Or, for heritage students:

CHNS UN3005	Third-Year Chinese I (W)
- CHNS UN3006	and Third-Year Chinese II (W)

JPNS UN3005	Third-Year Japanese I
- JPNS UN3006	and Third-Year Japanese II

KORN UN3005	Third-Year Korean I
- KORN UN3006	and Third-Year Korean II

TIBT UN3611	Third Year Modern Colloquial
- TIBT UN3612	Tibetan I
	and Third Year Modern Colloquial
	Tibetan II

Students who test out of a third-year level East Asian language must take either an additional year of the same language, one year of a classical East Asian language, one year of an additional East Asian language, or two electives.

Introductory Courses

AHUM UN1400	Colloquium on Major Texts: East Asia
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Select one of the following:

ASCE UN1359	Introduction to East Asian Civilizations: China
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ASCE UN1361	Introduction to East Asian Civilizations: Japan
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ASCE UN1363	Introduction to East Asian Civilizations: Korea
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ASCE UN1365	Introduction to East Asian Civilizations: Tibet
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ASCE UN1367	Introduction to East Asian Civilizations: Vietnam
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Electives

Two courses in East Asian Studies at Columbia or Barnard at the 3000- or 4000-level, subject to approval by the DUS. Concentrators may count Classical Chinese, Classical Japanese, or Classical Tibetan as one of the electives for this requirement.

Concentrators are not eligible for the Senior Thesis Program or for departmental honors.

ECOLOGY, EVOLUTION, AND ENVIRONMENTAL BIOLOGY

Departmental Office: Schermerhorn Extension, 10th floor;
212-854-9987
<http://e3b.columbia.edu/>

Director of Undergraduate Studies: Dr. Matthew Palmer, 1010
Schermerhorn; 212-854-4767; mp2434@columbia.edu

Evolutionary Biology of the Human Species Adviser: Dr.
Jill Shapiro, 1011 Schermerhorn Extension; 212-854-5819;
jss19@columbia.edu

Director, Administration and Finance: Lourdes A.
Gautier, 1014B Schermerhorn Extension; 212-854-8665;
lg2019@columbia.edu

The Department of Ecology, Evolution & Environmental Biology (E3B) at Columbia University was established in 2001. Although we are a relatively new department, we have grown rapidly in the past decade. We now have an internationally diverse student body and a broad network of supporters at Columbia and throughout New York City. Our affiliated faculty members come from departments at Columbia as well as from the American Museum of Natural History (<http://www.amnh.org>), the New York Botanical Garden (<http://www.nybg.org>), the Wildlife Conservation Society (<http://www.wcs.org>), and the EcoHealth Alliance (<http://www.ecohealthalliance.org>). Together, we provide an unparalleled breadth and depth of research opportunities for our students.

In creating E3B, Columbia University recognized that the fields of ecology, evolutionary biology, and environmental biology constitute a distinct subdivision of the biological sciences with its own set of intellectual foci, theoretical foundations, scales of analysis, and methodologies.

E3B's mission is to educate a new generation of scientists and practitioners in the theory and methods of ecology, evolution, and environmental biology. Our educational programs emphasize a multi-disciplinary perspective to understand life on Earth from the level of organisms to global processes that sustain humanity and all life.

To achieve this multi-disciplinary perspective, the department maintains close ties to over 70 faculty members beyond its central core. Thus, many faculty members who teach, advise, and train students in research are based in other departments on the Columbia campus or at the partner institutions. Through this collaboration, the department is able to tap into a broad array of scientific and intellectual resources in the greater New York City area. The academic staff covers the areas of plant and animal systematics; evolutionary and population genetics; ecosystem science; demography and population

biology; behavioral and community ecology; and related fields of epidemiology, ethnobiology, public health, and environmental policy. Harnessing the expertise of this diverse faculty and the institutions of which they are a part, E3B covers a vast area of inquiry into the evolutionary, genetic, and ecological relationships among all living things.

FACILITIES AND COLLABORATIVE INSTITUTIONS

The Department of Ecology, Evolution, and Environmental Biology (E3B)

In addition to the off-campus facilities detailed below, the Columbia community offers academic excellence in a range of natural and social science disciplines that are directly related to biodiversity conservation including: evolution, systematics, genetics, behavioral ecology, public health, business, economics, political science, anthropology, and public and international policy. These disciplines are embodied in world-class departments, schools, and facilities at Columbia. The divisions that bring their resources to bear on issues most relevant to E3B's mission are: the Lamont-Doherty Earth Observatory, the School of International and Public Affairs, the Goddard Institute for Space Studies, the International Research Institute for Climate Predication, the Black Rock Forest Reserve in New York State, the Rosenthal Center for Alternative/Complementary Medicine, the Division of Environmental Health Sciences at the School of Public Health, and the Center for International Earth Science Information Network (CIESIN). Several of these units of the University are networked through the Earth Institute at Columbia, a division of the University that acts as an intramural network of environmental programs and supplies logistical support for constituent programs, through planning, research, seminars, and conferences. All of the above schools, centers, and institutes contribute to finding solutions for the world's environmental challenges.

The Earth Institute Center for Environmental Sustainability (EICES)

The Earth Institute Center for Environmental Sustainability (EICES), formerly known as the Center for Environmental Research and Conservation (CERC), is actively involved in protecting biodiversity and ecosystems. The Earth Institute Center for Environmental Sustainability is dedicated to the development of a rich, robust, and vibrant world within which we can secure a sustainable future. Through a diverse array of strategic partners in science, education, and outreach, the center builds unique programs that promote human well-being through the preservation, restoration, and management of biodiversity, and the services our ecosystems provide.

The Center for Environmental Research and Conservation (CERC), a leading provider of cutting-edge environmental research, education, and training, since its inception in 1994, has grown into two institutions—an Earth institute center and a Secretariat for a major environmental consortium. The center's

new name is the Earth Institute Center for Environmental Sustainability (EICES, pronounced “i-sees”). EICES also continues, however, as the Secretariat for the Consortium for Environmental Research and Conservation, continuing 15 years of collaborations between the Earth Institute, the American Museum of Natural History, the New York Botanical Garden, The Wildlife Conservation Society, and EcoHealth Alliance on biodiversity conservation.

American Museum of Natural History

The American Museum of Natural History is one of the world’s preeminent scientific, educational, and cultural institutions. Since its founding in 1869, the Museum has advanced its global mission to discover, interpret, and disseminate information about human cultures, the natural world, and the universe through a wide-reaching program of scientific research, education, and exhibitions. The institution comprises 45 permanent exhibition halls, state-of-the-art research laboratories, one of the largest natural history libraries in the Western Hemisphere, and a permanent collection of 32 million specimens and cultural artifacts. With a scientific staff of more than 200, the Museum supports research divisions in anthropology, paleontology, invertebrate and vertebrate zoology, and the physical sciences. The Museum’s scientific staff pursues a broad agenda of advanced scientific research, investigating the origins and evolution of life on Earth, the world’s myriad species, the rich variety of human culture, and the complex processes that have formed and continue to shape planet Earth and the universe beyond.

The Museum’s Center for Biodiversity and Conservation (CBC) was created in June 1993 to advance the use of scientific data to mitigate threats to biodiversity. CBC programs integrate research, education, and outreach so that people, a key force in the rapid loss of biodiversity, will become participants in its conservation. The CBC works with partners throughout the world to build professional and institutional capacities for biodiversity conservation and heightens public understanding and stewardship of biodiversity. CBC projects are under way in the Bahamas, Bolivia, Madagascar, Mexico, Vietnam, and the Metropolitan New York region.

The Museum’s scientific facilities include: two molecular systematics laboratories equipped with modern high-throughput technology; the interdepartmental laboratories, which include a state-of-the-art imaging facility that provides analytical microscopy, energy dispersive spectrometry, science visualization, and image analysis to support the Museum’s scientific activities; a powerful parallel-computing facility, including a cluster of the world’s fastest computers, positioned to make significant contributions to bioinformatics; and a frozen tissue facility with the capacity to store one million DNA samples.

New York Botanical Garden

The New York Botanical Garden (NYBG), with its 7 million specimen herbarium, the largest in the Western Hemisphere, and its LuEsther T. Mertz Library, the largest botanical and horticultural reference collection on a single site in the Americas,

comprises one of the very best locations in the world to study plant science. NYBG’s systematic botanists discover, decipher, and describe the world’s plant and fungal diversity; and its economic botanists study the varied links between plants and people. The Enid A. Haupt Conservatory, the largest Victorian glasshouse in the United States, features some 6,000 species in a newly installed “Plants of the World” exhibit. The new International Plant Science Center stores the Garden collection under state-of-the-art environmental conditions and has nine study rooms for visiting scholars. All specimens are available for on-site study or loan.

In recent years, NYBG has endeavored to grow and expand its research efforts, supporting international field projects in some two dozen different countries, ranging from Brazil to Indonesia. In 1994, AMNH and NYBG established the Lewis and Dorothy Cullman Program for Molecular Systematics Studies to promote the use of molecular techniques in phylogenetic studies of plant groups. This program offers many opportunities for research in conservation genetics. NYBG operates both the Institute for Economic Botany (IEB) and the Institute of Systematic Botany (ISB). The ISB builds on the Garden’s long tradition of intensive and distinguished research in systematic botany—the study of the kinds and diversity of plants and their relationships—to develop the knowledge and means for responding effectively to the biodiversity crisis.

The Garden has also established a molecular and anatomical laboratory program, which includes light and electron microscopes, and has made enormous advances in digitizing its collection. There is currently a searchable on-line library catalog and specimen database collection with some half million unique records. Field sites around the world provide numerous opportunities for work in important ecosystems of unique biodiversity.

Wildlife Conservation Society

The Wildlife Conservation Society (WCS), founded in 1895 as the New York Zoological Society, works to save wildlife and wild lands throughout the world. In addition to supporting the nation’s largest system of zoological facilities—the Bronx Zoo; the New York Aquarium; the Wildlife Centers in Central Park, Prospect Park, and Flushing Meadow Park; and the Wildlife Survival Center on St. Catherine’s Island, Georgia—WCS maintains a commitment to field-based conservation science. With 60 staff scientists and more than 100 research fellows, WCS has the largest professional field staff of any U.S.-based international conservation organization. Currently, WCS conducts nearly 300 field projects throughout the Americas, Asia, and Africa. The field program is supported by a staff of conservation scientists based in New York who also conduct their own research.

WCS’s field-based programs complement the organization’s expertise in veterinary medicine, captive breeding, animal care, genetics, and landscape ecology, most of which are based at the Bronx Zoo headquarters. WCS’s Conservation Genetics program

places an emphasis on a rigorous, logical foundation for the scientific paradigms used in conservation biology and is linked to a joint Conservation Genetics program with the American Museum of Natural History. The Wildlife Health Sciences division is responsible for the health care of more than 17,000 wild animals in the five New York parks and wildlife centers. The departments of Clinical Care, Pathology, Nutrition, and Field Veterinary Programs provide the highest quality of care to wildlife.

EcoHealth Alliance

EcoHealth Alliance is an international organization of scientists dedicated to the conservation of biodiversity. For more than 40 years, EcoHealth Alliance has focused its efforts on conservation. Today, they are known for innovative research on the intricate relationships between wildlife, ecosystems, and human health.

EcoHealth Alliance's work spans the U.S. and more than 20 countries in Central and South America, the Caribbean, Africa, and Asia to research ways for people and wildlife to share bioscapes for their mutual survival. Their strength is built on innovations in research, education, and training and accessibility to international conservation partners.

Internationally, EHA programs support conservationists in over a dozen countries at the local level to save endangered species and their habitats, and to protect delicate ecosystems for the benefit of wildlife and humans.

ACADEMIC PROGRAMS

The Department of Ecology, Evolution, and Environmental Biology runs two undergraduate majors/concentrations. The primary major is in environmental biology and the second is evolutionary biology of the human species. The foci and requirements vary substantially and are intended for students with different academic interests.

The environmental biology major emphasizes those areas of biology and other disciplines essential for students who intend to pursue careers in the conservation of Earth's living resources. It is designed to prepare students for graduate study in ecology and evolutionary biology, conservation biology, environmental policy and related areas, or for direct entry into conservation-related or science teaching careers.

Interdisciplinary knowledge is paramount to solving environmental biology issues, and a wide breadth of courses is thus essential, as is exposure to current work. Conservation internships are available through partner institutions and serve as research experience leading to the development of the required senior thesis.

Declaration of the environmental biology major must be approved by the director of undergraduate studies and filed in the departmental office located on the 10th floor of Schermerhorn Extension.

The major in evolutionary biology of the human species provides students with a foundation in the interrelated spheres of behavior, ecology, genetics, evolution, morphology, patterns of growth, adaptation, and forensics. Using the framework of evolution and with attention to the interplay between biology and culture, research in these areas is applied to our own species and to our closest relatives to understand who we are and where we came from. This integrated biological study of the human species is also known as biological anthropology. As an interdisciplinary major, students are also encouraged to draw on courses in related fields including biology, anthropology, geology, and psychology as part of their studies.

PROFESSORS

- Walter Bock (*emeritus*; Biological Sciences)
- Steve Cohen (International and Public Affairs)
- Marina Cords (also Anthropology)
- Ruth DeFries
- Kevin Griffin (also Earth and Environmental Sciences)
- Paul Hertz (Barnard)
- Ralph Holloway (Anthropology)
- Darcy Kelley (Biological Sciences)
- Don Melnick (also Anthropology and Biological Sciences)
- Brian Morton (Barnard)
- Shahid Naeem
- Paul Olsen (Earth and Environmental Sciences)
- Robert Pollack (Biological Sciences)
- Maria Uriarte
- Paige West (Barnard)

ASSOCIATE PROFESSORS

- Hilary Callahan (Barnard)
- Maria Diuk-Wasser
- Dustin Rubenstein

ASSISTANT PROFESSORS

- Krista McGuire (also Barnard)
- Duncan Menge

LECTURERS

- Joshua Drew
- Matthew Palmer
- Jill Shapiro

ADJUNCT FACULTY/RESEARCH SCIENTISTS

Columbia University

- Natalie Boelman (Lamont-Doherty)
- Cheryl Palm (Earth Institute Agriculture & Food Security Center)
- Dorothy Peteet (Lamont-Doherty)

- Miguel Pinedo-Vásquez (Center for Environmental Research and Conservation)
- Pedro Antonio Sanchez (Earth Institute Agriculture & Food Security Center)
- William Schuster (Center for Environmental Research and Conservation)

American Museum of Natural History

- George Amato
- Mary Blair
- Daniel Brumbaugh
- James Carpenter
- Joel Cracraft
- Rob DeSalle
- Eunsoo Kim
- Christopher Raxworthy
- Mark Siddall
- Nancy Simmons
- Brian Smith
- John Sparks
- Eleanor Sterling
- Melanie Stiassny
- Ward Wheeler

The New York Botanical Garden

- Michael Balick
- Roy Halling
- Charles Peters
- Dennis Stevenson

Wildlife Conservation Society

- Carter Ingram
- Martin Mendez
- Robert Rose
- Howard Rosenbaum
- Eric Sanderson
- Scott Silver
- Patrick R. Thomas

Ecohealth Alliance

- Peter Daszak
- Parviez Hosseini
- Kevin Olival
- Melinda Rostal

Cary Institute of Ecosystem Studies

Joshua Ginsberg

NYC Audubon

- Susan Elbin

Woods Hole

- Michael T. Coe

GUIDELINES FOR ALL ECOLOGY, EVOLUTION, AND ENVIRONMENTAL BIOLOGY MAJORS AND CONCENTRATORS

The grade of D is not accepted for any course offered in fulfillment of the requirements toward the majors or concentrations.

MAJOR IN ENVIRONMENTAL BIOLOGY

The major in environmental biology requires 50 points, distributed as follows:

Lower Division Courses

Two terms of introductory or environmental biology such as the following:

EEEB UN2001 - EEEB UN2002	Environmental Biology I: Elements to Organisms and Environmental Biology II: Organisms to the Biosphere
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Two terms of environmental science such as the following:

EESC UN2100	Earth's Environmental Systems: The Climate System
EESC UN2200	Earth's Environmental Systems: The Solid Earth System

Two terms of chemistry such as the following:

CHEM UN1403	General Chemistry I (Lecture)
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One term of physics such as the following:

PHYS UN1201	General Physics I
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One term of statistics such as the following:

BIOL BC2286	Statistics and Research Design
EEEB UN3005	Introduction to Statistics for Ecology and Evolutionary Biology

STAT UN1101	Introduction to Statistics
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STAT UN1201	Calculus-Based Introduction to Statistics
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One term of calculus such as the following:

MATH UN1101	Calculus I
MATH UN1102	Calculus II
MATH UN1201	Calculus III
MATH UN1202	Calculus IV

Upper Division Courses

Students must complete five advanced elective courses (generally 3000-level or above) satisfying the following distribution. At least one of these courses must include a laboratory component. For more information and a list of appropriate courses, contact the director of undergraduate studies.

1. Ecology, behavior, or conservation biology;
2. Evolution or genetics;
3. Morphology, physiology, or diversity;
4. Policy or economics;
5. One additional course from the preceding four groups.

Students must also complete a senior thesis, which involves completing a research internship (generally in the summer before the senior year) and completing at least one semester of the thesis research seminar, EEEB UN3991- EEEB UN3992 Senior Seminar. Enrollment in both semesters of the seminar, starting in the spring of the junior year, is recommended.

Students planning on continuing into graduate studies in environmental biology or related fields are encouraged to take organic chemistry and genetics.

ECOLOGY AND EVOLUTION TRACK WITHIN THE ENVIRONMENTAL BIOLOGY MAJOR

The ecology and evolution track within the environmental biology major requires 50 points, distributed as follows:

Lower Division Courses

Two terms of introductory or environmental biology such as the following:

EEEB UN2001 - EEEB UN2002	Environmental Biology I: Elements to Organisms and Environmental Biology II: Organisms to the Biosphere
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Two terms of chemistry such as the following:

CHEM UN1403 - CHEM UN1404	General Chemistry I (Lecture) and General Chemistry II (Lecture)
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Chemistry laboratory such as the following:

CHEM UN1500	General Chemistry Laboratory
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Two terms of physics such as the following:

PHYS UN1201 - PHYS UN1202	General Physics I and General Physics II
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One term of statistics such as the following:

BIOL BC2286	Statistics and Research Design
EEEB UN3005	Introduction to Statistics for Ecology and Evolutionary Biology

STAT UN1101	Introduction to Statistics
-------------	----------------------------

STAT UN1201	Calculus-Based Introduction to Statistics
-------------	---

Two terms of calculus, or one term of calculus and second advanced course in math or statistics such as the following:

MATH UN1101	Calculus I
MATH UN1102	Calculus II
MATH UN1201	Calculus III
MATH UN1202	Calculus IV

Upper Division Courses

Students must complete five advanced elective courses (generally 3000-level or above) satisfying the following distribution. At least one of these courses must include a laboratory component. For more information and a list of appropriate courses, contact the director of undergraduate studies.

1. Three courses in ecology, evolution, conservation biology, or behavior;
2. One course in genetics. BIOL UN3031 Genetics or BIOL BC2100 Molecular and Mendelian Genetics is recommended;
3. One course in morphology, physiology, or diversity.

Students must also complete a senior thesis, which involves completing a research internship (generally in the summer before the senior year) and completing at least one semester of the thesis research seminar, EEEB UN3991-EEEB UN3992 Senior Seminar. Enrollment in both semesters of the seminar, starting in the spring of the junior year, is recommended.

Students planning on continuing into graduate studies in ecology or evolutionary biology are encouraged to take organic chemistry.

MAJOR IN EVOLUTIONARY BIOLOGY OF THE HUMAN SPECIES

The major in evolutionary biology of the human species requires 36 points, distributed as described below.

Students must take a minimum of 20 points from approved biological anthropology courses. The additional courses may be taken in other departments with adviser approval. These include up to 6 points of introductory biology/chemistry or calculus (in any combination). Please speak with the major adviser about the extended list of courses from related areas including Biology, Psychology, Archaeology, Anthropology, Earth and Environmental Science, and Statistics that count toward this program.

For example, students interested in focusing on paleoanthropology would complement the requirements with additional courses in human evolution and morphology, evolutionary biology and theory, archaeology, genetics, and statistics. Those interested in primate behavior would supplement the requirements with classes in behavioral biology, ecology, and statistics.

Required Courses

EEEB UN1010	Human Origins and Evolution
EEEB UN1011	Behavioral Biology of the Living Primates

****Alternate options may be possible for all courses other than EEEB UN1010 Human Origins and Evolution and EEEB UN1011 Behavioral Biology of the Living Primates. These will be considered on an individual basis in consultation with the major/concentration adviser.**

Conservation Course

EEEB UN3240	Challenges and Strategies of Primate Conservation (This is the recommended conservation course but this requirement can be fulfilled with other classes such as Conservation Biology, SEE-U in Brazil or Jordan, or other relevant offerings.)
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Theoretical Foundation from Related Fields

Select one course from each of the two subsets:

Cultural Anthropology

ANTH UN1002	The Interpretation of Culture
ANTH UN2004	Introduction to Social and Cultural Theory
ANTH UN3040	Anthropological Theory I
ANTH UN2005	Ethnographic Imagination

Archaeology

ANTH UN1007	The Origins of Human Society
ANTH UN2028	Pasts, Presents and Futures: An Introduction to 21st Century Archaeology
ANTH UN3064	Death and the Body
ANTH UN3823	Archaeology Engaged: The Past in the Public Eye
ANTH UN3933	Arabia Imagined

Breadth Requirement

Select a minimum of one course from each of the three sections (may overlap seminar requirement for majors):

Genetics/Human Variation

BIOL BC2100	Molecular and Mendelian Genetics
BIOL UN3031	Genetics
BIOL GU4560	Evolution in the age of genomics
ANTH UN3970	Biological Basis of Human Variation
EEEB GU4340	Human Adaptation
EEEB GU4700	Race: The Tangled History of a Biological Concept

Primate Behavioral Biology and Ecology

EEEB UN3940	Current Controversies in Primate Behavior and Ecology
BIOL BC2272	Ecology
BIOL BC2280	Animal Behavior
PSYC UN2420	Animal Behavior

PSYC BC1119	Systems and Behavioral Neuroscience
PSYC UN2450	Behavioral Neuroscience
PSYC BC3372	Comparative Cognition
PSYC UN3450	Evolution of Intelligence and Consciousness (Seminar)
PSYC UN3460	Evolution of Behavior (Seminar)
PSYC UN3470	Brain Evolution: Becoming Human (Seminar)
EEEB GU4010	The Evolutionary Basis of Human Behavior
EEEB GU4134	Behavioral Ecology

Human Evolution/Morphology

EEEB UN3208	Explorations in Primate Anatomy
EEEB UN3215	Forensic Osteology
EEEB UN3220	The Evolution of Human Growth and Development
ANTH GU4147	Human Skeletal Biology I
ANTH GU4148	The Human Skeletal Biology II
EEEB UN3204	Dynamics of Human Evolution
EEEB UN3910	The Neandertals
ANTH GU4002	Controversial Topics in Human Evolution
ANTH GU4200	Fossil Evidence of Human Evolution
BIOL BC2278	Evolution
BIOL UN3208	Introduction to Evolutionary Biology
EEEB UN3030	The Biology, Systematics, and Evolutionary History of the 'Apes'
BIOL BC2262	Vertebrate Biology
BIOL UN3006	Physiology
BIOL BC3360	Animal Physiology
EEEB GU4200	Natural History of the Mammals

Seminar

Selection at least one of the following seminars. May also count toward the breadth requirement.

EEEB UN3204	Dynamics of Human Evolution
EEEB UN3910	The Neandertals
EEEB UN3940	Current Controversies in Primate Behavior and Ecology
ANTH UN3970	Biological Basis of Human Variation
EEEB UN3993 - EEB UN3994	EBHS Senior Seminar and EBHS Senior Seminar
EEEB GU4321	Human Nature: DNA, Race & Identity
ANTH GU4002	Controversial Topics in Human Evolution (Fulfills the seminar requirement for the major)

Additional courses in the student's area of focus to complete the required 36 points overall including a minimum of 20 points of approved biological anthropology courses.

Students intending to pursue graduate study in this field should broaden their foundation by taking an introductory biology course (optimally EEEB UN2001 Environmental Biology I: Elements to Organisms) or advanced evolution course, a genetics course, and a statistics course. Students interested in forensic anthropology should take chemistry in lieu of biology (though the latter is recommended as a foundation course for all students). The adviser makes additional recommendations dependent on the student's area of focus.

Approved Biological Anthropology Courses

Paleoanthropology and Morphology

EEEB UN1010	Human Origins and Evolution
EEEB UN3204	Dynamics of Human Evolution
EEEB UN3208	Explorations in Primate Anatomy
EEEB UN3215	Forensic Osteology
EEEB UN3220	The Evolution of Human Growth and Development
EEEB UN3910	The Neandertals
ANTH GU4147 - ANTH GU4148	Human Skeletal Biology I and The Human Skeletal Biology II
ANTH GU4200	Fossil Evidence of Human Evolution <small>taught intermittently</small>

Primate Behavioral Ecology and Evolution

EEEB UN1011	Behavioral Biology of the Living Primates
EEEB UN3030	The Biology, Systematics, and Evolutionary History of the 'Apes'
EEEB UN3940	Current Controversies in Primate Behavior and Ecology
EEEB GU4010	The Evolutionary Basis of Human Behavior

Human Variation

ANTH UN3970	Biological Basis of Human Variation
EEEB GU4340	Human Adaptation
EEEB GU4700	Race: The Tangled History of a Biological Concept

Additional Courses

EEEB UN3240	Challenges and Strategies of Primate Conservation
EEEB UN3993 - EEEB UN3994	EBHS Senior Seminar and EBHS Senior Seminar

CONCENTRATION IN ENVIRONMENTAL BIOLOGY

The concentration in environmental biology differs from the major in omitting calculus and physics from the lower division, requiring three advanced electives rather than five, and omitting

the senior seminar with thesis project. It requires 35 points, distributed as follows:

Lower Division Courses

Two terms of introductory or environmental biology such as the following:

EEEB UN2001 - EEEB UN2002	Environmental Biology I: Elements to Organisms and Environmental Biology II: Organisms to the Biosphere (or equivalents)
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Two terms of environmental science such as the following:

EESC UN2100	Earth's Environmental Systems: The Climate System
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Two terms of chemistry such as the following:

CHEM UN1403 - CHEM UN1404	General Chemistry I (Lecture) and General Chemistry II (Lecture)
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One term of statistics. Select one of the following:

BIOL BC2286	Statistics and Research Design
EEEB UN3005	Introduction to Statistics for Ecology and Evolutionary Biology
STAT UN1101	Introduction to Statistics
STAT UN1201	Calculus-Based Introduction to Statistics

Upper Division Courses

EEEB UN3087	Conservation Biology
Two other 3000- or 4000- level courses from the advanced environmental biology courses listed for the major.	

CONCENTRATION IN EVOLUTIONARY BIOLOGY OF THE HUMAN SPECIES

The concentration in evolutionary biology of the human species requires 20 points including the required introductory courses EEEB UN1010 Human Origins and Evolution, EEEB UN1011 Behavioral Biology of the Living Primates, an approved conservation course (optimally Primate Conservation), and three courses for the breadth distribution requirements as described for the major. Students must take a minimum of 15 points from approved biological anthropology courses as described for the major (the two introductory classes count toward that total). The additional courses may be taken in other departments with adviser approval.

Concentrators do not have to complete the theoretical foundation courses from cultural anthropology/archaeology or a seminar.

SPECIAL CONCENTRATION IN ENVIRONMENTAL SCIENCE FOR ENVIRONMENTAL BIOLOGY MAJORS

The Department of Earth and Environmental Sciences sponsors a special concentration which must be done in conjunction with the environmental biology major. Students should be aware that they must complete the environmental biology major in order to receive credit for the special concentration.

The special concentration in environmental science requires a minimum of 31.5 points, distributed as follows:

Introductory Environmental Science (13.5 points)

EESC UN2100	Earth's Environmental Systems: The Climate System
EESC UN2200	Earth's Environmental Systems: The Solid Earth System
EESC UN2300	Earth's Environmental Systems: The Life System

Introductory Science (6 points)

Two courses in chemistry, physics, mathematics, or environmental biology from the supporting mathematics and science list for the environmental science major.

Advanced Environmental Science (12 points)

Select four of the following:

EESC UN3015	The Earth's Carbon Cycle
EESC BC3017	Environmental Data Analysis
EESC BC3025	Hydrology
EESC GU4008	Introduction to Atmospheric Science
EESC GU4050	Global Assessment and Monitoring Using Remote Sensing
EESC GU4223	Sedimentary Geology
EESC GU4550	Plant Ecophysiology
EESC GU4835	Wetlands and Climate Change
EESC GU4885	The Chemistry of Continental Waters
EESC GU4917	Earth/Human Interactions
EESC GU4926	Principles of Chemical Oceanography

Advanced courses used to fulfill requirements in the environmental biology major cannot count toward requirements for the special concentration.

SPECIAL CONCENTRATION IN ENVIRONMENTAL BIOLOGY FOR ENVIRONMENTAL SCIENCE MAJORS

The Department of Ecology, Evolution, and Environmental Biology sponsors a special concentration which must be done in conjunction with the environmental science major. Students should be aware that they must complete the environmental science major in order to receive credit for the special concentration.

The special concentration in environmental biology requires a minimum of 39 points, distributed as follows:

Introductory Environmental Biology and Environmental Science (17 points)

EESB UN2001	Environmental Biology I: Elements to Organisms
EESB UN2002	Environmental Biology II: Organisms to the Biosphere (equivalent to EESC UN2300)
EESC UN2100	Earth's Environmental Systems: The Climate System
EESC UN2200	Earth's Environmental Systems: The Solid Earth System

Introductory Science (13 points)

Select one of the following chemistry sequences:

CHEM UN1403	General Chemistry I (Lecture)
CHEM UN1604	Intensive General Chemistry (Lecture)

One term of statistics such as the following:

BIOL BC2286	Statistics and Research Design
EESB UN3005	Introduction to Statistics for Ecology and Evolutionary Biology
STAT UN1101	Introduction to Statistics
STAT UN1201	Calculus-Based Introduction to Statistics
STAT UN1201	Calculus-Based Introduction to Statistics
EESB UN3087	Conservation Biology

Advanced Environmental Biology (9 points)

Three additional advanced environmental biology courses (3000-level and above), each chosen from a different curricular area (evolution/genetics, ecology/behavior/conservation, anatomy/physiology/diversity, biology laboratory courses).

ECONOMICS

Departmental Office: 1022 International Affairs Building;
212-854-3680
<http://www.columbia.edu/cu/economics/>

Director of Undergraduate Studies: Dr. Susan Elmes, 1006
International Affairs Building; 212-854-9124; se5@columbia.edu

Director of Departmental Honors Program: Dr. Susan
Elmes, 1006 International Affairs Building; 212-854-9124;
se5@columbia.edu

Economics is the study of the ways in which society allocates its scarce resources among alternative uses and the consequences of these decisions. The areas of inquiry deal with a varied range of topics such as international trade, domestic and international financial systems, labor market analysis, and the study of less developed economies. Broadly speaking, the goal of an economics major is to train students to think analytically about social issues and, as such, provide a solid foundation for not only further study and careers in economics, but also for careers in law, public service, business, and related fields.

The Economics Department offers a general economics major in addition to five interdisciplinary majors structured to suit the interests and professional goals of a heterogeneous student body. All of these programs have different specific requirements but share the common structure of core theoretical courses that provide the foundation for higher-level elective courses culminating in a senior seminar. Students are urged to carefully look through the details of each of these programs and to contact an appropriate departmental adviser to discuss their particular interests.

ADVANCED PLACEMENT

Tests must be taken in **both** microeconomics and macroeconomics, with a score of 5 on one test and at least a 4 on the other. Provided that this is achieved, the department grants 4 credits for a score of 4 and 5 on the AP Economics exam along with exemption from *ECON UN1105 Principles of Economics*.

ADVISING

The Department of Economics offers a variety of advising resources to provide prospective and current undergraduate majors and concentrators with the information and support needed to successfully navigate through the program. These resources are described below.

Frequently Asked Questions

Please see: <http://econ.columbia.edu/frequently-asked-questions-0>

As a first step, students are encouraged to visit the department's FAQ page, which provides comprehensive information and answers to the most frequently asked questions about the departmental majors and requirements. This page also includes a

section that answers specific questions of first-years, sophomores, and non-majors.

Graduate Student Advisers

For answers to the most common questions that students have about the majors, the department has graduate student advisers, who are available by e-mail at econ-advising@columbia.edu, or during weekly office hours to meet with students.

Students should direct all questions and concerns about their major to the graduate student advisers either in person or via e-mail. The graduate student advisers can discuss major requirements, scheduling, and major course selection, as well as review student checklists and discuss progress in the major. Occasionally, graduate student advisers may refer a student to someone else in the department (such as the director of undergraduate studies) or in the student's school for additional advising.

Contact information and office hours for the graduate student advisers are posted on the *Advisers* page of the departmental website (<http://www.columbia.edu/cu/economics>) in the week prior to the beginning of the semester. Students considering one of the interdepartmental majors should speak to both a graduate student adviser from the Economics Department and the adviser from the other department early in the sophomore year.

Faculty Advisers

Faculty advisers are available to discuss students' academic and career goals, both in terms of the undergraduate career and post-graduate degrees and research. Students wishing to discuss these types of substantive topics may request a faculty adviser by completing the form available on the *Advisers* page of the departmental website (<http://www.columbia.edu/cu/economics>) and depositing it in the mailbox of the director of undergraduate studies in the department's main office, 1022 International Affairs Building.

The department does its best to match students with faculty members that share similar academic interests. While faculty advisers do not discuss major requirements—that is the role of the graduate student advisers—they do provide guidance in course selection as it relates to meeting a student's intellectual goals and interests, as well as advise on career and research options. It is recommended that students who plan on attending a Ph.D. program in economics or are interested in pursuing economics research after graduation request a faculty adviser.

ON-LINE INFORMATION

Students can access useful information on-line, including: a comprehensive FAQ page; requirement changes to the major and concentration; sample programs and checklists; faculty office hours, contact information and fields of specialization; adviser information; teaching assistant information; research assistant opportunities; list of tutors; and Columbia-Barnard Economics Society information.

DEPARTMENTAL HONORS

Economics majors and economics joint majors who wish to be considered for departmental honors in economics must:

1. Have at least a 3.7 GPA in their major courses;
2. Take ECON GU4999 Senior Honors Thesis (a one-year course);
3. Receive at least a grade of A- in ECON GU4999 Senior Honors Thesis.

Students must consult and obtain the approval of the departmental undergraduate director in order to be admitted to the workshop. Please note that ECON GU4999 Senior Honors Thesis may be taken to fulfill the **seminar requirement** for the economics major and all economics joint majors. Students who wish to write a senior thesis (ECON GU4999 Senior Honors Thesis) must have completed the core major requirements. Normally no more than 10% of graduating majors receive departmental honors in a given academic year. Please see the *Honors Prizes* page on the department's website for more information.

UNDERGRADUATE PRIZES

All prize recipients are announced at the end of the spring semester each academic year.

Sanford S. Parker Prize

Established in 1980, this prize is awarded annually to a Columbia College graduating student who majored or concentrated in economics and plans on continuing his or her studies in an economics Ph.D. program within the two years following his or her graduation.

Romine Prize

Established in 1997, this prize is awarded annually to two students (Columbia College or General Studies) majoring in economics: one for the best honors thesis paper, and the other for the best economics seminar paper.

Parker Prize for Summer Research

The department provides financial support for five Columbia College underclassmen who take unpaid summer internships that focus on research.

PROFESSORS

- Douglas Almond (also School of International and Public Affairs)
Jushan Bai
- Jagdish N. Bhagwati
- Patrick Bolton (also Business School)
- André Burgstaller (Barnard)
- Alessandra Casella
- Yeon-Koo Che
- Pierre-André Chiappori

- Graciela Chichilnisky
- Richard Clarida
- Donald Davis (Chair)
- Padma Desai (*emerita*)
- Prajit Dutta
- Harrison Hong
- Glenn Hubbard (also Business School)
- Navin Kartik
- Wojciech Kopczuk (also School of International and Public Affairs)
- Sokbae (Simon) Lee
- W. Bentley McLeod (also School of International and Public Affairs)
- Perry Mehrling (Barnard)
- Robert Mundell (*emeritus*)
Emi Nakamura (also Business School)
- Serena Ng
- Brendan O'Flaherty
- Edmund S. Phelps
- Michael Riordan
- Jeffrey Sachs (also Earth Institute)
- Xavier Sala-i-Martin
- Bernard Salanié
- José A. Scheinkman
- Stephanie Schmitt-Grohé
- Rajiv Sethi (Barnard)
Jón Steinsson
- Joseph Stiglitz (also Business School)
- Martín Uribe
- Miguel Urquiola (also School of International and Public Affairs)
Eric Verhoogen (also School of International and Public Affairs)
- David Weiman (Barnard)
- David Weinstein
- Michael Woodford

ASSOCIATE PROFESSORS

- Lena Edlund
- Katherine Ho
- Qingmin Liu

ASSISTANT PROFESSORS

- Hassan Afrouzi
Michael Best
Gregory Cox
Mark Dean
- Andres Drenik
- Francois Gerard
Matthieu Gomez

- Reka Juhasz
- Supreet Kaur
 - Jennifer La'O
 - Suresh Naidu
 - Jose Luis Montiel Olea
 - Tobias Salz
 - Jack Willis

LECTURERS

- Tri Vi Dang
- Sally Davidson
- Susan Elmes
- Seyhan Erden
- Sunil Gulati
- Wouter Vergote

ADJUNCT FACULTY

- Irasema Alonso
- Benjamin Ho
- Steven Ho
- Neal Masia
- Caterina Musatti
- Maxim Pinkovskiy
- Mauro Roca
- Argia Sbordone

ON LEAVE

- Profs. Casella, Dutta, Gerard, O'Flaherty (2017-2018)
- Profs. Clarida, Davis, Hong (Fall 2017)
- Profs. Dean, Riordan (Spring 2018)

GUIDELINES FOR ALL ECONOMICS MAJORS, CONCENTRATORS, AND INTERDEPARTMENTAL MAJORS

Economics Core Courses

All of the core courses must be completed **no later than the spring semester** of the student's **junior year** and must be taken at Columbia. *Students who take any core course during the fall semester of their senior year must obtain written permission from the department's director of undergraduate studies.* Unless otherwise specified below, all students must complete the following core courses:

ECON UN1105	Principles of Economics
ECON UN3211	Intermediate Microeconomics
ECON UN3213	Intermediate Macroeconomics
ECON UN3412	Introduction To Econometrics

Prerequisites

Course prerequisites are strictly enforced. Prerequisites must be taken before the course, not after or concurrently.

Economics courses taken before the completion of any of its prerequisites, even with instructor approval, are **not** counted toward the major, concentration, or interdepartmental majors. Exemptions from a prerequisite requirement may only be made, in writing, by the department's director of undergraduate studies. Credits from a course taken *prior* to the completion of its prerequisites are **not** counted towards the major requirements. As a consequence, students are required to complete **additional**, specific courses in economics at the direction of the director of undergraduate studies.

The prerequisites for required courses are as follows:

Course	Prerequisites
ECON UN1105 Principles of Economics	None
MATH UN1101 Calculus I	
STAT UN1201 Calculus-Based Introduction to Statistics	MATH UN1101 Calculus I
ECON UN3211 Intermediate Microeconomics	ECON UN1105 Principles of Economics MATH UN1201 Calculus III or UN1205
ECON UN3213 Intermediate Macroeconomics	ECON UN1105 Principles of Economics MATH UN1101 Calculus I Co-requisite: MATH UN1201 Calculus III or UN1205
ECON UN3412 Introduction To Econometrics	MATH UN1201 Calculus III or UN1205 ECON UN3211 Intermediate Microeconomics or UN3213 STAT UN1201 Calculus-Based Introduction to Statistics
ECON 2000-level electives	ECON UN1105 Principles of Economics
ECON GU4211 Advanced Microeconomics	ECON UN3211 Intermediate Microeconomics ECON UN3213 Intermediate Macroeconomics Corequisites: MATH UN2010 Linear Algebra MATH UN2500 Analysis and Optimization
ECON GU4412 Advanced Econometrics	ECON UN3211 Intermediate Microeconomics
ECON GU4213 Advanced Macroeconomics	ECON UN3213 Intermediate Macroeconomics
ECON GU4413 Econometrics of Time Series and Forecasting	ECON UN3412 Introduction To Econometrics MATH UN2010 Linear Algebra

ECON UN3025 Financial Economics	ECON UN3211 Intermediate Microeconomics
ECON GU4020 Economics of Uncertainty and Information	ECON UN3213 Intermediate Macroeconomics
ECON GU4230 Economics of New York City	STAT UN1201 Calculus-Based Introduction to Statistics
ECON GU4260 Market Design	
ECON GU4280 Corporate Finance	
ECON GU4370 Political Economy	
ECON GU4700 Financial Crises	
ECON GU4710 Finance and the Real Economy	
ECON GU4850 Cognitive Mechanisms and Economic Behavior	
ECON GU4860 Behavioral Finance	ECON UN3211 Intermediate Microeconomics
	ECON UN3213 Intermediate Macroeconomics
	ECON UN3412 Introduction To Econometrics
All other ECON 3000- and 4000-level electives	ECON UN3211 Intermediate Microeconomics
	ECON UN3213 Intermediate Macroeconomics
ECON UN3901 Economics of Education	ECON UN3211 Intermediate Microeconomics
ECON UN3952 Seminar in Macroeconomics and Formation of Expectations	ECON UN3213 Intermediate Macroeconomics
ECON UN3981 Applied Econometrics	ECON UN3412 Introduction To Econometrics
ECON GU4911 Seminar In Microeconomics	
ECON GU4913 Seminar In Macroeconomics	
ECON GU4918 Seminar In Econometrics	
ECPS GU4921 Seminar In Political Economy	ECON UN3211 Intermediate Microeconomics
	ECON UN3213 Intermediate Macroeconomics
	ECON UN3412 Introduction To Econometrics
	ECON GU4370 Political Economy
ECPH GU4950 Economics and Philosophy Seminar	ECON UN3211 Intermediate Microeconomics
	ECON UN3213 Intermediate Macroeconomics
	ECON UN3412 Introduction To Econometrics

Barnard electives

See Barnard bulletin

It is **strongly recommended** that students take ECON UN3412 Introduction To Econometrics in the semester **immediately** following the completion of the statistics course.

Grading

No course with a grade of D or lower, including calculus and statistics courses, can count toward the major, concentration, or interdepartmental majors. Economics core courses with a grade of D or F must be retaken and completed with a grade of C- or better.

Students who receive a grade of D or F in a core course are permitted to take a higher-level elective course that has that core course as a prerequisite, so long as it is taken concurrently with the retaking of that core course. For example, if a student fails ECON UN3211 Intermediate Microeconomics, the student must retake it and, in the same semester, may enroll in an elective course for which it is a prerequisite, provided that all other prerequisites for the elective have been completed. The same rule applies to the required math and statistics courses. For example, if a student fails *MATH UN1201 Calculus III*, the student may retake calculus III concurrently with *Intermediate Microeconomics*. Students who must retake any core economics or math course may not retake it concurrently with a senior seminar; the economics core courses *ECON UN3211 Intermediate Microeconomics*, *ECON UN3213 Intermediate Macroeconomics*, and *ECON UN3412 Introduction To Econometrics* must be successfully completed before a student may enroll in a seminar.

A grade of W is not equivalent to a grade of D or F; it does not qualify a student to retake the course concurrently with a higher level course that lists the course as a prerequisite. Students who receive a grade of W in a core course must complete the course with a grade of C- or better before taking a course that lists it as a prerequisite.

Only ECON UN1105 Principles of Economics may be taken for a grade of Pass/D/Fail, and the student must receive a grade of P for it to count towards the requirements for the major, concentration, or interdepartmental majors.

Economics Electives

Only those courses identified in the Economics Department listings in this Bulletin may be taken for elective credit. All 3000-level or higher electives offered by the Economics Department have ECON UN3211 Intermediate Microeconomics and ECON UN3213 Intermediate Macroeconomics as prerequisites. However, some electives have additional prerequisites and students should ensure that all prerequisites have been completed (see the table of prerequisites printed above). *Seminars do not count as electives.*

Seminars

Seminars can be taken only after all of the required core courses in economics have been completed. ECON UN3412 Introduction

To Econometrics may not be taken or retaken concurrently with a senior seminar. *Seminars do not count as electives*. Each seminar is limited to sixteen students, with priority given to seniors. For ECPS GU4921 Seminar In Political Economy and ECPH GU4950 Economics and Philosophy Seminar, priority is given to economics–political science and economics–philosophy majors, respectively.

For seminar registration details, read the information posted on the department's *Senior Seminar Registration* page: <http://econ.columbia.edu/senior-seminars-registration>.

Mathematics

Students must consult with the Mathematics Department for the appropriate placement in the calculus sequence. Students must complete one of the following sequences:

Select one of the following sequences:

MATH UN1101 - MATH UN1201	Calculus I and Calculus III
MATH UN1101 - MATH UN1205	Calculus I and Accelerated Multivariable Calculus
MATH UN1207 - MATH UN1208	Honors Mathematics A and Honors Mathematics B

In addition:

1. Students who receive a grade of D or F in MATH UN1201 Calculus III or MATH UN1205 must retake the course but may enroll in ECON UN3211 Intermediate Microeconomics.
2. Students who receive a grade of D or F in MATH UN1207 Honors Mathematics A may either retake the course, or take MATH UN1201 Calculus III or MATH UN1205, and enroll in ECON UN3211 Intermediate Microeconomics concurrently.

Statistics

Unless otherwise specified below, all students must take STAT UN1201 Calculus-Based Introduction to Statistics, or a higher level course, such as STAT GU4204 Statistical Inference, or SIEO S3001 Introduction to Probability and Statistics.

Barnard Courses

A limited number of Barnard economics electives may count toward the major, concentration, and interdepartmental majors. Students should pay careful attention to the limit of Barnard electives indicated in their program requirements. Please see the *Transfer Credit* section below for information on the number of Barnard electives that may be taken to fulfill major requirements. In addition, students may receive credit for the major, concentration, and interdepartmental majors only for those Barnard economics courses listed in this Bulletin. However, students may not receive credit for two courses whose content overlaps. Barnard and Columbia economics electives with overlapping content include but are not limited to:

ECON BC3029 - ECON GU4321	Empirical Development Economics and Economic Development
ECON BC3038 - ECON GU4505	International Money and Finance and International Macroeconomics
ECON BC3019 - ECON GU4400	Labor Economics and Labor Economics
ECON BC3047 - ECON GU4500	International Trade and International Trade
ECON BC3039 - ECON GU4625	Environmental and Natural Resource Economics and Economics of the Environment
ECON BC3041 - ECON GU4235	Theoretical Foundations of Political Economy and HISTORICAL FOUNDATIONS OF MODERN ECONOMICS: Adam Smith to J M Keynes
ECON GU4400	Labor Economics
ECON GU4235	HISTORICAL FOUNDATIONS OF MODERN ECONOMICS: Adam Smith to J M Keynes

Students should always first consult with *econ-advising* to confirm that the Barnard elective they wish to take does not overlap with a Columbia elective that they have already taken or plan to take. Students may *not* take the Barnard core economics, math, statistics, or seminar courses for credit towards the completion of major requirements.

School of Professional Studies Courses

The Department of Economics does not accept *any* of the courses offered through the School of Professional Studies for credit towards the economics major, concentration, or interdepartmental majors with the exception of the courses offered by the Economics Department during the summer session at Columbia.

Other Department and School Courses

Please note that with the exception of the above Barnard courses and the specific courses listed below for the financial economics major, no other courses offered through the different departments and schools at Columbia count toward the economics majors or concentration.

Transfer Credits

Students are required to take a minimum number of courses in the Columbia Economics Department. For all majors and interdepartmental majors, students must complete a minimum of *five* lecture courses in the Columbia department. Students may fulfill their remaining requirements for economics lecture courses through AP (or IB or GCE) credits, Barnard electives, transfer courses, and study abroad courses (the latter two are subject to the approval of the Economics Department). The following table summarizes the new rules:

Program	Number of required economics lecture courses	Minimum number which must be taken in the department	Maximum number of outside allowed
Economics major	9	5	4
Financial economics	8	5	3
Economics-mathematics	7	5	2
Economics-political science	7	5	2
Economics-statistics	7	5	2
Economics-philosophy	7	5	2
Economics concentration	7	4	3

1. **Lecture courses** do not include seminars, which must be taken in the Columbia Economics Department. The lecture course counts are counts of economics courses only and do **not** include math, statistics, or courses in other departments;
2. At least two of the three 3000-level economics core courses must be taken in the department and no corresponding Barnard courses are accepted. ECON UN3025 Financial Economics and ECON UN3265 The Economics of Money and Banking are counted as departmental courses regardless of the instructor;
3. **Outside courses** include AP (or IB or GCE) credits, transfer credits, Barnard 2000- and 3000-level elective courses and transfer credits from other universities. In the case where two or more courses taken outside of Columbia are used as the equivalent of ECON UN1105 Principles of Economics, those courses are counted as one transfer course.

Approval of transfer credits to fulfill economics requirements must be obtained in writing from the Department of Economics (see the departmental website (<http://www.columbia.edu/cu/economics>) or speak with your advising dean for information regarding applications for transfer credit). Approval is granted only for courses that are considered to be comparable to those offered at Columbia.

Summer courses taken at other institutions must be approved in writing by the department's transfer credit adviser before the course is taken. The department does not accept transfer credits for any 3000 level core courses taken during a summer session outside of Columbia University. Summer courses taken from the department of economics at Columbia University do not need approval.

Guidelines and instructions on how to request transfer credit approval can be found in the *Transfer Credit Information* page

of the departmental website (<http://www.columbia.edu/cu/economics>).

MAJOR IN ECONOMICS

Please read *Guidelines for all for Economics Majors, Concentrators, and Interdepartmental Majors* (p. 231) above.

The economics major requires a minimum of 35 points in economics, 6 points in mathematics, and 3 points in statistics, for a total of 44 points as follows:

Economics Core Courses

All economics core courses

Mathematics

Select a mathematics sequence

Statistics

Select a statistics course

Economics Electives

Select at least five electives, of which no more than one may be taken at the 2000-level (including Barnard courses)

Economics Seminar

Select one economics seminar course

CONCENTRATION IN ECONOMICS

Please read *Guidelines for all for Economics Majors, Concentrators, and Interdepartmental Majors* (p. 231) above.

The economics concentration requires a minimum of 25 points in economics, 6 points in mathematics, and 3 points in statistics, for a total of 34 points as follows:

Economics Core Courses

All economics core courses

Mathematics

Select a mathematics sequence

Statistics

Select a statistics course

Economics Electives

Select at least three electives, of which no more than one may be taken at the 2000-level (including Barnard courses)

MAJOR IN FINANCIAL ECONOMICS

Please read *Guidelines for all for Economics Majors, Concentrators, and Interdepartmental Majors* (p. 231) above.

The Department of Economics offers the major in financial economics, which provides an academic framework to explore the role of financial markets and intermediaries in the allocation (and misallocation) of capital. Among the topics studied in financial economics are financial markets, banks and other financial intermediaries, asset valuation, portfolio allocation, regulation and corporate governance.

The financial economics major requires 26 points in economics, 6 points in mathematics, 3 points in statistics, 3 points in business, and 12 points from a list of selected courses for a total of 50 points as follows:

Economics Core Courses

All economics core courses

Finance Core Courses *

ECON UN3025 Financial Economics

ECON GU4280 Corporate Finance

BUSI UN3013 Financial Accounting

*NOTE: The department considers BUSI UN3013 and IEOR E2261 as overlapping courses. Students who take both courses shall be credited with one course only. Financial economics majors who are also in the Business Management concentration program (CNBUMG) must take an additional elective from either the financial economics prescribed elective list (below) or from the CNBUMB prescribed list.

Mathematics

Select a mathematics sequence

Statistics

Select a statistics course

Electives

Select four of the following, of which two must be from the Columbia or Barnard economics departments, or equivalent economics transfer credits:

ECON BC3014	Entrepreneurship
ECON BC3017	Economics of Business Organization
ECON UN3265	The Economics of Money and Banking
ECON UN3952	Seminar in Macroeconomics and Formation of Expectations
ECON GU4020	Economics of Uncertainty and Information
ECON GU4213	Advanced Macroeconomics
ECON GU4251	Industrial Organization
ECON GU4260	Market Design
ECON GU4412	Advanced Econometrics
ECON GU4415	Game Theory
ECON GU4465	Public Economics
ECON GU4500	International Trade
ECON GU4505 or ECON BC3038	International Macroeconomics International Money and Finance
ECON G4526	Transition Reforms, Globalization and Financial Crisis
ECON GU4700	Financial Crises
ECON GU4710	Finance and the Real Economy
ECON GU4840	Behavioral Economics
ECON GU4850	Cognitive Mechanisms and Economic Behavior
ECON GU4860	Behavioral Finance
BIOT GU4180	
BUSI UN3021	Marketing Management
BUSI UN3701	Strategy Formulation

BUSI UN3702	Venturing to Change the World
BUSI UN3703	Leadership in Organizations
BUSI UN3704	Making History Through Venturing
COMS W1002	Computing in Context
HIST W2904	History of Finance
IEOR E3106	Introduction to Operations Research: Stochastic Models
IEOR E4700	Introduction to Financial Engineering
MATH UN3050	Discrete Time Models in Finance
POLS UN3630	Politics of International Economic Relations
STAT W3201	Math Finance in Continuous Time
STAT GU4261	Statistical Methods in Finance
STAT GU4207	Elementary Stochastic Processes
STAT GU4262	Stochastic Processes for Finance

Seminar

The seminar must be chosen from a list of seminars eligible for the financial economics major. The department indicates which seminars are eligible for the major on the Senior Seminars page of the departmental website.

Students must have completed at least one of ECON UN3025 or ECON GU4280 prior to taking their senior seminar.

* Students must complete the finance core no later than fall of their senior year.

MAJOR IN ECONOMICS-MATHEMATICS

Please read *Guidelines for all for Economics Majors, Concentrators, and Interdepartmental Majors* (p. 231) above.

The major in economics and mathematics provides students with a grounding in economic theory comparable to that provided by the general economics major and exposes students to rigorous and extensive training in mathematics. The program is recommended for any student planning to do graduate work in economics.

The Department of Economics has graduate student advisers with whom students may consult on economics requirements. The Department of Mathematics has an assigned adviser with whom students may consult on mathematics requirements. The economics adviser can only advise on economics requirements; the mathematics adviser can only advise on mathematics requirements.

The economics-mathematics major requires a total of 56 points: 29 points in economics and 27 points in mathematics and statistics as follows:

Economics Core Courses

All economics core courses

Economics Electives

Select three electives at the 3000-level or above

Mathematics

Select one of the following sequences:

MATH UN1101 Calculus I
 - MATH UN1102 and Calculus II
 - MATH UN1201 and Calculus III
 - MATH UN2010 and Linear Algebra

MATH UN1101 Calculus I
 - MATH UN1102 and Calculus II
 - MATH UN1205 and Accelerated Multivariable
 - MATH UN2010 Calculus
 and Linear Algebra

MATH UN1207 Honors Mathematics A
 - MATH UN1208 and Honors Mathematics B

Note: Students who take MATH UN1205 may not receive credit for both MATH UN1201 and MATH UN1202.

Analysis requirement:

MATH UN2500 Analysis and Optimization

Select three of the following:

MATH UN1202 Calculus IV
 MATH UN2030 Ordinary Differential Equations

Any mathematics course at the 3000-level or above

Note: Students who take MATH UN1205 will not receive credit for MATH UN1202.

Statistics

Select one of the following sequences:

STAT GU4001 Introduction to Probability and
 Statistics

STAT GU4203 PROBABILITY THEORY
 - STAT GU4204 and Statistical Inference

Economics Seminar

Select an economics seminar

NOTE:

1. Students who fulfill the statistics requirement with STAT GU4203 and STAT GU4204, may count STAT GU4203 or STAT GU4204 as one of the three required mathematics electives.
2. Students who choose the one year sequence (STAT GU4203/ STAT GU4204), must complete the year long sequence *prior* to taking ECON UN3412. Students receive elective credit for the probability course.

MAJOR IN ECONOMICS- PHILOSOPHY

Please read *Guidelines for all for Economics Majors, Concentrators, and Interdepartmental Majors* (p. 231) above.

Economics-philosophy is an interdisciplinary major that introduces students to basic methodologies of economics and philosophy and stresses areas of particular concern to both, e.g. rationality and decision making, justice and efficiency, freedom and collective choice, logic of empirical theories and testing. Many

issues are dealt with historically. Classic texts of Plato, Kant, Mill, Marx, and Smith are reviewed.

The Department of Economics has graduate student advisers with whom students may consult on economics requirements. The Department of Philosophy has an assigned adviser with whom students may consult on philosophy requirements. The economics adviser can only advise on economics requirements; the philosophy adviser can only advise on philosophy requirements.

The economics-philosophy major requires a total of 53 points: 25 points in economics, 15 points in philosophy, 6 points in mathematics, 3 points in statistics, and 4 points in the interdisciplinary seminar as follows:

Economics Core Courses

ECON UN1105	Principles of Economics
ECON UN3211	Intermediate Microeconomics
ECON UN3213	Intermediate Macroeconomics
ECON UN3412	Introduction To Econometrics

Mathematics

Select a mathematics sequence

Statistics

Select a statistics course

Economics Electives

Three Electives are required; two must be selected from the below list, and the remaining elective may be any economics elective at the 3000-level or above.

ECON GU4020	Economics of Uncertainty and Information
ECON GU4211	Advanced Microeconomics
ECON GU4213	Advanced Macroeconomics
ECON GU4228	Urban Economics
ECON GU4230	Economics of New York City
ECON GU4235	HISTORICAL FOUNDATIONS OF MODERN ECONOMICS: Adam Smith to J M Keynes
ECON GU4301	Economic Growth and Development
ECON GU4370	Political Economy
ECON GU4400	Labor Economics
ECON GU4415	Game Theory
ECON GU4438	Economics of Race in the U.S.
ECON GU4465	Public Economics
ECON GU4480	Gender and Applied Economics
ECON GU4500	International Trade
ECON W4615	Law and Economics
ECON GU4625	Economics of the Environment
or ECON BC3039	Environmental and Natural Resource Economics
ECON GU4750	Globalization and Its Risks
ECON GU4840	Behavioral Economics
ECON GU4850	Cognitive Mechanisms and Economic Behavior
ECON BC3011	Inequality and Poverty

Philosophy Courses

PHIL UN1010	Methods and Problems of Philosophical Thought
PHIL UN3411	Symbolic Logic
PHIL UN3701	Ethics
PHIL UN3551	Philosophy of Science
PHIL GU4561	Probability and Decision Theory

Seminar

ECPH GU4950	Economics and Philosophy Seminar
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MAJOR IN ECONOMICS–POLITICAL SCIENCE

Please read *Guidelines for all for Economics Majors, Concentrators, and Interdepartmental Majors* (p. 231) above.

Political economy is an interdisciplinary major that introduces students to the methodologies of economics and political science and stresses areas of particular concern to both. This program is particularly beneficial to students planning to do graduate work in schools of public policy and international affairs.

The Department of Economics has graduate student advisers with whom students may consult on economics requirements. The Department of Political Science has an assigned adviser with whom students may consult on political science requirements. The economics adviser can only advise on economics requirements; the political science adviser can only advise on political science requirements.

The economics–political science major requires a total of 57 points: 22 points in economics, 15 points in political science, 6 points in mathematics, 6 points in statistical methods, 4 points in a political science seminar, and 4 points in the interdisciplinary seminar as follows.

The political science courses are grouped into three areas, i.e. subfields: (1) American politics, (2) comparative politics, and (3) international relations. For the political science part of the major, students are required to select one area as a major subfield and one as a minor subfield. The corresponding introductory courses in both subfields must be taken, plus two electives in the major subfield, and one in the minor subfield.

Economics Core Courses

ECON UN1105	Principles of Economics
ECON UN3211	Intermediate Microeconomics
ECON UN3213	Intermediate Macroeconomics
ECON GU4370	Political Economy

Mathematics

Select a mathematics sequence

Statistical Methods

STAT UN1201	Calculus-Based Introduction to Statistics
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Select one of the following:

ECON UN3412	Introduction To Econometrics
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POLS GU4712	Analysis of Political Data
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Economics Electives

Select two electives (6 points) at the 3000-level or above

Political Science Courses

Students must choose a Primary Subfield and a Secondary Subfield to study. The subfields are as follows: American Politics (AP), Comparative Politics (CP), International Relations (IR), and Political Theory (PT).

Primary Subfield: Minimum three courses, one of which must be the subfield's introductory course.

Secondary Subfield: Minimum two courses, one of which must be the subfield's introductory course.

Seminars

Students must take the following two seminars:

ECPS GU4921	Seminar In Political Economy
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and a Political Science Department seminar, in the student's Primary Subfield. Please select one of the following: *

POLS UN3911 or POLS UN3912	Seminar in Political Theory
POLS UN3921 or POLS UN3922	Seminar in American Politics
POLS UN3951 or POLS UN3952	Seminar in Comparative Politics
POLS UN3961 or POLS UN3962	International Politics Seminar

- Students who wish to count toward the political science seminar requirement a course that is not in the above list of approved seminars must obtain permission from the political science Director of Undergraduate studies. Barnard colloquia can count for seminar credit only with the written permission of the Director of Undergraduate Studies. Note that admission to Barnard colloquia is by application to the Barnard political science department only.

MAJOR IN ECONOMICS-STATISTICS

Please read *Guidelines for all for Economics Majors, Concentrators, and Interdepartmental Majors* (p. 231) above.

The major in economics-statistics provides students with a grounding in economic theory comparable to that provided by the general economics major, but also exposes students to a significantly more rigorous and extensive statistics training than is provided by the general major. This program is recommended for students with strong quantitative skills and for those contemplating graduate studies in economics.

The Department of Economics has graduate student advisers with whom students may consult on economics requirements. The Department of Statistics has an assigned adviser with whom students may consult on statistics requirements. The economics adviser can only advise on economics requirements; the statistics adviser can only advise on statistics requirements.

The economics-statistics major requires a total of 59 points: 29 in economics, 15 points in statistics, 12 points in mathematics, 3 points in computer science as follows:

Economics Core Courses

All economics core courses

Economics Electives

Select three electives at the 3000-level or above

Mathematics

Select one of the following sequences:

MATH UN1101 Calculus I
 - MATH UN1102 and Calculus II
 - MATH UN1201 and Calculus III
 - MATH UN2010 and Linear Algebra

MATH UN1101 Calculus I
 - MATH UN1102 and Calculus II
 - MATH UN1205 and Accelerated Multivariable
 - MATH UN2010 Calculus
 and Linear Algebra

MATH UN1207 Honors Mathematics A
 - MATH UN1208 and Honors Mathematics B

Statistics

STAT UN1201 Calculus-Based Introduction to
 Statistics

STAT GU4203 PROBABILITY THEORY

STAT GU4204 Statistical Inference

STAT GU4205 Linear Regression Models

One elective in statistics from among courses numbered STAT
 GU 4206 through GU 4266.

Computer Science

Select one of the following:

COMS W1004 Introduction to Computer Science
 and Programming in Java

COMS W1005 Introduction to Computer Science
 and Programming in MATLAB

COMS W1007 Honors Introduction to Computer
 Science

ENGI E1006 Introduction to Computing for
 Engineers and Applied Scientists

STAT UN2102 Applied Statistical Computing

Economics Seminar

ECON GU4918 Seminar In Econometrics

EDUCATION

335-336 Milbank Hall
212-854-7072

Department Assistant: Patricia Argueta

The Barnard Education Program is committed to strengthening public education and addressing issues of equity and social justice, particularly in urban schools. We offer three tracks in Education: Urban Teaching-Elementary/Childhood Education, Urban Teaching-Secondary/Adolescent Education, and Education Studies. In these tracks, students develop a critical lens for looking at the issues facing public schooling and consider ways to promote fair and inclusive policies and practices for all children in our public system. The program is open to all undergraduates at Columbia (BC, SEAS, GS, CC) who are interested in becoming certified teachers, working with young people in human service agencies, or preparing for careers related to education.

Urban Teaching Minors/Special Concentrations: Our goal is to prepare students to become skilled and reflective teachers who can effectively respond to the learning needs of diverse learners, and create supportive and intellectually stimulating classroom communities. Students learn to create innovative curriculum; gain experience observing, tutoring, and teaching a diverse range of children and young people; develop confidence in their role as teachers who can promote fair and inclusive school practices; and graduate with certification to teach in New York. (Note: we are part of an interstate agreement for reciprocal certification with many other states.)

This program is registered by the New York State Department of Education and accredited by the Teacher Education Accreditation Council (TEAC), now the Council for the Accreditation of Education Preparation (CAEP). These tracks prepare students to obtain a teaching position as a certified teacher upon graduation and/or to pursue graduate studies in education, public policy, sociology, youth studies, and other related fields.

Education Studies Minor/Special Concentration: This track prepares students to pursue graduate studies or positions in public policy, sociology, history, youth studies, philosophy, psychology, and other areas where K-12 education is frequently a focus of coursework and scholarship. Students learn to think deeply and knowledgeably about the manner in which schools socialize as well as educate citizens, and examine how the interests of different stakeholders are privileged or neglected. The courses are linked by a focus on educational inequality and youth studies. This track does not lead to certification.

All three tracks are minors (BC) or special concentrations (CC, GS, SEAS) and are intended to complement a major's disciplinary specialization and methodological training. In addition to the requirements of the minor/special concentration, students must complete a major.

Student Learning Outcomes

1. **Knowledge of Self:** Students investigate how educational experiences in and out of school affect their vision for teaching and learning, use that knowledge to reflect upon and critique their practice, and set goals for continuing growth as equitable, multicultural educators.
2. **Knowledge of Students:** Students understand the importance of getting to know the children and youth in their classrooms; develop specific strategies that aid in understanding students' needs, capacities, interests, funds of knowledge, and social identities; and construct learning experiences that are responsive and relevant to their students.
3. **Knowledge of Content:** Students develop knowledge and skills to critique the social, political, cultural, and historical forces that construct traditional content knowledge and design academic content that is dynamic, inquiry-based, and encompasses multiple literacies, and cultural perspectives.
4. **Knowledge of Pedagogy:** Students experience, practice, evaluate, and reflect on a range of constructivist, inclusive, critical, collaborative, and authentic methods for engaging students in learning and in assessing learning outcomes
5. **Knowledge of Context:** Students investigate the complex ways in which social, political, cultural, and historical forces shape school contexts, including students' opportunities in schools, teacher empowerment, effective leadership, roles of parents and the community, and patterns of similarity and difference across schools.

The Education Program is accredited by Teacher Education Accreditation Council (TEAC) to recommend students who complete the program for Initial Certification in either Childhood Education (Grades 1-6) or Adolescent Education (Grades 7-12). Graduates of the program are also eligible for membership in the Interstate Certification Agreement, a reciprocal certification among forty-one states. We provide ongoing support to those who teach in the New York City area through our New Teacher Network.

To apply, visit our website (<http://education.barnard.edu/program-education>). Students are encouraged to apply for admission by March of the sophomore year but no later than the first Monday in October of the junior year. Those who plan to study abroad during junior year should apply by December of the sophomore year and take the Methods and Practicum courses in the spring of sophomore year. Admission criteria include good academic standing; evidence of commitment to the field of education; interest in issues of social justice issues as they affect education, particularly in urban schools; and capacity for growth as an intellectually resourceful and reflective teacher. Enrollment is limited.

Associate Professors

Thea Abu El-Haj

Maria Rivera Maulucci (Program Director/Chair)

Associate, Certification Officer, and Placement Coordinator

Lisa Edstrom

Term Assistant Professor

Rachel Throop

Education Advisory Committee

Peter Balsam, Professor of Psychology and Samuel R. Milbank Chair

Lesley Sharp, Barbara Chamberlain & Helen Chamberlain

Josefsberg Professor of Anthropology

Herbert Sloan, Professor Emeritus of History

Kathryn Yatrakis, Professor of Urban Studies and Former Dean of Academic Affairs (Columbia College)

REQUIREMENTS FOR THE URBAN TEACHING MINORS/SPECIAL CONCENTRATIONS

Elementary/Childhood Education (To Teach Grades 1-6)

This program leads to New York State Initial Certification in Childhood Education (Grades 1- 6). In addition to the liberal arts major, students must complete a total of 26-28 credits as follows:

Requirement A - Educational Foundations For students who have already taken EDUC BC3032, PHIL UN2100, SOCI UN3225, or ECON BC3012 to fulfill

Requirement A prior to Fall 2018 do not need to enroll in EDUC BC1510 to fulfill the requirement.

EDUC BC1510	Educational Foundations	3
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Requirement B - Psychology

Select one of the following: 3-4.5

PSYC BC1107	Psychology of Learning
PSYC BC1115	Cognitive Psychology
PSYC BC1129	Developmental Psychology
PSYC BC2134	Educational Psychology
PSYC UN1420	Experimental Psychology: Human Behavior *

Requirement C - Pedagogical Core

EDUC BC2052	Seminar in Multicultural Elementary Pedagogy	4
EDUC BC2055	Urban School Practicum (Sec. 001)	3
EDUC BC3063	Elementary Student Teaching in Urban Schools	6
EDUC BC3064	Critical Inquiry in Urban Teaching	4
EDUC BC3061	Performance Assessment of Teaching	3

Requirement D - Pedagogical Elective

Select one of the following:

EDUC BC3050	Science in the City
EDUC BC3052	Math and the City
EDUC BC3058	Science in the City II: Preparing Future Scientists Now

Requirement E - Liberal Arts and Sciences

See <https://education.barnard.edu/urban-teaching/liberal-arts-and-sciences-requirements-certification> for more information.

* Courses offered at Columbia

Note: Senior year student teaching may conflict with other opportunities at Barnard (e.g., PSYC BC3465 Field Work and Research Seminar: The Barnard Toddler Center, PSYC BC3466 Field Work and Research Seminar: The Barnard Toddler Center). Students with these interests should arrange their schedules accordingly.

Secondary/Adolescent Education (To Teach Grades 7-12)

This program leads to the New York State Initial Certification in Adolescent Education (Grades 7-12) in the fields of English, Foreign and Ancient Languages, Mathematics, the Sciences, and Social Studies. Students must complete a total of 23-26 credits from the following course of study:

Requirement A - Educational Foundations For students who have already taken EDUC BC3032, PHIL UN2100, SOCI UN3225, or ECON BC3012 to fulfill

Requirement A prior to Fall 2018 do not need to enroll in EDUC BC1510 to fulfill the requirement.

EDUC BC1510	Educational Foundations	3
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Requirement B - Psychology

Select one of the following: 3-4.5

PSYC BC1107	Psychology of Learning
PSYC BC1115	Cognitive Psychology
PSYC BC1129	Developmental Psychology
PSYC BC2134	Educational Psychology
PSYC BC3382	Adolescent Psychology
PSYC UN1420	Experimental Psychology: Human Behavior *

Requirement C - Pedagogical Core

EDUC BC2052	Seminar in Multicultural Elementary Pedagogy	4
EDUC BC2055	Urban School Practicum (Sec. 002)	3
EDUC BC3065	Secondary Student Teaching in Urban Schools	6
EDUC BC3064	Critical Inquiry in Urban Teaching	4
EDUC BC3061	Performance Assessment of Teaching	3

Requirement D - Pedagogical Elective

Select one of the following:

EDUC BC3050	Science in the City
EDUC BC3052	Math and the City
EDUC BC3055	Arts and Humanities in the City: Critical Literacy and Digital Storytelling
EDUC BC3058	Science in the City II: Preparing Future Scientists Now

Requirement E - Liberal Arts and Sciences

See <https://education.barnard.edu/urban-teaching/liberal-arts-and-sciences-requirements-certification> for more information.

Requirement F - Additional Urban Teaching Certification Requirements: Adolescent/Secondary

Students seeking certification in Adolescent Education must also complete 36 credits in the content area for which they seek certification. Typically, students major in the subject area for which they are seeking certification. Students must earn a grade of C or better for each course taken in the content core.

English:

A total of 36 credits of English.

Foreign Languages:

A total of 36 credits in French, German, Greek, Italian, Latin, Russian, or Spanish.

Mathematics:

A total of 36 credits of Mathematics.

Science:

A total of 36 credits in sciences including a minimum of 18 credits of collegiate-level study in the science or each of the sciences for which certification is sought: Biology, Chemistry, Physics, or Earth Science. Please note that psychology does not count as a science for NYS Teacher Certification. **

Social Studies:

A total of 36 credits, including 6 credits of American History; 6 credits of European or World History; 3 credits of non-Western study; and any other distribution to make 36 credits, chosen from credits in History, Political Science, Anthropology, Sociology, and Economics.

* Courses offered at Columbia

** Please note that some applied science courses will not be accepted.

Certification Requirements

The Urban Teaching program is accredited by CAEP (formerly TEAC) and approved by the New York State Education Department to recommend students who complete the program for Initial Certification in either Childhood Education (grades 1-6) or Adolescent Education (grades 7-12). New York State has reciprocity with most other states, allowing graduates of the program the ability to apply for certification in another state through our membership in the Interstate Certification Agreement.

Certification is based on demonstrated competency in both academic and field settings. Students are required to complete a minimum of 360 hours of educational based field experiences. 260+ hours must be supervised field based experiences. Students must pass the New York State Teacher Certification Examinations and the edTPA performance assessment. Also required are workshops in Child Abuse Identification; School Violence Intervention and Prevention; and the Dignity for All Students Act (DASA), offered at Teachers College.

REQUIREMENTS FOR THE EDUCATION STUDIES MINOR/SPECIAL CONCENTRATION

To complete the Minor (BC) or Special Concentration (CC/GS) in Education Studies, students must complete 20-24 points of course work, listed below.

The Education Studies track requires a minimum of six courses:

Requirement A - Educational Foundations

EDUC BC1510	Educational Foundations	3
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Select two of the following:

EDUC BC3032	Contemporary Issues in Education
PHIL UN2100	Philosophy of Education
SOCI UN3225	Sociology of Education
SOCI UN3974	Sociology of Schools, Teaching and Learning *
ECON BC3012	Economics of Education
PSYC BC2134	Educational Psychology
PSYC BC3382	Adolescent Psychology
PSYC BC3363	Pedagogy for Higher Education in Psychology

Requirement B - Educational Elective **

Select one of the following:

SOCI W2420	Race and Place in Urban America
SOCI UN3302	Sociology of Gender
SOCI W3923	Adolescent Society
URBS UN3420	Introduction to Urban Sociology
ECON BC3011	Inequality and Poverty
AMST UN3930	Topics in American Studies (Sec. 003) *
CSER UN3919	Modes of Inquiry *
CSER UN3928	Colonization/Decolonization *
OTHER - For a full list of courses that satisfy the Educational Elective requirement, see https://education.barnard.edu/education_studies . Advanced approval required for courses not on this list or the website.	

Requirement C - Pedagogical Elective

Select one of the following:

EDUC BC3050	Science in the City
EDUC BC3052	Math and the City
EDUC BC3055	Arts and Humanities in the City: Critical Literacy and Digital Storytelling
EDUC BC3058	Science in the City II: Preparing Future Scientists Now

Requirement D - Pedagogical Core

EDUC BC2055	Urban School Practicum (Sec. 003; taken in the spring semester of your senior year)	3
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* Courses offered at Columbia

** Your final project or paper for the Educational Elective course should focus on educational issues and a copy of the project or paper must be submitted to the Education Program office for inclusion in your student file.

REQUIREMENTS FOR THE URBAN STUDIES SPECIALIZATION IN EDUCATION

Urban Studies majors who wish to pursue certification should apply to the Education Program in the fall of their junior year. We encourage students to plan carefully if they wish to pursue this option.

Urban Studies majors who have selected education as their area of specialization within the major should complete the following:

Requirement A - Educational Foundations

Select one of the following:

EDUC BC1510	Educational Foundations
EDUC BC3032	Contemporary Issues in Education
PHIL UN2100	Philosophy of Education
SOCI UN3225	Sociology of Education
SOCI UN3974	Sociology of Schools, Teaching and Learning *
ECON BC3012	Economics of Education

Requirement B - Psychology

Select one of the following:

PSYC BC1107	Psychology of Learning
PSYC BC1115	Cognitive Psychology
PSYC BC1129	Developmental Psychology
PSYC BC2134	Educational Psychology
PSYC BC3382	Adolescent Psychology
PSYC UN1420	Experimental Psychology: Human Behavior *

Requirement C - Pedagogical Elective

Select one of the following:

EDUC BC3050	Science in the City
EDUC BC3052	Math and the City
EDUC BC3058	Science in the City II: Preparing Future Scientists Now

Requirement D - Pedagogical Core

EDUC BC2052	Seminar in Multicultural Elementary Pedagogy	4
or EDUC BC2062	Seminar in Multicultural Secondary Pedagogy	
EDUC BC2055	Urban School Practicum	3

* Courses offered at Columbia

ENGLISH AND COMPARATIVE LITERATURE

Departmental Office: 602 Philosophy; 212-854-3215
<http://www.english.columbia.edu>

Director of Undergraduate Studies: Prof. Michael Golston, 407 Philosophy; 212-854-4707; mg2242@columbia.edu

Departmental Advisers:

Prof. Michael Golston, 407 Philosophy; mg2242@columbia.edu
Prof. David Yerkes, 615 Philosophy; dmy1@columbia.edu

The program in English fosters the ability to read critically and imaginatively, to appreciate the power of language to shape thought and represent the world, and to be sensitive to the ways in which literature is created and achieves its effects. It has several points of departure, grounding the teaching of critical reading in focused attention to the most significant works of English literature, in the study of the historical and social conditions surrounding literary production and reception, and in theoretical reflection on the process of writing and reading and the nature of the literary work.

The courses the department offers draw on a broad range of methodologies and theoretical approaches, from the formalist to the political to the psychoanalytical (to mention just a few). Ranging from the medieval period to the 21st century, the department teaches major authors alongside popular culture, traditional literary genres alongside verbal forms that cut across media, and canonical British literature alongside postcolonial, global, and trans-Atlantic literatures.

At once recognizing traditional values in the discipline and reflecting its changing shape, the major points to three organizing principles for the study of literature—history, genre, and geography. Requiring students not only to take a wide variety of courses but also to arrange their thinking about literature on these very different grids, the major gives them broad exposure to the study of the past, an understanding of the range of forms that can shape literary meaning, and an encounter with the various geographical landscapes against which literature in English has been produced.

ADVISING

Students are not assigned specific advisers, but rather each year the faculty members serving on the department's Committee on Undergraduate Education (CUE) are designated undergraduate advisers (see above). Upon declaring a major or concentration in English, students should meet with the director of undergraduate studies or a delegated faculty adviser to discuss the program, especially to ensure that students understand the requirements.

Students must fill out a Major Requirements Worksheet early in the semester preceding graduation. The worksheet must be reviewed by an adviser and submitted to 602 Philosophy before the registration period for the final semester. The worksheet is available in the English Department or on-line at <http://english.columbia.edu/undergraduate/major-requirements>. It is this worksheet—not the Degree Audit Report (DAR)—that determines eligibility for graduation as an English major or concentrator.

COURSE INFORMATION

Lectures

Generally, lectures are addressed to a broad audience and do not assume previous course work in the area, unless prerequisites are noted in the description. The size of some lectures is limited. Senior majors have preference unless otherwise noted, followed by junior majors, followed by senior and junior non-majors. Students are responsible for checking for any special registration procedures on-line at <http://english.columbia.edu/courses>.

Seminars

The department regards seminars as opportunities for students to do advanced undergraduate work in fields in which they have already had some related course experience. With the exception of some *CLEN* classes (in which, as comparative courses, much material is read in translation), students' admission to a seminar presupposes their having taken ENGL UN3001 Literary Texts, Critical Methods. During the three weeks preceding the registration period, students should check <http://english.columbia.edu/courses> for application instructions for individual seminars. Applications to seminars are usually due by the end of the week preceding registration. Students should always assume that the instructor's permission is necessary; those who register without having secured the instructor's permission are not guaranteed admission.

DEPARTMENTAL HONORS

Writing a senior essay is a precondition, though not a guarantee, for the possible granting of departmental honors. After essays are submitted, faculty sponsors deliver a written report on the essay to the department's Committee on Undergraduate Education (CUE), with a grade for the independent study and, if merited, a recommendation for honors. CUE considers all the essays, including sponsor recommendations, reviews students' fall semester grades, and determines which students are to receive departmental honors. Normally no more than 10% of graduating majors receive departmental honors in a given academic year.

THE DEGREE AUDIT REPORTING SYSTEM (DARS)

The DAR is a useful tool for students to monitor their progress toward degree requirements, but it is not an official document for the major or concentration, nor should it replace consultation with departmental advisers. The department's director of undergraduate studies is the final authority on whether

requirements for the major have been met. Furthermore, the DAR may be inaccurate or incomplete for any number of reasons—for example, courses taken elsewhere and approved for credit do not show up on the DAR report as fulfilling a specific requirement.

ON-LINE INFORMATION

Other departmental information—faculty office hours, registration instructions, late changes, etc.—is available on the departmental website (<http://www.english.columbia.edu>).

PROFESSORS

- James Eli Adams
- Rachel Adams
- Branka Arsic
- Christopher Baswell (Barnard)
- Sarah Cole
- Susan Crane
- Nicholas Dames
- Jenny Davidson
- Andrew Delbanco
- Kathy Eden
- Brent Edwards
- Stathis Gourgouris
- Farah Jasmine Griffin
- Saidiya Hartman
- Marianne Hirsch
- Jean E. Howard
- Sharon Marcus
- Edward Mendelson
- Robert O'Meally
- Julie Peters
- Ross Posnock
- Austin E. Quigley
- Bruce Robbins
- James Shapiro
- Gayatri Chakravorty Spivak (University Professor)
- Alan Stewart
- Gauri Viswanathan
- Jennifer Wenzel
- William Worthen (Barnard)
- David M. Yerkes

ASSOCIATE PROFESSORS

- Marcellus Blount
- Julie Crawford
- Patricia Dailey
- Michael Golston
- Erik Gray
- Eleanor Johnson
- Molly Murray

- Frances Negrón-Muntaner
- Joseph Slaughter
- Maura Spiegel

ASSISTANT PROFESSORS

- Katherine Biers
- John Gamber
- Austin Graham
- Matt Hart
- Cristobal Silva
- Dustin Stewart
- Dennis Yi Tenen

GUIDELINES FOR ALL ENGLISH AND COMPARATIVE LITERATURE MAJORS AND CONCENTRATORS

Declaring a Major in English

Upon declaring a major in English, students should meet with either the director of undergraduate studies or a departmental adviser to discuss the program. Students declaring a major should obtain a Major Requirements Worksheet from 602 Philosophy or on-line (http://english.columbia.edu/files/english/content/ENGLISH%20MAJOR%20WKSHEET_0.pdf), which outlines the requirements.

Additional information, including events and deadlines of particular relevance to undergraduates, is provided at <http://english.columbia.edu/undergraduate>, the department's undergraduate homepage. The sidebar on this page provides links to pages with details about undergraduate advising, major and concentration requirements, course options and restrictions, registration procedures, the senior essay, and writing prizes, as well as links to downloadable worksheets for the major and concentration and to course distribution requirement lists, past and present. For detailed information about registration procedures, students should consult <http://english.columbia.edu/courses>, which explains the requirements and enables students to monitor their own progress.

Newly declared majors should contact the undergraduate assistant in 602 Philosophy Hall and request that their names be added to the department's electronic mailing list for English majors and concentrators. Because important information now routinely is disseminated through e-mail, it is crucial that students be on this list.

Literary Texts, Critical Methods

The introductory course ENGL UN3001 Literary Texts, Critical Methods, together with its companion seminar, ENGL UN3011 Literary Texts, Critical Methods seminar, is required for the English major and concentration. It should be taken by the end of the sophomore year. Fulfillment of this requirement is a factor in admission to seminars and to some lectures. This once-a-week faculty lecture, accompanied by a seminar led by an advanced

graduate student in the department, is intended to introduce students to the study of literature. Students read works from the three major literary modes (lyric, drama, and narrative), drawn from premodern to contemporary literature, and learn interpretative techniques required by these various modes or genres. This course does not fulfill any distribution requirements.

Senior Essay

The senior essay program is an opportunity for students to explore in depth some literary topic of special interest to them, involving extensive background reading and resulting in an essay (8,000–15,000 words) that constitutes a substantial and original critical or scholarly argument. Students submit proposals in September of their senior year, with acceptance contingent upon the quality of the proposal and the student's record in the major. Students who are accepted are assigned a faculty sponsor to supervise the project, from its development during the fall semester to its completion in the spring. It is for the spring semester, not the fall, that students officially register for the course, designated as ENGL UN3999 Senior Essay. Senior essays are due in early April.

Course Options and Restrictions

1. No course at the 1000-level may be counted toward the major.
2. Speech courses may not be counted toward the major.
3. Two writing courses or two upper-level literature courses taught in a foreign language, or one of each, may count toward the major, though neither type of course fulfills any distribution requirement. Writing courses that may be applied toward the major include those offered through Columbia's undergraduate Creative Writing Program and through Barnard College.
4. Comparative literature courses sponsored by the department (designated as **CLEN**) may count toward the major. **Those sponsored by other departments** (e.g. *CLFR* - Comp Lit French, *CPLS* - Comp Lit and Society) **are not counted toward the major without permission of the director of undergraduate studies**. Literature courses taught in English in language departments do not count toward the major.
5. No more than two courses taken during the summer session may be counted toward the major.
6. Courses offered through the Barnard English Department may count toward the major or concentration. Before taking Barnard courses, students should verify with the director of undergraduate studies whether and how such courses may count toward the major.
7. For courses taken abroad or at other American institutions to count toward the major, students must obtain approval of the director of undergraduate studies.
8. To register for more than 42 points (including advanced standing credit) in English and comparative literature, a

student majoring in English must obtain permission of the director of undergraduate studies.

9. No more than five courses taken elsewhere may be applied to the major, four to the concentration.
10. One independent study (for at least 3 points) may count toward the major but cannot satisfy any distribution requirements; likewise, the *Senior Essay* may count toward the major but fulfills no requirements. Students **may not count both** an *Independent Study* and the *Senior Essay* toward the major.
11. Courses assigned a grade of D may not be counted toward the major.
12. Only the first course taken to count toward the major can be taken Pass/D/Fail.

MAJOR IN ENGLISH

Please read *Guidelines for all English and Comparative Literature Majors and Concentrators* above.

Ten departmental courses (for a minimum of 30 points) and, in the process, fulfillment of the following requirements. See course information above for details on fulfilling the distribution requirements.

1. ENGL UN3001 Literary Texts, Critical Methods and ENGL UN3011 Literary Texts, Critical Methods seminar
2. **Period distribution:** Three courses primarily dealing with periods before 1800, only one of which may be a course in Shakespeare
3. **Genre distribution:** One course in each of the following three generic categories:
 - Poetry
 - Prose fiction/narrative
 - Drama/film/new media
4. **Geography distribution:** One course in each of the following three geographical categories:
 - British
 - American
 - Comparative/global (comparative literature, postcolonial, global English, trans-Atlantic, diaspora)

Course Distribution Lists are available in the department and on-line at <http://english.columbia.edu/course-distribution-lists> to help students determine which courses fulfill which requirements.

A single course can satisfy more than one distribution requirement. For example, a Shakespeare lecture satisfies three requirements at once: not only does it count as one of the three required pre-1800 courses it also, at the same time, fulfills both a genre and a geography distribution requirement (drama and British, respectively). Courses not on the distribution list may count toward the major requirements **only** with the permission

of the director of undergraduate studies. Two writing courses or upper-level literature courses taught in a foreign language, or one of each, may count toward the ten required courses.

CONCENTRATION IN ENGLISH

Please read *Guidelines for all English and Comparative Literature Majors and Concentrators* above.

Eight departmental courses and, in the process, fulfillment of the following requirements. See course information above for details on fulfilling the distribution requirements.

1. ENGL UN3001 Literary Texts, Critical Methods and
ENGL UN3011 Literary Texts, Critical Methods seminar
2. **Period distribution:** Two courses dealing with periods before 1800, only one of which may be a course in Shakespeare
3. **Genre distribution:** Two courses, each chosen from a different genre category (see above)
4. **Geography distribution:** Two courses, each chosen from a different geography category (see above)

See the Course Distribution Lists, available in the department or on-line at <http://english.columbia.edu/course-distribution-lists>, to determine which courses fulfill which requirements. All of the restrictions outlined for the English major also apply for the concentration in English.

COMPARATIVE LITERATURE PROGRAM

Students who wish to major in comparative literature should consult the *Comparative Literature and Society* section of this Bulletin.

ETHNICITY AND RACE STUDIES

Center for the Study of Ethnicity and Race: 423

Hamilton; 212-854-0507

<http://www.columbia.edu/cu/cser/>

Program Director: Prof. Neferti Tadiar, 425 Hamilton;
212-854-2564; nt2181@columbia.edu (fn2103@columbia.edu)

Director of Undergraduate Studies: Prof.
Catherine Fennell, 957 Schermerhorn Extension;
212-854-7752; ckf2106@columbia.edu

Founded in 1999, the Center for the Study of Ethnicity and Race (CSER) is an interdisciplinary intellectual space whose mission is to advance the most innovative teaching, research, and public discussion about race and ethnicity. To promote its mission, the Center organizes conferences, seminars, exhibits, film screenings, and lectures that bring together faculty, undergraduates, and graduate students with diverse interests and backgrounds. Moreover, CSER partners with departments, centers, and institutes at Columbia, as well as with colleagues and organizations on and off campus, in order to reach new audiences and facilitate an exchange of knowledge.

PROGRAMS OF STUDY

The ethnicity and race studies major encompasses a variety of fields and interdisciplinary approaches to the critical study of ethnicity and race. What makes CSER unique is its attention to the comparative study of racial and ethnic categories in the production of social identities, power relations, and forms of knowledge in a multiplicity of contexts including the arts, social sciences, natural sciences, and humanities. In addition to the major, CSER also offers a concentration in ethnicity and race studies.

In both the major and concentration, students have the opportunity to select from the following areas of specialization:

- Asian American studies
- Comparative ethnic studies
- Latino/a studies
- Native American/Indigenous studies
- Individualized courses of study

Faculty and students find this field exciting and important because it opens up new ways of thinking about two fundamental aspects of human social existence: race and ethnicity. Although various traditional disciplines such as history, sociology, anthropology, and literature, among others, offer valuable knowledge on race and ethnicity, ethnicity and race studies provides a flexible interdisciplinary and comparative space to bring the insights of various conceptual frameworks and disciplines together in critical dialogue.

Overall, this program introduces students to the study of ethnicity and race, and the deep implications of the subject matter for thinking about human bodies, identity, culture, social hierarchy, and the formation of political communities. The major encourages students to consider the repercussions of racial and ethnic identifications to local and global politics, and how race and ethnicity relates to gender, sexuality, and social class, among other forms of hierarchical difference.

Students majoring in ethnicity and race studies may focus their work on specific groups, such as Asian Americans, Latinos, or Native Americans; or a comparative study of how race and ethnicity are formed and how conceptions of race and ethnicity transform and change over time and place. Students also have the option of designing an individualized course of study, which may encompass a wide variety of themes. Among the most studied are those involving the relationship between race, ethnicity and law; health; human rights; urban spaces; cultural production; visual culture; and the environment.

Due to its rigorous curriculum, which trains students in theory, history, and a wide range of modes of inquiry, the major enables students to follow multiple directions after graduation. According to our internal surveys, nearly half of CSER students continue to Ph.D. programs in history, anthropology, and ethnic studies, among other areas. A second significant number of students continue on to professions most notably related to law, public policy, medicine, human rights, community organizing, journalism, and the environment.

STUDY ABROAD

Students are highly encouraged to participate in study abroad programs, as they represent an exciting opportunity to learn new languages and live in countries that are germane to their areas of study. In addition, traveling abroad can enrich every student's intellectual experience by providing an opportunity to learn about other perspectives on ethnicity and race.

In summer 2017 CSER, together with Columbia's Office of Global Programs (OGP) launched a pilot summer program in Mexico City in collaboration with the Centro de Investigación y Docencia Económicas--CIDE, a leading institution of higher education with a focus in the social sciences. The program consists of an intensive 5-week CSER core course, "Colonization-Decolonization," visits to various historical colonial sites and a field trip to Oaxaca. Professors Claudio Lomnitz and Manan Ahmed jointly taught the class. Eleven Columbia students participated in this exchange. For more information about Summer 2018 Global Programs, please contact cser@columbia.edu

In the past, students have also participated in study abroad programs in Australia, Dominican Republic, Mexico, and South Africa. To ensure that study abroad complements the major and integrates effectively with the requirements of the major, students are encouraged to consult with CSER's undergraduate adviser as early in their academic program as possible. The director

of undergraduate studies can advise students on what may be exciting programs for their areas.

DEPARTMENTAL HONORS

CSER majors may choose to write and/or produce an honors project. If a monograph, the honors thesis is expected to be 35-50 pages in length. Honors projects can also take other forms, such as video or websites. These projects also require a written component, but of a shorter length than the traditional thesis. During their senior year, honors students perform research as part of CSER UN3990 Senior Project Seminar. Senior projects are due in early April.

In order to qualify for departmental honors, students must satisfy all the requirements for the major, maintain a GPA of at least 3.6 in the major, and complete a high quality honors project. In addition, each student is expected to meet periodically with his or her supervising project adviser and preceptor. Normally no more than 10% of graduating majors receive departmental honors in a given academic year.

Executive Committee

- Sayantani DasGupta (CSER, Professional Studies)
- Catherine Fennel (Anthropology)
- Karl Jacoby (History)
- Natasha Lightfoot (History)
- Claudio Lomnitz (Anthropology)
- Frances Negrón-Muntaner (English and Comparative Literature)
- Mae Ngai (History)
- Ana Maria Ochoa (Ethnomusicology)
- Gary Okihiro (School of International and Public Affairs)
- Deborah Paredez (CSER and Professional Practice)
- Audra Simpson (Anthropology)
- Neferti Tadiar (Barnard, Women's Studies)
- Gray Tuttle (East Asian Languages and Cultures)
-

AFFILIATED FACULTY

- Rachel Adams (English and Comparative Literature)
- Carlos Alonso (Latin American and Iberian Cultures)
- Christina Burnett (Law School)
-
- Nadia Abu El-Haj (Anthropology, Barnard)
- Kevin Fellezs (Music)
- Kaiama L. Glover (French, Barnard)
- Steven Gregory (Anthropology)
- Kim Hall (English, Barnard)
- Marianne Hirsch (English and Comparative Literature)
- Maja Horn (Spanish and Latin American Cultures, Barnard)
- Jean Howard (English and Comparative Literature)
- Elizabeth Hutchinson (Art History, Barnard)

- Clara Irazabal Zurita (Architecture, Planning and Preservation)
- Ira Katznelson (Political Science)
- George Lewis (Music)
- Natasha Lightfoot (History)
- Jose Moya (History, Barnard)
- Celia Naylor (History, Barnard)
- Greg Pflugfelder (East Asian Languages and Cultures)
- Pablo Piccato (History)
- Caterina Pizzigoni (History)
- Elizabeth A. Povinelli (Anthropology)
- Bruce Robbins (English and Comparative Literature)
- Samuel Roberts (History)
- Joseph Slaughter (English and Comparative Literature)
- Dennis Tenen (English and Comparative Literature)

MAJOR IN ETHNICITY AND RACE STUDIES

The major in ethnicity and race studies consists of a minimum of 27 points. Students take three core courses (may choose between CSER UN1010 and CSER UN1040) and write a senior research project. Following the core courses, students take a minimum of four elective courses, one of which must be a seminar:

Core Courses

CSER UN1010	Introduction to Comparative Ethnic Studies (or)
CSER UN1040	Critical Approaches to the Study of Ethnicity and Race
CSER UN3919	Modes of Inquiry
CSER UN3928	Colonization/Decolonization

Specialization

Students must complete at least four courses, in consultation with their major adviser, in one of the following areas of specialization:

Asian American studies
Comparative ethnic studies
Latino/a studies
Native American/Indigenous studies
Individualized courses of study

Senior Research Project

CSER UN3990	Senior Project Seminar
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The final requirement for the major is completion of a senior essay, to be written in the spring of the senior year. All CSER seniors are expected to present their paper at the annual undergraduate symposium in April. Students may fulfill this requirement in one of the following two ways:

1. By matriculating in the Senior Thesis course and writing the thesis under the supervision of the course faculty.
2. By taking an additional 4-point seminar where a major paper is required and further developing the paper into a thesis length work (minimum of 30 pages) under the supervision of a CSER faculty member.

Language Courses

One of the following is highly recommended, although not required for the major:

One course beyond the intermediate-level in language pertinent to the student's focus

An introductory course in a language other than that used to fulfill the degree requirements, but that is pertinent to the student's focus

A linguistics or other course that critically engages language

An outside language and study abroad programs that include an emphasis on language acquisition

CONCENTRATION IN ETHNICITY AND RACE STUDIES

The requirements for this program were modified on September 19, 2014. Students who declared this program before this date should contact the director of undergraduate studies for the department in order to confirm their correct course of study.

The concentration in ethnicity and race studies requires a minimum of 19 points. Students take two core courses (may choose between CSER UN1010 and CSER UN1040) and four elective courses, one of which must be a seminar:

Core Courses

CSER UN1010	Introduction to Comparative Ethnic Studies (or)
CSER UN1040	Critical Approaches to the Study of Ethnicity and Race
CSER UN3928	Colonization/Decolonization

Specialization

Students must complete at least four courses, in consultation with their major adviser, in one of the following areas of specialization:

Asian American studies

Comparative ethnic studies

Latino/a studies

Native American/Indigenous studies

Individualized courses of study

FILM AND MEDIA STUDIES

Departmental Office: 513 Dodge; 212-854-2815
<http://arts.columbia.edu/film>

Director of Undergraduate Studies: Prof. Robert King, 509C Dodge Hall; 212-854-2815; rk2704@columbia.edu. Office hours: Wednesdays, 2–5 p.m.

The major in film studies is scholarly, international in scope, and writing-intensive. Students choose to major in film if they want to learn more about the art form, from technology to cultural significance; want to work in the film industry; or are interested in a major that combines arts and humanities.

Students usually declare the major toward the end of the second year by meeting with the departmental adviser; together, they create a program of twelve required courses within the major, often supplemented by courses outside the department. In the lecture classes and seminars, there tends to be a mixed population of undergraduate majors and graduate film students.

Students have the opportunity to gain additional experience by taking advantage of internship opportunities with film companies, working on graduate student films, and participating in the Columbia Undergraduate Film Productions (CUFP), an active, student-run organization that provides film-making experience to Columbia undergraduate producers and directors. In addition to careers in screenwriting, directing, and producing, alumni have gone on to work in film distribution, publicity, archives, and festivals, and to attend graduate school to become teachers and scholars.

The trajectory of the major is from introductory-level courses (three are required), to intermediate and advanced-level courses (two are required, plus seven electives). While film studies majors take workshops in screenwriting and film-making, the course of study is rooted in film history, theory, and culture.

The prerequisite for all classes is *Introduction to Film and Media Studies* (FILM UN1000) offered each term at Columbia as well as at Barnard, and open to first-year students. Subsequently, majors take a combination of history survey courses; workshops ("Labs"); and advanced classes in theory, genre study, national cinemas, auteur study, and screenwriting.

The educational goal is to provide film majors with a solid grounding in the history and theory of film; its relation to other forms of art; and its synthesis of visual storytelling, technology, economics, and sociopolitical context, as well as the means to begin writing a script and making a short film.

Students who wish to graduate with honors must take the Senior Seminar in Film Studies (FILM UN3900), writing a thesis that reflects mastery of cinematic criticism. The essay is submitted

after the winter break. Students decide upon the topic with the professor and develop the essay during the fall semester.

Since film courses tend to be popular, it is imperative that students attend the first class. Registration priority is usually given to film majors and seniors.

DEPARTMENTAL HONORS

In order to qualify for departmental honors, students must take FILM UN3900 Senior Seminar in Film Studies, have a GPA of at least 3.75 in the major and distinction in their overall achievements in film study. The department submits recommendations to the undergraduate honors committees for confirmation. Normally no more than 10% of graduating majors receive departmental honors in a given academic year.

FACULTY

- Vito Adriaenssens
- Nico Baumbach
- Loren-Paul Caplin
- Jane Gaines
- Ronald Gregg
- Annette Insdorf
- Caryn James
- Robert King
- Richard Peña
- James Schamus
- Edward Turk

MAJOR IN FILM STUDIES

The major in film studies requires a minimum of 36 points distributed as follows:

Introductory Courses

FILM UN1000	Introduction to Film and Media Studies
FILM GU4000	Film and Media Theory

History Courses

Select two of the following courses, one of which must either be FILM UN2010 or FILM UN2020:

FILM UN2010	Cinema History 1: Beginning-1930
FILM UN2020	Cinema History 2: 1930-60
FILM UN2030	Cinema History 3: 1960-90
FILM UN2040	Cinema History 4: after 1990

Laboratories

Select one of the following courses:

FILM UN2410	Laboratory in Writing Film Criticism
FILM UN2510	Laboratory in Fiction Filmmaking
FILM UN2420	Laboratory in Screenwriting
FILM UN2520	Laboratory In Nonfiction Filmmaking

Electives

Select seven of the following electives, one of which must be an international course:

FILM UN1010	Genre Study
FILM UN2310	The Documentary Tradition
FILM UN2190	Topics in American Cinema
FILM UN3020	Interdisciplinary Studies
FILM UN3900	Senior Seminar in Film Studies
FILM UN3910	Senior Seminar in Filmmaking
FILM UN3920	Senior Seminar in Screenwriting
FILM UN3925	Narrative Strategies in Screenwriting
FILM UN3930	Seminar in International Film
FILM UN3950	Seminar in Media: Seriality
FILM UN2400	Script Analysis
FILM UN3010	Auteur Study
FILM UN2290	Topics in World Cinema: Arab and Africa
FILM G4310	Experimental Film and Media
FILM G4320	New Directions in Film and Philosophy
FILM GU4910	Seeing Narrative

FRENCH AND ROMANCE PHILOLOGY

Departmental Office: 515 Philosophy; 212-854-2500 or 212-854-3208

<http://www.columbia.edu/cu/french/>

Director of Undergraduate Studies: Prof. Emmanuelle Saada, 516 Philosophy; 212-854-3691; es2593@columbia.edu

Director of the Language Program: Dr. Pascale Hubert-Leibler, 519 Philosophy; 212-854-4819; ph2028@columbia.edu

Academic Department Administrator: Isabelle Chagnon, 515 Philosophy; 212-854-7978; ic7@columbia.edu

The Department of French and Romance Philology offers a major and concentration in French, as well as a major and concentration in French and Francophone studies. Students who are primarily interested in French literature should consider the major in French. Students who are interested in French history and civilization, and in the literature and culture of the Francophone world, should consider the major in French and Francophone studies.

Major in French

The major in French gives students an in-depth familiarity with the language, culture, and literature of France and the French-speaking world. After completing the four-semester language requirement, students take courses in advanced grammar, and composition to refine their skills in reading, speaking, and writing French. In a required two-semester survey course (FREN UN3333-FREN UN3334), they receive a comprehensive overview of the development of French literature from the Middle Ages to the present day. After completing these core courses, French majors are encouraged to pursue individual interests; a wide range of language, literature, and cultural studies courses is available. Small classes and seminars allow for individual attention and enable students to work closely with faculty members. Advanced elective courses on French literature, history, philosophy, and cinema allow students to explore intellectual interests, perfect critical reading skills, and master close reading techniques.

The capstone course is the senior seminar, in which students study a range of texts and critical approaches and are encouraged to synthesize their learning in previous courses. The optional senior essay, written under the direction of a faculty member, introduces students to scholarly research. To be considered for departmental honors, students must complete the senior essay.

Major in French and Francophone Studies

The major in French and Francophone studies provides an interdisciplinary framework for the study of the history, literature, and culture of France and parts of the world in which French is an important medium of culture. Students explore the history

and contemporary applications of concepts such as citizenship, national unity, secularism, and human rights, and explore central issues including universalism/relativism, tradition/modernity, and religion/state as they have developed in France and its colonies/former colonies since the 18th century.

Students take a series of required courses that includes:

- French grammar and composition/stylistics, essential to achieving proficiency in French language;
- FREN UN3420 Introduction To French and Francophone Studies I-FREN UN3421 Introduction To French and Francophone Studies II;
- FREN UN3995 Senior Seminar.

Having completed these courses, students take courses in related departments and programs, e.g., history, anthropology, political science, women's studies, human rights, art history, to fulfill the interdisciplinary portion of the major. To ensure methodological focus, three of these courses should be taken within a single field (e.g., history, music, anthropology, or political science), or in relation to a single issue or world region, e.g., West Africa.

IN FULFILLMENT OF THE LANGUAGE REQUIREMENT

Students beginning the study of French at Columbia must take four terms of the following two-year sequence:

Entering students are placed, or exempted, on the basis of their College Board Achievement or Advanced Placement scores, or their scores on the placement test administered by the Center for Student Advising, 403 Lerner. An SAT score of 780 or a score of 4 on the AP exam satisfies the language requirement.

The Barnard course, FREN BC1204 Intermediate II does **not** fulfill the undergraduate language requirement.

Language Proficiency Courses

Elementary and intermediate French courses help students develop an active command of the language. In FREN UN1101 Elementary French I and FREN UN1102 Elementary French II, the communicative approach is the main instructional method. In addition to practicing all four language skills—listening, speaking, reading, and writing—students are introduced to the cultural features of diverse French-speaking communities.

In intermediate courses FREN UN2101 INTERMEDIATE FRENCH I and FREN UN2102 Intermediate Course II, students develop linguistic competence through the study of short stories, films, novels, and plays. After completing the four-semester language sequence, students can discuss and write in fairly proficient French on complex topics.

At the third-year level, attention is focused on more sophisticated use of language, in grammar and composition courses, and on literary, historical, and philosophical questions.

Conversation Courses

Students looking for intensive French oral practice may take one of the 2-point conversation courses offered at intermediate and advanced levels. Conversation courses generally may not be counted toward the major. The exception is the special 3-point advanced conversation course, FREN UN3498 French Cultural Workshop, offered in the fall, designed to meet the needs of students planning to study abroad at Reid Hall.

ADVANCED PLACEMENT

- AP score of 4: The department grants 0 credits for a score of 4 on the AP French Language exam, but the foreign language requirement is satisfied.
- AP score of 5 or DELF: The department grants 3 credits for a score of 5 on the AP French Language exam, or for the completion of DELF (Diplôme d'Etudes en Langue Française). Students are awarded this credit after they take a 3000-level French course (taught in French, for at least 3 points) and obtain a grade of B or above in that course.
- DALF C1 level or IB HL score of 6 or 7: The department grants 6 credits for the C1 level of DALF (Diplôme Approfondi de Langue Française), or for a score of 6 or 7 on the International Baccalaureate (IB) Higher Level (HL) exam. Students have no obligation to take higher-level French courses in order to receive these 6 credits, but restrictions apply on the use of these credits toward the French major.

LANGUAGE LABORATORY AND ON-LINE MATERIALS

Language laboratories located in the International Affairs Building provide opportunities for intensive practice in French pronunciation and aural comprehension. French courses typically make extensive use of on-line interactive materials that students can access from their own computer terminals.

MAISON FRANÇAISE

Students interested in French should acquaint themselves with the Maison Française, which houses a reading room of French newspapers, periodicals, books, and videos, and sponsors lectures/discussions by distinguished French visitors to New York City. With its weekly French film series, book club, café-conversation and other events, the Maison Française offers an excellent opportunity for students to perfect their language skills and enhance their knowledge of French and Francophone culture.

STUDY ABROAD

Because a direct experience of contemporary French society is an essential part of the program, majors and concentrators are strongly encouraged to spend either a semester or a year at Reid Hall-Columbia University in Paris, or at another French or Francophone university. During their time abroad, students take courses credited toward the major and, in some cases, also toward other majors (e.g. history, art history, political science).

For information on study abroad, visit the OGP website at www.ogp.columbia.edu, call 212-854-2559, or e-mail studyabroad@columbia.edu. For a list of approved study abroad programs, visit <http://www.ogp.columbia.edu/index.cfm?FuseAction=Programs.ListAll>.

Reid Hall, Paris

Located at 4 rue de Chevreuse, Paris, Reid Hall is administered by Columbia University. It offers semester and year-long programs of study, as well as summer courses.

Most students who study at Reid Hall take courses in the French university system (e.g., at the Sorbonne) and core courses offered at Reid Hall. In their first semester, students take a course in academic writing in French, enabling them to succeed at a high level in French university courses. Special opportunities include small topical seminars of Reid Hall students and French students.

For information on study abroad at Reid Hall, visit www.ogp.columbia.edu.

GRADING

Students who wish to use toward the major or concentration a course in which a grade of D has been received must consult with the director of undergraduate studies.

DEPARTMENTAL HONORS

Majors who wish to be considered for departmental honors should consult with the director of undergraduate studies. To be eligible, students must have a grade point average of at least 3.7 in major courses and have completed an approved senior thesis under the guidance of a faculty member at Columbia or Reid Hall. Normally no more than 10% of graduating majors receive departmental honors in a given academic year.

UNDERGRADUATE PRIZES

The Department of French and Romance Philology awards the following prizes to students enrolled in courses in the department:

1. Prize for Excellence in French Studies: awarded to a highly promising student in an intermediate or advanced French course;
2. Senior French Prize: awarded to an outstanding graduating major.

PROFESSORS

- Madeleine Dobie
- Antoine Compagnon
- Souleymane Bachir Diagne
- Pierre Force
- Elisabeth Ladenson
- Emmanuelle Saada

ASSOCIATE PROFESSORS

- Peter Connor (Barnard)

- Joanna Stalnaker

ASSISTANT PROFESSORS

Thomas Dodman

Eliza Zingesser

VISITING PROFESSORS

Etienne Balibar

SENIOR LECTURERS

- Heidi Holst-Knudsen
- Pascale Hubert-Leibler
- Sophie Queuniet

LECTURERS

- Vincent Aurora
- Alexandra Borer
- Pascale Crépon
- Samuel Skippon

MAJOR IN FRENCH

The program of study should be planned before the end of the sophomore year with the director of undergraduate studies.

The major in French requires a minimum of 33 points beyond completion of the language requirement (FREN UN2102 Intermediate Course II), distributed as follows:

FREN UN3405	Advanced Grammar and Composition I
FREN UN3333 - FREN UN3334	Introduction to Literary Study I and Introduction to Literary Studies II
FREN UN3600	France, Past and Present. An Introduction to French Civilization.
FREN UN3995	Senior Seminar

Select one upper-level course on literature before 1800.

Select one course in area of Francophone literature or culture, i.e., bearing on practices of French outside of France or on internal cultural diversity of France.

The remaining four courses (12 points) are to be chosen from 3000-level offerings in French literature, linguistics, or civilization.

One of the following advanced language classes can be counted as an elective: French for Diplomats; French Culture, Language and Society through...; Advanced Translation Workshop; and The Cultural Workshop.

Note the following:

- FREN BC3006 Composition and Conversation is not applicable to either the French major or the concentration. Other Barnard French courses may be taken with the approval of the director of undergraduate studies;

- Heritage speakers are exempted from FREN UN3405 Advanced Grammar and Composition I, but must replace the course by taking an advanced elective.

The following Columbia French courses are **not applicable** to the French major or concentration:

FREN UN1101	Elementary French I
FREN UN1102	Elementary French II
FREN UN1105	Accelerated Elementary French
FREN UN2101	INTERMEDIATE FRENCH I
FREN UN2102	Intermediate Course II
FREN UN2106	RAPID READING AND TRANSLATION
FREN UN2121	INTERMED CONVERSATN FRENCH I
FREN UN2122	INTERMED CONVERSATN FRENCH II
FREN UN3131	Third-Year Conversation I
FREN UN3132	Third-Year Conversation II

CONCENTRATION IN FRENCH

The requirements for this program were modified on March 1, 2016. Students who declared this program before this date should contact the director of undergraduate studies for the department in order to confirm their correct course of study.

The concentration in French requires a minimum of 24 points beyond completion of the language requirement (FREN UN2102 Intermediate Course II), distributed as follows:

FREN UN3405	Advanced Grammar and Composition I
FREN UN3333 - FREN UN3334	Introduction to Literary Study I and Introduction to Literary Studies II
FREN UN3600	France, Past and Present. An Introduction to French Civilization.

The remaining four courses (12 points) are to be chosen from 3000-level offerings in French literature, linguistics, or civilization.

One of the following advanced language classes can be counted as an elective: French for Diplomats; French Culture, Language and Society through...; Advanced Translation Workshop; and The Cultural Workshop.

MAJOR IN FRENCH AND FRANCOPHONE STUDIES

The requirements for this program were modified on February 14, 2014. Students who declared this program before this date should contact the director of undergraduate studies for the department in order to confirm their correct course of study.

The program of study should be planned before the end of the sophomore year with the director of undergraduate studies.

The major in French and Francophone studies requires a minimum of 33 points beyond completion of the language requirement (FREN UN2102 Intermediate Course II), distributed as follows:

FREN UN3405	Advanced Grammar and Composition I
FREN UN3420	Introduction To French and Francophone Studies I
FREN UN3421	Introduction To French and Francophone Studies II
FREN UN3995	Senior Seminar

Select one course on Francophone/postcolonial French literature.

The remaining six courses (18 points) are to be chosen from upper-level offerings in French and other disciplines. Nine (9) of these points must be taken in a discipline other than French literature. To ensure focus, these interdisciplinary electives must fall within a single discipline of subject area. Courses must be pre-approved by the director of undergraduate studies. One of the advanced electives may be a senior essay written under the direction of a faculty member affiliated with the French and Francophone studies committee or teaching at Reid Hall. Majors who choose to write a senior essay at Columbia should register for the senior tutorial course in their adviser's home department.

Note the following:

- FREN BC3006 Composition and Conversation is not applicable to either the French and Francophone studies major or concentration. Other Barnard College French courses may be taken with the approval of the director of undergraduate studies;
- Heritage speakers can be exempted from FREN UN3405 Advanced Grammar and Composition I, but must replace the course by taking an advanced elective.

The following Columbia French courses are not applicable to the French and Francophone studies major or concentration:

FREN UN1101	Elementary French I
FREN UN1102	Elementary French II
FREN UN1105	Accelerated Elementary French
FREN UN2101	INTERMEDIATE FRENCH I
FREN UN2102	Intermediate Course II
FREN UN2106	RAPID READING AND TRANSLATION
FREN UN2121	INTERMED CONVERSATN FRENCH I
FREN UN2122	INTERMED CONVERSATN FRENCH II
FREN UN3131	Third-Year Conversation I
FREN UN3132	Third-Year Conversation II

CONCENTRATION IN FRENCH AND FRANCOPHONE STUDIES

The requirements for this program were modified on March 1, 2016. Students who declared this program before this date should contact the director of undergraduate studies for the department in order to confirm their correct course of study.

The concentration in French and Francophone studies requires a minimum of 24 points beyond completion of the language requirement (FREN UN2102 Intermediate Course II), distributed as follows:

FREN UN3405	Advanced Grammar and Composition I
FREN UN3420	Introduction To French and Francophone Studies I
FREN UN3421	Introduction To French and Francophone Studies II

One course on Francophone/postcolonial French literature.

The remaining four courses (12 points) are to be chosen from upper-level offerings in French and other disciplines. Six (6) of these points must be taken in a discipline other than French literature. To ensure focus, these interdisciplinary elective courses must fall within a single discipline or subject area. Courses must be pre-approved by the director of undergraduate studies.

GERMANIC LANGUAGES

Departmental Office: 414 Hamilton; 212-854-3202
<https://germanic.columbia.edu/>

Director of Undergraduate Studies: Prof. Tobias Wilke, 412 Hamilton; 212-854-5344; tw2284@columbia.edu

Language Instruction: Jutta Schmiers-Heller, 403A Hamilton; 212-854-4824; js2331@columbia.edu (rak23@columbia.edu)

The Department of Germanic Languages and Literatures is considered one of the very best in the country. Many of the faculty specialize in the study of German literature and culture from 1700 to the present. German majors acquire proficiency in examining literary, philosophical, and historical texts in the original, as well as critical understanding of modern German culture and society. Particular attention is given to German-speaking traditions within larger European and global contexts. Courses taught in translation build on Columbia's Core Curriculum, thereby allowing students to enroll in upper-level seminars before completing the language requirement.

All classes are taught as part of a living culture. Students have ample opportunities to study abroad, to work with visiting scholars, and to take part in the cultural programs at Deutsches Haus. In addition, the department encourages internships with German firms, museums, and government offices. This hands-on experience immerses students in both language and culture, preparing them for graduate study and professional careers.

Upon graduation, German majors compete successfully for Fulbright or DAAD scholarships for research in Germany or Austria beyond the B.A. degree. Our graduating seniors are highly qualified to pursue graduate studies in the humanities and social sciences, as well as professional careers. Former majors and concentrators have gone on to careers in teaching, law, journalism, banking and consulting, international affairs, and communications.

German literature and culture courses are taught as seminars integrating philosophical and social questions. Topics include romanticism, revolution, and national identity; German intellectual history; minority literatures; Weimar cinema; German-Jewish culture and modernity; the Holocaust and memory; and the history and culture of Berlin. Classes are small, with enrollment ranging from 5 to 15 students.

The department regularly offers courses in German literature and culture in English for students who do not study the German language. The department also participates in Columbia's excellent program in comparative literature and society.

ADVANCED PLACEMENT

The department grants 3 credits for a score of 5 on the AP German Language exam, which satisfies the foreign language requirement. Credit is awarded upon successful completion of a

3000-level (or higher) course with a grade of B or higher. This course must be for at least 3 points of credit and be taught in German. Courses taught in English may not be used for language AP credit. The department grants 0 credits for a score of 4 on the AP German Language exam, but the foreign language requirement is satisfied.

THE YIDDISH STUDIES PROGRAM

The program in Yiddish studies offers a track in both the undergraduate major and concentration, in addition to graduate studies leading to the Ph.D. The graduate program is considered one of the world's most important, with its graduates holding many of the major university positions in the field. In both the undergraduate and graduate program, emphasis is placed not merely on acquiring linguistic proficiency and textual study, but also viewing Yiddish literature in a larger cultural and interdisciplinary context.

Students work with faculty in Germanic languages, Jewish studies, history, and Slavic studies to broaden their understanding of the literature, language, and culture of Eastern European Jewry. Classes are small, and instruction is individualized and carefully directed to ensure that students gain both a thorough general grounding and are able to pursue their own particular interests in a wide-spanning field. The program also offers classes taught in translation for students who do not study Yiddish.

THE GERMAN LANGUAGE PROGRAM

First- and second-year German language courses emphasize spoken and written communication, and provide a basic introduction to German culture. Goals include mastery of the structure of the language and enough cultural understanding to interact comfortably with native speakers.

After successfully completing the elementary German sequence, GERM UN1101 Elementary German Language Course, I-GERM UN1102 Elementary German Language Course, II, students are able to provide information about themselves, their interests, and daily activities. They can participate in simple conversations, read edited texts, and understand the main ideas of authentic texts. By the end of GERM UN1102 Elementary German Language Course, II, students are able to write descriptions, comparisons, and creative stories, and to discuss general information about the German-speaking countries.

The intermediate German sequence, GERM UN2101 Intermediate German I-GERM UN2102 Intermediate German II, increases the emphasis on reading and written communication skills, expands grammatical mastery, and focuses on German culture and literary texts. Students read short stories, a German drama, and increasingly complex texts. Regular exposure to video, recordings, the World Wide Web, and art exhibits heightens the cultural dimensions of the third and fourth semesters. Students create portfolios comprised of written and spoken work.

Upon completion of the second-year sequence, students are prepared to enter advanced courses in German language, culture, and literature at Columbia and/or at the Berlin Consortium for German Studies in Berlin. Advanced-level courses focus on more sophisticated use of the language structure and composition (GERM UN3001 Advanced German, I-*GERM UN3002 Advanced German II: Vienna*); on specific cultural areas; and on literary, historical, and philosophical areas in literature-oriented courses (GERM UN3333 Introduction To German Literature [In German]).

IN FULFILLMENT OF THE LANGUAGE REQUIREMENT IN GERMAN

Students beginning the study of German at Columbia must take four terms of the following two-year sequence:

GERM UN1101	Elementary German Language Course, I
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GERM UN1102	Elementary German Language Course, II
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GERM UN2101	Intermediate German I
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GERM UN2102	Intermediate German II
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Entering students are placed, or exempted, on the basis of their College Board Achievement or Advanced Placement scores, or their scores on the placement test administered by the departmental language director. Students who need to take GERM UN1101 Elementary German Language Course, I-GERM UN1102 Elementary German Language Course, II may take GERM UN1125 Accelerated Elementary German I & II as preparation for GERM UN2101 Intermediate German I.

UNIVERSITY STUDY IN BERLIN

The Berlin Consortium for German Studies provides students with a study abroad program, administered by Columbia, which includes students from the other consortium member schools (Princeton, Yale, University of Pennsylvania, Johns Hopkins, and the University of Chicago). Under the guidance of a senior faculty member, the program offers a home stay with a German family, intensive language instruction, and study in regular German university courses at the Freie Universität Berlin.

For additional information on the Berlin Consortium, see the *Study Abroad—Sponsored Programs* section in this Bulletin, visit the Office of Global Programs (<http://www.ogp.columbia.edu>), or consult the program's office in 606 Kent Hall; 212-854-2559; berlin@columbia.edu.

DEUTSCHES HAUS

Deutsches Haus, 420 West 116th Street, provides a center for German cultural activities on the Columbia campus. It sponsors lectures, film series, and informal gatherings that enrich the academic programs of the department. Frequent events throughout the fall and spring terms offer students opportunities to practice their language skills.

GRADING

Courses in which a grade of D has been received do not count toward the major or concentration requirements.

DEPARTMENTAL HONORS

Normally no more than 10% of graduating majors receive departmental honors in a given academic year. For the requirements for departmental honors, see the director of undergraduate studies.

PROFESSORS

- Mark Anderson
- Stefan Andriopoulos
- Claudia Breger
- Jeremy Dauber
- Andreas Huyssen (emeritus)
- Harro Müller
- Dorothea von Mücke
- Oliver Simons (Chair)

ASSISTANT PROFESSOR

- Tobias Wilke

SENIOR LECTURERS

- Wijnne de Groot (Dutch)
- Jutta Schmiere-Heller

LECTURERS

Agnieszka Legutko (Yiddish)

MAJOR IN GERMAN LITERATURE AND CULTURAL HISTORY

The goal of the major is to provide students with reasonable proficiency in reading a variety of literary, philosophical, and historical texts in the original and, through this training, to facilitate a critical understanding of modern German-speaking cultures and societies. Students should plan their program of study with the director of undergraduate studies as early as possible. Competence in a second foreign language is strongly recommended, especially for those students planning to attend graduate school.

The major in German literature and cultural history requires a minimum of 30 points, distributed as follows:

GERM UN3001	Advanced German, I
GERM UN3333	Introduction To German Literature [In German]

Select two of the following survey courses in German literature and culture (at least one of these must focus on pre-20th-century cultural history):

GERM UN3443	Romanticism, Revolution, Realism [In German]
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GERM UN3444 Decadence, Modernism, Exile [In German]

GERM UN3445 German Literature After 1945 [In German]

One course in German intellectual history

GERM UN3991 Senior Seminar

The remaining courses to be chosen from the 3000- or 4000-level offerings in German and Comparative Literature–German

Senior Thesis

A senior thesis is not required for the major. Students interested in a senior thesis or research project may do so through independent study with a faculty member over one or two semesters.

MAJOR TRACK IN YIDDISH STUDIES

First- and second-year Yiddish language courses emphasize spoken and written communication, and provide a basic introduction to Eastern European Jewish culture. Goals include mastery of the structure of the language and enough cultural understanding to interact comfortably with native speakers.

After second-year Yiddish language courses are completed, students should feel sufficiently comfortable to begin to work with Yiddish literature in the original. Upper-level undergraduate/graduate courses are designed to accommodate students with a range of Yiddish language experience, and intensive language summer study is also encouraged for improvement in language acquisition and comprehension.

The goal is to provide students with reasonable proficiency in reading a variety of literary, philosophical, and historical texts in the original and, through this training, to provide them with a critical understanding of Yiddish-speaking culture and society. Students should plan their program of study with the director of undergraduate studies as early as possible.

The major track in Yiddish studies requires a minimum of 30 points, distributed as follows:

1. At least three courses of intermediate/advanced language study;
2. Two courses in Yiddish literature, at least one of which is not taught in translation;
3. One course in the senior seminar or independent study;
4. Four related courses, at least one of which is in medieval or modern Jewish history.

A senior thesis is required for the track in Yiddish studies. Students interested in a senior thesis or research project may do so through independent study with a faculty member over one or two semesters.

CONCENTRATION IN GERMAN LITERATURE AND CULTURAL HISTORY

The concentration in German literature and cultural history requires a minimum of 21 points in German courses numbered GERM UN3001 and above, including the senior seminar *GERM UN3991 Senior Seminar*, which may be taken in the junior or senior year.

CONCENTRATION TRACK IN YIDDISH STUDIES

The concentration track in Yiddish studies requires a minimum of 24 points, distributed as follows:

1. At least three courses of beginning/intermediate language study
2. Two courses in Yiddish literature
3. Three related courses, at least one of which is in medieval or modern Jewish history

HISTORY

Departmental Office: 413 Fayerweather; 212-854-4646
<http://www.history.columbia.edu>

Director of Undergraduate Studies: Prof. Caterina Pizzigoni,
 321 Fayerweather; cp2313@columbia.edu

Undergraduate Administrator: Sia
 Mensah; sjm2206@columbia.edu

The history curriculum covers most areas of the world and most periods of history. It encourages students to develop historical understanding in the widest sense of the word: a thorough empirical grasp along with the kind of analytical skills that come with a genuinely historical sensibility. This is done through two types of courses: lectures and seminars. Lectures range from broad surveys of the history of a place or period to more thematically oriented courses. Seminars offer students the opportunity to work more closely with historical sources in smaller groups and to do more sophisticated written work. Because history courses usually have no prerequisites, there are no preordained sequences to follow. It is advisable, however, that students take a relevant lecture course in preparation for a seminar. Majors wishing to follow a more intensive program are advised to enroll in a historiography course and to undertake a senior thesis project. Historically, majors have pursued careers in a very wide range of areas including medicine, law, mass media, Wall Street, and academia.

ADVANCED PLACEMENT

Students may receive 3 credits toward the overall degree requirements for a score of 5 on the AP European History exam or the AP United States History exam. No points count toward or fulfill any requirements of the history major or concentration.

ADVISING

During their junior and senior years, majors and concentrators are advised by the faculty members of the Undergraduate Education Committee (UNDED). UNDED advisers also review and sign Plan of Study (POS) forms for majors and concentrators at least once per year. POS forms track students' progress toward completing all major and concentration requirements. New history majors and concentrators may see any member of UNDED. For the most up-to-date information on UNDED members, please see the undergraduate advising page of the departmental website (<http://www.history.columbia.edu>).

Majors and concentrators can also receive pure academic interest advising (non-requirement advising) from any faculty member and affiliated faculty member of the department.

First-years and sophomores considering a history major or concentration can seek advising from UNDED or any other faculty member.

For questions about requirements, courses, or the general program, majors and concentrators can also contact the undergraduate administrator.

DEPARTMENTAL HONORS

To be eligible for departmental honors, the student must have a GPA of at least 3.6 in courses for the major, an ambitious curriculum, and an outstanding senior thesis. Honors are awarded on the basis of a truly outstanding senior thesis. Normally no more than 10% of graduating majors receive departmental honors in a given academic year.

COURSE NUMBERING

Courses are numbered by *type*:

UN 1xxx - Introductory Survey Lectures

UN 2xxx - Undergraduate Lectures

UN 3xxx - Undergraduate Seminars

GU 4xxx - Joint Undergraduate/Graduate Seminars

and *field* (with some exceptions):

x000-x059: Ancient

x060-x099: Medieval

x100-x199: Early modern Europe

x200-x299: East Central Europe

x300-x399: Modern Western Europe

x400-x599: United States

x600-x659: Jewish

x660-x699: Latin America

x700-x759: Middle East

x760-x799: Africa

x800-x859: South Asia

x860-x899: East Asia

x900-x999: Research, historiography, and transnational

SEMINARS

Seminars are integral to the undergraduate major in history. In these courses, students develop research and writing skills under the close supervision of a faculty member. Enrollment is normally limited to approximately 15 students. In order to maintain the small size of the courses, admission to most seminars is by instructor's permission or application.

In conjunction with the Barnard History Department and other departments in the University (particularly East Asian Languages and Cultures), the History Department offers about 25 seminars each semester that majors may use to meet their seminar requirements. While there are sufficient seminars offered to meet the needs of majors seeking to fulfill the two-seminar requirement, given the enrollment limits, students may not always be able to enroll in a particular seminar. Students should discuss with UNDED their various options for completing the seminar requirement.

The History Department has developed an on-line application system for some seminars. The department regularly provides declared majors and concentrators with information on upcoming application periods, which typically occur midway through the

preceding semester. Students majoring in other fields, or students who have not yet declared a major, must inform themselves of the application procedures and deadlines by checking the undergraduate seminar page of the departmental website (<http://www.history.columbia.edu>).

PROFESSORS

- Charles Armstrong
- Volker Berghahn (*emeritus*)
- Richard Billows
- Elizabeth Blackmar
- Casey Blake
- Alan Brinkley
- Christopher Brown
- Richard Bulliet (*emeritus*)
- Elisheva Carlebach
- Mark Carnes (Barnard)
- Zeynep Çelik
- George Chauncey
- John Coatsworth (Provost)
- Matthew Connelly
- Victoria de Grazia
- Mamadou Diouf (Middle Eastern, South Asian, and African Studies)
- Catherine Evtuhov
- Barbara Fields
- Eric Foner
- Carol Gluck
- Martha Howell
- Robert Hymes (East Asian Language and Cultures)
- Kenneth Jackson
- Karl Jacoby
- Matthew Jones
- Ira Katznelson (Political Science)
- Joel Kaye (Barnard)
- Alice Kessler-Harris (*emerita*)
- Rashid Khalidi
- Dorothy Ko (Barnard)
- Adam Kosto
- William Leach (*emeritus*)
- Gregory Mann
- Mark Mazower
- Robert McCaughey (Barnard)
- Stephanie McCurry
- Jose Moya (Barnard)
- Mae Ngai
- Susan Pedersen
- Pablo Piccato
- Rosalind Rosenberg (Barnard)

- David Rosner (Mailman School of Public Health)
- David Rothman (Physicians and Surgeons)
- Simon Schama (University Professor)
- Seth Schwartz
- Herbert Sloan (Barnard, *emeritus*)
- Pamela Smith
- Robert Somerville (Religion)
- Michael Stanislawski
- Anders Stephanson
- Lisa Tiersten (Barnard)
- Adam Tooze
- Deborah Valenze (Barnard)
- Marc Van de Mieroop
- Richard Wortman (*emeritus*)
- Madeleine Zelin (East Asian Languages and Cultures)
-

ASSOCIATE PROFESSORS

- Tarik Amar
- Lisbeth Kim Brandt (East Asian Languages and Cultures)
- Paul Chamberlin
- Malgorzata Mazurek
- Gregory Pflugfelder (East Asian Languages and Cultures)
- Caterina Pizzigoni
- Anupama Rao (Barnard)
- Samuel Roberts
- Neslihan Senocak
- Rhiannon Stephens
- Carl Wennerlind (Barnard)
-

ASSISTANT PROFESSORS

- Manan Ahmed
- Gergely Baics
- Charly Coleman
- Elizabeth Esch (Barnard)
- Hannah Farber
- Andrew Lipman (Barnard)
- Gulnar Kendirbai (Visiting)
- A. Tunç Şen
- Gray Tuttle (East Asian Languages and Cultures)
- Emma Winter
-

LECTURERS IN DISCIPLINE

- Emily Jones (*2017-2018*)
- Victoria Phillips (*2017-2018*)
- Sophie Pitman (*2017-2018*)
- Tillman Taafe (*2017-2018*)

- Tianna Uchacz (2017-2018)
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-

ON LEAVE

- Profs. Coleman, Howell, Mazurek, Ngai, Piccato, Roberts (2017-2018)
- Profs. de Grazia, Jones, Stephanson (Fall 2017)
- Profs. Chauncey, Gluck, Guridy, Jackson, Khalidi, Smith (Spring 2018)

GUIDELINES FOR ALL HISTORY MAJORS AND CONCENTRATORS

For detailed information about the history major or concentration, as well as the policies and procedures of the department, please refer to the *History at Columbia Undergraduate Handbook*, available for download on the departmental website (<http://www.history.columbia.edu/undergraduate/handbook>).

MAJOR IN HISTORY

Students must complete a minimum of *nine* courses in the department, of which *four* or more must be in an area of specialization chosen by the student and approved by a member of UNDED. Students must also fulfill a breadth requirement by taking three courses outside of their specialization. Two of the courses taken in the major must be seminars (including one seminar in the chosen specialization).

The requirements of the undergraduate program encourage students to do two things:

1. Develop a deeper knowledge of the history of a particular time and/or place. Students are required to complete a specialization by taking a number of courses in a single field of history of their own choosing. The field should be defined, in consultation with a member of UNDED, according to geographical, chronological, and/or thematic criteria. For example, a student might choose to specialize in 20th C. U.S. History, Medieval European History, Ancient Greek and Roman History, or Modern East Asian History. The specialization does not appear on the student's transcript, but provides an organizing principle for the program the student assembles in consultation with UNDED.
2. Gain a sense of the full scope of history as a discipline by taking a broad range of courses. Students must fulfill a breadth requirement by taking courses outside their own specialization -- at least one course removed in time and two removed in space.
 - a. Time: majors and concentrators must take at least one course removed in time from their specialization:
 - Students specializing in the modern period must take at least one course in the pre-modern period; students specializing in the pre-modern period must take at least one course in the modern period.

- If the course proposed is in the same regional field as a student's specialization, special care must be taken to ensure that it is as far removed as possible; please consult with UNDED to make sure a given course counts for the chronological breadth requirement.

- b. Space: majors must take at least two additional courses in regional fields not their own:

- These two "removed in space" courses must also cover **two different** regions.
- For example, students specializing in some part of Europe must take two courses in Africa, East or South Asia, Latin America/Caribbean, Middle East, and/or the U.S.
- Some courses cover multiple geographic regions. If a course includes one of the regions within a student's specialization, that course cannot count towards the breadth requirement unless it is specifically approved by the Director of Undergraduate Studies. For example, if a student is specializing in 20th C. U.S. history and takes the class *World War II in Global Perspective*, the class is too close to the specialization and may not count as a regional breadth course.

All courses in the Barnard History Department as well as select courses in East Asian Languages and Cultures; Middle Eastern, South Asian, and African Studies; and other departments count toward the major. Eligible inter-departmental courses may include:

- African Civilizations (AFCV UN1020) (when taught by Professor Gregory Mann, Professor Rhiannon Stephens, or PhD students in the Columbia University Department of History; the course does NOT count for History when taught by anyone else)
- Primary Texts of Latin American Civilization (LACV UN1020) (when taught by Professor Pablo Piccato, Professor Caterina Pizzigoni, or PhD students in the Columbia University Department of History; the course does NOT count for History when taught by anyone else)
- Introduction to East Asian Civilizations: China (ASCE UN1359), Introduction to East Asian Civilizations: Japan (ASCE UN1361), Introduction to East Asian Civilizations: Korea (ASCE UN1363) or other ASCE UN1xxx courses (when taught by Professors Charles Armstrong, Carol Gluck, Robert Hymes, Dorothy Ko, Eugenia Lean, Feng Li, David Lurie, Jungwon Kim, Paul Kreitman, Gregory Pflugfelder, Gray Tuttle, or Madeleine Zelin, and NOT when they are taught by anyone else)
- Please see the Courses section on the departmental website (<http://www.history.columbia.edu>) to see which of these might count in a given semester. Any courses not listed or linked on the departmental website, however historical in approach or content, do not count toward the history major

or concentration, except with explicit written approval of the UNDED chair.

- If you suspect a History course has escaped being listed at the above link and want to confirm whether or not it counts for History students, please contact the Undergraduate Administrator.

a geographic region far removed in space. There is no seminar requirement for the concentration.

Thematic Specializations

Suitably focused thematic and cross-regional specializations are permitted and the breadth requirements for students interested in these topics are set in consultation with a member of UNDED. Classes are offered in fields including, but not limited to:

- Ancient history
- Medieval history
- Early modern European history
- Modern European history
- United States history
- Latin American and Caribbean history
- Middle Eastern history
- East Asian history
- South Asian history

Additionally, classes are offered in thematic and cross-regional fields which include, but are not limited to:

- Intellectual history
- Jewish history
- Women's history
- International history
- History of science

These fields are only examples. Students should work with a member of UNDED to craft a suitably focused specialization on the theme or field that interests them.

Thesis Requirements

Majors may elect to write a senior thesis, though this is not a graduation requirement. Only senior thesis writers are eligible to be considered for departmental honors. The senior thesis option is not available to concentrators.

The yearlong HIST UN3838-HIST UN3839 Senior Thesis Seminar carries 8 points, 4 of which typically count as a seminar in the specialization. For the most up-to-date information on the field designations for history courses, please see the Courses section of the departmental website (<http://www.history.columbia.edu>).

CONCENTRATION IN HISTORY

Effective February 2018, students must complete a minimum of *six* courses in history. At least *three* of the six courses must be in an area of specialization, *one* far removed in time, and *one* on

HISTORY AND PHILOSOPHY OF SCIENCE

The University offers a number of courses in the history and philosophy of science, although it does not, at this time, offer a major or concentration to undergraduates in Columbia College or General Studies. The course listings bring together a variety of courses from different disciplines, which should be of interest to anyone wishing to pursue work in the history and philosophy of science. The list is not intended to be all inclusive; students interested in the history and philosophy of science should speak to members of the committee.

INTERDEPARTMENTAL COMMITTEE ON HISTORY AND PHILOSOPHY OF SCIENCE

David Albert
Philosophy
706 Philosophy; 212-854-3519

Walter Bock (*emeritus*)
Biology
1106 Schermerhorn; 212-854-4487

Marwa Elshakry
History
512 Fayerweather; 212-851-5914

Karl Jacoby
History
424 Hamilton; 212-854-3248

Richard John
History
201E Pulitzer; 212-854-0547

Matthew Jones
History
514 Fayerweather; 212-854-2421

Joel Kaye
History
422B Lehman; 212-854-4350

Philip Kitcher
Philosophy
717 Philosophy; 212-854-4884

Eugenia Lean
History
925 International Affairs Building; 212-854-1742

Christia Mercer
Philosophy
707 Philosophy; 212-854-3190

Alondra Nelson
Sociology
607 Knox; 212-851-7081

Samuel Roberts
History/Sociomedical Sciences
322 Fayerweather; 212-854-2430

David Rosner
History/Sociomedical Sciences
420 Fayerweather; 212-854-4272

David Rothman
History/Sociomedical Sciences
622 West 168th Street; 212-305-4096

George Saliba
Middle Eastern, South Asian, and African Studies
312 Knox; 212-854-4166

Pamela Smith
History
605 Fayerweather; 212-854-7662

HUMAN RIGHTS

Program Office: Institute for the Study of Human Rights; 91 Claremont Avenue, 7th Floor; 212-851-9703; humanrightscolumbia.org/education/undergraduate

Departmental Website: <http://humanrightscolumbia.org/education/undergraduate>

Director of Undergraduate Studies: Prof. Inga Winkler, 475 Riverside Drive (Interchurch Center), 308C; 646-745-8524. Office hours: Tuesday, 4pm - 6pm, and by appointment.

Human rights are central to contemporary understandings of justice and equality and have crucial bearing on the ability to assess and respond to emerging technological, economic, social, cultural, and political issues.

The Undergraduate Human Rights Program at the Institute for the Study of Human Rights engages students in this dynamic and evolving field and enhances their knowledge, skills, and commitment to human rights. The program offers a major and a concentration in human rights, provides students the opportunity to deepen their knowledge and explore their interests in human rights outside the classroom, and works to strengthen and support the undergraduate human rights community on campus. More information on academic and extracurricular events, opportunities, and resources for undergraduate human rights students is available on the program's website. For an advising appointment, please e-mail humanrightscolumbia.org/education/undergraduate.

DEPARTMENTAL HONORS

To be eligible for departmental honors, a student must satisfy all the requirements for the major, maintain a 3.6 GPA in the major, maintain an overall GPA of 3.6, and complete a thesis of sufficiently high quality to merit honors. A thesis is required for all students who wish to be considered for honors, but does not guarantee honors. Students who graduate in October, February, or May of a given academic year are eligible for honors consideration in May. Normally no more than 10% of graduating majors receive departmental honors in a given academic year.

Students interested in writing a thesis for honors consideration enroll in the HRTS UN3996 Human Rights Thesis Seminar in the spring semester of their senior year. The course will consist of group sessions, where students will present their work and participate in discussions, as well as individual meetings with their thesis supervisor, who is also the course instructor.

Students are encouraged to write a thesis, but they should not do so solely to be eligible for honors consideration. Rather, students should consider enrolling in the thesis seminar in order to demonstrate their capacity to produce a work of original research and develop more specialized knowledge of a human rights issue.

GUIDELINES FOR ALL HUMAN RIGHTS MAJORS, CONCENTRATORS, AND SPECIAL CONCENTRATORS

Student should also consult the general academic policies of their school.

Planning Forms

Major and concentration planning forms are available on the ISHR undergraduate program website. Prior to each semester, students should submit an online course advising form (<http://www.humanrightscolumbia.org/education/courseadvising>). Students may also e-mail uhrp@columbia.edu to set up an advising appointment.

Grades

No course with a grade of D or lower is credited towards the major or concentration.

One course, with the exception of the three core courses required for the major, can be taken for Pass/D/Fail. The student must receive a grade of P for the course to count toward the requirements of the major or concentration. All other courses must be taken for a letter grade.

All seminar courses must be taken for a letter grade.

Transfer Credit/Study Abroad Credit

Human rights majors may transfer a maximum of three courses from other institutions. Human rights concentrators may transfer a maximum of two courses from other institutions. This includes study abroad credit. No more than one Advanced Placement course can be counted for the major or concentration. The application of transferred courses to the major or concentration must be approved by the Director of Undergraduate Studies or the undergraduate adviser.

Students wishing to count transfer courses toward the major or concentration should email uhrp@columbia.edu with their Transfer Credit Report, the syllabi of the courses they want to count toward departmental requirements, and a statement of how they want to apply the transfer credits to the requirements.

Double-Counting

Students may double count major or concentration courses toward the fulfillment of degree requirements in accordance with the academic policies of their school.

Normally, courses for one program of study (i.e. major, concentration, special concentration, etc.) may not be used to satisfy the course requirements for another program of study. Students should consult the academic policies of their school for specific information.

MAJOR IN HUMAN RIGHTS

The major in human rights requires 10 courses for a minimum of 31 points as follows. One of the distributional or specialization courses must be a seminar.

Core Courses

HRTS UN3001	Introduction to Human Rights
HRTS UN3190	International Human Rights Law
HRTS UN3995	Human Rights Senior Seminar

Distributional Requirement *

Students take one course in three of these four categories (three courses), for a minimum of 9 credit points.

- Politics and history
- Culture and representation
- Political theory and philosophy
- Social and economic processes

Specialization Requirement **

Students fulfill the specialization requirement by focusing on a particular discipline, taking four courses for a minimum of 12 credit points offered by a single department or institute.

* Please see the ISHR undergraduate course list (<http://www.humanrightscolumbia.org/education/undergraduate/undergraduate-courses>) for the current list of courses that fulfill the distributional requirement of the major.

** The goal of the specialization requirement is to equip students with the tools of a specific discipline. Students should inform the human rights program of their intended specialization before taking courses to fulfill this requirement. As a general rule, fields of study listed as academic programs (<http://www.college.columbia.edu/academics/programs>) on the bulletin are approved for the specialization requirement if a free-standing major is offered. Courses approved for that major are generally approved for the human rights specialization. However, language acquisition and studio courses may not be taken to fulfill the specialization requirement. Students are encouraged to take any core and/or methodology courses required by a program when fulfilling their specialization requirement. Students are also encouraged to take courses within their chosen specialization that focus on human rights issues, but the specialization requirement can be fulfilled by taking any four courses within the same discipline. For example, if a student's specialization is Political Science, he or she can fulfill the specialization requirement by taking any four POLS courses.

Seven additional human rights courses, one of which must be a seminar.

Please see the ISHR undergraduate course list (<http://www.humanrightscolumbia.org/education/undergraduate/undergraduate-courses>) for the current list of courses that fulfill the concentration requirements.

CONCENTRATION IN HUMAN RIGHTS

The concentration in human rights requires 8 courses for a minimum of 24 points as follows:

HRTS UN3001	Introduction to Human Rights
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ITALIAN

Departmental Office: 502 Hamilton; 212-854-2308
<http://italian.columbia.edu/>

Director of Undergraduate Studies: Asst. Prof. Konstantina Zanou, 513 Hamilton; 212-854-0747; kz2269@columbia.edu

A major in Italian offers students the opportunity to study Italian literature and culture in an intimate, seminar setting with the close supervision of the department's faculty. In addition, the prerequisite and corequisite sequence of language courses is designed to give students a command of written and spoken Italian.

Majors must complete 30 points and concentrators must complete 24 points. All majors and concentrators are required to take two semesters of Advanced Italian (ITAL UN3335 Advanced Italian-ITAL UN3336 Advanced Italian II: Italian Language & Culture, ITAL UN3337 Advanced Italian Through Cinema, or ITAL UN3338 Italiana. Introduction to Italian Culture, the High, the Low, and the In-between) as well as one of the following two sequences:

- *Introduction to Italian Literature I and II* (ITAL UN3333-ITAL UN3334) provides an overview of major authors and works in the Italian literary tradition from the Middle Ages to the present;
- *Italian Cultural Studies I and II* (ITAL GU4502-ITAL GU4503) is an interdisciplinary investigation into Italian culture and society from national unification in 1860 to the present.

In consultation with the director of undergraduate studies, majors select six additional courses (concentrators select four additional courses) from the department's 3000- or 4000-level offerings or from other humanities and social science departments with a focus on Italian culture. Students who have taken courses in Italian Literature, Italian History, and/or Italian Culture while abroad should consult with the Director of Undergraduate Studies to determine if the courses may be applicable to the major.

Highly motivated students have the opportunity to pursue a senior thesis under the guidance of a faculty adviser in an area of Italian literature or culture of their choosing. The senior thesis tutorial, ITAL UN3993 Senior Thesis/Tutorial, will count for 3 points.

Departmental courses taught entirely in English do not have linguistic prerequisites and students from other departments who have interests related to Italian culture are especially welcome to enroll.

Italian language instruction employs a communicative approach that integrates speaking, reading, writing, and listening. Courses make use of materials that help students to learn languages not just as abstract systems of grammar and vocabulary but as living cultures with specific content. Across the levels from elementary

to advanced, a wide range of literary, cultural and multimedia materials, including books, film, and opera, supplement the primary course text.

The sequence in elementary and intermediate Italian enables students to fulfill the College's foreign language requirement and thoroughly prepares them for advanced study of language and for literature courses taught in Italian. Specialized language courses allow students to develop their conversational skills.

For highly motivated students, the department offers intensive elementary and intensive intermediate Italian, both of which cover a full year of instruction in one semester. Courses in advanced Italian, although part of the requirements for a major or a concentration in Italian, are open to any qualified student whose main goal is to improve and perfect their competence in the language.

Outside the classroom, the Department of Italian organizes a weekly *Caffè e conversazione* where students at all levels can converse with fellow students and faculty members over Italian espresso and cookies. Students can also attend the *Serata al cinema*, Italian film viewings scheduled in the evening throughout the academic year, in which faculty and graduate students introduce each film and then conclude with a question and answer session. In addition, the student-run *Società Italiana* (culasocieta@gmail.com) organizes events such as pasta-making workshops, movie nights, and costume parties.

ADVANCED PLACEMENT

The department grants 3 credits for a score of 5 on the AP Italian Language exam, which satisfies the foreign language requirement. Credit is awarded upon successful completion of a 3000-level (or higher) course with a grade of B or higher. This course must be for at least 3 points of credit and be taught in Italian. Courses taught in English may not be used for language AP credit. The department grants 0 credits for a score of 4 on the AP Italian Language exam, but the foreign language requirement is satisfied.

CASA ITALIANA

A wide range of cultural programs are sponsored by the Italian Academy for Advanced Studies in America (<http://www.italianacademy.columbia.edu/>), located in Casa Italiana. These programs, which include the activities of the *Columbia Seminar on Modern Italian Studies* and the *Italian Academy Film Festival*, enrich the learning experience of the student and offer opportunities to meet distinguished Italian and Italian-American visitors to the University. The Paterno book collection is housed in Butler Library and contains valuable resources on Italian literature and culture.

For inquiries into the department and its undergraduate and graduate degrees offered, please contact 212-854-2308 or italian@columbia.edu.

LANGUAGE RESOURCE CENTER

The Language Resource Center (LRC) provides resources for intensive practice in pronunciation, diction, and aural comprehension of some twenty-five modern languages. LRC exercises are closely coordinated with the classroom's work.

Coordinated tape programs and on-line audio are available and mandatory for students registered in elementary and intermediate Italian language courses. Taped exercises in pronunciation and intonation, as well as tapes of selected literary works, are also available to all students in Italian courses.

ELECTRONIC CLASSROOMS

Language instruction courses meet at least once a week in a multimedia-equipped electronic classroom in order to facilitate exposure to Italian arts such as music, opera, and film, and for other pedagogical uses.

DEPARTMENTAL HONORS

Majors in Italian literature or Italian cultural studies who wish to be considered for departmental honors in Italian must: (1) have at least a 3.6 GPA in their courses for the major; and (2) complete a senior thesis or tutorial and receive a grade of at least A- within the context of the course ITAL UN3993 Senior Thesis/Tutorial. Normally no more than one graduating senior receives departmental honors in a given academic year.

PROFESSORS

Teodolinda Barolini
Jo Ann Cavallo (Chair)
Elizabeth Leake

ASSOCIATE PROFESSOR

Nelson Moe (Barnard)

ASSISTANT PROFESSOR

Pier Mattia Tommasino (*on leave 2016-17*)
Konstantia Zanou

SENIOR LECTURERS

- Maria Luisa Gozzi
- Carol Rounds (Hungarian)
- Barbara Spinelli

LECTURERS

- Felice Italo Beneduce
- Federica Franze
- Patrizia Palumbo
- Alessandra Saggin

GUIDELINES FOR ALL ITALIAN MAJORS AND CONCENTRATORS

The courses in the Department of Italian are designed to develop the student's proficiency in all the language skills and to present the literary and cultural traditions of Italy. The program of study is to be planned as early as possible with the director of undergraduate studies. Students are advised to meet with the director of undergraduate studies each semester in order to obtain program approval.

For students with no knowledge of Italian, the required language course sequence is:

ITAL UN1101 - ITAL UN1102	Elementary Italian I and Elementary Italian II
ITAL UN2101 - ITAL UN2102	Intermediate Italian I and Intermediate Italian II

For students planning to enroll in Intensive Italian courses, a minimum of three semesters of Italian language instruction is required, such as:

ITAL UN1121 - ITAL UN2101 - ITAL UN2102	Intensive Elementary Italian and Intermediate Italian I and Intermediate Italian II
ITAL UN1101 - ITAL UN1102 - ITAL UN1203	Elementary Italian I and Elementary Italian II and Intensive Intermediate Italian
ITAL UN1121 - ITAL UN1203	Intensive Elementary Italian and Intensive Intermediate Italian

And one of the following courses:

ITAL UN3335	Advanced Italian
ITAL UN3336	Advanced Italian II: Italian Language & Culture
ITAL UN3337	Advanced Italian Through Cinema
ITAL UN3338	Italiana. Introduction to Italian Culture, the High, the Low, and the In-between

Italian language proficiency equivalent to the elementary and intermediate sequence may be demonstrated by the departmental placement test, offered before the start of every semester; with a score of 4 or 5 on the Advanced Placement Examination; or with a score of 780 or higher on the SAT II Subject Test in Italian.

As noted above, courses given entirely in English do not have linguistic prerequisites; students planning a major in Italian may enroll in such courses before completing the language prerequisite for the major or concentration.

MAJOR IN ITALIAN

Please read *Guidelines for all Italian Majors and Concentrators* above.

Requirements

The major in Italian literature requires a minimum of 30 points in Italian courses numbered above the intermediate level, i.e., above ITAL UN2121, to include the following:

Two semesters of Advanced Italian

ITAL UN3335	Advanced Italian
- ITAL UN3336	and Advanced Italian II: Italian Language & Culture

Two semesters of Italian Literature

ITAL UN3333	Introduction To Italian Literature, I
- ITAL UN3334	and Introduction To Italian Literature, II

- OR -

Two Semesters of Italian Culture

ITAL GU4502	Italian Cultural Studies I: From Unification to World War I
- ITAL GU4503	and Italian Cultural Studies II: From World War I to the Present

Additional Courses

Select at least two other courses from the department's GU4000-level courses.

In consultation with the director of undergraduate studies, the remaining courses may be selected from the department's 3000- or 4000-level offerings or from other humanities and social science departments with a focus on Italian literature or culture.

ITAL UN3993	Senior Thesis/Tutorial (or another course in Italian literature or culture)
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Native speakers and students with superior proficiency (as demonstrated by a departmental exam) may replace the Advanced Italian sequence with six points of Italian literature courses of their choice.

Period Distribution

At least two courses that cover material before 1700 and two courses that cover material after 1700.

CONCENTRATION IN ITALIAN

Please read *Guidelines for all Italian Majors and Concentrators* above.

Requirements

The concentration in Italian literature requires a minimum of 24 points in Italian courses numbered above the intermediate level, i.e., above ITAL UN2121, to include the following:

Two semesters of Advanced Italian

ITAL UN3335	Advanced Italian
- ITAL UN3336	and Advanced Italian II: Italian Language & Culture
or ITAL UN3337	Advanced Italian Through Cinema

or ITAL UN3338	Italiana. Introduction to Italian Culture, the High, the Low, and the In-between
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Two semesters of Italian Literature

ITAL UN3333	Introduction To Italian Literature, I
- ITAL UN3334	and Introduction To Italian Literature, II

- OR -

Two Semesters of Italian Culture

ITAL GU4502	Italian Cultural Studies I: From Unification to World War I
- ITAL GU4503	and Italian Cultural Studies II: From World War I to the Present

Additional Courses

Select at least two other courses from the department's GU4000-level courses.

In consultation with the director of undergraduate studies, the remaining courses may be selected from the department's 3000- or 4000-level offerings or from other humanities and social science departments with a focus on Italian literature or culture.

JAZZ STUDIES

The Center for Jazz Studies: Prentiss Hall, 4th floor (632 W. 125th Street); 212-851-9270
<http://www.columbia.edu/cu/cjs>

Jazz at Columbia:

<http://www.music.columbia.edu/~cecenter/JazzConcentration/>

Director: Prof. Robert G. O'Meally, 611 Philosophy;
 212-851-9270; rgo1@columbia.edu

Director of Jazz Performance: Prof. Christopher Washburne,
 619A Dodge; 212-854-9862; cjw5@columbia.edu

Program Administrator: Yulanda McKenzie, 602 Philosophy;
 212-851-9270; ym189@columbia.edu

The special concentration in jazz studies is an interdisciplinary liberal arts course of study that uses jazz music—and the jazz culture from which the music emanated—as a prism through which to study jazz culture during what might be termed the long jazz century, the Sprawling 20's. The curriculum in this new field guides students in developing a firm grounding in the traditions and aesthetic motives of jazz music, viewed through the perspectives of music history and ethnomusicology as well as literary theory and cultural studies.

The program also explores in depth the development of jazz-oriented art works in the music's sister arts—literature, dance, painting, photography, and film. While a U.S. focus is highly appropriate, considering the many ways in which jazz is a definitive music of this nation, students also explore jazz's geographical history beyond these shorelines, including complex, ongoing interactions with Africa, the Caribbean, Europe, and Asia.

The special concentration in jazz studies is designed for music majors as well as for those majoring in other fields. The main difference between music majors and non-music majors is that while music majors take advanced courses in arranging, composition, and transcription, non-music majors are required to take an introduction to music fundamentals.

While there are some fields where the fit with jazz studies is very obvious—music, American studies, African-American studies, English, comparative literature, and history—special concentrators can major in any field whatsoever. Is there a jazz or improvisatory philosophy? What might be its relation to studies of aesthetics or American pragmatism? And what are jazz's implications for the student of law? How does one protect the intellectual property rights of an improvised jazz solo? What about business? What economic and political forces have shaped jazz? Who buys jazz? What is its audience? What is a jazz painting? A jazz novel? What is jazz poetry? What is jazz dance? What is a jazz film? What are the sources and meanings of art? What work does the music do for the whole community?

Along with problems of musical history, form, and definition, our special courses explore jazz as a culture. Students not only study individual jazz artists but also explore the immeasurably variegated worlds through which such artists moved, and which they helped to shape. As cultural historians-in-training—focused on questions of nationality, race, sexuality, gender, economics, and politics—students explore the extraordinarily complicated terrains of the New Orleans of Bunk Johnson, for example, or the Baltimore of Billie Holiday (born in Philadelphia, reared in Baltimore). They explore such artists' other geographical travels. What did their images, including mistaken conceptions of who they were, tell us about the cultures that mythologized them?

How did these jazz musicians influence not only musicians but other artists of their era and milieu: the poets and novelists, painters and sculptors, photographers and filmmakers, dancers and choreographers who regularly heard them play and often shared with them a sense of common project?

One thinks of Tito Puente, working with singers and dancers at the Palladium; Jackson Pollack dancing to the music as he spun drips of paints on canvasses placed on the studio floor; Langston Hughes writing detailed instructions to the musicians he hoped would accompany performance of his poetry; Romare Bearden's beautifully turned stage and costume designs for Alvin Ailey and Dianne McIntyre, whose improvisatory jazz dance workshop was called Sound in Motion; the drummer Jo Jones in an interview naming as key influences a series of tap dancers he admired; Stanley Crouch, stirring in his high-powered essays in a room where jazz drums stand at the center, the old dream-kit inspiration; Ralph Ellison, who kept in touch with his beginnings as a musician in Oklahoma City through hour-long conversations with his childhood friend, the singer Jimmy Rushing; Toni Morrison reading her magical prose to improvisations by Max Roach and the dancer Bill T. Jones; and the pianist Jason Moran playing at the Studio Museum in Harlem, where he introduced his group as including Beauford Delany, whose paintings hung on the wall near the bandstand—vigorous all and recall across the art forms.

Perhaps above all, the special concentration in jazz studies is designed to prepare students to be well-prepared and flexible improvisers in a universe of change and possibility.

INTERDEPARTMENTAL COMMITTEE ON JAZZ STUDIES

- Ann Douglas (English and Comparative Literature)
- Brent Hayes Edwards (English and Comparative Literature)
- Aaron Fox (Music)
- Farah Jasmine Griffin (English and Comparative Literature)
- George Lewis (Music)
- Robert G. O'Meally (English and Comparative Literature)
- Christopher Washburne (Music)

ADJUNCT LECTURERS IN JAZZ PERFORMANCE

- Paul Bollenbeck
- Christine Correa
- Krin Gabbard
- David Gibson
- Brad Jones
- Victor Lin
- Ole Mathiesen
- Tony Moreno
- Ugonna Okegwa
- Adriano Santos
- Don Sickler
- Leo Traversa
- Ben Waltzer

MUSI G4500	Jazz Transcription and Analysis
MUSI UN1618 - MUSI UN1619	and Columbia University Jazz Ensemble (strongly recommended but not required)

Private music lessons (strongly recommended but not required)

Three interdisciplinary courses as approved by the director

A senior independent study project

GUIDELINES FOR ALL JAZZ STUDIES SPECIAL CONCENTRATORS

Students interested in a special concentration in jazz studies should speak with the director no later than the fall semester of the sophomore year.

In addition to the requirements of the special concentration, students must complete a major or a full concentration. Students interested in declaring a special concentration in jazz studies will be assigned an adviser. The program of study is to be planned with the adviser as early as possible.

SPECIAL CONCENTRATION IN JAZZ STUDIES

Please read *Guidelines for all Jazz Studies Special Concentrators* above.

The special concentration in jazz studies requires a total of seven courses (22 points minimum), distributed as follows:

Requirements for Non-Music Majors/Concentrators

ENGL GU4612	Jazz and American Culture
MUSI UN2016	Jazz
MUSI UN1002	Fundamentals of Music
Three interdisciplinary courses as approved by the director	
A senior independent study project	

Requirements for Music Majors/Concentrators

ENGL GU4612	Jazz and American Culture
MUSI UN2016	Jazz
MUSI G4505	Jazz Arranging and Composition

JEWISH STUDIES

Program Office: Institute for Israel and Jewish Studies, 617 Kent Hall; 212-854-2581; <http://www.iijs.columbia.edu/>

Program Director: Prof. Elisheva Carlebach, 505 Fayerweather; 212-854-5294; ec607@columbia.edu

Assistant Director: Dana Kresel, 619 Kent Hall; 212-854-4006; drk2106@columbia.edu

Academic Advisor: Prof. Yitzhak Lewis, 410 Knox Hall; 212-854-6668; yml2108@columbia.edu

The academic discipline of Jewish studies is an interdisciplinary field centered on the analysis and investigation of Jewish history, religion, language, and literature. The discipline ranges from the study of Jews and Judaism in antiquity to the present day. It explores Judaism not only as a religion, but as a civilization and culture.

A special concentration in Jewish studies is available for undergraduates and allows students to draw upon classes in a wide range of departments across the University, including History; Sociology; Middle Eastern, South Asian, and African Studies; Germanic Languages and Literature; and Religion. The requirements for the special concentration are designed to provide students with the interdisciplinary knowledge necessary to study Jewish civilization both broadly and deeply.

The roots of Judaism lie deeper than one region, gender, language, or culture; and by studying the interconnectedness of these areas, the depth of understanding across a range of spheres and disciplines greatly increases. The special concentration in Jewish studies enhances the current scholarly programs, adding to current Jewish studies courses' vitality as students come to each course with a deeper understanding and background based on their complementary coursework.

Students wishing to complete a special concentration in Jewish studies work with a program adviser to decide upon course selection and sequencing. The program office provides and keeps on record a planning form to track the fulfillment of requirements for the special concentration.

AFFILIATED FACULTY

- Beth Berkowitz (Religion, Barnard)
- Clemence Boulouque (Religion)
- Elisheva Carlebach (History)
- Yinon Cohen (Sociology)
- Jeremy Dauber (Germanic Languages)
- Rebecca Kobrin (History)
- Rina Kreitman (Middle Eastern, South Asian, and African Studies)
- Agnieszka Legutko (Germanic Languages)

- Yitzhak Lewis (Middle Eastern, South Asian, and African Studies)
- Dan Miron (Middle Eastern, South Asian, and African Studies)
- Seth Schwartz (History)
- Michael Stanislawski (History)

SPECIAL CONCENTRATION IN JEWISH STUDIES

In addition to the requirements of the special concentration, students must complete a major or a full concentration.

For a special concentration in Jewish studies, students are required to complete a minimum of 21 points. Please note:

- At least one course must be taken from each of three of the focus areas listed below.
- Credits for language courses may constitute at most 10 points, and one year of Hebrew or Yiddish language is strongly recommended.
- A minimum of 18 points must be taken at Columbia or as part of an approved study abroad program (unless equivalent courses are not offered at Columbia, as determined by the faculty adviser).

The focus areas and courses listed below are examples and do not include all the potential courses which may count. Additionally, as new courses are introduced, new focus areas may develop. Some courses may fall under multiple headings. Determination of a course's focus area is at the discretion of the faculty adviser.

Focus Areas

Bible and Rabbis/Ancient Judaism

RELI V3512	The Bible and Its Interpreters
RELI W4537	Talmudic Narrative
RELI W4520	Patriarchal and Rabbinic Authority in Antiquity
RELI V3501	Introduction To the Hebrew Bible
RELI V3508	Origins of Judaism
RELI V3561	Classics of Judaism: Ethics of the Fathers
RELI V2510	Jews and Judaism in Antiquity
RELI W4535	Ancient Jewish Texts

Medieval Judaism

HIST UN2657	Medieval Jewish Cultures
HIST W3616	Jews and Christians in the Medieval World
RELI W4510	The Thought of Maimonides
RELI V3870	Inquisitions, New Christians, and Empire
RELI W4515	Reincarnation and Technology
HIST UN3180	Conversion in Historical Perspective

Modern Judaism

HIST W3630	American Jewish History
RELI V3571	Judaism, Jewishness, and Modernity
MDES UN3542	Introduction to Israeli Literature
Israeli Society	
MDES UN3541	Zionism: A Cultural Perspective
MDES UN3542	Introduction to Israeli Literature
RELI W4513	Homelands, Diasporas, Promised Lands
Gender and Judaism	
HIST W3640	Jewish Women and Family, 1000-1800
RELI V3570	Women and Judaism: Folklore or Religion?
RELI W4504	Reading the Patriarchal and Matriarchal Stories in Genesis
Jewish History and Culture	
MUSI G4125	Jewish Music: Uniqueness and Diversity
RELI V3585	The Sephardic Experience
RELI W4503	Readings from the Sephardic Diaspora
RELI UN2306	Intro to Judaism
RELI W4511	Jewish Ethics
HIST UN2657	Medieval Jewish Cultures
HIST UN3645	Spinoza to Sabbatai: Jews in Early Modern Europe
Jewish Literature	
CLYD W3500	Readings In Jewish Literature: Humor In Jewish Literature [In English]
YIDD UN3800	
RELI V3561	Classics fo Judaism: Ethics of the Fathers

LANGUAGE RESOURCE CENTER

Office: 353 International Affairs Building; 212-854-9224
<http://www.lrc.columbia.edu/>

Director: Dr. Stéphane Charitos, 353 International Affairs Building; 212-854-6341; sc758@columbia.edu

Associate Director: Piero di Porzio, 353 International Affairs Building; 212-854-3326; pdp@columbia.edu

Hours of Operation: Monday-Friday, 9 a.m.–5 p.m.

The Language Resource Center is the home for several less commonly taught languages including those offered via videoconferencing through the Shared Course Initiative and through the NYU-Columbia language exchange agreement.

The center also organizes noncredit language maintenance tutorials designed for professional school students who wish to maintain or enhance an existing language proficiency. Additionally, the Language Resource Center provides the Columbia community with state-of-the-art digital facilities to support collaborative language projects, faculty development, and active student-centered language learning activities.

LATIN AMERICAN AND CARIBBEAN STUDIES

The Institute of Latin American Studies: 8th Floor,
International Affairs Building; 212-854-4643
<http://ilas.columbia.edu>

Program Director: Prof. José Moya, 413 Lehman;
jmoya@barnard.edu

Student Affairs Coordinator: Eliza Kwon-Ahn, 827
International Affairs Building; ek2159@columbia.edu

The major in Latin American and Caribbean Studies stresses knowledge of a dynamic, historically deep and extensive region, but it also focuses on social, political, and cultural phenomena that transcend physical boundaries. The major thus reflects multidisciplinary dialogues that are transnational yet remain anchored in the common historical experience of Latin American societies. Thanks to the broad range of courses on Latin America offered in different departments of instruction and centers at Columbia, the major provides a multidisciplinary training on politics, history, culture, economy, and society.

The Institute of Latin American Studies coordinates the major and offers access to research support, study abroad options, and linkages and credits toward the M.A. program in Latin American and Caribbean studies.

AFFILIATED FACULTY

Alan Dye (<https://barnard.edu/profiles/alan-dye>) (Economics, Barnard)

Ana Paula Huback (<http://laic.columbia.edu/author/1234567890>) (Latin American and Iberian Studies)

Claudio Lomnitz (<http://anthropology.columbia.edu/people/profile/368>) (Anthropology; Latino Studies; Center for the Study of Ethnicity and Race)

Nara Milanich (<https://history.barnard.edu/profiles/nmilanic>) (History, Barnard)

Jose Moya (<https://history.barnard.edu/profiles/jose-moya>) (History, Barnard)

M. Victoria Murillo (<http://polisci.columbia.edu/people/profile/100>) (Political Science)

Ana Maria Ochoa (<http://music.columbia.edu/people/bios/ochoa-ana-mar>) (Music)

Pablo Piccato (<http://history.columbia.edu/faculty/Piccato.html>) (History)

Caterina Pizzigoni (<http://history.columbia.edu/faculty/Pizzigoni.html>) (History)

Michael T. Taussig (<http://anthropology.columbia.edu/people/profile/376>) (Anthropology)

GUIDELINES FOR ALL LATIN AMERICAN AND CARIBBEAN STUDIES MAJORS AND CONCENTRATORS

Declaring the Major or Concentration

For additional information on Latin American and Caribbean Studies, please visit the Institute's website (<http://ilas.columbia.edu>) or contact Eliza Kwon-Ahn, ILAS Student Affairs Coordinator, at ek2159@columbia.edu.

MAJOR IN LATIN AMERICAN AND CARIBBEAN STUDIES

The major requires a minimum of 31 points as follows:

Select five of the following six courses:

HIST UN2618	The Modern Caribbean (formerly HIST W3618)
HIST UN2660	Latin American Civilization I
HIST UN2661	Modern Latin American History (Latin American Civilization II) (Formerly HIST W3661)
LACV UN1020	Primary Texts of Latin American Civilization
POLS GU4461	Latin American Politics
SPAN UN3300	Advanced Language through Content [in Spanish]

***** The SPAN UN3300 section taken for the Major must focus on Latin America. Please contact the ILAS Student Affairs Coordinator for details.**

Language Requirement

Select one course on Spanish, Portuguese, or an indigenous language at the intermediate or advanced level; if students can demonstrate advance knowledge of one of these languages, they can replace this course with a course on other languages at any level.

Discipline of Choice

Select four courses in a discipline or theme of choice with substantive focus on Latin America. One of these courses must be a seminar. All students, however, need to take at least two courses in a discipline or theme outside of their specialization. The director of undergraduate studies advises students on areas of specialization and must approve courses with substantial Latin American or Caribbean contents not included in the list of eligible courses.

Up to 12 credits for Discipline of Choice requirement can be earned through study abroad. Students are encouraged to explore study abroad options before their junior year. Upon return, they should submit the syllabi and all coursework related to each course taken abroad for approval by the director of undergraduate studies.

CONCENTRATION IN LATIN AMERICAN AND CARIBBEAN STUDIES

The concentration requires a minimum of 18 points as follows:

Select three of the following six courses:

HIST UN2618	The Modern Caribbean (formerly HIST W3618)
HIST UN2660	Latin American Civilization I
HIST UN2661	Modern Latin American History (Latin American Civilization II) (Formerly HIST W3661)
LACV UN1020	Primary Texts of Latin American Civilization
POLS GU4461	Latin American Politics
SPAN UN3300	Advanced Language through Content [in Spanish]

***** The SPAN UN3300 section taken for the Concentration must focus on Latin America. Please contact the ILAS Student Affairs Coordinator for details.**

Language Requirement

Select one course on Spanish, Portuguese, or an indigenous language at the intermediate or advanced level; if students can demonstrate advance knowledge of one of these languages, they can replace this course with a course on other languages at any level.

Discipline of Choice:

Select two courses in a discipline or theme of choice with substantive focus on Latin America. One of these courses must be a seminar. All students, however, need to take at least two courses in a discipline or theme outside of their specialization. The director of undergraduate studies advises students on areas of specialization and must approve courses with substantial Latin American or Caribbean contents not included in the list of eligible courses.

Up to 6 credits for Discipline of Choice requirement can be earned through study abroad. Students are encouraged to explore study abroad options before their junior year. Upon return, they should submit the syllabi and all coursework related to each course taken abroad for approval by the director of undergraduate studies.

LATIN AMERICAN AND IBERIAN CULTURES

Departmental Office: 101 Casa Hispánica, 612 W. 116th Street; 212-854-4187; 212-854-5322 (fax)
<http://www.laic.columbia.edu/>

Director of Undergraduate Studies: Prof. Bruno Bosteels, 302 Casa Hispánica; 212-854-4187; bb438@columbia.edu

Director of Graduate Studies: Prof. Graciela Montaldo, 307 Casa Hispánica; 212-854-4882; gm2168@columbia.edu

Directors of the Spanish Language Program:

Lee B. Abraham, 402 Casa Hispánica; 212-854-3764;
lba2133@columbia.edu

Angelina Craig-Flórez, 402 Casa Hispánica; 212-854-3764;
ac68@columbia.edu

The Department of Latin American and Iberian Cultures (LAIC) at Columbia, located in Casa Hispánica, has long enjoyed an international reputation as a center for Hispanic and Lusophone studies. The department provides linguistic preparation in Spanish, Portuguese, and Catalan, and offers a flexible program to study manifestations of the Hispanic and Lusophone worlds in all historical periods—from the medieval to the globalized present—and in a variety of cultural contexts: the Iberian Peninsula, Latin America, the former colonies of Portugal, and the United States.

Students can enter the program at any level of linguistic and cultural preparedness. The department offers a placement exam to determine the level at which students may either begin or continue study. Majors and concentrators in Hispanic studies and Portuguese studies are typically double majors who bring insights and methods from fields such as history, political science, women's studies, anthropology, economics, Latino studies, Latin American studies, etc., which fosters engaging discussions.

ACADEMIC PROGRAMS

The department offers two majors. The major in Hispanic studies gives students a well-rounded preparation in the history and culture of the Hispanic world. The second option, a major in Hispanic studies with specialization, allows students to study the Hispanic world through a number of fields, among them Latin American studies, gender studies, political science, economics, history, and sociology. The department also offers two concentrations: Hispanic studies and Portuguese studies.

The language and major programs have also been designed in close consultation and cooperation with Barnard's Department of Spanish and Latin American Cultures. All courses taken in one program may be used to fulfill the requirements of the other. Hence, Columbia and Barnard students may move freely between departments of both institutions for courses that best fit their intellectual interests and schedules.

ADVANCED PLACEMENT

The department grants 3 credits for a score of 5 on the AP Spanish Language exam, which satisfies the foreign language requirement. Credit is awarded upon successful completion of a 3300-level (or higher) course with a grade of B or higher. This course must be for at least 3 points of credit and be taught in Spanish. Courses taught in English may not be used for language AP credit.

The department grants 0 credits for a score of 4 on the AP Spanish Language exam, but the foreign language requirement is satisfied.

The department grants 3 credits for a score of 5 on the AP Spanish Literature exam, which satisfies the foreign language requirement. Credit is awarded upon successful completion of a 3300-level (or higher) course with a grade of B or higher. This course must be for at least 3 points of credit and be taught in Spanish. Courses taught in English may not be used for language AP credit.

The department grants 0 credits for a score of 4 on the AP Spanish Literature exam, but the foreign language requirement is satisfied.

STUDY ABROAD

The department strongly recommends that all Hispanic and Portuguese studies majors/concentrators study abroad. Most courses taken abroad can be used to fulfill the requirements for the major and concentration, and with adequate planning, even some of the requirements for a second major or concentration. A maximum of four (4) courses taken abroad may be applied to the major, and a maximum of three (3) to the concentration in Hispanic or Portuguese studies.

All students are strongly advised to take either SPAN UN3349 Hispanic Cultures I: Islamic Spain through the Colonial Period or SPAN UN3350 Hispanic Cultures II: Enlightenment to the Present before studying abroad. Actual or potential majors and concentrators in Hispanic or Portuguese studies should seek tentative approval of their programs from the director of undergraduate studies before their departure.

INTERNSHIPS

The department maintains an updated list of internship resources and volunteer opportunities in New York City, the United States, and abroad. No academic credit is given for internships.

THE HISPANIC INSTITUTE

The department hosts the Hispanic Institute at Columbia. Founded in 1920 as the Instituto de las Españas, the Institute sponsors and disseminates research on Hispanic and Luso-Brazilian culture. Since 1934, the Institute has published the *Revista Hispánica Moderna*, a distinguished journal in Hispanic criticism and theory.

IN FULFILLMENT OF THE LANGUAGE REQUIREMENT

For students with no knowledge of Spanish, Portuguese, or Catalan, at least four terms of the language are required: *UN1101-UN1102* (or *UN1120*) and *UN2101-UN2102* (or *UN2120*). **All courses must be taken for a letter grade to fulfill the language requirement.**

Students with prior knowledge of Spanish who plan to continue studying Spanish are required to take the department's on-line placement examination (<http://laic.columbia.edu/programs/placement-examination>) before registering for courses. Students with prior knowledge of Portuguese or Catalan should speak with the director of language programs.

Students may be exempted from the language requirement in one of four ways:

1. Present a score of 4 or 5 on the AP Spanish Language or Spanish Literature Exams. Students who receive a score of 5 in either exam are awarded 3 AP credits upon successful completion of a 3300-level (or above) course with a grade of B or higher. AP credit is not granted for a score of 4.
2. Present a score of 780 or above on the SAT Subject Test. Students with a score lower than 780 should take the department's on-line placement exam and follow the placement advice received.
3. Present a score of a 7, 6, or 5 on the International Baccalaureate Higher Level Exam in Spanish.
4. Obtain a score of 625 or higher in the department's on-line placement exam (<http://laic.columbia.edu/programs/placement-examination>). If the score in the on-line test qualifies a student for exemption from the language requirement, they are required to take a written version of the placement exam during orientation (for entering students) or during the semester (for continuing students). This written exam is offered every year on the Thursday before the beginning of classes in the fall semester from 10:00 a.m.-2:00 p.m. in Room 352 of the International Affairs Building (the Language Resource Center Computer Lab). Students do not need to make an appointment to take the exam.

DEPARTMENTAL HONORS

Beginning in Spring 2015, the department has put in place a new timeline and training program for juniors, in order to assist students with planning and completing the Honors Thesis during their senior year. The Honors Thesis is an excellent option for any student interested in pursuing a Master's degree or Ph.D.; but, above all, it is a highly formative research and writing experience—one that can bear unexpected fruits toward any path the student decides to take in the future.

All students pursuing a major through the department may apply to write an Honors Thesis. The department envisions the thesis as an intellectually challenging and rewarding experience that crowns

four years of undergraduate studies with an original contribution in the field chosen by the student.

The department supports students in shaping their research topic and provides frequent advising throughout the research and writing process. The timeline is as follows:

- During the junior year, students take into consideration the possibility of writing an Honors Thesis in the following year. The topic of the Honors Thesis may likely originate in an advanced course taken during the junior year; students may also choose to develop ideas discussed or papers written in courses taken in previous years. Juniors schedule a meeting (or, if the student is studying abroad, a Skype conversation) with the director of undergraduate studies to discuss their proposed topic and faculty adviser.
- By May 15, juniors who have decided to write an Honors Thesis in their senior year send a formal proposal to the director of undergraduate studies, which includes:
 - A title and a one-page abstract;
 - The name of the proposed faculty adviser;
 - An application for departmental partial funding support (for those who would like to pursue research during the summer).
- By May 30, the Honors Thesis committee reviews the proposals and informs the students of its decision.
- In the fall of the senior year:
 - Seniors selected to write the Honors Thesis enroll in SPAN UN3998 Supervised Individual Research (Spring) with their faculty adviser and write the Honors Thesis during the entire senior year under the direction of their adviser. For the purposes of the major, this independent study counts as a 3-point course towards elective courses.
 - Faculty advisers organize Honors Thesis Workshops to discuss students' ongoing projects and provide advising on research tools, methodological and theoretical frames, and overall writing process.
- In either the fall or spring of the senior year, students enroll in SPAN UN3991 Senior Seminar or SPAN W3992 Senior Seminar: Modern Cities and Global Cities.
- By April 15 of the senior year, students complete and present their Honors Thesis for consideration towards departmental honors and prizes. Students submit their thesis in hard copy, following the formatting specifications provided on the LAIC website (<http://laic.columbia.edu/programs/formatting-specifications-for-the-senior-thesis>).
- By May 1, the Honors Thesis committee informs the students of its decision. Departmental honors and prizes are assigned. The committee provides publishing options to students whose work has resulted in a highly original scholarship piece.

In order to facilitate the transition to this new schedule, the department will organize an *Honors Thesis Introductory Session* during the last week of April 2015. All undergraduate students are

welcome; students in the junior year will have the opportunity to discuss possible research themes and thesis topics.

To be considered for departmental honors, a student must write an Honors Thesis and maintain a GPA of at least 3.6 in major courses. Normally no more than 10% of graduating majors receive departmental honors in a given academic year.

UNDERGRADUATE PRIZES

The faculty awards an undergraduate prize every year:

Susan Huntington Vernon Prize

Established in 1941 by a member of the noted family of New York Hispanophiles, it is given to the Columbia College senior major who has demonstrated excellence in the study of Spanish, Portuguese, and Latin American languages and cultures.

PROFESSORS

- Carlos J. Alonso
- Bruno Bosteels
- Patricia E. Grieve
- Graciela R. Montaldo
- Gustavo Pérez-Firmat
- Jesús Rodríguez-Velasco

ASSOCIATE PROFESSORS

- Alberto Medina
- Alessandra Russo

ASSISTANT PROFESSORS

- Joaquín Barriendos
- Karen Benezra
- Seth Kimmel
- Ana Paulina Lee

SENIOR LECTURER

- Guadalupe Ruiz-Fajardo

LECTURERS

- Lee B. Abraham
- Irene Alonso-Aparicio
- José Antonio Castellanos-Pazos
- Angelina Craig-Flórez
- Ana Paula Huback
- Juan Pablo Jiménez-Caicedo
- Reyes Llopis-García
- Francisco Meizoso
- Sonia Montero
- João Nemi Neto
- Mercedes Pérez Serrano
- Diana P. Romero

- Francisco Rosales-Varo
- Perla Rozencvaig
- José Plácido Ruiz-Campillo
- Elsa Úbeda

MAJOR IN HISPANIC STUDIES

The requirements for this program were modified on March 2, 2016. Students who declared this program before this date should contact the director of undergraduate studies for the department in order to confirm their correct course of study.

The major in Hispanic studies requires 11 courses (minimum of 33 points) as follows:

Core Courses

SPAN UN3300	Advanced Language through Content [in Spanish]
SPAN UN3349	Hispanic Cultures I: Islamic Spain through the Colonial Period
SPAN UN3350	Hispanic Cultures II: Enlightenment to the Present

Elective Courses

Select seven elective courses (21 points): a minimum of three 3000- or 4000-level electives must be chosen within the department and up to three electives related to Hispanic Studies may be taken outside the department.

Senior Seminar

SPAN UN3991	Senior Seminar
or SPAN UN3992	Senior Seminar: Modern Cities and Global Cities

MAJOR IN HISPANIC STUDIES WITH SPECIALIZATION

The requirements for this program were modified on March 2, 2016. Students who declared this program before this date should contact the director of undergraduate studies for the department in order to confirm their correct course of study.

The major in Hispanic studies with specialization requires 14 courses (minimum of 42 points) as follows. Students should consult the director of undergraduate studies to plan their program and refer to the Hispanic Studies Major Worksheet.

Core Courses

SPAN UN3300	Advanced Language through Content [in Spanish]
SPAN UN3349	Hispanic Cultures I: Islamic Spain through the Colonial Period
SPAN UN3350	Hispanic Cultures II: Enlightenment to the Present

Elective Courses

Select ten elective courses (30 points): four of which must be chosen within the department and six of which must be in the field of specialization. Approved courses taken abroad may be counted as inside or outside the department for the specialization. A maximum of four courses taken abroad may be counted toward the major.

Senior Seminar *

SPAN UN3991	Senior Seminar
or SPAN UN3992	Senior Seminar: Modern Cities and Global Cities

* In exceptional cases and with the director of undergraduate studies' approval, students may take a senior seminar in their area of specialization as a seventh course outside the department, if they have completed enough foundational courses to manage the demands of an advanced seminar. In such cases, the director of undergraduate studies must receive a letter or e-mail from the seminar instructor indicating approval of a student's membership in the course; the seminar project must be on a Hispanic topic; and a copy of the project must be turned in to the director of undergraduate studies for the student's file upon completion of the course. Students who complete the senior seminar in another department may also count it as the third elective course on a Hispanic topic outside the department, in which case they may take a fourth 3000- or 4000-level course in the department.

CONCENTRATION IN HISPANIC STUDIES

The requirements for this program were modified on March 2, 2016. Students who declared this program before this date should contact the director of undergraduate studies for the department in order to confirm their correct course of study.

The concentration in Hispanic studies requires eight courses (minimum of 24 points) as follows:

Core Courses

SPAN UN3300	Advanced Language through Content [in Spanish]
SPAN UN3349	Hispanic Cultures I: Islamic Spain through the Colonial Period
SPAN UN3350	Hispanic Cultures II: Enlightenment to the Present

Elective Courses

Select five elective courses (15 points): a minimum of four 3000- or 4000-level courses must be chosen within the department and up to one elective related to Hispanic Studies may be taken outside the department. A maximum of three courses taken abroad may be counted toward the concentration.

CONCENTRATION IN PORTUGUESE STUDIES

The concentration in Portuguese studies requires eight courses (minimum 24 points) as follows:

Core Courses

PORT UN3101	Conversation about the Lusophone World
PORT UN3300	Advanced Language through Content
PORT UN3330	Introduction to Portuguese Studies
PORT UN3350	Lusophone Africa and Afro Brazilian Culture

Elective Courses

Select four elective courses (12 points): at least two must have a PORT designation and be chosen from the department's 3000-level offerings. Electives taken outside of the department must have the director of undergraduate studies' approval and be related to Portuguese studies. A maximum of two courses taught in English may be counted toward the concentration overall. Refer to the Portuguese Concentration Worksheet.

LINGUISTICS

Program Director: Prof. Alan Timberlake (2017 - 2018), 1128 International Affairs Building 212-854-8488; a (jm3156@columbia.edu)t2205@columbia.edu.

In any discussion of linguistics, in popular or academic contexts, the first question is always, what *is* linguistics, after all? This is remarkable. Language informs most of our mental and cultural activity, and linguistics is the just study of language.

The tradition of *generative grammar* posits (a) an idealized individual user of language, which is then seen as (b) a thoroughly rule-governed, (c) biological and universal system. This tradition has been dominant in the sociology of the field since the appearance of Chomsky's *Syntactic Structures* (1957).

But various programs have begun to move away from the reductionism of generative grammar and contextual approaches. Alternative approaches, which might be termed *contextual*, look at:

(a) how individuals use language in the context of a community, from which it follows that (b) language is not just an abstract mental system; (c) language is rather a cultural habit, whose salient features are by no means universal.

Our program seeks to be inclusive; it presents both strains of linguistics, to ensure that students have the proper training to apply to graduate school, but leans more to a contextual approach. This bias to contextual linguistics fits with the tradition of linguistics at Columbia, from Franz Boas through Uriel Weinreich.

Linguistics, by virtue of dealing with language, naturally intersects with other academic disciplines which also touch on language from the perspective of the other discipline.

(a) Linguistics—at least contextual linguistics—shares with sociology and anthropology the axiom that language is communal, and therefore may be used (for example) to signal identity, to negotiate relations of power between members of a community, and the like. Linguistics does not reduce to sociology, however, in that linguistics investigates not only the communal side of language, but also the systemic and the cognitive properties of language.

(b) Cognitive psychology, in the attempt to understand the workings of the mind, often investigates language, which, after all, is the most accessible manifestation of the activity of the mind. Psychology, however, is virtually obligated to treat all languages as equivalent—after all, language is produced by the human brain, whose properties do not vary across individuals or cultures.

In this way psychological investigations of language are less attuned to the variation and cultural accident of language than linguistics.

(c) Some concerns of philosophy have been adopted by some practitioners of “formal semantics” in linguistics. Yet philosophy, like psychology, adopts an idealized view of language, whereby

all languages and all modes of usage are equivalent; there is a tacit assumption that language is immutable. Linguistics—again, contextual linguistics, at least—when it investigates semantics finds the associative and subjective operations of metaphor (similarity) and metonymy (contiguity) as essential tools in modeling language meaning and change in meaning; the subdiscipline of cognitive linguistics focuses on these essentially tropic operations as the critical means whereby meaning is textured and changed over time; change in meaning over time is not relevant to psychology and philosophy. Philosophy and linguistics differ in their take on discourse. In philosophy, the Gricean approach to discourse, to take one example, posits an overarching and idealized “cooperative principle” against which behavior is evaluated. While Grice is in fact often invoked in linguistic discussions of discourse, linguistics is likely to be more empirical than the tradition of discourse in philosophy and pay attention, for example, to *differences*: to differences among functions of discourse (“genres” of speech), to differences in the roles of speaker, and to the differences between written and spontaneous oral use of language.

STUDY ABROAD

Undergraduates have engaged in unique travel and research projects, including sign language in Nicaragua; language attitudes in Kyrgyzstan; colloquial Arabic in Cairo; summer internship at the Max Planck Institute for Evolutionary Biology; and study abroad in Spain, England, India, Hungary, and Ireland.

GRADUATE STUDY

Columbia's linguists have distinguished themselves with awards and plans after graduation, such as Fulbright Fellowships to France, Georgia, and Turkey; and graduate study of linguistics or psychology at Harvard, Stanford, UCSD, Northwestern, New York University, and SUNY Buffalo. Linguistics is also a natural background for the law, and our students have entered such law schools as Georgetown and Columbia.

There is no graduate program in linguistics at Columbia. Students interested in pursuing graduate study in linguistics in New York should investigate CUNY Graduate Center, New York University, or Teachers College (applied linguistics).

THE COLUMBIA LINGUISTICS SOCIETY

The Columbia Linguistics Society is an organization of undergraduates interested in linguistics which sponsors lectures and hosts informal social events. Information is available at <http://columbialinguistics.wordpress.com/> or through Facebook.

AFFILIATED FACULTY

- May Ahmar (Arabic; MESAAS)
- Akeel Bilgrami (Philosophy)
- Aaron Fox (Music)
- Haim Gaifman (Philosophy)
- Boris Gasparov (Slavic Languages)

- Tiina Haapakoski (Finnish, Germanic Languages)
- Julia Hirschberg (Computer Science)
- Ana Paula Huback (Latin American and Iberian Studies)
- Rina Kreitman (Hebrew; MESAAS)
- Karen Lewis (Philosophy, Barnard)
- Lening Liu (Chinese; East Asian Languages and Cultures)
- David Lurie (Japanese; East Asian Languages and Cultures)
- Kathleen McKeown (Computer Science)
- John McWhorter (American Studies)
- Yuan-Yuan Meng (Chinese; East Asian Languages and Cultures)
- Michele Miozzo (Psychology)
- Fumiko Nazikian (Japanese; East Asian Languages and Cultures)
- Youssef Nouhi (Arabic; MESAAS)
- Christopher Peacocke (Philosophy)
- Owen Rambow (Center for Computational Learning Systems)
- Robert Remez (Psychology, Barnard)
- Francisco Rosales-Varo (Latin American and Iberian Studies)
- Carol Rounds (Hungarian; Italian)
- José Plácido Ruiz-Campillo (Latin American and Iberian Studies)
- Richard Sacks (English and Comparative Literature)
- Ann Senghas (Psychology, Barnard)
- Mariame Sy (Wolof; Pulaar; MESAAS)
- Alan Timberlake (Slavic Languages)
- Zhirong Wang (Chinese; East Asian Languages and Cultures)

SPECIAL CONCENTRATION IN LINGUISTICS

Linguistics at Columbia: Special Concentration

The special concentration in linguistics is not sufficient for graduation in and of itself. It must be taken in conjunction with a major or a full concentration in another discipline. For the special concentration, students must take 18 points in the linguistics program as follows:

1. Three core courses in linguistics chosen from:

LING UN3101	Introduction to Linguistics
HNGR UN3343	Hungarian Descriptive Grammar
ANTH UN3906	Functional Linguistics and Language Typology
AMST UN3990	Senior Research Seminar
LING GU4108	Language History
LING GU4120	Language Documentation and Field Methods
LING GU4190	Discourse and Pragmatics
LING GU4202	Cognitive Linguistics
LING GU4206	Advanced Grammar and Grammars
LING GU4376	Phonetics and Phonology
LING GU4800	Language and Society

ENGL GU4901	History of the English Language
LING GU4903	Syntax

2. Two additional courses in either linguistics or in related fields chosen in consultation with the program director, in fields such as:

History or structure of individual languages	
Chinese, Spanish, French, Russian, etc.	
Anthropology	
ANTH V3044	Symbolic Anthropology
ANTH W4042	Agent, Person, Subject, Self
ANTH G6125	Language, Culture and Power
Computer Science	
COMS W3261	Computer Science Theory
COMS W4705	Natural Language Processing
COMS W4706	Spoken Language Processing
COMS E6998	Topics in Computer Science
French	
FREN BC3011	
Music	
MUSI W4405	Music and Language
MSPS G4233	Language and Music (Seminar)
Philosophy	
PHIL UN3411	Symbolic Logic
PHIL UN3685	Philosophy of Language
PHIL GU4490	LANGUAGE AND MIND
Psychology	
PSYC W2440	Language and the Brain
PSYC UN2450	Behavioral Neuroscience
PSYC W3265	Auditory Perception (Seminar)
PSYC BC3164	Perception and Language
PSYC BC3369	Language Development
PSYC UN2215	Cognition and the Brain
Sociology	
SOCI G4030	Sociology of Language

3. One language course at the intermediate level (third-semester), separate from the general language requirement.

IN FULFILLMENT OF THE LANGUAGE REQUIREMENT FOR LINGUISTICS

The language taken in fulfillment of the linguistics requirement can be either an ancient or modern language, but should neither be the student's native (or semi-native) language nor belong to one of the major groups of modern European languages (Germanic, Romance). In addition to the regularly taught courses listed under the Foreign Language Requirement, the following is a list of languages that have been offered at Columbia. See the list of languages offered through the Language Resource Center and consult with the program director about other

languages to determine if they are acceptable for the linguistics language requirement.

Ancient Egyptian
Anglo-Saxon
Aramaic
Bosnian/Croatian/Serbian
Cantonese
Chagatay
Czech
Finnish
Georgian
Hindi
Hungarian
Indonesian
Irish
Kannada
Kazakh
Korean
Nahuatl
Nepali
Old Church Slavonic
Quechua
Persian
Polish
Pulaar
Romanian
Sumerian Swahili
Syriac
Tajik
Tamil
Telugu
Ukrainian Uzbek
Urdu
Vietnamese
Wolof
Zulu

MATHEMATICS

Departmental Undergraduate Office: 410 Mathematics;
212-854-2432
<http://www.math.columbia.edu/>

Director of Undergraduate Studies: Prof. Ovidiu Savin, 409
Mathematics; 212-854-8233; savin@math.columbia.edu

Calculus Director: Prof. Michael Woodbury, 525 Mathematics;
212-854-2849; woodbury@math.columbia.edu

Computer Science-Mathematics Adviser: Prof.
Patrick X. Gallagher, 411 Mathematics; 212-854-4346;
pxg@math.columbia.edu

Economics-Mathematics Advisers:
Mathematics: Prof. Julien Dubedat, 601 Mathematics;
212-854-8806; jd2653@columbia.edu
Economics: Dr. Susan Elmes, 1006 International Affairs Building;
212-854-9124; se5@columbia.edu

Mathematics-Statistics Advisers:
Mathematics: Prof. Julien Dubedat, 601 Mathematics;
212-854-8806; dubedat@math.columbia.edu
Statistics: Prof. Banu Baydil, 611 Watson; 212-851-2132;
bb2717@columbia.edu

The major in mathematics is an introduction to some of the highlights of the development of theoretical mathematics over the past four hundred years from a modern perspective. This study is also applied to many problems, both internal to mathematics and arising in other disciplines such as physics, cryptography, and finance.

Majors begin by taking either Honors mathematics or the calculus sequence. Students who do not take MATH UN1207 Honors Mathematics A and MATH UN1208 Honors Mathematics B normally take MATH UN2010 Linear Algebra in the second year. Following this, majors begin to learn some aspects of the main branches of modern mathematics: algebra, analysis, and geometry; as well as some of their subdivisions and hybrids (e.g., number theory, differential geometry, and complex analysis). As the courses become more advanced, they also become more theoretical and proof-oriented and less computational.

Aside from the courses offered by the Mathematics Department, cognate courses in areas such as astronomy, chemistry, physics, probability, logic, economics, and computer science can be used toward the major. A cognate course must be a 2000-level (or higher) course and must be approved by the director of undergraduate studies. In general, a course not taught by the Mathematics Department is a cognate course for the mathematics major if either (a) it has at least two semesters of calculus as a stated prerequisite, or (b) the subject matter in the course is mathematics beyond an elementary level,

such as PHIL UN3411 Symbolic Logic, in the Philosophy Department, or COMS W3203 Discrete Mathematics: Introduction to Combinatorics and Graph Theory, in the Computer Science Department.

Another requirement for majors is participation in an undergraduate seminar, usually in the junior or senior year. In these seminars, students gain experience in learning an advanced topic and lecturing on it. In order to be eligible for departmental honors, majors must write a senior thesis.

COURSES FOR FIRST-YEAR STUDENTS

The systematic study of mathematics begins with one of the following three alternative calculus and linear algebra sequences:

MATH UN1101	Calculus I
- MATH UN1102	and Calculus II
- MATH UN1201	and Calculus III
- MATH UN1202	and Calculus IV
- MATH UN2010	and Linear Algebra
MATH UN1101	Calculus I
- MATH UN1102	and Calculus II
- MATH UN1205	and Accelerated Multivariable
- MATH UN2010	Calculus
	and Linear Algebra
MATH UN1101	Calculus I
- MATH UN1102	and Calculus II
- MATH UN1207	and Honors Mathematics A
- MATH UN1208	and Honors Mathematics B

Credit is allowed for only one calculus and linear algebra sequence.

Calculus I, II is a standard course in single-variable differential and integral calculus; *Calculus III, IV* is a standard course in multivariable differential and integral calculus; *Accelerated Multivariable Calculus* is an accelerated course in multivariable differential and integral calculus.

While *Calculus II* is no longer a prerequisite for *Calculus III*, students are strongly urged to take it before taking *Calculus III*. In particular, students thinking of majoring or concentrating in mathematics or one of the joint majors involving mathematics should take *Calculus II* before taking *Calculus III*. Note that *Calculus II* is a prerequisite for Accelerated Multivariable Calculus, and both *Calculus II* and *Calculus III* are prerequisites for *Calculus IV*.

The third sequence, *Honors Mathematics A- B*, is for exceptionally well-qualified students who have strong Advanced Placement scores. It covers multivariable calculus (MATH UN1201 Calculus III- MATH UN1202 Calculus IV) and linear algebra (MATH UN2010 Linear Algebra), with an emphasis on theory.

MATH UN1003 College Algebra and Analytic Geometry does not count toward the degree. Students who take this course do not receive college credit.

ADVANCED PLACEMENT

The department grants 3 credits for a score of 4 or 5 on the AP Calculus AB exam provided students complete MATH UN1102 Calculus II or MATH UN1201 Calculus III with a grade of C or better. The department grants 3 credits for a score of 4 on the AP Calculus BC exam provided students complete MATH UN1102 Calculus II or MATH UN1201 Calculus III with a grade of C or better. The department grants 6 credits for a score of 5 on the AP Calculus BC exam provided students complete MATH UN1201 Calculus III or MATH UN1205 Accelerated Multivariable Calculus MATH UN1207 Honors Mathematics A with a grade of C or better. Students can receive credit for only one calculus sequence.

PLACEMENT IN THE CALCULUS SEQUENCES

Calculus I

Students who have essentially mastered a precalculus course and those who have a score of 3 or less on an Advanced Placement (AP) exam (either AB or BC) should begin their study of calculus with MATH UN1101 Calculus I.

Calculus II and III

Students with a score of 4 or 5 on the AB exam, 4 on the BC exam, or those with no AP score but with a grade of A in a full year of high school calculus may begin with either MATH UN1102 Calculus II or *MATH UN1201 Calculus III*. Note that such students who decide to start with *Calculus III* may still need to take *Calculus II* since it is a requirement or prerequisite for other courses. In particular, they **MUST** take *Calculus II* before going on to MATH UN1202 Calculus IV. Students with a score of 5 on the BC exam may begin with *Calculus III* and do not need to take *Calculus II*.

Those with a score of 4 or 5 on the AB exam or 4 on the BC exam may receive 3 points of AP credit upon completion of *Calculus II* with a grade of C or higher. Those students with a score of 5 on the BC exam may receive 6 points of AP credit upon completion of *Calculus III* with a grade of C or higher.

Accelerated Multivariable Calculus

Students with a score of 5 on the AP BC exam or 7 on the IB HL exam may begin with MATH UN1205 Accelerated Multivariable Calculus. Upon completion of this course with a grade of C or higher, they may receive 6 points of AP credit.

Honors Mathematics A

Students who want a proof-oriented theoretical sequence and have a score of 5 on the BC exam may begin with MATH UN1207 Honors Mathematics A, which is especially designed for mathematics majors. Upon completion of this course with a grade of C or higher, they may receive 6 points of AP credit.

TRANSFERS INSIDE THE CALCULUS SEQUENCES

Students who wish to transfer from one calculus course to another are allowed to do so beyond the date specified on the Academic Calendar. They are considered to be adjusting their level, not changing their program. However, students must obtain the approval of the new instructor and their advising dean prior to reporting to the Office of the Registrar.

GRADING

No course with a grade of D or lower can count toward the major, interdepartmental major, or concentration. Students who are doing a double major cannot double count courses for their majors.

DEPARTMENTAL HONORS

In order to be eligible for departmental honors, majors must write a senior thesis. To write a senior thesis, students must register for MATH UN3999 Senior Thesis in Mathematics in the fall semester of their senior year. Normally no more than 10% of graduating majors receive departmental honors in a given academic year.

PROFESSORS

- Mohammed Abouzaid
- David A. Bayer (Barnard)
- Simon Brendle
- Ivan Corwin
- Panagiotas Daskalopoulos
- Aise Johan de Jong
- Robert Friedman
- Patrick X. Gallagher
- Dorian Goldfeld
- Brian Greene
- Richard Hamilton
- Michael Harris
- Ioannis Karatzas
- Mikhail Khovanov
- Igor Krichever
- Chiu-Chu Liu
- Dusa McDuff (Barnard)
- Walter Neumann (Barnard)
- Andrei Okounkov
- D. H. Phong
- Henry Pinkham
- Ovidiu Savin
- Michael Thaddeus (Department Chair)
- Eric Urban
- Mu-Tao Wang
- Wei Zhang

ASSOCIATE PROFESSORS

- Daniela De Silva (Barnard)
- Julien Dubedat

ASSISTANT PROFESSORS

- n/a

J.F. RITT ASSISTANT PROFESSORS

- Akram Alishahi
- Guillaume Barraquand
- Hector Chang
- Teng Fei
- Bin Guo
- David Hansen
- Chao Li
- Shotaro Makisumi
- Joanna Nelson
- Gus Schrader
- Shrenik Shah
- Hao Shen
- Evan Warner
- Hui Yu
- Yihang Zhu

SENIOR LECTURERS IN DISCIPLINE

- Lars Nielsen
- Mikhail Smirnov
- Peter Woit

LECTURERS IN DISCIPLINE

- Michael Woodbury

ON LEAVE

- Profs. Daskalopoulos, Liu, Okounkov, Pinkham, Wang, Zhang (*Fall 2017*)
- Profs. Daskalopoulos, Liu, Makisumi, Okounkov, Pinkham, Wang, Zhang (*Spring 2018*)

MAJOR IN MATHEMATICS

The major requires 40-42 points as follows:

Select one of the following three calculus and linear algebra sequences (13-15 points including Advanced Placement Credit):

MATH UN1101	Calculus I
- MATH UN1102	and Calculus II
- MATH UN1201	and Calculus III
- MATH UN1202	and Calculus IV
- MATH UN2010	and Linear Algebra

MATH UN1101	Calculus I
- MATH UN1102	and Calculus II
- MATH UN1205	and Accelerated Multivariable
- MATH UN2010	Calculus
	and Linear Algebra

MATH UN1101	Calculus I
- MATH UN1102	and Calculus II
- MATH UN1207	and Honors Mathematics A
- MATH UN1208	and Honors Mathematics B

15 points in the following required courses:

MATH UN3951	Undergraduate Seminars in
- MATH UN3952	Mathematics I
	and Undergraduate Seminars in
	Mathematics II (at least one term)

MATH GU4041	Introduction to Modern Algebra I
- MATH GU4042	and Introduction to Modern
	Algebra II

MATH GU4061	Introduction To Modern Analysis I
- MATH GU4062	and Introduction To Modern
	Analysis II

12 points in any combination of mathematics and cognate courses. **

* Students who are not contemplating graduate study in mathematics may replace one or both of the two terms of MATH GU4061- MATH GU4062 by one or two of the following courses: MATH UN2500 Analysis and Optimization, MATH UN3007 Complex Variables, MATH UN3028 Partial Differential Equations, or MATH GU4032 Fourier Analysis.

** A course not taught by the Mathematics Department is a cognate course for the mathematics major if either (a) it has at least two semesters of calculus as a stated prerequisite and is a 2000-level (or higher) course, or (b) the subject matter in the course is mathematics beyond an elementary level, such as PHIL UN3411 Symbolic Logic, in the Philosophy Department, or COMS W3203 Discrete Mathematics: Introduction to Combinatorics and Graph Theory, in the Computer Science Department. In exceptional cases, the director of undergraduate studies may approve the substitution of certain more advanced courses for those mentioned above.

The program of study should be planned with a departmental adviser before the end of the sophomore year. Majors who are planning on graduate studies in mathematics are urged to obtain a reading knowledge of one of the following languages: French, German, or Russian.

Majors are offered the opportunity to write an honors senior thesis under the guidance of a faculty member. Interested students should contact the director of undergraduate studies.

MAJOR IN APPLIED MATHEMATICS

The major requires 38-40 points as follows:

Select one of the following three calculus and linear algebra sequences (13-15 points including Advanced Placement Credit):

MATH UN1101	Calculus I
- MATH UN1102	and Calculus II
- MATH UN1201	and Calculus III
- MATH UN1202	and Calculus IV
- MATH UN2010	and Linear Algebra

MATH UN1101	Calculus I
- MATH UN1102	and Calculus II
- MATH UN1205	and Accelerated Multivariable
- MATH UN2010	Calculus
	and Linear Algebra

MATH UN1101	Calculus I
- MATH UN1102	and Calculus II
- MATH UN1207	and Honors Mathematics A
- MATH UN1208	and Honors Mathematics B

Select one of the following three courses:

MATH UN2500	Analysis and Optimization
MATH GU4032	Fourier Analysis
MATH GU4061	Introduction To Modern Analysis I

APMA E4901	Seminar: Problem in Applied Mathematics (junior year)
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APMA E4903	Seminar: Problems in Applied Mathematics (senior year)
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18 points in electives, selected from the following (other courses may be used with the approval of the Applied Mathematics Committee):

MATH UN2500	Analysis and Optimization
MATH UN3007	Complex Variables
or MATH GU4065	Honors Complex Variables
or APMA E4204	Functions of a Complex Variable
MATH UN3027	Ordinary Differential Equations
MATH UN3028	Partial Differential Equations
or APMA E4200	Partial Differential Equations
or APMA E6301	Analytic methods for partial differential equations

MATH GU4032	Fourier Analysis
APMA E4300	Computational Math: Introduction to Numerical Methods

APMA E4101	Introduction to Dynamical Systems
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APMA E4150	Applied Functional Analysis
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APMA E4400	Introduction to Biophysical Modeling
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MAJOR IN COMPUTER SCIENCE–MATHEMATICS

The goal of this interdepartmental major is to provide substantial background in each of these two disciplines, focusing on some of the parts of each which are closest to the other. Students intending to pursue a Ph.D. program in either discipline are urged to take additional courses, in consultation with their advisers.

The major requires 20 points in computer science, 19-21 points in mathematics, and two 3-point electives in either computer science or mathematics.

Computer Science

COMS W1004	Introduction to Computer Science and Programming in Java
or COMS W1007	Honors Introduction to Computer Science
COMS W3134	Data Structures in Java
or COMS W3137	Honors Data Structures and Algorithms
COMS W3157	Advanced Programming
COMS W3203	Discrete Mathematics: Introduction to Combinatorics and Graph Theory
COMS W3261	Computer Science Theory
CSEE W3827	Fundamentals of Computer Systems

Mathematics

Select one of the following three calculus and linear algebra sequences (13-15 points including Advanced Placement Credit):

MATH UN1101	Calculus I
- MATH UN1102	and Calculus II
- MATH UN1201	and Calculus III
- MATH UN1202	and Calculus IV
- MATH UN2010	and Linear Algebra

MATH UN1101	Calculus I
- MATH UN1102	and Calculus II
- MATH UN1205	and Accelerated Multivariable
- MATH UN2010	Calculus
	and Linear Algebra

MATH UN1101	Calculus I
- MATH UN1102	and Calculus II
- MATH UN1207	and Honors Mathematics A
- MATH UN1208	and Honors Mathematics B

MATH UN3951	Undergraduate Seminars in Mathematics I
or MATH UN3952	Undergraduate Seminars in Mathematics II
MATH GU4041	Introduction to Modern Algebra I

Electives

Select two of the following courses:

CSOR W4231	Analysis of Algorithms I
COMS W4241	Numerical Algorithms and Complexity
MATH BC2006	Combinatorics
MATH UN2500	Analysis and Optimization
MATH UN3007	Complex Variables
MATH UN3020	Number Theory and Cryptography
MATH UN3386	Differential Geometry
MATH GU4051	Topology
MATH GU4061	Introduction To Modern Analysis I

MAJOR IN ECONOMICS-MATHEMATICS

For a description of the joint major in economics-mathematics, see the *Economics* section of this bulletin.

MAJOR IN MATHEMATICS-STATISTICS

The program is designed to prepare the student for: (1) a career in industries such as finance and insurance that require a high level of mathematical sophistication and a substantial knowledge of probability and statistics, and (2) graduate study in quantitative disciplines. Students choose electives in finance, actuarial science, operations research, or other quantitative fields to complement requirements in mathematics, statistics, and computer science.

Mathematics

Select one of the following sequences:

MATH UN1101 Calculus I
- MATH UN1102 and Calculus II
- MATH UN1201 and Calculus III
- MATH UN2010 and Linear Algebra
- MATH UN2500 and Analysis and Optimization

MATH UN1101 Calculus I
- MATH UN1102 and Calculus II
- MATH UN1205 and Accelerated Multivariable
- MATH UN2010 Calculus
- MATH UN2500 and Linear Algebra
 and Analysis and Optimization

MATH UN1207 Honors Mathematics A
- MATH UN1208 and Honors Mathematics B
- MATH UN2500 and Analysis and Optimization
 (with approval from the adviser)

Statistics

Introductory Course

STAT UN1201 Calculus-Based Introduction to
 Statistics

Required Courses

STAT GU4203 PROBABILITY THEORY

STAT GU4204 Statistical Inference

STAT GU4205 Linear Regression Models

Select one of the following courses:

STAT GU4207 Elementary Stochastic Processes

STAT GU4262 Stochastic Processes for Finance

STAT GU4264 Stochastic Processes and
 Applications

STAT GU4265 Stochastic Methods in Finance

Computer Science

Select one of the following courses:

COMS W1004 Introduction to Computer Science
 and Programming in Java

COMS W1005 Introduction to Computer Science
 and Programming in MATLAB

ENGI E1006 Introduction to Computing for
 Engineers and Applied Scientists

COMS W1007 Honors Introduction to Computer
 Science

or an advanced computer science offering in programming

Electives

An approved selection of three advanced courses in mathematics, statistics, applied mathematics, industrial engineering and operations research, computer science, or approved mathematical methods courses in a quantitative discipline. At least one elective must be a Mathematics Department course numbered 3000 or above.

Students interested in modeling applications are recommended to take MATH UN3027 Ordinary Differential Equations and MATH UN3028 Partial Differential Equations.

Students interested in finance are recommended to take MATH GR5010 Introduction to the Mathematics of Finance, STAT GU4261 Statistical Methods in Finance, and STAT GU4221 Time Series Analysis.

Students interested in graduate study in mathematics or in statistics are recommended to take MATH GU4061 Introduction To Modern Analysis I and MATH GU4062 Introduction To Modern Analysis II.

Students preparing for a career in actuarial science are encouraged to replace STAT GU4205 Linear Regression Models with STAT GU4282 Linear Regression and Time Series Methods , and to take among their electives STAT GU4281 Theory of Interest .

CONCENTRATION IN MATHEMATICS

The concentration requires the following:

Mathematics

Select one of the following three multivariable calculus and linear algebra sequences:

MATH UN1201 Calculus III
- MATH UN1202 and Calculus IV
- MATH UN2010 and Linear Algebra

MATH UN1205 Accelerated Multivariable Calculus
- MATH UN2010 and Linear Algebra

MATH UN1207 Honors Mathematics A
- MATH UN1208 and Honors Mathematics B

Additional Courses

Select at least 12 additional points from any of the courses offered by the department numbered 2000 or higher.

For mathematics courses taken in other departments, consult with the director of undergraduate studies.

MEDIEVAL AND RENAISSANCE STUDIES

Program Director: Prof. Adam Kosto, 404 Fayerweather Hall, ajkosto@columbia.edu

Program Administrator: Helen Schreiber, medren@columbia.edu

Medieval and Renaissance studies is an interdisciplinary program in which a student combines a concentration in medieval or Renaissance civilization with a major or concentration in one of the following departments:

- Art History and Archaeology
- Classics
- East Asian Languages and Cultures
- English and Comparative Literature
- French and Romance Philology
- Germanic Languages
- History
- Italian
- Latin American and Iberian Cultures
- Middle Eastern, South Asian, and African Studies
- Music
- Philosophy
- Religion
- Slavic Languages

For more information about the special concentration in medieval and Renaissance studies, visit <http://medren.columbia.edu/>.

EXECUTIVE COMMITTEE OF THE INTERDEPARTMENTAL COMMITTEE ON MEDIEVAL AND RENAISSANCE STUDIES

- Christopher Baswell (English and Comparative Literature)
- Susan Boynton (Music; Program Director, Medieval and Renaissance Studies)
- Consuelo Dutschke (Rare Book and Manuscript Library)
- Rachel Eisendrath (Barnard Department of English, Barnard Medieval and Renaissance Studies)
- Carmela Franklin (Classics)
- Seth Kimmel (Latin American and Iberian Cultures)
- Adam Kosto (History)
- Pamela Smith (History)
- Alan Stewart (English and Comparative Literature)
- Jesus Rodriguez-Velasco (Latin American and Iberian Cultures)
- Michael Waters (Art History and Archaeology)

- Eliza Zingesser (French and Romance Philology)

Full Faculty List: <https://medren.columbia.edu/people>

SPECIAL CONCENTRATION IN MEDIEVAL AND RENAISSANCE STUDIES

Students considering the special concentration in medieval and Renaissance studies should consult with the director in advance of course registration to ensure that their selection of courses will count towards the special concentration.

Please note that requirements for the Special Concentration were revised November 2017.

In addition to fulfilling the requirements for a departmental major or concentration, students with this special concentration should plan on taking an additional four (4) courses in other departments of the program, to be chosen in consultation with an appropriate member of the committee.

Students must also demonstrate an ability to work with original language sources (other than in Early Modern English) from the medieval and/or Early Modern periods, either through language coursework focusing on the historical language (e.g., LATN UN3033 Medieval Language and Literature, MDES GU4214 Fourth Year Classical Arabic I) or through research (e.g., a senior thesis or seminar paper with substantial use of original language sources). Any courses outside the major used to demonstrate the language requirement may also count toward the course requirement for the special concentration. Students should gain approval of the director of the program in advance for plans to fulfill this language requirement.

MIDDLE EASTERN, SOUTH ASIAN, AND AFRICAN STUDIES

Departmental Office: 401 Knox; 212-854-2556
<http://www.columbia.edu/cu/mesaas/>

Director of Undergraduate Studies: Kai Kresse, 513 Knox;
 212-854-4766; kk2918@columbia.edu

Language Coordinators:

African Languages: Mariame Sy, 408 Knox; 212-851-2439;
sms2168@columbia.edu

Arabic: Taoufik Ben Amor, 308 Knox; 212-854-2985;
tb46@columbia.edu

Armenian: Charry Karamanoukian, 407 Knox; 212-851-4002;
ck2444@columbia.edu

Hebrew: Naama Harel, 410 Knox Hall, 212-854-6668;
nh2508@columbia.edu

Hindi/Urdu: Rakesh Ranjan, 409 Knox; 212-851-4107;
rr2574@columbia.edu

Persian: Saeed Honarmand, 313 Knox; sh3468@columbia.edu

Sanskrit: Guy Leavitt, 311 Knox;
 212-854-1304; gl2392@columbia.edu

Tamil: D. Samuel Sudanandha, 305 Knox; 212-854-4702;
dss2121@columbia.edu

Turkish: Zuleyha Colak, 412 Knox; 212-854-0473;
zc2208@columbia.edu

The undergraduate program in Middle Eastern, South Asian, and African studies (MESAAS) offers students the opportunity to study in depth the cultures, ideas, histories, and politics of several overlapping world regions. The program emphasizes a close engagement with intellectual traditions, creative movements, and political debates, drawing on a wide variety of historical and contemporary sources in literature, religion, political thought, law, the visual and performing arts, and new media. Courses also examine the historical and cultural contexts in which these traditions and debates have been produced.

MAJORS AND CONCENTRATIONS

Majors develop two closely related skills. The first is linguistic expertise. A minimum of two years of course work in one language is required, and further work (including intensive summer language study) is greatly encouraged, because the aim is to study a cultural field through its own texts and discourses. The Department of Middle Eastern, South Asian, and African Studies offers courses in Arabic, Persian, Turkish, Hebrew, Armenian, Sanskrit, Hindi/Urdu, Bengali, Tamil, Swahili, Wolof, and Zulu.

The second skill is learning how to think and write about complex cultural formations, drawing on a variety of methods and disciplinary approaches. The approaches vary according to the faculty members' expertise, incorporating methods from relevant fields in the humanities and social sciences, such as

literary criticism, film studies, cultural studies, political theory, and intellectual history.

The only difference between the MESAAS major and the concentration is that the latter does not require language proficiency.

PROFESSORS

- Gil Anidjar
- Muhsin J. Ali al-Musawi
- Partha Chatterjee
- Hamid Dabashi
- Mamadou Diouf
- Wael Hallaq
- Gil Hochberg
Sudipta Kaviraj
- Rashid Khalidi
- Mahmood Mamdani
- Joseph Massad
- Brinkley Messick
- Dan Miron (*emeritus*)
- Timothy Mitchell
- Sheldon Pollock
- Frances Pritchett (*emeritus*)
- George Saliba (*emeritus*)

ASSOCIATE PROFESSORS

- Allison Busch
- Kai Kresse
- Jennifer Wenzel

ASSISTANT PROFESSORS

- Sarah bin Tyeer
- Mana Kia
- Debashree Mukherjee

SENIOR LECTURERS

- Taoufik Ben Amor
- Abdul Nanji
- Rakesh Ranjan

LECTURERS

- Oujidane Absi
- Aftab Ahmad
- May Ahmar
- Tarik Belhoussein
- Rym Bettaieb
- Ihsan Colak
- Zuleyha Colak
- Reem Faraj
- Illan Gonen

- Naama Harel
- Saeed Honarmand
- Charry Karamanoukian
- Rina Kreitman
Yithak Lewis
- Youssef Nouhi
Michelle Quay
- Dalpat Rajpurohit
- D. Samuel Sudanandha
- Mariame Sy

ON LEAVE

- Profs. Busch, Mamdani, Mitchell, Pollock (*Fall 2017*)
-

GUIDELINES FOR ALL MIDDLE EASTERN, SOUTH ASIAN, AND AFRICAN STUDIES MAJORS AND CONCENTRATORS

Introduction to MESAAS

Majors and concentrators begin their work with an introductory course that emphasizes a particular area (the Middle East, South Asia, or Africa). For instance, students interested in the Middle East would take ASCM UN2003 Introduction to Islamic Civilization or ASCM UN2008 Contemporary Islamic Civilization. Students keen on learning more about South Asia would take ASCM UN2357 Introduction to Indian Civilization, HSME UN3810 History of South Asia I: al-Hind to Hindustan, or HIST W3811 South Asia II: Empire and Its Aftermath. The introductory course generally recommended for students interested in Africa is MDES UN2030 Major Debates in the Study of Africa.

Required Core Courses

All majors must take two additional core courses. The first is a small seminar in which they explore some of the classic texts of the region, either AHUM UN3399 Colloquium on Major Texts: Middle East and South Asia (for those focusing on the Middle East and South Asia) or AFCV UN1020 African Civilizations (for those focusing on Africa).

With this background, students are ready to take MDES UN3000 Theory and Culture generally in the junior or senior year. This course examines critical approaches to the study of language, culture, and politics and encourages students to reflect on their own work from many different perspectives.

Additional Requirements

Fifteen additional points (generally five courses) are chosen in consultation with the director of undergraduate studies. These may include six points of coursework from other departments, subject to the director of undergraduate studies' approval. Although students may have a particular interest (e.g., Arab

political thought, Urdu literature, Armenian history, Iranian cinema, or contemporary West Africa), they are encouraged to gain exposure to the fullest range of courses and approaches offered by the faculty, and to familiarize themselves with other regions beyond their core area.

In Fulfillment of the Language Requirement (for Majors)

Enrollment in language courses is in some cases determined by placement exams. For more information, see *Languages* on the departmental website (<http://www.columbia.edu/cu/mesaas>) and, if necessary, consult the relevant Coordinator listed on that page. The website includes separate pages for each language, describing the program of instruction, courses for heritage speakers, summer language programs, and more. Language courses must be taken for a letter grade. Pass/D/Fail or Registration credit (R) is not permitted. Those seeking to waive a language requirement must take a proficiency test.

Students who enter with language proficiency at only the second-year level must complete one additional year of language study and one additional MESAAS course. When students enter with language proficiency at the third year level (or in cases where only two years of a particular language are offered in MESAAS), they must substitute three additional MESAAS courses.

Advising

Newly declared majors and concentrators should meet with the director of undergraduate studies in order to plan a program of study. The goal is to strike a balance between courses that help a student achieve depth in a particular area/discipline and those that foster a wider perspective.

Although students are encouraged to approach faculty in the department based on their specific interests, the director of undergraduate studies functions as an ad hoc adviser for all entering students, addressing issues of course requirements, credit, approval for courses in other departments or schools, study abroad, and, eventually, honors requirements (including the senior thesis). Students should not hesitate to contact the director of undergraduate studies to set up an appointment.

Grading

Courses in which the grade of D has been received do not count toward the major or concentration requirements, nor do those taken Pass/D/Fail, except for the first course taken toward the major or concentration.

Honors Program/Senior Thesis

Students may also wish to write a thesis. While not required for graduation, the thesis enables a student to be considered for departmental honors. It is advisable to begin planning for the thesis during the student's junior year. Interested students should attend the relevant information sessions and identify a potential faculty adviser.

All students who wish to write a thesis must enroll in MDES UN3960 MESAAS Honors Thesis Seminar, a full year course consisting of a 1-point segment in the Fall semester and a 3-point segment in the Spring semester. Students work closely with their peers in a supportive environment to produce a substantial piece of research (in the range of 40 pages). The primary intellectual guidance is provided by the faculty adviser, whereas the director of undergraduate studies and the honors seminar teaching assistant oversee the general development of the project. Every year in April, MESAAS hosts a senior colloquium in which students present their research. For more information on the honors program, see *Frequently Asked Questions* on the departmental website (<http://www.columbia.edu/cu/mesaas>).

For additional guidelines, see *Departmental Honors* as outlined in the *Academic Honors, Prizes, and Fellowships* section of the Columbia College Bulletin.

MAJOR IN MIDDLE EASTERN, SOUTH ASIAN, AND AFRICAN STUDIES

Students should obtain a Major Declaration (https://www.studentaffairs.columbia.edu/sites/dsa/files/forms/CC%20major%20declaration_1.pdf) form from their advising dean and bring it to the director of undergraduate studies for approval. The director of undergraduate studies meets with students as necessary in order to establish and approve their individual programs of study. The requirements for the major are as follows:

Select a one-term introductory culture course, to be approved by the director of undergraduate studies

AHUM UN3399	Colloquium on Major Texts: Middle East and South Asia
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MDES UN3000	Theory and Culture
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Select two years of a language regularly taught in the department, or substitutional courses for students who test out of this requirement with the approval of the director of undergraduate studies

Select 15 points of coursework, which may include up to six points from other departments, selected in consultation with the director of undergraduate studies

The MESAAS Major and its 'tracks'

Students majoring in MESAAS are studying the languages, and central cultural and political aspects of the societies of the Middle East, South Asia, and Africa, in past and present. This can be done either with a focus on one of these three regions, i.e. the 'African Studies', the 'South Asian Studies', or the 'Middle Eastern Studies' track, or a comparative perspective on them, the 'combined track'.

The coursework for each of those 'tracks' is composed of the same five elements: 1. an approved Introductory course; 2. a seminar on texts from the region; 3. 'Theory and Culture'; 4. five approved elective courses; 5. the regional language requirement.

Note that some MESAAS courses are already comparative by design and connect more than one region: for example, *Societies and Cultures Across the Indian Ocean*, or *Postcolonial Thought*, or courses on Persianate culture that include North India, or Middle East courses that include North Africa. These may satisfy requirements for more than one track, subject to approval by the Director of Undergraduate Studies (DUS).

African Studies

1. MDES UN3130 Major Debates in the Study of Africa or another approved introductory lecture course.
2. CC1020 African Civilization
3. MDES UN3000 Theory and Culture
4. Five additional courses on Africa, such as: South African Literature and Culture: Apartheid and After; East Africa and the Swahili Coast; or Pan Africanism (see the Courses page for more options). You may include up to two courses from other departments, in fields such as African history, politics, and philosophy, the anthropology of Africa, and African art, subject to the approval of the Director of Undergraduate Studies. For a listing of courses in other departments, see here (<http://www.ias.columbia.edu/academics>).
5. Language: A minimum of two years of course work in Swahili, Arabic, Pular, or another African language. See the MESAAS language programs here (<http://www.columbia.edu/cu/mesaas/languages>). Those already fluent in an African language may substitute other courses—see FAQ (<http://www.columbia.edu/cu/mesaas/undergraduate/faqs.html#fluent>). Not required for the concentration.

Middle Eastern Studies

1. ASCM UN2003 Islamic Civilization or another approved introductory lecture course.
2. Asian Humanities UN3399 Major Texts: Middle East/India
3. MDES UN3000 Theory and Culture
4. Five additional courses on the Middle East, such as: Arabic Self-Narratives; Central Questions in Islamic Law, Palestinian-Israeli Politics and Society, or Epics and Empires (see the Courses page for more options). You may include up to two courses from other departments, in fields such as Middle Eastern history, politics, and anthropology, or Islamic art, subject to the approval of the Director of Undergraduate Studies. Find a list of Middle East courses in other departments here (<http://www.mei.columbia.edu>).
5. Language: A minimum of two years of coursework in Arabic, Hebrew, Persian, Turkish, or Armenian. See the MESAAS language programs here (<http://www.columbia.edu/cu/mesaas/languages>). Those already fluent in a Middle Eastern language may substitute other courses—see FAQ (<http://www.columbia.edu/cu/mesaas/undergraduate/faqs.html#fluent>). Not required for the concentration.

South Asian Studies

1. MDES UN2357 Indian Civilization or another approved introductory lecture course.
2. Asian Humanities UN3399 Major Texts: Middle East/India

3. MDES UN3000 Theory and Culture
4. Five additional courses on South Asia, such as: Mughal India; Gandhi and his Interlocutors; or Cinemas of India (see the Courses page for more options). You may include up to six points of course work from other departments, in fields such as South Asian history, politics, and anthropology, or Indian art, subject to the approval of the Director of Undergraduate Studies. Find a list of South Asia courses in other departments here (<http://sai.columbia.edu/courses>).
5. Language: A minimum of two years of course work in Hindi/Urdu, Sanskrit, Persian, or other South Asian languages. See the MESAAS language programs here (<http://www.columbia.edu/cu/mesaas/languages>). Those already fluent in a South Asian language may substitute other courses—see FAQ (<http://www.columbia.edu/cu/mesaas/undergraduate/faqs.html#fluent>). Not required for the concentration.

Combined

There is also a combined option. For this, you may satisfy the five requirements by choosing courses from any of the three tracks.

1. An approved introductory lecture course.
2. Asian Humanities UN3399 Major Texts: Middle East/India – OR: CC1020 African Civilization
3. MDES UN3000 Theory and Culture
4. Five additional courses, fitting one's course of study, to be approved by DUS
5. Language: A minimum of two years of course work in any of the regional MESAAS languages, to be approved by the DUS.

CONCENTRATION IN MIDDLE EASTERN, SOUTH ASIAN, AND AFRICAN STUDIES

The requirements are identical with those for the major, except that there is no departmental language requirement. Fifteen points in department courses, selected with the approval of the director of undergraduate studies. These may not include elementary or intermediate language courses. Not more than two courses out of the general 15 points may be devoted to language study.

MUSIC

Departmental Office: 621 Dodge; 212-854-3825
<http://www.music.columbia.edu/>

Director of Undergraduate Studies: Prof. Bradford Garton, 807 Dodge; 212-854-2261; garton@columbia.edu

Music Humanities Chair: Prof. Giuseppe Gerbino, 607 Dodge; 212-854-6299; gg2024@columbia.edu

Music Performance Program Director: Prof. Magdalena Stern-Baczewska, 618A Dodge; 212-854-2348; mb3713@columbia.edu

The music major provides aspiring musicians and/or scholars with a wide range of ways to think about music (performance-related, theoretical, historical, cultural, and compositional) and to concentrate on the aspects of music that most interest them—from popular and world music to computer music. Our faculty engage in cultural studies (i.e., ethnomusicology) and with current literary theory, connect with faculty of other departments (i.e., English, Philosophy, and Psychology), and are on the cutting edge of technological change. Students who have a passion for music and who have already developed basic skills in areas including performance, music history, composition, or ethnography, should consider a major in music.

MUSIC PERFORMANCE

For information on auditions, registration, and other aspects of performance not included below, visit <http://www.music.columbia.edu/mpp> or contact Prof. Stern-Baczewska, Director of the Music Performance Program, in 618 Dodge, 212-854-1257.

Students with questions about the Columbia-Juilliard programs should consult *Special Programs* in this Bulletin or contact Rebecca Schiavo, 212-854-9478, rab2195@columbia.edu.

Lessons

Individual lessons on instruments listed under Courses of Instruction may be taken for one half hour per week for 1 point of credit (or in the case of voice lessons at Barnard College, one full hour per week for 2 points). Auditions are only offered in the fall semester and courses are a one year commitment. There is a \$250 lesson fee per semester for each instrumental instruction course.

- MPP UN1401 Bassoon Instruction
- MPP UN1403 Cello Instruction
- MPP UN1405 Clarinet Instruction
- MPP UN1407 Classical Saxophone Instruction
- MPP UN1409 Flute Instruction
- MPP UN1411 French Horn Instruction
- MPP UN1413 Guitar (Bluegrass) Instruction
- MPP UN1415 Guitar (Classical) Instruction
- MPP UN1417 Harp Instruction

- MPP UN1419 Oboe Instruction
- MPP UN1421 Organ Instruction
- MPP UN1423 Percussion Instruction
- MPP UN1425 Piano Instruction
- MPP UN1427 String Bass Instruction
- MPP UN1429 Trombone Instruction
- MPP UN1431 Trumpet Instruction
- MPP UN1433 Tuba Instruction
- MPP UN1435 Viola Instruction
- MPP UN1437 Violin Instruction
- MPP UN1439 Early Instruments: Harpsichord
- MPP UN1441 Early Instruments: Viola da Gamba
- MPP UN1443 Jazz Bass Instruction
- MPP UN1445 Jazz Bass (Electric) Instruction
- MPP UN1447 Jazz Guitar (Electric) Instruction
- MPP UN1449 Jazz Orchestration
- MPP UN1451 Jazz Percussion Instruction
- MPP UN1453 Jazz Piano Instruction
- MPP UN1455 Jazz Saxophone Instruction
- MPP UN1457 Jazz Trombone Instruction
- MPP UN1459 Jazz Trumpet Instruction
- MPP UN1461 Jazz Voice Instruction

Ensembles

Participation in the following ensembles is open to all members of the University community. Students who wish to receive course credit may register for 1 point per semester for these courses as listed.

See Music Performance Program website (<https://mpp.music.columbia.edu>) for audition and activity information about all of the below.

- *Columbia University Orchestra* – Jeffrey Milarsky, *Conductor*
 See -MPP UN1521 *University Orchestra* for audition and activity information.
- *Chamber Music Ensemble* – Magdalena Stern-Baczewska, *Director, Music Performance Program*
 See -MPP UN1531 *Chamber Ensemble* for audition and activity information.
- *Barnard-Columbia Chorus and Chamber Singers* – Gail Archer, *Director*
 See MUSI UN1593 *Barnard-Columbia Chorus*-
 MUSI UN1594 *Barnard-Columbia Chorus* and
 MUSI UN1595 *Barnard-Columbia Chamber Singers*-
 MUSI UN1596 *Barnard-Columbia Chamber Singers* for
 audition and activity information.
- *Collegium Musicum* – Evelyn DeGraf, *Director*
 See - MPP UN1511 *Collegium Musicum* for audition and
 activity information.
- *Jazz Ensembles* – Christopher Washburne, *Director*
 See -MPP UN1541 *Columbia University Jazz Ensemble* for
 audition and activity information.

- *World Music Ensembles* – Magdalena Stern-Baczewska, *Director, Music Performance Program*
See- *MPP UN1551 World Music Ensemble*

PRACTICE ROOMS

Please see Practice Rooms and Policies (<https://mpp.music.columbia.edu/music-practice-rooms-and-policies>) for the most up to date information.

GRADING

Ensembles: Letter Grade

Instrumental Lesson: P/F

DEPARTMENTAL HONORS

For departmental honors, see the director of undergraduate studies during the first week of the first semester of senior year. A formal written proposal is required. Normally no more than 10% of graduating majors receive departmental honors in a given academic year.

PROFESSORS

- Susan Boynton
- Joseph Dubiel
- Walter Frisch
- Bradford Garton
- Giuseppe Gerbino
- Georg Friedrich Haas
- Ellie Hisama
- Alfred Lerdahl
- George Lewis
- Ana Maria Ochoa
- Elaine Sisman

ASSOCIATE PROFESSORS

- Aaron Fox
- Christopher Washburne

ASSISTANT PROFESSORS

- Alessandra Ciucci
- Sophia di Castri
- Julia Doe
- Kevin A. Fellezs
- Mariusz Kozak
- Benjamin Steege

COORDINATOR OF MUSICIANSHIP

- Peter Susser

LECTURERS

- Elise L. Bonner
- Deborah Bradley-Kramer

- Mahir Cetiz
- Mario Diaz De Leon
- Matthew Goodheart
- Eben Graves
- Jeffrey Milarsky
- Caleb Mutch
- Martha Newland
- Alexander Rothe
- Magdalena Stern-Baczewska
- Lucie Vagnerova

ASSOCIATES IN MUSIC PERFORMANCE

- Sarah Adams
- Dmitry Alexeev
- Gail Archer (Barnard)
- Eliot Bailen
- Bruce Barth
- Cyrus S. Beroukhim
- Allen Blustine
- Vicki Bodner
- Paul Bollenback
- Yari Bond
- Maja Cerar
- Vince Cherico
- Kenneth Cooper
- Christine Correa
- Adriano Dos Santos
- David Fulmer
- Brad Gemeinhardt
- John David Gibson
- Marc Goldberg
- June Han
- Brad Jones
- Sue Ann Kahn
- Arthur Kampela
- James Kerr
- Louis Kosma
- Victor Lin
- Paul-Martin Maki
- Ole Mathisen
- Andrew Milne
- Tony Moreno
- Ah-Ling Neu
- Ugonna Okegwo
- Muneko Otani
- Susan Palma-Nidel
- Richard Rood

- Susan Rotholz
- Louise Sasaki
- James Nyoraku Schlefer
- Michael Seltzer
- Don Sickler
- Michael Skelly
- Helen Sung
- Jessica Thompson
- Masayo Ishigure Tokue
- Leo Traversa
- Michael Truesdell
- Reiko Uchida
- Jeffrey Warschauer
- James Wilson

ON LEAVE

- Julia Doe (Fall 2017)
- Walter Frisch (Spring 2018)
Ellie Hisama (Spring 2018)
- Mariuzs Kozak (2017-18)
- Alfred Lerdahl (2017-2018)
Benjamin Steege (Fall 2017)

GUIDELINES FOR ALL MUSIC MAJORS AND CONCENTRATORS

A program of study should be planned with the director of undergraduate studies in the first semester of the sophomore year. Students planning to focus on a particular area (e.g., computer music, composition, ethnomusicology, music theory, or music history) may wish to select a faculty adviser in that area.

Prerequisites

Prospective music majors and concentrators are advised to satisfy the following prerequisites as early as possible: MUSI UN1002 Fundamentals of Music and MUSI UN1312 Introductory Ear Training. These requirements may be fulfilled either through successful completion of the courses or through satisfactory performance on exemption exams administered at the beginning of each semester by the department.

Keyboard Proficiency

All music majors are required to take a keyboard proficiency exam upon entrance into the first semester of theory. Those who do not pass the exam are required to take two terms of *MUSI UN1518 Keyboard Harmony and Musicianship* for 1 point each term.

Language Recommendations

For students who plan to do graduate work in music, studying German, French, Italian, and/or Latin is recommended.

MAJOR IN MUSIC

Please read *Guidelines for all Music Majors and Concentrators* (p. 295) above.

The major in music requires a minimum of 40 points, including the following courses:

MUSI UN2318	Music Theory I
- MUSI UN2319	and Music Theory II

MUSI UN3321	Music Theory III
- MUSI UN3322	and Music Theory IV

Select four terms of ear training from the following:

MUSI UN2314	Ear Training, I
- MUSI UN2315	and Ear Training, II

MUSI UN3316	Ear Training, III
- MUSI UN3317	and Ear Training, IV

MUSI GU4318	Ear Training, V
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MUSI UN3128	History of Western Music I: Middle
- MUSI UN3129	Ages To Baroque
	and History of Western Music II:
	Classical To the 20th Century

MUSI UN3400	Topics in Music and Society
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Select at least two 3000- or 4000-level electives.

The remaining points are to be earned through 2000-, 3000-, or 4000-level courses subject to these constraints:

1. No more than 6 points of 2000-level courses
2. No more than 4 points of instrumental or vocal lessons or participation for a letter grade in these courses:

MPP UN1401	Bassoon Instruction
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MPP UN1403	Cello Instruction
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MPP UN1405	Clarinet Instruction
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MPP UN1407	Classical Saxophone Instruction
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MPP UN1409	Flute Instruction
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MPP UN1411	French Horn Instruction
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MPP UN1413	Guitar (Bluegrass) Instruction
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MPP UN1415	Guitar (Classical) Instruction
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MPP UN1417	Harp Instruction
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MPP UN1419	Oboe Instruction
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MPP UN1421	Organ Instruction
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MPP UN1423	Percussion Instruction
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MPP UN1425	Piano Instruction
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MPP UN1427	String Bass Instruction
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MPP UN1429	Trombone Instruction
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MPP UN1431	Trumpet Instruction
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MPP UN1433	Tuba Instruction
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MPP UN1435	Viola Instruction
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MPP UN1437	Violin Instruction
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MPP UN1439	Early Instruments: Harpsichord
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MPP UN1441	Early Instruments: Viola da Gamba
MPP UN1443	Jazz Bass Instruction
MPP UN1445	Jazz Bass (Electric) Instruction
MPP UN1447	Jazz Guitar (Electric) Instruction
MPP UN1449	Jazz Orchestration
MPP UN1451	Jazz Percussion Instruction
MPP UN1453	Jazz Piano Instruction
MPP UN1455	Jazz Saxophone Instruction
MPP UN1457	Jazz Trombone Instruction
MPP UN1459	Jazz Trumpet Instruction
MPP UN1461	Jazz Voice Instruction
MPP UN1511	Collegium Musicum
MPP UN1521	University Orchestra
MPP UN1531	Chamber Ensemble
MPP UN1541	Columbia University Jazz Ensemble
MPP UN1551	World Music Ensemble

3. *Two terms of MUSI UN1518 Keyboard Harmony and Musicianship*, when necessary, count against the 4-point maximum in performance before any other lessons

CONCENTRATION IN MUSIC

Please read *Guidelines for all Music Majors and Concentrators* (p. 295) above. All concentrators must consult the director of undergraduate studies each term before registering.

The concentration in music requires a minimum of 28 points, including the following courses:

MUSI UN2318	Music Theory I
- MUSI UN2319	and Music Theory II
MUSI UN3321	Music Theory III
- MUSI UN3322	and Music Theory IV

Select four terms of ear training from the following:

MUSI UN2314	Ear Training, I
- MUSI UN2315	and Ear Training, II
MUSI UN3316	Ear Training, III
- MUSI UN3317	and Ear Training, IV
MUSI GU4318	Ear Training, V
- MUSI GU4319	and Ear-Training VI (if offered)
MUSI UN3128	History of Western Music I: Middle Ages To Baroque
- MUSI UN3129	and History of Western Music II: Classical To the 20th Century
MUSI UN3400	Topics in Music and Society

Select at least one additional course at the 3000- or 4000-level.

No more than 4 points of instrumental or vocal lessons or participation for a letter grade in these courses:

MUSI UN1518	Keyboard Harmony and Musicianship (two terms *)
MPP UN1401	Bassoon Instruction
MPP UN1403	Cello Instruction
MPP UN1405	Clarinet Instruction

MPP UN1407	Classical Saxophone Instruction
MPP UN1409	Flute Instruction
MPP UN1411	French Horn Instruction
MPP UN1413	Guitar (Bluegrass) Instruction
MPP UN1415	Guitar (Classical) Instruction
MPP UN1417	Harp Instruction
MPP UN1419	Oboe Instruction
MPP UN1421	Organ Instruction
MPP UN1423	Percussion Instruction
MPP UN1425	Piano Instruction
MPP UN1427	String Bass Instruction
MPP UN1429	Trombone Instruction
MPP UN1431	Trumpet Instruction
MPP UN1433	Tuba Instruction
MPP UN1435	Viola Instruction
MPP UN1437	Violin Instruction
MPP UN1439	Early Instruments: Harpsichord
MPP UN1441	Early Instruments: Viola da Gamba
MPP UN1443	Jazz Bass Instruction
MPP UN1445	Jazz Bass (Electric) Instruction
MPP UN1447	Jazz Guitar (Electric) Instruction
MPP UN1449	Jazz Orchestration
MPP UN1451	Jazz Percussion Instruction
MPP UN1453	Jazz Piano Instruction
MPP UN1455	Jazz Saxophone Instruction
MPP UN1457	Jazz Trombone Instruction
MPP UN1459	Jazz Trumpet Instruction
MPP UN1461	Jazz Voice Instruction
MPP UN1511	Collegium Musicum
MPP UN1521	University Orchestra
MPP UN1531	Chamber Ensemble
MPP UN1541	Columbia University Jazz Ensemble
MPP UN1551	World Music Ensemble

* When necessary, count against the 4-point maximum in performance before any other lessons

SPECIAL CONCENTRATION IN JAZZ STUDIES

Students interested in a special concentration in jazz studies should see *Jazz Studies*.

PHILOSOPHY

Departmental Office: 708 Philosophy; 212-854-3196
www.philosophy.columbia.edu

Director of Undergraduate Studies: David Albert, 717
 Philosophy; 212-854-4884; da5@columbia.edu

Economics-Philosophy Adviser: Philip Kitcher, 717 Philosophy;
 212-854-4884; psk16@columbia.edu

Students interested in philosophy may pursue a major either in philosophy or in economics-philosophy. Because philosophy treats issues fundamental to both the sciences and the humanities, students are also welcome to combine their philosophy major with work in other fields. Before declaring a major in philosophy or economics-philosophy, and before deciding to combine philosophy with another discipline, students should meet with the director of undergraduate studies to formulate the program best for them.

Philosophy majors are given a foundation in logic and philosophical methodology, and are asked to confront fundamental questions in the main areas of philosophy: epistemology and metaphysics, ethics and political philosophy, philosophy of mind and language, and history of philosophy. The department requires that all majors take at least one seminar (PHIL UN3912), designed to allow students to focus on particular philosophical issues or texts in greater depth. Outstanding seniors may also pursue their own philosophical project in a senior thesis.

Over and above the courses required of all majors, there is room for considerable flexibility. Through an appropriate choice of electives from among the department's offerings (and from related courses in other departments), there are special opportunities for focusing more intensively on one or two subfields of philosophy, e.g., logic and the philosophy of mathematics, philosophy of science, ethics and political philosophy, or the history of philosophy. Students should consult with the director of undergraduate studies on how best to pursue such programs.

STUDY ABROAD: REID HALL, PARIS

For information on the Columbia in Paris Program at Reid Hall, including summer courses, consult the *Columbia University in Paris Bulletin* (available in 606 Kent and on-line at the Office of Global Programs (<http://ogp.columbia.edu>) website), call 212-854-2559, or send an e-mail to reidhall@columbia.edu. For information on applicability of Reid Hall courses to the major or concentration, consult the director of undergraduate studies.

GRADING

Courses in which a grade of D has been received do not count toward the major or concentration requirements.

SENIOR THESIS

Undergraduates majoring in Philosophy or Economics-Philosophy may propose to write a senior thesis. Students who wish to write a thesis should approach a faculty member at the end of their junior or beginning of their senior year, and begin working on the proposal early in the fall semester of their senior year. Proposals are due in early December, and will be reviewed by a committee which will include the Director of Undergraduate Studies; students will be notified of the committee's decision within two weeks. Students whose proposals are approved should register for their faculty advisor's section of Supervised Independent Research for the spring term of the senior year. Theses are due in early April.

Students who have a grade point average of 3.6 or above in the major and who complete a thesis will be placed into consideration for departmental honors, though any senior may complete a thesis regardless of their grade point average (upon approval of the proposal).

See the full policy and procedure concerning senior theses on the departmental webpage:

<http://philosophy.columbia.edu/content/senior-thesis-philosophy>

DEPARTMENTAL HONORS

Departmental honors are highly competitive. Normally no more than 10% of the majors graduating in the department each year will receive departmental honors.

In order to qualify for departmental honors in philosophy, a student must have a grade point average of at least 3.6 in the major.

For students with a GPA of 3.6 or above, there are two possible routes to consideration:

1. A student may complete a senior thesis; those students who complete senior theses will automatically be considered for honors without having to be nominated.
2. A student may be nominated by a faculty member early in the spring semester of the senior year; nominated students will be invited to submit a writing sample at least 15 pages in length. A nominated student who is also writing a thesis may submit their thesis as the writing sample, or may choose to submit a different work.

Both the senior theses and writing samples are due in early April.

The departmental honors committee will then review the submitted material and the academic records of the writers, and will report to the full faculty.

The full faculty will then decide which students to recommend for departmental honors to the Columbia College and General Studies administrations.

PROFESSORS

- David Albert

- Akeel Bilgrami
- Taylor Carman (Barnard)
- Haim Gaifman
- Lydia Goehr
- Robert Gooding-Williams
- Axel Honneth
- Patricia Kitcher
- Philip Kitcher
- Wolfgang Mann
- Christia Mercer
- Michele Moody-Adams
- Fred Neuhouser (Barnard)
- Christopher Peacocke
- Carol Rovane
- Achille Varzi
- Katja Vogt

ASSOCIATE PROFESSORS

- John Collins

ASSISTANT PROFESSORS

- Justin Clarke-Doane
- Melissa Fusco
- Dhananjay Jagannathan
- Tamar Lando
- Karen Lewis (Barnard)
- John Morrison (Barnard)
- Elliot Paul (Barnard)
- Una Stojnić
- Kathryn Tabb

AFFILIATED FACULTY

- Souleymane Bachir Diagne (French and Romance Philology)
- Jon Elster (Political Science)
- Kent Greenawalt (University Professor)
- Wayne Proudfoot (Religion)
- Joseph Raz (Law School)
- Gayatri Spivak (University Professor)

MAJOR IN PHILOSOPHY

Students considering a major in philosophy are strongly encouraged to meet with the director of undergraduate studies early in their sophomore year. All majors must consult with the director of undergraduate studies each term before registering for classes in order to plan and update their individual programs of study.

Students planning to major in philosophy are advised to begin with PHIL UN1010 Methods and Problems of Philosophical Thought. Beginning students are especially encouraged to take 2000-level courses, both in the history of philosophy

and in systematic philosophy. These courses are typically less specialized and less narrowly focused than higher-numbered ones. More advanced students are encouraged to take 3000-level courses. The department requires that all majors take at least one seminar, PHIL UN3912.

No more than one course at the 1000-level can be counted toward the major. In order to enroll in one of the 4000-level courses, students must have taken at least four courses in Philosophy.

The major requires a minimum of 30 points in philosophy chosen from courses prefixed with *UN* or *GU*:

PHIL UN2101	The History of Philosophy I: Presocratics to Augustine
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PHIL UN2201	History of Philosophy II: Aquinas to Kant
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PHIL UN3411	Symbolic Logic
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At least one course in either metaphysics or epistemology e.g., PHIL W3960, or a related course to be chosen in consultation with the director of undergraduate studies.

Select at least one course in either ethics or social and political philosophy from the following:

PHIL UN2702	Contemporary Moral Problems
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PHIL UN3701	Ethics
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PHIL UN3751	Political Philosophy
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A related course to be chosen in consultation with the director of undergraduate studies.

PHIL UN3912	Seminar
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CONCENTRATION IN PHILOSOPHY

Philosophy, as an academic discipline, has significant points of contact with a wide range of other subjects—in the humanities, the social sciences, and the natural sciences. A concentration in philosophy thus can be an attractive option for many students. Those considering becoming concentrators are strongly encouraged to meet with the director of undergraduate studies early in their sophomore year, in order to discuss their specific interests and to plan their programs of study. All concentrators should consult with the director of undergraduate studies each term before registering for courses.

The concentration requires a minimum of 24 points in philosophy, chosen from courses prefixed with UN or GU. There are no specific courses required for the concentration.

Students may choose courses prefixed with *GR* only with the instructor's permission.

PHIL UN3912 is open to junior and senior concentrators who have taken at least four courses in philosophy.

MAJOR IN ECONOMICS- PHILOSOPHY

Please read *Guidelines for all Economics Majors, Concentrators, and Interdepartmental Majors* in the *Economics* section of this Bulletin.

Economics-Philosophy is an interdisciplinary major that, while introducing students to the basic methodologies of economics and philosophy, stresses areas of particular concern to both. These include subjects such as rationality and decision making, justice and efficiency, freedom and collective choice, and the logic of empirical theories and their testing. Many of the issues are dealt with historically, and classic texts of Plato, Kant, Mill, Marx, and Smith are reviewed.

Two advisers are assigned for the interdepartmental major, one in the Department of Economics and one in the Department of Philosophy. Please note that the economics adviser can only advise on the economics requirements and the philosophy adviser can only advise on the philosophy requirements.

The economics-philosophy major requires a total of 44 points: 16 points in economics, 15 points in philosophy, 6 points in mathematics, 3 points in statistics, and 4 points in the interdisciplinary seminar as follows:

Economics Core Courses

ECON UN1105	Principles of Economics
ECON UN3211	Intermediate Microeconomics
ECON UN3213	Intermediate Macroeconomics

Mathematics Sequence

Select a mathematics sequence

Statistics

Select a statistics course

Economics Electives

Select 6 points of economics electives; refer to the Economics section of this bulletin.

Philosophy Courses

PHIL UN1010	Methods and Problems of Philosophical Thought
PHIL UN3411	Symbolic Logic
PHIL UN3701	Ethics
PHIL UN3551 or PHIL UN3960	Philosophy of Science Epistemology
PHIL GU4561	Probability and Decision Theory

Seminar

ECPH GU4950	Economics and Philosophy Seminar (or another seminar in philosophy or economics approved by advisers in both department)
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1. ECON UN3412 Introduction To Econometrics
2. A third economics elective; two of the three electives must be from the prescribed list found in the *Economics* section of the Bulletin, and the remaining economics elective may be *any* elective at the 3000-level or above.

Students who declare in Spring 2014 and beyond:

In addition to the above requirements, students are required to take:

PHYSICAL EDUCATION AND INTERCOLLEGIATE ATHLETICS

Departmental Office: 336 Dodge Physical Fitness Center;
212-854-3439

perec.columbia.edu (<http://bulletin.columbia.edu/columbia-college/departments-instruction/physical-education-intercollegiate-athletics/perec.columbia.edu>)

Director of Undergraduate Studies: The Director of Physical Education, Jeffrey Ryder; jr3786@columbia.edu, 332 Dodge Physical Fitness Center; 212-854-4001;

Departmental Administrative: Belgica Ramirez,
212-854-3439; br12@columbia.edu

The Physical Education Department offers a variety of activities in the areas of aquatics, fitness, martial arts, individual and dual “lifetime” sports, team sports, and outdoor education. Most of the activities are designed for the beginner or intermediate level. However, advanced courses are offered at selected times. The courses are designed to develop and/or improve the student’s fundamental skills and to help realize his or her potential. Activity that promotes one’s fitness level is emphasized. A major goal is to provide a positive, enjoyable experience for students. It is our hope that these activities will contribute to the development of an active, healthy lifestyle.

The majority of the activities are offered in ten time preferences. However, there are early morning conditioning activities, Friday-only classes at Baker Athletics Complex, and special courses that utilize off-campus facilities during weekends. A description of the scheduled activities for each time preference is included in the Department of Physical Education website (<http://www.dodgefitnesscenter.com>).

A list of the activities for the term is included in the *Directory of Classes* and on the website. Students may select physical education courses during on-line registration. Students may register for only one section of physical education each term.

PHYSICAL EDUCATION REQUIREMENT

Successful completion of two Physical Education Activities is a Columbia College requirement that students are advised to complete by the end of the first year. Students may elect to take one or two additional terms of Physical Education Activities for credit. Students receive 1 point of academic credit for each completed term of physical education for a possible total of 4 points.

For more information on this requirement, please visit the *Core Curriculum*—Physical Education Requirement section of the bulletin.

MEDICAL CONDITIONS

Students who request to have their physical education activities limited or waived because of a medical condition should contact the chair of Physical Education. In some situations, students may require an evaluation by a clinician at Health Services at Columbia in order to receive a waiver. In consultation with the Director of Physical Education, students may be instructed to contact Dr. Melanie Bernitz, medical director of Columbia Health Programs, who facilitates these evaluations.

GRADING

The grading in all physical education courses is Pass/Fail. Students who fulfill the attendance and participation requirement receive a Pass. Those who miss more than the permissible number of classes and who do not drop the course by the official drop deadline receive a W (Withdrawal). Those who anticipate attendance problems should contact their instructors or the director of undergraduate studies.

SWIM TEST

Passing Physical Education OC1001-OC1002 is a requirement for the degree. All students are also required to pass a swimming test or take beginning swimming for one term to fulfill the swimming requirement. A waiver of the swimming test requirement may be granted if a student has a disability certified by a medical authority that precludes swimming. Students may also request waivers and accommodations on the grounds of religious observance or gender identity/expression. All requests for waivers and accommodations are reviewed by the Director of Physical Education.

LOCKER AND TOWEL SERVICE

Students have access to a lock/towel service (\$18 fee) and, with the exception of tennis, equipment for the activities is supplied by the Physical Education Department.

INTERCOLLEGIATE ATHLETICS

Students who are participating on an intercollegiate team should register for the appropriate team section of PHED UN1005 Intercollegiate Athletics. Intercollegiate athletes are responsible for taking the swimming test. Student athletes who cannot pass the test should take beginning swimming at the first possible opportunity.

Student athletes who register correctly and participate on a team receive a Pass; those who drop off a team in midterm and still wish to receive academic credit must notify the Physical Education Office and be placed in an activity to complete the attendance requirement. Otherwise, the student must officially drop *Intercollegiate Athletics* or they receive a mark of W (Withdrawal).

DIRECTOR OF PHYSICAL EDUCATION PROGRAMS

Jeffrey Ryder

ASSOCIATES

Cemi Abreu

Michael Aufrichtig

James Bolster

Christie Bonn

Samantha Carr

Diana Caskey

Brian Chenoweth

Demerae Christianson

Lauren Dudziak

Elizabeth Grubb

Pete Cruz

Derek Davis

Howard Endelman

Bid Goswami

Jumpie Harada

Matt Herhal

Colleen Irby

Daniel Ireland

Brian Jines

Lauren Kahn

Luke Kelly

Amphone Keovongmanysar

Gustavo Leal

SeoungWoo Lee

Kelly McPartland

Gaurav Misra

Richard Mueller

Caroline Nichols

Ed Nickoloff

Joshua Osit

Ken Pollard

Joanne Schickerling

Anne Marie Skylis

Jen Spicer

Marquise Stancil

Erik Supplee

Dan Tischler

Jacques Swanepoel

Sara Negrette

Steve Santos

Cassie Vondrak

Amy Weeks

PHYSICS

Departmental Office: 704 Pupin; 212-854-3348
<http://www.columbia.edu/cu/physics>

Director of Undergraduate Studies: Dr. Jeremy Dodd, 924 Pupin; 212-854-3969; dodd@phys.columbia.edu

The physics major offers a rigorous preparation in the intellectual developments of modern physics, along with extensive exposure to the mathematical and experimental techniques required to conduct basic and applied research in physics.

For the major, the department offers a set of required courses well-suited to prepare students for the most rigorous course of graduate study. These can be supplemented by elective courses in a variety of advanced topics. Although most majors go on to graduate work in physics, the intellectual skills acquired in the study of physics can also provide the basis for work in a variety of other scientific and nonscientific areas.

The physics concentration is for students who are interested in physics but are uncertain about graduate study in physics; for those who want to explore other subjects along with physics; for those who want to find a physics- or technology-related job after graduation; or for those who are considering a professional school such as law or medicine. The department helps concentrators custom design programs to ensure maximum flexibility in meeting students' intellectual needs and career goals. With appropriate selection of courses, the concentrator can explore other subjects yet maintain the option of graduate study in physics.

Research is an extremely important component of the Columbia physics experience. Because the department has a very small student-to-faculty ratio, essentially all physics majors and concentrators engage in experimental, computational, or theoretical research under the close supervision of a faculty member during part, if not all, of their time at Columbia.

REGISTRATION FOR INTRODUCTORY COURSES

The department offers a stand-alone one-semester course for nonscience majors, one introductory sequence in physics intended primarily for preprofessional students, and three introductory sequences in physics for engineering and physical science majors. Students are given credit for courses from only one of the different sequence groups.

Mixing courses across the sequences is strongly discouraged; however, physics majors who begin their studies with PHYS UN1401 Introduction To Mechanics and Thermodynamics - PHYS UN1402 Introduction To Electricity, Magnetism, and Optics should take PHYS UN2601 Physics, III: Classical and Quantum Waves as the third-semester course.

Introductory Sequences

Nonscience Majors:

PHYS UN1001 Physics for Poets

Preprofessional Students:

PHYS UN1201 General Physics I
 - PHYS UN1202 and General Physics II

Accompanying laboratory course:

PHYS UN1291 General Physics Laboratory
 - PHYS UN1292 and General Physics Laboratory II

Engineering and Physical Science Majors:

Select one of the following sequences with accompanying laboratory course:

Sequence A:

PHYS UN1401 Introduction To Mechanics and
 - PHYS UN1402 Thermodynamics
 - PHYS UN1403 and Introduction To Electricity,
 Magnetism, and Optics
 and Introduction to Classical and
 Quantum Waves

Sequence B:

PHYS UN1601 Physics, I: Mechanics and Relativity
 - PHYS UN1602 and Physics, II: Thermodynamics,
 - PHYS UN2601 Electricity, and Magnetism
 and Physics, III: Classical and
 Quantum Waves

Sequence C:

PHYS UN2801 Accelerated Physics I
 - PHYS UN2802 and Accelerated Physics II

Sequence A is a self-contained group of three courses, while Sequences B and C anticipate more course work in the Physics Department. Students considering a physics major are strongly encouraged to begin one of these sequences in their first year.

LABORATORY

Many of the introductory courses include a laboratory, as indicated. A \$75 per term *laboratory fee* is charged for all 1000-level and 2000-level laboratories.

ADVANCED PLACEMENT

Students may earn a maximum of 6 credits in physics. The department grants 6 credits for a score of 4 or 5 on the AP Physics B exam, but the student is not entitled to any exemptions. The amount of credit is reduced to 3 if the student takes a 1000-level physics course.

The department grants 3 credits for a score of 4 or 5 on the AP Physics C/MECH exam, but the student is not entitled to any exemptions. The amount of credit is reduced to 0 if the student takes PHYS UN1001, PHYS UN1201, PHYS UN1401 or PHYS UN1601.

The department grants 3 credits for a score of 4 or 5 on the AP Physics C/E&M exam, but the student is not entitled to any exemptions. The amount of credit

is reduced to 0 if the student takes PHYS UN1001, PHYS UN1202, PHYS UN1402 or PHYS UN1602.

PROFESSORS

- Igor Aleiner
- Boris Altshuler
- Elena Aprile
- Dmitri Bassov
- Andrei Beloborodov
- Allan Blaer (*emeritus*)
- Gustaaf Brooijmans
- Norman Christ
- Brian Cole
- Frederik Denef
- Richard Friedberg (*Barnard emeritus*)
- Brian Greene (Mathematics)
- Miklos Gyulassy (*emeritus*)
- Charles J. Hailey
- Timothy Halpin-Healy (Barnard)
- Sven Hartmann (*emeritus*)
- Emlyn Hughes
- Lam Hui
- Laura Kay (Barnard Astronomy)
- Tsung Dao Lee (*emeritus*)
- Szabolcs Marka
- Robert Mawhinney
- Andrew Millis
- Alfred H. Mueller
- Reshmi Mukherjee (Barnard)
- John Parsons
- Aron Pinczuk (Applied Physics)
- Malvin Ruderman
- Frank Sciulli (*emeritus*)
- Michael Shaevitz
- Michael Tuts (Chair)
- Yasutomo Uemura
- Erick Weinberg
- William Zajc

ASSOCIATE PROFESSORS

- Janna Levin (Barnard)
- Alberto Nicolis
- Abhay Pasupathy
- Ozgur Sahin (Biology)
- Tanya Zelevinsky

ASSISTANT PROFESSORS

- Cory Dean
- Brian Humensky

- Bradley Johnson
- Georgia Karagiorgi
- Brian Metzger
- Rachel Rosen
- Sebastian Will

SENIOR LECTURER IN DISCIPLINE

- Jeremy Dodd

ADJUNCT PROFESSOR

- Morgan May

LECTURER

- Burton Budick
- Joel Gersten

ON LEAVE

Tony Heinz

Amber Miller

GUIDELINES FOR ALL PHYSICS MAJORS, CONCENTRATORS, AND INTERDEPARTMENTAL MAJORS

Majors and concentrators should plan their programs of study with the director of undergraduate studies before the beginning of the junior year.

Prospective physics majors are strongly encouraged to begin one of the introductory physics sequences in their first year. Majors should aim to acquire as extensive a background in mathematics as possible.

The department considers laboratory experience to be an essential part of the physics curriculum. Majors and concentrators can gain such experience in the intermediate-level laboratories, the electronics laboratory, and through experimental research in faculty research groups.

Grading

A grade of C- or better must be obtained for a course to count toward the majors or the concentration. The grade of P is not acceptable, but a course that was taken P/D/F may be counted if and only if the P is uncovered by the Registrar's deadline.

MAJOR IN PHYSICS

Physics Courses

The major in physics requires a minimum of 41 points in physics courses, including:

Introductory Sequences

Select one of the following sequences:

Sequence A: Students with a limited background in high school physics may elect to take:

PHYS UN1401	Introduction To Mechanics and
- PHYS UN1402	Thermodynamics
- PHYS UN2601	and Introduction To Electricity, Magnetism, and Optics and Physics, III: Classical and Quantum Waves

Sequence B:

PHYS UN1601	Physics, I: Mechanics and Relativity
- PHYS UN1602	and Physics, II: Thermodynamics, Electricity, and Magnetism
- PHYS UN2601	and Physics, III: Classical and Quantum Waves

Sequence C: Students with advanced preparation in both physics and mathematics may be eligible to take:

PHYS UN2801	Accelerated Physics I
- PHYS UN2802	and Accelerated Physics II

Core Physics Courses

PHYS UN3003	Mechanics
PHYS UN3007	Electricity and Magnetism
PHYS UN3008	Electromagnetic Waves and Optics
PHYS GU4021	Quantum Mechanics
PHYS GU4022	Quantum Mechanics II
PHYS GU4023	Thermal and Statistical Physics

Elective Courses

Select at least six points of the following courses:

PHYS UN3002	From Quarks To the Cosmos: Applications of Modern Physics
PHYS GU4003	Advanced Mechanics
PHYS GU4011	Particle Astrophysics and Cosmology
PHYS GU4018	Solid-State Physics
PHYS GU4019	Mathematical Methods of Physics
PHYS GU4040	Introduction to General Relativity
PHYS GU4050	Introduction to Particle Physics

With the permission of the Director of Undergraduate Studies, 4000- or 6000-level courses offered in this or other science departments

Laboratory Work at the Intermediate Level *

Select one of the following options:

Option 1:

PHYS UN3081	Intermediate Laboratory Work (two semesters)
PHYS UN3083	Electronics Laboratory

Option 2:

PHYS UN3081	Intermediate Laboratory Work (three semesters)
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Senior Seminar

PHYS UN3072	Seminar in Current Research Problems
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* Approved experimental work with a faculty research group may satisfy one semester of the laboratory requirement.

Mathematics Courses

Calculus through MATH UN1202 Calculus IV or MATH UN1208 Honors Mathematics B; and MATH UN3027 Ordinary Differential Equations or the equivalent.

Recommended cognate courses: MATH UN2010 Linear Algebra, MATH UN3007 Complex Variables, and MATH UN3028 Partial Differential Equations.

CONCENTRATION IN PHYSICS

The concentration in physics requires a minimum of 24 points in physics, including one of the introductory sequences.

INTERDISCIPLINARY MAJOR

It is also possible to major in astrophysics, biophysics, and chemical physics. Students interested in these areas should consult with the director of undergraduate studies and with cognate departments (astronomy, biological sciences, chemistry).

POLITICAL SCIENCE

Departmental Office: 710 International Affairs Building;
212-854-3707
<http://www.polisci.columbia.edu>

Director of Undergraduate Studies:

Prof. Andrew J. Nathan, 931 International Affairs Building;
212-854-6909; ajn1@columbia.edu

Economics-Political Science Advisers:

Economics: Prof. Susan Elmes, Director of Undergraduate Studies,
1006 International Affairs Building; se5@columbia.edu

Political Science: Prof. Carlo Prato, 702 International Affairs
Building; 212-854-3646; cp2928@columbia.edu

Political Science-Statistics Advisers:

Political Science: Prof. Robert Shapiro, 730 International Affairs
Building; 212-854-3944; rys3@columbia.edu

Statistics: Prof. Banu Baydil, 612 West 115th Street, Room
611; 212-853-1397; bb2717@columbia.edu

Statistics: Prof. Ronald Neath, 612 West 115th Street, Room
612; 212-853-1398; rcn2112@columbia.edu

The discipline of political science focuses on issues of power and governance and, in particular, on political institutions, both formal and informal. It also focuses on political behavior, political processes, political economy, and state-society relations.

The field consists of four substantive subfields: *American politics*, which covers such topics as national and local politics, elections, and constitutional law; *comparative politics*, which aims at understanding the political systems of other countries, both by studying individual states and by engaging in cross-national comparisons; *international relations*, which deals with the ways that states and other political actors behave in the international arena, including such topics as security, foreign policies, international organizations, and international economic relations; and *political theory*, which analyzes the history of normative political thought as well as of analytic concepts such as the nature of justice or liberty.

Other broad topics, such as “political economy,” or the study of the relationships between economic and political processes, overlap with the subfields, but also constitute a separate program (see below). Methodology, including statistical analysis and formal modeling, also occupies an important place in the discipline.

ADVANCED PLACEMENT

The department grants credit toward the major for work completed under the College Entrance Examination Board (CEEB) Advanced Placement Program. Students receive 3 academic credits and exemption from POLS UN1201 Introduction To American Government and Politics or POLS UN1501 Introduction to Comparative Politics for scores of

5 in the United States and Comparative Government and Politics AP Exams.

ADVISING

The Department of Political Science offers a variety of advising resources to provide undergraduate majors and concentrators with the information and support needed to successfully navigate through the program. These resources are described below.

Undergraduate Advising Office

Students should take questions or concerns about the undergraduate program to the department's undergraduate advising office first. If advisers cannot answer a student's question, they then refer the student to the appropriate person.

The undergraduate advising office is staffed by a political science Ph.D. student who holds open office hours at least once per week (the schedule can be found on-line at <http://polisci.columbia.edu/academic-programs/undergraduate-programs/advising>). Students should stop by during these hours with questions about requirements, course selection, course of study, transfer and study abroad credit, and any other aspect of the program. Students may also reach the adviser by email at polisciadvising@columbia.edu.

Students should also visit the undergraduate advising office for assistance in completing the political science program planning form (available in the office, or on-line at <http://polisci.columbia.edu/academic-programs/undergraduate-programs/planning-forms>). The advisers must sign and date this form in the approval column next to any listed class that requires approval to be counted toward the program (transfer courses, non-traditional courses, etc.). These forms cannot be completed by faculty advisers. Each student's planning form is kept on file in the department, so that each semester they may meet with an adviser to update it.

The advisers are also available to speak with students about more substantive issues, including research interests, internships, and post-college plans. Since the advisers have been through the graduate school application process, they are great resources with whom students may discuss the process. Also, because they are current Ph.D. students in the department, they are familiar with the research interests of political science faculty and can therefore refer students to a professor for thesis advice, a research assistant job, or a faculty member whose research corresponds to the student's interests.

Requesting a Faculty Adviser

Often the best way for students to obtain advising from a faculty member is to contact a professor with whom they have taken a class in an area of interest. Students also have the option of having a faculty adviser assigned by the department. To request a faculty adviser, students should complete the Faculty Adviser Request Form and submit it to the undergraduate coordinator during the first two weeks of the semester.

Students may consult with their faculty adviser for any substantive issue, but still must visit walk-in advising hours to have courses approved, to fill out and update planning forms, and to discuss departmental requirements and regulations.

Director of Undergraduate Studies

The director of undergraduate studies oversees the undergraduate program and is available during office hours. While a student's first stop for advising should be the undergraduate advising office, the director of undergraduate studies is available to answer any questions that the undergraduate advisers or the undergraduate coordinator cannot. In such cases, the undergraduate coordinator and advisers refer students to the director of undergraduate studies.

Economics–Political Science Adviser

Economics–political science majors may consult with the economics–political science adviser during office hours. Please note that students should also see an undergraduate adviser to discuss major requirements and fill out a planning form. For any questions about the economics–political science program that an undergraduate adviser cannot answer, students are referred to the economics–political science adviser.

Political Science–Statistics Adviser

Political science–statistics majors may consult with the political science–statistics adviser during office hours. Please note that students should also see an undergraduate adviser to discuss major requirements and fill out a planning form. For any questions about the political science–statistics program that an undergraduate adviser cannot answer, students are referred to the political science–statistics adviser.

Faculty At-Large

Students are encouraged to contact any professor for advice during his or her office hours, or by appointment, to discuss interests in political science, course selection, and other academic or post-college issues. The faculty may provide advice about graduate schools, suggest literature that the student might consult as sources for research, recommend specific courses or professors based on the student's interests, or offer information about research opportunities with faculty. However, students should note that any issues surrounding departmental regulations and requirements, major certification, course approvals, etc., are addressed at the undergraduate advising office.

HONORS PROGRAM

The department offers the Honors Program for a limited number of seniors who want to undertake substantial research projects and write honors theses. The honors thesis is expected to be at least 75 pages in length and of exceptional quality.

Honors students perform research as part of a full-year honors seminar (POLS UN3998-POLS UN3999, 8 points total) during their senior year, in place of the seminar requirement for majors. Honors students may, however, take regular seminars to fulfill

other course requirements for the major. Theses are due in late March or early April. To be awarded departmental honors, the student must satisfy all the requirements for the major, maintain a 3.6 GPA in the major, and complete a thesis of sufficiently high quality to merit honors.

The honors seminar director provides general direction for the seminar. The honors seminar director supervises all students; each student also works with a faculty member in his or her major subfield (American politics, comparative politics, international relations, or political theory) and a preceptor. The honors seminar meets weekly for part of the year and addresses general issues involved in research and thesis writing, such as how to develop research questions and projects, methodology, sources of evidence, and outlining and drafting long papers. The sessions are also used for group discussions of students' research and thesis presentations. Students are also expected to meet periodically with the supervising professor and preceptor.

Students who wish to apply to the Honors Program must notify the department in writing by the end of the spring semester of the junior year. Please check the department website for the official deadline. Normally no more than 10% of graduating majors receive departmental honors in a given academic year. Applicants are required to have already completed the methods requirement for the major.

Application Materials

Applications to the Honors Program must include the following:

1. A cover page with the student's name, CUID number, e-mail address, and school (Columbia College or General Studies);
2. An official transcript, which may be obtained from the Office of the Registrar (<http://www.registrar.columbia.edu>) in Kent Hall, or from Student Services Online (<https://ssol.columbia.edu>) (SSOL);
3. A writing sample, preferably a paper written for a political science course;
4. A brief description (no more than one page) of a possible thesis topic. For guidelines for writing a proposal, please review the *Guidelines for Honors Seminar Proposals* (<http://polisci.columbia.edu/files/polisci/content/pdf/students/Honors%20SeminarApplication%20guidelines.pdf>).

Complete applications should be sent to:

Department of Political Science
Attn: Departmental Honors
420 West 118th Street
Mail Code 3320
New York, NY 10027

In addition, students are encouraged to find a faculty sponsor for their thesis proposal. Students who have identified a faculty sponsor should indicate the sponsor in the proposal; students without a faculty sponsor should identify a faculty member with whom they would like to work. Research areas for the political science department faculty are listed on the department's website

(<http://www.columbia.edu/cu/polisci>). Students will be notified by e-mail of the decision taken on their applications before fall registration.

Students who are not accepted into the honors seminar, or who decide after the application deadline that they would like to write an honors thesis may take one or two semesters of *Special Reading and Research* in order to write a thesis to submit for honors consideration.

Students who are not accepted into the honors seminar or who decide after the application deadline that they would like to write an honors thesis may take one or two semesters of *Independent Study* in order to write a thesis to submit for honors consideration.

For registration information and more details about this process, students should contact the undergraduate coordinator. Students may also submit for honors consideration a paper written for a class. Note that most honors theses are at least 75 pages in length. All theses must be submitted along with a confidential assessment of the paper by the supervising instructor in order to be considered for departmental honors. Students who choose this path must also complete all the requirements for the major and maintain a minimum major GPA of 3.6. Theses are due in late March or early April, and decisions about departmental honors are announced in May.

DEPARTMENTAL PRIZES AND FELLOWSHIPS

The Department of Political Science administers the following prizes and awards. Unless otherwise noted, students do not play an active part in the nomination process. Rather, faculty members nominate students at their own discretion. Departmental prizes are reserved for political science majors.

Charles A. Beard Prize

A cash prize awarded every other year to the student who writes the best paper in political science during the academic year.

Caroline Phelps Stokes Prize

A cash prize established at the bequest of Caroline Phelps Stokes is awarded to a student who has been a degree candidate at Columbia College or Barnard College for at least one academic year, and who has written the best essay in course or seminar work on the general subject of human rights.

Allan J. Willen Memorial Prize

A cash prize awarded to the Columbia College student who writes the best seminar paper on a contemporary American political problem.

Edwin Robbins Academic Research/Public Service Fellowship

The Robbins Fellowship provides a stipend each summer for at least two political science students in Columbia College who will be engaged in research in important matters of politics or policy

making or who will be working, without other compensation, as interns in a governmental office, agency, or other public service organization. Each spring, the department invites students to submit fellowship proposals. Awards are announced in late April or early May.

The Arthur Ross Foundation Award

A cash prize awarded to GS students for excellence in the field of political science.

Phyllis Stevens Sharp Fellowship in American Politics

The Phyllis Stevens Sharp Endowment Fund provides stipends each year during either academic semester or the summer for one or more Columbia College or School of General Studies students majoring or concentrating in political science to support research in American politics or policy making, or otherwise uncompensated internships in a government office, agency, or other public service organization. Each spring, the department invites students to submit fellowship proposals. Awards are announced in late April or early May.

EARLY ADMISSION TO THE MASTER'S DEGREE PROGRAM IN POLITICAL SCIENCE FOR COLUMBIA AND BARNARD POLITICAL SCIENCE UNDERGRADUATES

While the Department of Political Science does not offer a joint bachelor of arts/master's degree, it does allow Columbia and Barnard undergraduates to apply for early admission to its master's degree program. This enables qualified undergraduates majoring or concentrating in political science to obtain the B.A. degree and M.A. degree in fewer than five years (ten semesters) from the time of their entrance into Columbia or Barnard, if they fulfill the M.A. course and residency requirements through summer course work after receiving the B.A. or accelerated study during the course of their undergraduate career.

Students should apply during the fall semester of their senior year for admission to the M.A. program in the following fall semester, after completion of the B.A. degree. The department and the Graduate School of Arts and Sciences may award up to one-half residence unit of advanced standing and/or up to three courses (nine to twelve credits) of transfer credit for graduate courses (4000-level and above) taken at Columbia in excess of the requirements for the Columbia bachelor's degree, as certified by the dean of the undergraduate school awarding the bachelor's degree.

For further information about the application process and minimum qualifications for early admission, please contact the director of undergraduate studies.

For further information about requirements for the M.A. degree, see <http://gsas.columbia.edu/content/academic-programs/political-science>.

PROFESSORS

- Richard K. Betts
- Jagdish Bhagwati (also Economics)
- Alessandra Casella (also Economics)
- Partha Chatterjee (Anthropology)
- Jean L. Cohen
- Rodolfo de la Garza (also School of International and Public Affairs)
- Michael Doyle (also School of International and Public Affairs; Law School)
- Jon Elster
- Robert Erikson
- Virginia Page Fortna
- Timothy Frye (Chair)
- Ester Fuchs (School of International and Public Affairs)
- Andrew Gelman (also Statistics)
- Donald P. Green
- Bernard Harcourt (Law)
- Fredrick Harris
- Jeffrey Henig (Teachers College)
- John Huber
- Macartan Humphreys
- Robert Jervis
- David C. Johnston
- Ira Katznelson (also History)
- Sudipta Kaviraj (Middle Eastern, South Asian, and African Studies)
- Jeffrey Lax
- Mahmood Mamdani (Anthropology)
- Isabela Mares
- M. Victoria Murillo (also School of International and Public Affairs)
- Andrew J. Nathan
- Sharyn O'Halloran (also School of International and Public Affairs)
- Kenneth Prewitt (School of International and Public Affairs)
- Robert Y. Shapiro
- Jack Snyder
- Michael Ting (also School of International and Public Affairs)
- Nadia Urbinati
- Gregory Wawro
- Andreas Wimmer (Sociology)
-

ASSOCIATE PROFESSORS

- Shigeo Hirano

- Kimuli Kasara
- Justin Phillips
- Tonya Putnam
-

ASSISTANT PROFESSORS

- Allison Carnegie
- Daniel Corstange (also School of International and Public Affairs)
- Nikhar Gaikwad
- Turkuler Isiksel
- John Marshall
- Carlo Prato
- Joshua Simon

LECTURERS

- Michelle Chun
- Kevin Elliott
- Jessica Kimpell Johnson
- Chiara Superti

ON LEAVE

- Profs. de la Garza, Doyle, Kasara, and Katznelson (*2017-2018*)
- Profs. Casella, Corstange, and Hirano (*Fall 2017*)
- Profs. Cohen, Lax, and Wawro (*Spring 2018*)

GUIDELINES FOR ALL POLITICAL SCIENCE MAJORS, CONCENTRATORS, AND INTERDEPARTMENTAL MAJORS

Planning Forms

Major Planning forms are available on the departmental website: <http://polisci.columbia.edu/academic-programs/undergraduate-programs/planning-forms>.

Policy on Double-Counting Courses

- Policies about double-counting courses to fulfill requirements in more than one major may be found here:
 - Columbia College (<http://bulletin.columbia.edu/columbia-college/requirements-degree-bachelor-arts>)
 - School of General Studies (<http://bulletin.columbia.edu/general-studies/undergraduates/degree-fulfillment/major/#double>)
- Courses in the Core Curriculum do not fulfill requirements for the Political Science major.

Policy on Counting Credits outside the Department of Political Science

- Courses taken at other institutions or other Columbia departments may not be used to meet the requirement of a major or concentration in political science without the approval of the Director of Undergraduate Studies or the department's undergraduate adviser. Students should secure such approval in advance of registration.

Pass/D/Fail and Grading Policy

- A grade of "Pass" is acceptable only for the first course taken toward the major or concentration.
 - The course used to fulfill the research methods requirement cannot be taken Pass/D/Fail.
- Students must receive a grade of at least C- in order for a course to count towards the major or concentration.

AP Credit Policy

- Students who receive transfer credit for one or more AP exams in political science may count a maximum of one AP course toward the major or concentration, contingent upon completing an upper-level (3000 or higher) course with a grade of C or higher in the subfield in which the AP exam was taken. All transfer credits must be approved by the Director of Undergraduate Studies or the undergraduate adviser (<http://bulletin.columbia.edu/columbia-college/departments-instruction/political-science/polisciadvicing@columbia.edu>).

Transfer Credit Policy

- A maximum of three 3-point or 4-point courses in Political Science may be transferred from other institutions toward the major; a maximum of two courses in Political Science may be transferred toward the concentration and the two interdepartmental joint majors. This includes study abroad and AP credit. All transfer credits must be approved by the Director of Undergraduate Studies or the undergraduate adviser (<http://bulletin.columbia.edu/columbia-college/departments-instruction/political-science/polisciadvicing@columbia.edu>).
- Students wishing to count transfer credits toward the major or concentration should send the Director of Undergraduate Studies their transfer credit report, the syllabi of the courses they want to count toward departmental requirements, and a statement of how they want to apply the transfer credits to the requirements.

Independent Study Policy

- Independent Study (POLS UN3901 Independent Reading and Research I in the fall or POLS UN3902 Independent Reading and Research II in the spring) taken in fulfillment of course requirements for the major/concentration must be taken for at least 3 points of credit.

MAJOR IN POLITICAL SCIENCE

Program of Study

To be planned with the department as soon as the student starts to register for courses toward the major. Students should not wait until they formally declare the major before meeting with an undergraduate adviser during the registration period to plan their programs for the major.

Course Requirements

Students must choose a **Primary Subfield** and a **Secondary Subfield** to study. The subfields are as follows:

- American Politics (AP)
- Comparative Politics (CP)
- International Relations (IR)
- Political Theory (PT)

The major in political science requires a minimum of 9 courses in political science, to be distributed as follows:

Introductory Courses

Students must take two of the following introductory courses:

POLS UN1201	Introduction To American Government and Politics
POLS UN1501	Introduction to Comparative Politics
POLS UN1601	Introduction to International Politics
POLS UN1101	Political Theory I

NOTE: Introductory courses taken that do not fit into the Primary or Secondary Subfield will be counted in the Political Science Elective category.

Primary Subfield

Minimum three courses.

Minor Subfield

Minimum two courses.

Seminars

Two 4-point 3000-level seminars, at least one of which is in the student's Primary Subfield.

(See "Seminars" section below for more information)

Research Methods

Minimum one course in research methods. Courses that satisfy the research methods requirement are:

POLS UN3220	Logic of Collective Choice
POLS UN3704	Data Analysis and Statistics for Political Science Research
POLS UN3708	Empirical Research Methods
POLS UN3720	Scope and Methods
POLS GU4710	Principles of Quantitative Political Research
POLS GU4712	Analysis of Political Data
POLS GU4714	Multivariate Political Analysis
POLS GU4730	Game Theory and Political Theory
POLS GU4732	Research Topics in Game Theory

POLS GU4764	Design and Analysis of Sample Surveys
POLS GU4768	Experimental Research: Design, Analysis and Interpretation
POLS GU4790	Advanced Topics in Quantitative Research
POLS GU4792	Advanced Topics in Quantitative Research: Models for Panel and Time-Series Cross-Section Data

Political Science Electives

Minimum one course (in any subfield).

- * A student may take another course inside or outside the department that provides relevant training in research methods to satisfy this requirement only with the written permission in advance of the Director of Undergraduate Studies or the department's undergraduate adviser. If a course outside the political science department is used to satisfy the research methods requirement, this same course cannot be used toward other majors/concentrations or programs.

Seminars

Students are expected to take two 4-point seminars: one in their junior year and another in their senior year (with exceptions made for students on leave or studying abroad). They may choose from among the seminars offered, though at least one of the seminars taken must be in the student's Primary Subfield (that in which at least 9 other points have been completed). Entry into seminars requires instructor's permission.

For detailed seminar registration guidelines, see <http://polisci.columbia.edu/undergraduate-programs/seminar-registration-guidelines>. Seminars cannot be taken for R credit or Pass/D/Fail.

Barnard colloquia are open to students with the permission of the instructor. However, Barnard colloquia can only count for seminar credit at the discretion of the director of undergraduate studies. Note that admission to Barnard colloquia is by application to the Barnard Political Science Department only. Please consult with the Barnard Political Science Department for more information.

Recommended Courses

In addition to political science courses, students are strongly advised, but not required, to take six points in a related social science field.

MAJOR IN ECONOMICS–POLITICAL SCIENCE

The major in economics-political science is an interdisciplinary major that introduces students to the methodologies of economics and political science and stresses areas of particular concern to both. This program is particularly beneficial to students planning

to do graduate work in schools of public policy and international affairs.

Two advisers are assigned for the interdepartmental major, one in the Department of Economics and one in the Department of Political Science. Please note that the economics adviser can only advise on economics requirements and the political science adviser can only advise on political science requirements.

Course Requirements

For the political science part of the major, students must choose a **Primary Subfield** and a **Secondary Subfield** to study. The corresponding introductory courses in both subfields must be taken, plus two electives in the Primary Subfield and one in the Secondary Subfield. The subfields are as follows:

- American Politics (AP)
- Comparative Politics (CP)
- International Relations (IR)
- Political Theory (PT)

The economics–political science major requires a minimum of 17 courses in economics, mathematics, statistics, and political science, to be distributed as follows:

Core Requirements in Economics

Students must take all of the following core economics courses:

ECON UN1105	Principles of Economics
ECON UN3211	Intermediate Microeconomics
ECON UN3213	Intermediate Macroeconomics
ECON UN3412	Introduction To Econometrics
ECON GU4370	Political Economy

Core Requirements in Mathematics and Statistics

Students must take all of the following core mathematics and statistics courses:

MATH UN1101	Calculus I
MATH UN1201	Calculus III
STAT UN1201	Calculus-Based Introduction to Statistics

Economics Electives

Students must take two electives at the 3000 level or higher in the Department of Economics.

Political Science Courses

Students must choose a Primary Subfield and a Secondary Subfield to study. The subfields are as follows: American Politics (AP), Comparative Politics (CP), International Relations (IR), and Political Theory (PT).

Primary Subfield: Minimum three courses, one of which must be the subfield's introductory course.

Secondary Subfield: Minimum two courses, one of which must be the subfield's introductory course.

Seminars

Students must take the following two seminars:

ECPS GU4921	Seminar In Political Economy
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and a Political Science Department seminar, in the student's Primary Subfield. Please select one of the following: *

POLS UN3911	Seminar in Political Theory
or POLS UN3912	Seminar in Political Theory
POLS UN3921	Seminar in American Politics
or POLS UN3922	Seminar in American Politics
POLS UN3951	Seminar in Comparative Politics
or POLS UN3952	Seminar in Comparative Politics
POLS UN3961	International Politics Seminar
or POLS UN3962	Seminar in International Politics

- * Students who wish to count toward the political science seminar requirement a course that is not in the above list of approved seminars must obtain permission from the political science Director of Undergraduate studies. Barnard colloquia can count for seminar credit only with the written permission of the Director of Undergraduate Studies. Note that admission to Barnard colloquia is by application to the Barnard political science department only.

MAJOR IN POLITICAL SCIENCE–STATISTICS

The interdepartmental major of political science–statistics is designed for students who desire an understanding of political science to pursue advanced study in this field and who also wish to have at their command a broad range of sophisticated statistical tools to analyze data related to social science and public policy research.

Students should be aware of the rules regarding the use of the Pass/D/Fail option. Courses in which a grade of D has been received do not count toward the major requirements.

Political science–statistics students are eligible for all prizes reserved for political science majors.

The political science–statistics major requires a minimum of 15 courses in political science, statistics, mathematics, and computer science, to be distributed as follows:

POLITICAL SCIENCE

Primary Subfield

–Students must choose a Primary Subfield to study. Within the subfield, students must take a minimum of three courses, including the subfield's introductory course. The subfields and their corresponding introductory courses are as follows:

American Politics:

POLS UN1201	Introduction To American Government and Politics
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Comparative Politics:

POLS UN1501	Introduction to Comparative Politics
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International Relations:

POLS UN1601	Introduction to International Politics
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Political Theory:

POLS UN1101	Political Theory I
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–Additionally, students must take one 4-point 3000-level seminar in their Primary Subfield.

Research Methods

–Students must take the following two research methods courses:

POLS GU4710	Principles of Quantitative Political Research
or POLS UN3704	Data Analysis and Statistics for Political Science Research
POLS GU4712	Analysis of Political Data

STATISTICS

–Students must take one of the following sequences:

Sequence A — recommended for students preparing for graduate study in statistics ¹

MATH UN1101	Calculus I
MATH UN1102	Calculus II
MATH UN2010	Linear Algebra
STAT UN1201	Calculus-Based Introduction to Statistics
STAT GU4203	PROBABILITY THEORY
STAT GU4204	Statistical Inference
STAT GU4205	Linear Regression Models
STAT GU4206	Statistical Computing and Introduction to Data Science

or

Sequence B — recommended for students preparing to apply statistical methods to other fields

STAT UN1101	Introduction to Statistics
STAT UN2102	Applied Statistical Computing
STAT UN2103	Applied Linear Regression Analysis
STAT UN2104	Applied Categorical Data Analysis
STAT UN3105	Applied Statistical Methods
STAT UN3106	Applied Data Mining

Statistics Elective

–Students must take an approved elective in a statistics or a quantitatively oriented course in a social science.

- ¹ Students taking Statistics Sequence A may replace the mathematics requirements with both MATH UN1207 Honors Mathematics A and MATH UN1208 Honors Mathematics B.

CONCENTRATION IN POLITICAL SCIENCE

Program of Study

To be planned with the department as soon as the student starts to register for courses toward the concentration. Students should not wait until they formally declare the concentration before meeting with an undergraduate adviser during the registration period to plan their programs for the concentration.

Concentration Requirements

Students must choose a **Primary Subfield** and a **Secondary Subfield** to study. The subfields are as follows:

- American Politics (AP)
- Comparative Politics (CP)
- International Relations (IR)
- Political Theory (PT)

The concentration in political science requires a minimum of 7 courses in political science, to be distributed as follows:

Introductory Courses

Students must take two of the following introductory courses:

POLS UN1201	Introduction To American Government and Politics
POLS UN1501	Introduction to Comparative Politics
POLS UN1601	Introduction to International Politics
POLS UN1101	Political Theory I

NOTE: Introductory courses taken that do not fit into the Primary or Secondary Subfield will be counted in the Political Science Elective category.

Primary Subfield

Minimum two courses.

Secondary Subfield

Minimum two courses.

Research Methods *

Minimum one course in research methods. Courses that satisfy the methods requirement are:

POLS UN3220	Logic of Collective Choice
POLS UN3704	Data Analysis and Statistics for Political Science Research
POLS UN3708	Empirical Research Methods
POLS UN3720	Scope and Methods
POLS GU4710	Principles of Quantitative Political Research
POLS GU4712	Analysis of Political Data
POLS GU4714	Multivariate Political Analysis
POLS GU4730	Game Theory and Political Theory
POLS GU4732	Research Topics in Game Theory
POLS GU4764	Design and Analysis of Sample Surveys
POLS GU4768	Experimental Research: Design, Analysis and Interpretation
POLS GU4790	Advanced Topics in Quantitative Research
POLS GU4792	Advanced Topics in Quantitative Research: Models for Panel and Time-Series Cross-Section Data

Political Science Electives

Minimum two courses (in any subfield).

- * A student may take another course inside or outside the department that provides relevant training in research methods to satisfy this requirement only with the written permission in advance of the Director of Undergraduate Studies or the department's undergraduate adviser. If a course outside the political science department is used to satisfy the research methods requirement, this same course cannot be used toward other majors/concentrations or programs.

Recommended Courses

In addition to courses in political science, students are strongly advised, but not required, to take six credits in a related social science field.

PSYCHOLOGY

Departmental Office: 406 Schermerhorn; 212-854-3608
<https://psychology.columbia.edu/>

Directors of Undergraduate Studies:

Psychology Major and Concentration:

Prof. Patricia Lindemann, 358E Schermerhorn Extension;
 212-854-8285; pgl2@columbia.edu (Students with last names
 beginning A-H)
 Prof. Katherine Fox-Glassman, 314 Schermerhorn;
 212-854-4550; kjt2111@columbia.edu (Students with last names
 beginning I-S)
 Prof. Larisa Heiphetz, 355C Schermerhorn;
 212-854-1348; lah2201@columbia.edu (Students with last names
 beginning T-Z)
 Prof. Nim Tottenham, 370 Schermerhorn
 Extension; 212-854-1925; nlt7@psych.columbia.edu
 (nlt7@columbia.edu) (Honors)

Neuroscience and Behavior Major:

Psychology (A-S): Prof. Caroline Marvin, 317 Schermerhorn
 Extension; 212-854-0166; cbm2118@columbia.edu
Psychology (T-Z): Prof. Sarah Woolley, 402B Schermerhorn Hall;
 212-851-9421; sw2277@columbia.edu
Biology: Prof. Jian Yang, 917A Fairchild; 212-854-6161;
 jy160@columbia.edu
Biology: Prof. Deborah Mowshowitz, 744 Mudd; 212-854-4497;
 dbm2@columbia.edu

Director of Instruction:

Prof. Caroline Marvin, 355B Schermerhorn Extension;
 212-854-0166; cbm2118@columbia.edu

Directors of Psychology Honors Program:

Prof. Lila Davachi, 315 Schermerhorn; 212-854-3608;
 ld24@columbia.edu
 Prof. Nim Tottenham, 370 Schermerhorn Extension;
 212-854-1925; nlt7@columbia.edu

Preclinical Adviser: Prof. E'mett McCaskill, 415O Milbank;
 212-854-8601; emccaski@barnard.edu

Administrative Coordinator: Joanna Borchert-Kopczuk, 406
 Schermerhorn; 212-854-3940; jb2330@columbia.edu

Undergraduate Curriculum Assistant: Liz Walters, 406
 Schermerhorn; 212-854-8859; uca@psych.columbia.edu

The Department of Psychology (<https://psychology.columbia.edu>) offers students a balanced curriculum in psychological science, including research methods, cognition, neuroscience, developmental, social, and clinical areas. The curriculum prepares majors for graduate education in these fields and provides a relevant background for social work, education, medicine, law, and business. Psychology course offerings are designed to meet the varying needs and interests of students, from

those wishing to explore a few topics in psychology or to fulfill the science requirement, to those interested in majoring in Psychology (<https://psychology.columbia.edu/content/psychology-major>) or in Neuroscience and Behavior (<https://psychology.columbia.edu/content/neuroscience-behavior-major>).

PROGRAM GOALS

The department's program goals (<https://psychology.columbia.edu/content/psychology-program-goals>) start with the development of a solid knowledge base in psychological science. Consistent with the value psychology places on empirical evidence, courses at every level of the curriculum nurture the development of skills in research methods, quantitative literacy, and critical thinking, and foster respect for the ethical values that undergird the science of psychology.

Most of these program goals (<https://psychology.columbia.edu/content/psychology-program-goals>) are introduced in PSYC UN1001 The Science of Psychology, the recommended first psychology course required for all majors that satisfies the prerequisite for most 2000-level courses. These goals are extended and reinforced in our statistics (1600-level) and research methods (1400-level) laboratory courses, as well as in the 2000-level lecture courses and 3000- and 4000-level seminars. Each of the 2000-level lecture courses enables students to study systematically, and in greater depth, one of the content areas introduced in PSYC UN1001 The Science of Psychology. These lecture courses are the principal means by which psychology majors satisfy the distribution requirements, ensuring not only depth but also breadth of coverage across three central areas of psychology: (1) perception and cognition, (2) psychobiology and neuroscience, and (3) social, personality, and abnormal psychology. To complete the major, students take one or more advanced seminars and are encouraged to participate in supervised research courses, where they have the opportunity to explore research questions in depth and further develop their written and oral communication skills.

RESEARCH PARTICIPATION

All qualified students are welcome to participate in research project opportunities (<https://psychology.columbia.edu/content/research-opportunities>) within the Department of Psychology. Students may volunteer to work in a lab, register for supervised individual research (PSYC UN3950 SUPERVISED INDIVIDUAL RESEARCH), or participate in the department's two-year Honors Program (<https://psychology.columbia.edu/content/honors-program>). Information on faculty research (<https://psychology.columbia.edu/content/faculty>) is available on the departmental website. Students are advised to read about research laboratories on faculty lab sites (<https://psychology.columbia.edu/content/lab-websites>) and visit the professor's office hours to discuss opportunities. At the beginning of the fall term, the department also hosts a Lab-Preview (https://psychology.columbia.edu/sites/default/files/content/Lab%20Preview%20Handout%202017_0.pdf) event for students to learn about research opportunities for the upcoming semester.

PROGRAM PLANNING

Majors and concentrators in psychology and majors in neuroscience and behavior should begin planning a program of study as early as possible. All necessary forms and information are available in Program Planning Tips (<https://psychology.columbia.edu/content/program-planning-tips>). All majors and concentrators in Psychology (<https://psychology.columbia.edu/content/psychology-major>) and majors in Neuroscience and Behavior (<https://psychology.columbia.edu/content/neuroscience-behavior-major>) should complete a Major Requirement Checklist (<https://psychology.columbia.edu/content/major-concentration-requirement-checklists>) before consulting a program adviser to discuss program plans. At minimum, all students must submit a Major Requirement Checklist (<https://psychology.columbia.edu/content/major-concentration-requirement-checklists>) prior to the start of their final semester, so that graduation eligibility can be certified.

ADVISING

The Department of Psychology offers a variety of advising resources to provide prospective and current undergraduate majors and concentrators with the information and support needed to successfully plan their programs. An overview of these resources is provided on the Psychology Undergraduate Advising Resources website (<https://psychology.columbia.edu/content/advising>).

Students are encouraged to consult with Peer, Faculty, and Program Advisers as they plan their course of study in Psychology or Neuroscience and Behavior. Faculty and Peer Advisers are important contacts for general advice on class choices, research opportunities, and post-graduation plans. For definitive answers to questions regarding major requirements and other aspects of your degree, including transfer credit, current and prospective majors should consult their Program Adviser (Director of Undergraduate Studies) or the Undergraduate Curriculum Assistant in the departmental office. Program Adviser assignments (<https://psychology.columbia.edu/content/advisors>) and contact information are provided on the departmental website. Please see this page as well for additional information about program, faculty, peer, and pre-clinical advising, please see the Psychology Undergraduate Advising Resources website (<https://psychology.columbia.edu/content/advising>).

E-MAIL COMMUNICATION

The department maintains an e-mail distribution list with the UNIs of all declared majors and concentrators. Students are held responsible for information sent to their Columbia e-mail addresses. Students should read these messages from the department regularly and carefully. They are intended to keep students informed about deadlines, requirements, events, and opportunities. Prospective majors or concentrators who would like to be added to the e-mail distribution list should contact the Undergraduate Curriculum Assistant (uca@psych.columbia.edu) in the departmental office.

GUIDE TO COURSE NUMBERS

Course numbers reflect the structure of the Psychology curriculum:

- The *1000*-level comprises introductions to psychology, introductory research methods courses, and statistics. PSYC UN1001 The Science of Psychology and PSYC UN1010 Mind, Brain and Behavior are introductory courses with no prerequisites. Either one can serve as the prerequisite for most of the *2000*-level courses. However, most students find it advantageous to take PSYC UN1001 The Science of Psychology first. The *1400s* contain the research methods laboratory courses, and the *1600s* contain statistics courses; these two course types are designed to prepare students for the types of research found in many psychology and neuroscience labs.
- The *2000*-level comprises lecture courses that are introductions to areas within psychology; most require PSYC UN1001 The Science of Psychology or PSYC UN1010 Mind, Brain and Behavior as a prerequisite.
- The *3000*-level comprises more advanced and specialized undergraduate courses; most are given in a seminar format and require instructor permission.
- The *3900s* are the courses providing research opportunities for undergraduates.
- The *4000*-level comprises advanced seminars suitable for both advanced undergraduates and graduate students.

Subcategories within the *2000*-, *3000*-, and *4000*-levels correspond to the three groups in our distribution requirement for undergraduate Psychology majors:

1. Perception and cognition (*2200s*, *3200s*, and *4200s*),
2. Psychobiology and neuroscience (*2400s*, *3400s*, and *4400s*), and
3. Social, personality, and abnormal psychology (*2600s*, *3600s*, and *4600s*).

Note that Barnard psychology courses do not follow the same numbering scheme.

HONORS PROGRAM

The department offers a two-year Honors Program (<https://psychology.columbia.edu/content/honors-program>), designed for a limited number of juniors and seniors interested in participating in research. Beginning in the first term of junior year and continuing through senior year, students take PSYC UN3920 Honors Research and simultaneously participate in an honors research course (PSYC UN3920 Honors Research) under the supervision of a member of the department. Students make a formal presentation and complete an honors essay based on this research toward the end of their senior year.

To qualify for honors, students must take a total of 6 points beyond the number required for their major and satisfy all other requirements for the major. The additional 6 points may include

the *Honors Seminar* and *Honors Research* courses. **Interested students should apply at the end of their sophomore year.** Instructions and an application form are available on the Honors Program page of the department website. Typically no more than 10% of graduating majors receive departmental honors in a given academic year.

REQUIREMENTS FOR ADMISSION TO GRADUATE PROGRAMS IN PSYCHOLOGY

Most graduate programs in psychology, including those in clinical psychology, require:

An undergraduate course in introductory psychology:

PSYC UN1001	The Science of Psychology
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A course in statistics such as one of the following:

PSYC UN1610	Introductory Statistics for Behavioral Scientists
PSYC UN1660	Advanced Statistical Inference
STAT UN1001	Introduction to Statistical Reasoning
STAT UN1101	Introduction to Statistics
STAT UN1201	Calculus-Based Introduction to Statistics

A laboratory course in research methods such as one of the following:

PSYC UN1420	Experimental Psychology: Human Behavior
PSYC UN1450	Experimental Psychology: Social Cognition and Emotion
PSYC UN1455	Experimental Psychology: Social and Personality
PSYC UN1490	Experimental Psychology: Cognition and Decision Making

Students should also take a variety of more advanced undergraduate courses and seminars and participate in PSYC UN3950 SUPERVISED INDIVIDUAL RESEARCH. Students are encouraged to apply for the Psychology Honors Program at the end of their sophomore year.

Students interested in clinical psychology should obtain experience working in a community service program in addition to supervised individual research experience. Students should consult the department's pre-clinical adviser, Prof. E'mett McCaskill (<https://psychology.columbia.edu/content/emett-mccaskill>), and attend the department's pre-clinical advising events for more information. Additional resources to help prepare students for graduate study in psychology, and for careers in clinical psychology, are available on the Department of Psychology's website (<https://psychology.columbia.edu>).

ON-LINE INFORMATION

The Department of Psychology website (<https://psychology.columbia.edu>) provides access to a wide variety of information for majors and prospective majors. Among other

useful resources, students will find syllabi posted for most lecture and lab courses and for many advanced seminars. Students should read the on-line course syllabi prior to registering for psychology courses. For assistance in finding all necessary resources, students should contact the undergraduate curriculum assistant (uca@psych.columbia.edu).

SCIENCE REQUIREMENT

PSYC UN1001 The Science of Psychology, PSYC UN1010 Mind, Brain and Behavior, and any PSYC course in the 2200- or 2400-level may be used to fulfill the science requirement.

2600-level and some other psychology courses, including PSYC BC1001 Introduction to Psychology and other Barnard psychology courses, may not be used to fulfill the science requirement.

With prior departmental approval, 3- and 4-point courses numbered in the 32xx, 34xx, 42xx, and 44xx, and some additional courses, may partially fulfill the science requirement. For more detailed information regarding psychology courses that may be applied toward the science requirement, see the *Core Curriculum* section in this bulletin.

EVENING AND COLUMBIA SUMMER COURSES

The department normally offers at least one lab course (currently PSYC UN1420 Experimental Psychology: Human Behavior and PSYC UN1450 Experimental Psychology: Social Cognition and Emotion) in the late afternoon with evening labs. A number of other courses are occasionally offered in late afternoon and evening hours. No more than one quarter of the courses required for the major are normally available in the evening. Working students may find the wide variety of early morning (8:40 a.m.) classes, as well as Summer Session offerings, helpful in completing degree requirements.

Any course offered by the Psychology Department during the Summer Session is applicable toward the same major requirement(s) as the corresponding course of that same number offered during the academic year. For instance, PSYC S1001D The Science of Psychology meets the same major requirements as does PSYC UN1001 The Science of Psychology.

See *Academic Regulations—Study Outside Columbia College* in this Bulletin for additional information.

PROFESSORS

- Niall Bolger
- Geraldine Downey
- William Fifer (Psychiatry, Pediatrics)
- Norma Graham
- Carl Hart (Chair)
- Tory Higgins
- Donald C. Hood

- Sheena S. Iyengar (Business School)
- Nikolaus Kriegeskorte
- Janet Metcalfe
- Michael Morris (Business School)
- Kevin Ochsner
- Rae Silver (Barnard)
- Ursula M. Staudinger (Mailman School of Public Health)
- Yaakov Stern (Neurology and Psychiatry)
- Herbert Terrace
- Sarah M.N. Woolley

ASSOCIATE PROFESSORS

- Valerie Purdie-Greenaway
- Daphna Shohamy
- Nim Tottenham
-

ASSISTANT PROFESSORS

- Mariam Aly
- Christopher Baldassano
- Yunglin Gazes (Neurology)
- Larisa Heiphetz
- Koleen McCrink (Barnard)
- Joshua New (Barnard)

LECTURERS IN DISCIPLINE

Katherine Fox-Glassman
Patricia Lindemann
Caroline Marvin

ADJUNCT FACULTY

- Helen Brew
- Frances Champagne
- Ljubica Chatman
- Stephanie Consentino (Neurology)
James Curley
- Teal Eich
- David Friedman
- Karen Kelly
- Svetlana Komissarouk
- E'mett McCaskill
- Catherine Peña
- Svetlana Rosis
- Kathleen Taylor

GUIDELINES FOR ALL PSYCHOLOGY MAJORS, CONCENTRATORS, AND INTERDEPARTMENTAL MAJORS

Double Majors/Concentrations

All students attempting to complete double majors, double concentrations, or a combination of a major and a concentration must complete separate sets of required and related courses for each program. Generally speaking, a single course may not be counted twice. Students should consult with one of the directors of undergraduate studies (<https://psychology.columbia.edu/content/advisors>) or the undergraduate curriculum assistant (uca@psych.columbia.edu) if they have questions. Note one exception: students attempting to complete two programs with a statistics requirement are able to use one course—e.g., STAT UN1201 Calculus-Based Introduction to Statistics (formerly *STAT W1211*)—to satisfy the requirement for both programs (i.e., the student does not need to take two different statistics courses).

Overlapping Courses

Students cannot receive credit for two courses—one completed at Columbia and one at another institution (including Barnard)—if those courses have largely overlapping content. For example, PSYC UN1001 The Science of Psychology is similar in content to introductory psychology courses offered at many other institutions, including Barnard; only one such course will receive credit. Similarly, PSYC UN2630 Social Psychology and PSYC BC1138 Social Psychology have overlapping content; only one will receive credit. Please refer to the table of Overlapping Courses (http://dept.psych.columbia.edu/dept/ugrad/exceptions/bc_overlapping.pdf) for a partial list of courses at Columbia and Barnard that are known to overlap.

Grade Requirements for the Major

A grade of C- or higher must be earned and revealed on the transcript in any Columbia or Barnard course, including the first, that is used to satisfy the major requirements. The grade of P is not accepted for credit towards the Psychology major (<https://psychology.columbia.edu/content/psychology-major>), Psychology concentration (<https://psychology.columbia.edu/content/psychology-concentration>), or Neuroscience and Behavior major (<https://psychology.columbia.edu/content/neuroscience-behavior-major>). Courses taken only on a Pass/D/Fail basis may not be used to satisfy the major or concentration requirements unless the grade of P is uncovered by the Registrar's deadline. Students may petition to have their P/D/F grades uncovered for the following three courses: PSYC UN1001 Science of Psychology, PSYC UN1010 Mind, Brain, & Behavior, and PSYC UN1610 Introductory Statistics for Behavioral Scientists. Courses taken only on a Pass/Fail basis may not be used to satisfy the major or concentration requirements under any circumstances.

Major Requirement Checklist

Prior to the start of their final semester, all seniors must submit a Major Requirement Checklist (<https://psychology.columbia.edu/content/major-concentration-requirement-checklists>) showing all major courses they have taken and those they plan to take. The Psychology department evaluates each checklist to determine whether or not the course plan completes the major requirements and then notifies the student accordingly. If the student's course plan changes, or if it does not satisfy the major requirements, a revised checklist must be submitted. Departmental approval of an accurate and up-to-date checklist will help ensure completion of all major requirements on time for graduation.

MAJOR IN PSYCHOLOGY

Please read *Guidelines for all Psychology Majors, Concentrators, and Interdepartmental Majors* (p. 316) above.

Thirty or more points are needed to complete the major (<https://psychology.columbia.edu/content/psychology-major>) and must include:

The Introductory Psychology Course

- PSYC UN1001 The Science of Psychology

A Statistics Course

Select one of the following:

- PSYC UN1610 Introductory Statistics for Behavioral Scientists
- PSYC UN1660 Advanced Statistical Inference
- STAT UN1001 Introduction to Statistical Reasoning
- STAT UN1101 Introduction to Statistics (formerly *STAT W1111*)
- STAT UN1201 Calculus-Based Introduction to Statistics (formerly *STAT W1211*)

A Research Methods Course

Select one of the following:

- PSYC UN1420 Experimental Psychology: Human Behavior
- PSYC UN1450 Experimental Psychology: Social Cognition and Emotion
- PSYC UN1455 Experimental Psychology: Social and Personality
- PSYC UN1490 Experimental Psychology: Cognition and Decision Making

Majors are strongly advised to complete the statistics and research methods requirements, in that order, by the fall term of their junior year. Students are advised to verify the specific prerequisites for research methods courses, most of which require prior completion of a statistics course.

Distribution Requirement

One course (3 points or more) must be taken from each of the following three groups (in addition to the introductory, statistics, and research methods courses described above):

- Group I—Perception and cognition: courses numbered in the 2200s, 3200s, or 4200s. Also PSYC UN1420 Experimental Psychology: Human Behavior and PSYC UN1490 Experimental Psychology: Cognition and Decision Making.
- Group II—Psychobiology and neuroscience: courses numbered in the 2400s, 3400s, or 4400s. Also PSYC UN1010 Mind, Brain and Behavior.
- Group III—Social, personality, and abnormal: courses numbered in the 2600s, 3600s, or 4600s. Also PSYC UN1450 Experimental Psychology: Social Cognition and Emotion and PSYC UN1455 Experimental Psychology: Social and Personality.

If a 1400-level course is used to satisfy a distribution requirement, it cannot also be used to fulfill the laboratory requirement, and vice versa.

Seminar Requirement

For students entering Columbia in Fall 2013 or later, one seminar course numbered in the 3000s or 4000s must be taken for 3 or more points.

Seminars are usually taken in the senior year as a culmination of the major program. Enrollment in seminar courses requires the instructor's permission; students are advised to contact instructors at least one month prior to registration to request seminar admission. Note that honors and supervised individual research courses (PSYC UN3910 Honors Seminar, PSYC UN3920 Honors Research, and PSYC UN3950 SUPERVISED INDIVIDUAL RESEARCH) will not meet the seminar requirement.

No course may be counted twice in fulfillment of the above major requirements, with the following exception: a seminar course may fulfill both the seminar requirement and a group requirement if it meets the criteria for both.

Additional Courses

Additional psychology courses ("electives") must be taken for a total of 30 points. As described below, these may include research courses, transfer courses, and Barnard psychology courses not approved for specific requirements.

Research Credits

No more than 4 points of PSYC UN3950 SUPERVISED INDIVIDUAL RESEARCH or PSYC UN3920 Honors Research may be taken in any one term, and no more than 8 points total of research and field work courses (PSYC UN3950 SUPERVISED INDIVIDUAL RESEARCH, PSYC BC3466 Field Work and Research Seminar: The Barnard Toddler Center,

PSYC BC3473 Field Work Seminar in Psychological Services and Counseling, PSYC BC3592 Senior Research Seminar and PSYC BC3599 Individual Projects) may be applied toward the major. See below for further restrictions on applying Barnard courses toward the psychology major.

Barnard Courses

No more than 9 points (minus any transfer credits) from Barnard psychology courses may be applied as credit toward the major. The table of approved Barnard psychology courses (https://psychology.columbia.edu/sites/default/files/content/bc_approved_171106.pdf) indicates which courses have been approved for specific requirements of the psychology major. Courses not on the approved list may only be applied toward a specific requirement with prior written approval from a program adviser. Courses not on the approved list for a specific requirement may be applied as elective credit toward the 30 points for the major.

Transfer Credits

No more than 9 transfer credits (or combination of transfer and Barnard credits) will be accepted toward the psychology major. Approval of transfer credits on a student's Entrance Credit Report toward general requirements for the B.A. degree does **not** grant approval of these credits toward the psychology major. Students must apply for written approval of transfer credit towards the major by submitting the Major Requirement Substitution Form ([https://psychology.columbia.edu/sites/default/files/content/Major%20Substitution%20Form%20\(Updated%20170611\)_0.pdf](https://psychology.columbia.edu/sites/default/files/content/Major%20Substitution%20Form%20(Updated%20170611)_0.pdf)). This form, along with additional information about transfer credits can be found on the Transfer Credit page of our website (<https://psychology.columbia.edu/content/transfer-credit>). To be approved for the major, a course taken at another institution should be substantially similar to one offered by the department, the grade received must be a B- or better, and the course must have been taken within the past 8 years. As noted above, if two courses overlap in content, only one will be applied towards the major. With the exception of approved Barnard courses, students should consult with one of the directors of undergraduate studies (<https://psychology.columbia.edu/content/advisors>) before registering for psychology courses offered outside the department.

Students who have completed an introductory psychology course at another institution prior to declaring a psychology major should consult with one of the directors of undergraduate studies (<https://psychology.columbia.edu/content/advisors>) to verify whether or not this course meets departmental standards for major transfer credit. If transfer credit toward the major is not approved, the student must enroll in PSYC UN1001 The Science of Psychology or PSYC BC1001 Introduction to Psychology to complete this major requirement. Note that College Board Advanced Placement (AP) psychology scores do **not** satisfy the PSYC UN1001 The Science of Psychology requirement, nor do they confer elective credit toward the major.

MAJOR IN NEUROSCIENCE AND BEHAVIOR

Please read *Guidelines for all Psychology Majors, Concentrators, and Interdepartmental Majors* (p. 316) above.

The department cosponsors an interdepartmental major in neuroscience and behavior with the Department of Biological Sciences. For assistance in planning the psychology portion of the neuroscience and behavior major, refer to the Program Planning Tips website (<https://psychology.columbia.edu/content/program-planning-tips>) and use the appropriate major requirement checklist (<https://psychology.columbia.edu/content/major-concentration-requirement-checklists>).

No course may be counted twice in fulfillment of the biology or psychology requirements described below. Most graduate programs in neuroscience also require one year of calculus, one year of physics, and chemistry through organic.

Required Courses

In addition to one year of general chemistry (or the high school equivalent), ten courses are required to complete the major—five from the Department of Biological Sciences and five from the Department of Psychology. For the definitive list of biology requirements, see the Department of Biological Sciences website (<http://biology.columbia.edu>).

Required Biology Courses

1. BIOL UN2005 Introductory Biology I: Biochemistry, Genetics & Molecular Biology
2. BIOL UN2006 Introductory Biology II: Cell Biology, Development & Physiology
3. BIOL UN3004 Neurobiology I: Cellular and Molecular Neurobiology
4. BIOL UN3005 Neurobiology II: Development & Systems
5. One additional 3000- or 4000-level biology course from a list approved by the biology adviser (<http://www.columbia.edu/cu/biology/pages/undergrad/cur/majors/neuro.html>) to the program.

Required Psychology Courses

1. PSYC UN1001 The Science of Psychology
2. PSYC UN1010 Mind, Brain and Behavior or PSYC UN2450 Behavioral Neuroscience
3. One statistics or research methods course from the following:
 - PSYC UN1420 Experimental Psychology: Human Behavior
 - PSYC UN1450 Experimental Psychology: Social Cognition and Emotion
 - PSYC UN1610 Introductory Statistics for Behavioral Scientists
 - PSYC UN1660 Advanced Statistical Inference

- STAT UN1101 Introduction to Statistics (formerly *STAT W1111*)
 - STAT UN1201 Calculus-Based Introduction to Statistics (formerly *STAT W1211*)
4. One additional 2000- or 3000-level psychology lecture course from a list approved by the psychology adviser (<http://biology.columbia.edu/pages/neuroscience-and-behavior-major-requirements>) to the program.
 5. One advanced psychology seminar from a list approved by the psychology adviser (https://psychology.columbia.edu/content/neuroscience-behavior-major/#/cu_accordion_item-1257) to the program.

Transfer Credit for Psychology Courses Taken Elsewhere

Students should consult a psychology adviser (<https://psychology.columbia.edu/content/advising>) before registering for psychology courses offered outside the department. With the adviser's approval, one, and only one, course from another institution, including Barnard, may be applied toward the psychology portion of the Neuroscience and Behavior major. Students who wish to obtain credit for a course taken at Barnard or at another institution should complete the Major Requirement Substitution Form (<https://psychology.columbia.edu/content/transfer-credit>). **To be approved for the major, the course should be substantially similar to one offered by this department and approved for this major, and the grade received must be a C- or better if from Barnard, or B- or better if from another institution.** Advanced Placement (AP) psychology scores will **not** satisfy the PSYC UN1001 The Science of Psychology requirement.

Exceptions to Biology Requirements

Any exceptions must be approved in advance by a biology adviser and students must receive an email notification of that approval. Students may substitute Barnard College courses only with prior permission from an adviser.

CONCENTRATION IN PSYCHOLOGY

Please read *Guidelines for all Psychology Majors, Concentrators, and Interdepartmental Majors* (p. 316) above.

A concentration in psychology (<https://psychology.columbia.edu/content/psychology-concentration>) requires a minimum of 18 points, including PSYC UN1001 The Science of Psychology and courses in at least two of the three groups listed under "Distribution Requirement" for the psychology major. Restrictions on research credits, Barnard credits, and transfer credits are modified from those of the psychology major as follows:

1. Only 4 points total may be applied toward the concentration from research or field-work courses, including: PSYC UN3950 SUPERVISED INDIVIDUAL RESEARCH, PSYC UN3920

Honors Research PSYC BC3466 Field Work and Research Seminar: The Barnard Toddler Center, PSYC BC3473 Field Work Seminar in Psychological Services and Counseling, PSYC BC3592 Senior Research Seminar, and PSYC BC3599 Individual Projects;

2. Only 5 points from Barnard (including PSYC BC1001 Introduction to Psychology) may be applied toward the concentration.
3. Only 5 points total (including any Barnard points) from approved psychology courses taken outside the department may be applied toward the concentration.

Except as noted above, other regulations outlined in the Psychology Major section regarding grades, transfer credits, and overlapping courses also apply toward the concentration.

REGIONAL STUDIES

EAST CENTRAL EUROPEAN CENTER

<http://ece.columbia.edu/>

Director: Prof. Alan Timberlake, 1228 International Affairs Building; 212-854-8488; at2205@columbia.edu

Related Departments: Anthropology, Economics, History, Political Science, Slavic Languages and Literatures, and Sociology.

Language Requirement: Two years or demonstrated reading knowledge of one of the following languages: Czech, Hungarian, Polish, Romanian, Russian, Bosnian/Croatian/Serbian, or Ukrainian.

The regional studies major is designed to give undergraduates the general mastery of a discipline and at the same time permit them to do specialized work in the history and cultures of a particular geographic area through the associated institutes of the Faculty of Arts and Sciences. It is an interdisciplinary major in which students divide their work between the associated institute and an appropriate academic department. Students plan their programs with the consultant of the associated institute they have selected.

MAJOR IN REGIONAL STUDIES

The major in regional studies requires a minimum of 36 points, of which 18 must be credited by the associated institute, i.e. East Central European Center, and an additional 18 must be in one of the College departments designated as relevant by the institute. Six points of seminar work approved by the institute are required of all majors and are included in the total of 36 points.

Language Study

Courses taken to satisfy the institute's language requirement are not counted toward the 18 institute points.

RELIGION

Departmental Office: Room 103, 80 Claremont; 212-851-4122
<http://www.columbia.edu/cu/religion>

Director of Undergraduate Studies: Prof. Josef Sorett,
 80 Claremont; 212-851-4141; js3119@columbia.edu
js3119@columbia.edu

Director of Academic Administration and Finance:
 Meryl Marcus, Room 103B, 80 Claremont; 212-851-4124;
mm3039@columbia.edu

The Religion Department's curriculum is designed to engage students in critical, comparative, and interdisciplinary exploration of religious life. The faculty's research and teaching build upon the shared understandings that religion continues to be a central and influential component of human life, society, and politics—and that, furthermore, religious transmission and authority are constantly being shaped in dynamic interactions with other religious traditions, societies, and cultures. Courses and seminars in religion teach students how to analyze and investigate religious texts, histories, beliefs, bodies, and communities using a variety of disciplinary and methodological approaches.

Students are also encouraged to conduct their studies by exploring one or more zone of inquiry. These are focus areas that integrated in the departmental curriculum and complement the tradition-based approaches. They provide broad and alternative frames that aim to identify problems, chart trajectories cutting across different field specialties, and set parameters for theoretical and methodological questions. The zones are: *Time* (History, Modernity), *Transmission* (Tradition, Memory, Institutions), *Space* (Place, Geography, Virtual Space), *Body* (Materiality, Mind, Bio-ethics), and *Media* (Transportation, Information, Communication).

Majors and concentrators in religion gain both a foundation in the study of religious traditions in historical contexts and zones of inquiry, all grounded in theoretical and methodological debates that shape academic and public discussions about religion. Lecture courses, seminars, and colloquia are designed to balance students' growing understanding of particular religious topics, dynamics, and traditions with intensive engagement with critical theoretical, political, and philosophical debates. Students are encouraged to pursue a course of study in which they develop breadth and depth, as well as the tools and expertise to pose (and even answer) necessary questions about religious phenomena of the past or present.

As the study of religion is truly interdisciplinary, students find their work in the department enhanced by their coursework in the College's Core curriculum and in related departments. Many religion courses are listed in the College's Global Core requirement, and numerous religious works are central texts in Literature Humanities and Contemporary Civilization. Majors

and concentrators are required to take courses outside of religion in related fields to expand their vision of approaches to religion.

In addition, the University's wide offerings in the languages of various religious traditions (including Arabic, Chinese, Greek, Hebrew, Japanese, Persian, Latin, Sanskrit, and Tibetan) augment many students' abilities to conduct research in religion. Students likewise are actively encouraged to explore the world-renowned archival resources within Columbia's libraries (including the Rare Book and Manuscript Room, the Burke Library at Union Theological Seminary, the C.V. Starr East Asian Library), and to explore and investigate the equally wide range of living religious communities represented in New York's global neighborhoods.

Prospective majors should first arrange to meet with the Director of Undergraduate Studies. All students are then allocated a faculty adviser, and must submit a copy of the Declaration of Major form to the director of undergraduate studies. After agreeing upon a plan for the major or concentration, students must obtain final approval and confirmation from the Director of Undergraduate Studies.

GUIDELINES FOR ALL RELIGION MAJORS AND CONCENTRATORS

Major in Religion

All majors are encouraged to pursue both depth and breadth by constructing a program of study in consultation with the Director of Undergraduate Studies. The program should include courses in a variety of religious traditions. Students who write a senior thesis may include a term of individually supervised research as one of the courses for their major.

Courses

For the major the following 9 courses are required:

- 1 gateway course (1000 level)
- 2 introductory courses (2000 level)
- 2 intermediate courses (3000 level)
- 2 seminars (4000 level)
- 1 additional course at any level
- RELI UN3199 Theory (formerly Juniors Colloquium)

Concentration in Religion

To be planned in consultation with the Director of Undergraduate Studies and with a member of the faculty in an area in which the student has a particular interest. The program should include some study in a breadth of religious traditions.

Courses

For the concentration the following 7 courses are required:

- 1 gateway course (1000 level)
- 2 introductory courses (2000 level)
- 2 intermediate courses (3000 level)

- 1 seminar (4000 level)
- RELI UN3199 Theory

DEPARTMENTAL HONORS

Students who write a senior thesis and maintain a GPA of 3.66 or above in the major may be considered for departmental honors. Writing a senior thesis qualifies a student for consideration for departmental honors but does not assure it. Normally no more than 10% of graduating majors receive departmental honors in a given academic year.

COURSE NUMBERING

Courses are numbered by level and type:

- 1000-level: Gateway lecture course
- 2000-level: Introductory and “traditions” lectures
- 3000-level: Intermediate lecture
- 4000-level: Seminar

and Zone:

- x100-199: Theory (RELI UN3199)
- x200-299: Time (zone)
- x300-399: Transmission (zone)
- x400-499: Space (zone)
- x500-599: Body (zone)
- x600-699: Media (zone)

PROFESSORS

- Gil Anidjar (Chair)
- Peter Awn
- Courtney Bender
- Beth Berkowitz (Barnard)
- Elizabeth Castelli (Barnard)
- Katherine Pratt Ewing
- Bernard Faure
- John Hawley (Barnard)
- Rachel McDermott (Barnard)
- David (Max) Moerman (Barnard)
- Wayne Proudfoot
- Robert Somerville
- Mark Taylor
- Robert Thurman

ASSOCIATE PROFESSORS

- Michael Como
- Josef Sorett

ASSISTANT PROFESSORS

- Clémence Boulouque
- Najam Haider (Barnard)
- Katharina Ivanyi
- Gale Kenny (Barnard)
- Zhaohua Yang

ADJUNCT FACULTY

- Obery Hendricks
- David Kittay
- Thomas Yarnall

POSTDOCTORAL FELLOWS

- Robban Toleno (EALAC)

ON LEAVE

- Prof. Castelli (2017-18)
- Prof. Ivanyi (2017-18)
- Prof. Proudfoot (2017-18)
- Prof. Somerville (Fall 2017)
- Prof. Taylor (Spring 2018)
- Prof. Thurman (Spring 2018)
- Prof. Yang (2017-18)

GUIDELINES FOR ALL RELIGION MAJORS AND CONCENTRATORS

Senior Thesis

Many students choose to write a senior honors thesis in order to pursue an advanced topic in greater depth, or to work on a particular area of interest with one of their professors. This opportunity is available to all students who major in the department, regardless of GPA, and serves for many as their undergraduate capstone experience.

Students who write a senior thesis may apply for up to 3 points of directed reading with their thesis adviser. The deadline for application for the honors thesis in religion is the last day of exams in the student's junior spring term, and must be submitted for approval to the director of undergraduate studies. The application must include both a prospectus for the paper and a letter of support by the faculty member who has agreed to direct the thesis. The prospectus (5-7 pages) should detail a research program and the central question(s) to be pursued in the paper, preparation for the thesis, and a timeline. The primary adviser of the thesis must be a member of the Religion Department faculty.

Many students find that identifying a thesis project earlier in the junior year, in conjunction with the Juniors colloquium, presents an opportunity to develop a proposal in advance of deadlines for summer research funding from various sources, including the undergraduate schools and the Institute for Religion Culture and Public Life.

Grading

Courses in which a grade of D has been received do not count toward the major or concentration requirements.

MAJOR IN RELIGION

All majors are encouraged to pursue both depth and breadth by constructing a program of study in consultation with the Director of Undergraduate Studies and with a member of the faculty in an area in which they have particular interest. The program should include courses in a variety of religious traditions. Students who write a senior thesis may include a term of individually supervised research as one of the courses for their major.

For the major the following 9 courses are required::

- 1 gateway course (1000 level)
- 2 introductory courses (2000 level)
- 2 intermediate courses (3000 level)
- 2 seminars (4000 level)
- 1 additional course at any level
- RELI UN3199 Theory (formerly Juniors Colloquium)

CONCENTRATION IN RELIGION

To be planned in consultation with the Director of Undergraduate Studies and with a member of the faculty in an area in which the student has a particular interest. The program should include some study in a breadth of religious traditions.

For the concentration the following 7 courses are required:

- 1 gateway course (1000 level)
- 2 introductory courses (2000 level)
- 2 intermediate courses (3000 level)
- 1 seminar (4000 level)
- RELI UN3199 Theory

SLAVIC LANGUAGES

Departmental Office: 708 Hamilton; 212-854-3941
<http://www.columbia.edu/cu/slavic/>

Director of Undergraduate Studies:

Prof. Irina Reyfman, 712 Hamilton Hall; 212-854-3941;
ir2@columbia.edu

Russian Language Program Director:

Prof. Alla Smyslova, 708 Hamilton; 212-854-8155;
as2157@columbia.edu

The Department of Slavic Languages and Literatures is devoted to the study of the cultures, literatures, and languages of Russia and other Slavic peoples and lands. We approach our study and teaching of these cultures with an eye to their specificity and attention to their interaction with other cultures, in history and in the contemporary global context. We focus not only on the rich literary tradition, but also on the film, theater, politics, art, music, media, religious thought, critical theory, and intellectual history of Russians and other Slavs. Our approach is interdisciplinary.

Students who take our courses have different interests. Many of our courses are taught in English with readings in English and have no prerequisites. As a consequence, our majors and concentrators are joined by students from other literature departments, by students of history and political science who have a particular interest in the Slavic region, and by others who are drawn to the subject matter for a variety of intellectual and practical reasons.

We provide instruction in Russian at all levels (beginning through very advanced), with a special course for heritage speakers. To improve the proficiency of Russian learners and speakers, we offer a number of literature and culture courses in which texts are read in the original and discussion is conducted in Russian. We offer three levels of other Slavic languages: Bosnian-Croatian-Serbian, Czech, Polish, and Ukrainian (with additional courses in culture in English). All language courses in the Slavic Department develop the four basic language skills (speaking, listening, reading, and writing) and cultural understanding.

Our department prides itself on the intellectual vitality of its program and on the sense of community among students and faculty. As they explore Russian and Slavic languages, literatures, and cultures, students develop not only their specific knowledge and cultural understanding, but also the capacity for critical thought, skills in analyzing literary and other texts, and the ability to express their ideas orally and in writing. Our graduates have used their knowledge and skills in different ways: graduate school, Fulbright and other fellowships, journalism, publishing, law school, NGO work, public health, government work, and politics. Our faculty is proud of its students and graduates.

MAJORS AND CONCENTRATIONS

Guided by the director of undergraduate studies and other faculty members, students majoring in Slavic create a program that suits their intellectual interests and academic goals. They choose from three tracks: Russian Language and Culture (for those with a strong interest in mastering the language), Russian Literature and Culture (for those who want to focus on literary and cultural studies), and Slavic Studies (a flexible regional studies major for those interested in one or more Slavic cultures). In each major, students may count related courses in other departments among their electives.

In addition to its majors, the department offers five concentrations. Three are analogous to the major tracks (Russian Language and Culture, Russian Literature and Culture, and Slavic Studies). There is also a concentration in Russian Literature that does not require language study and another concentration in Slavic Cultures that allows students to focus on a Slavic language and culture other than Russian.

Motivated seniors are encouraged but not required to write a senior thesis. Those who write a thesis enroll in the Senior Seminar in the fall term and work individually with a thesis adviser. Students have written on a wide range of topics in literature, culture, media, and politics.

SLAVIC CULTURE AT COLUMBIA OUTSIDE OF THE CLASSROOM

All interested students are welcome to take part in departmental activities, such as conversation hours, Slavic student organizations, the department's various film series (Russian, East Central European, Central Asian, and Ukrainian), and the country's first undergraduate journal of Eastern European and Eurasian Culture, *The Birch*. The Slavic Department has close ties to the Harriman Institute and the East Central European Center, which sponsor lectures, symposia, performances, and conferences.

STUDY AND RESEARCH ABROAD

The department encourages its students to enrich their cultural knowledge and develop their language skills by spending a semester or summer studying in Russia, the Czech Republic, Poland, Ukraine, or the countries of the former Yugoslavia. The department helps students find the program that suits their needs and interests. Undergraduates may apply to the Harriman Institute for modest scholarships for research during winter/spring breaks or the summer.

PROFESSORS

- Valentina Izmirlieva (Chair)
Liza Knapp
- Cathy Popkin
- Irina Reyfman
- Alan Timberlake

ASSISTANT PROFESSORS

Adam Leeds
Jessica Merrill

VISITING ASSISTANT PROFESSORS

- Bradley Gorski (Barnard)

SENIOR LECTURERS

- Alla Smyslova

LECTURERS

- Aleksandar Boskovic
- Christopher Caes
- Christopher Harwood
- Nataliya Kun
- Yuri Shevchuk

ON LEAVE

- Liza Knapp (*Fall 2017*)
- Prof. Leeds (*Fall 2017, Spring 2018*)

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GUIDELINES FOR ALL SLAVIC MAJORS AND CONCENTRATORS

Senior Thesis

A senior thesis is not required for any Slavic major. Students who wish to undertake a thesis project should confer with the director of undergraduate studies during the registration period in April of their junior year and register to take RUSS UN3595 Senior Seminar in the fall term of their senior year. Students can opt to expand the thesis into a two-semester project register for RUSS UN3998 Supervised Individual Research, with their thesis adviser, in the spring term of their senior year. *Senior Seminar* may satisfy one elective requirement; the optional second semester of thesis work adds one course to the 15 required for the major.

Grading

Courses in which a grade of D has been received do not count toward major or concentration requirements.

MAJOR IN RUSSIAN LANGUAGE AND CULTURE

This major is intended for students who aim to attain maximal proficiency in the Russian language. Intensive language training is complemented by an array of elective courses in Russian culture that allow students to achieve critical understanding of contemporary Russian society and of Russian-speaking communities around the world. Since this major emphasizes

language acquisition, it is not appropriate for native Russian speakers.

The program of study consists of 15 courses, distributed as follows:

Eight semesters of coursework in Russian language (from first-through fourth-year Russian) or the equivalent

Select two of the following surveys; at least one of these should be a Russian literature survey (RUSS UN3220 or RUSS UN3221):

RUSS UN3220	Literature and Empire: The Reign of the Novel in Russia (19th Century) [In English]
RUSS UN3221	Literature & Revolution [In English]
RUSS UN3223	Magical Mystery Tour: The Legacy of Old Rus'
SLCL UN3001	Slavic Cultures
RUSS GU4006	Russian Religious Thought, Praxis, and Literature
CLRS GU4022	Russia and Asia: Orientalism, Eurasianism, Internationalism
RUSS GU4107	Russian Literature and Culture in the New Millennium

Five additional courses in Russian culture, history, literature, art, film, music, or in linguistics, chosen in consultation with the director of undergraduate studies. At least one of the selected courses should be taught in Russian

MAJOR IN RUSSIAN LITERATURE AND CULTURE

The goal of this major is to make students conversant with a variety of Russian literary, historical and theoretical texts in the original, and to facilitate a critical understanding of Russian literature, culture, and society. It is addressed to students who would like to complement serious literary studies with intensive language training, and is especially suitable for those who intend to pursue an academic career in the Slavic field.

The program of study consists of 15 courses, distributed as follows:

Six semesters of coursework in Russian language (from first-through third-year Russian) or the equivalent.

Select three of the following surveys; two of which must be in Russian literature (RUSS UN3220 and RUSS UN3221)

RUSS UN3220	Literature and Empire: The Reign of the Novel in Russia (19th Century) [In English]
RUSS UN3221	Literature & Revolution [In English]
RUSS UN3223	Magical Mystery Tour: The Legacy of Old Rus'
SLCL UN3001	Slavic Cultures

RUSS GU4006 Russian Religious Thought, Praxis, and Literature

CLRS GU4022 Russia and Asia: Orientalism, Eurasianism, Internationalism

RUSS GU4107 Russian Literature and Culture in the New Millennium

Six additional courses in Russian literature, culture, history, film, art, music, or in advanced Russian language, chosen in consultation with the director of undergraduate studies. At least one course should be taught in Russian

Students considering graduate study in Russian literature are strongly advised to complete four years of language training.

MAJOR IN SLAVIC STUDIES

This flexible major provides opportunities for interdisciplinary studies within the Slavic field. Students are encouraged to choose one target language (Bosnian-Croatian-Serbian, Czech, Polish, Russian, or Ukrainian), though there are possibilities for studying a second Slavic language as well. Generally, the major has one disciplinary focus in history, political science, economics, religion, anthropology, sociology, art, film, or music. In addition, this program allows students to focus on a particular Slavic (non-Russian) literature and culture or to do comparative studies of several Slavic literatures, including Russian. Students should plan their program with the director of undergraduate studies as early as possible, since course availability varies from year to year.

The program of study consists of 15 courses, distributed as follows:

Six semesters of coursework in one Slavic language (from first-through third-year Russian, Bosnian-Croatian-Serbian, Czech, Polish, or Ukrainian) or the equivalent.

Two relevant courses in Russian, East/Central European or Eurasian history.

Two relevant literature or culture courses in Slavic, preferably related to the target language.

Five additional courses with Slavic content in history, political science, economics, literature, religion, anthropology, sociology, art, film, or music, chosen in consultation with the director of undergraduate studies. Two of these electives may be language courses for students who opt to include a second Slavic language in their program.

Altogether students should complete four courses in a single discipline, including, if appropriate, the required history or literature/culture courses.

CONCENTRATION IN RUSSIAN LANGUAGE AND CULTURE

This program is intended for students who aim to attain proficiency in the Russian language. Intensive language training is complemented by an array of elective courses in Russian culture that allow students to achieve critical understanding of contemporary Russian society and of Russian-speaking

communities around the world. Since this concentration emphasizes language acquisition, it is not appropriate for native Russian speakers.

The program of study consists of 10 courses, distributed as follows:

Six semesters of coursework in Russian language (from first-through third-year Russian) or the equivalent.

Select one of the following surveys:

SLCL UN3001 Slavic Cultures

RUSS UN3220 Literature and Empire: The Reign of the Novel in Russia (19th Century) [In English]

RUSS UN3221 Literature & Revolution [In English]

RUSS UN3223 Magical Mystery Tour: The Legacy of Old Rus'

CLRS GU4022 Russia and Asia: Orientalism, Eurasianism, Internationalism

Three additional courses in Russian culture, history, literature, art, film, music, or in linguistics, chosen in consultation with the director of undergraduate studies; at least one of the selected courses should be taught in Russian.

RUSS GU4107 Russian Literature and Culture in the New Millennium

CONCENTRATION IN SLAVIC (NON-RUSSIAN) LANGUAGE AND CULTURE

This program is intended for students who aim to attain proficiency in a Slavic language other than Russian. Intensive language training is complemented by an array of elective courses in Slavic cultures that allow students to achieve critical understanding of the communities that are shaped by the Slavic language of their choice. Since this concentration emphasizes language acquisition, it is not appropriate for native speakers of the target language.

The program of study consists of 10 courses, distributed as follows:

Six semesters of coursework in one Slavic language (from first-through third-year Bosnian-Croatian-Serbian, Czech, Polish, or Ukrainian) or the equivalent.

Four additional courses in Slavic literature, culture or history, or in linguistics, chosen in consultation with the director of undergraduate studies; at least two should be directly related to the target language of study.

CONCENTRATION IN RUSSIAN LITERATURE AND CULTURE

The goal of this concentration is to make students conversant with a variety of Russian literary texts and cultural artifacts that facilitate a critical understanding of Russian culture. It

is addressed to students who would like to combine language training with study of the Russian literary tradition.

The program of study consists of 10 courses, distributed as follows:

Four semesters of coursework in Russian language (first- and second-year Russian) or the equivalent.

Select two of the following surveys; one of which must be a literature survey (RUSS UN3220 or RUSS UN3221)

RUSS UN3220	Literature and Empire: The Reign of the Novel in Russia (19th Century) [In English]
RUSS UN3221	Literature & Revolution [In English]
RUSS UN3223	Magical Mystery Tour: The Legacy of Old Rus'
RUSS GU4006	Russian Religious Thought, Praxis, and Literature
SLCL UN3001	Slavic Cultures
CLRS GU4022	Russia and Asia: Orientalism, Eurasianism, Internationalism
RUSS GU4107	Russian Literature and Culture in the New Millennium

Four additional courses in Russian literature, culture, and history, chosen in consultation with the director of undergraduate studies.

CONCENTRATION IN SLAVIC STUDIES

This flexible concentration provides opportunities for interdisciplinary studies within the Slavic field. Students are encouraged to choose one target language (Bosnian-Croatian-Serbian, Czech, Polish, Russian, or Ukrainian), and one disciplinary focus in history, political science, economics, religion, anthropology, sociology, art, film, or music. In addition, this program allows students to focus on a particular Slavic (non-Russian) literature and culture, or to do comparative studies of several Slavic literatures, including Russian.

The program of study consists of 10 courses, distributed as follows:

Four semesters of coursework in one Slavic language (first- and second-year Bosnian-Croatian-Serbian, Czech, Polish, Russian, or Ukrainian) or the equivalent.

One relevant courses in Russian, East/Central European or Eurasian history.

One relevant literature or culture course in Slavic, preferably related to the target language.

Four additional courses with Slavic content in history, political science, economics, literature, religion, anthropology, sociology, art, film, or music, chosen in consultation with the director of undergraduate studies

Altogether students should complete three courses in a single discipline, including, if appropriate, the required history or literature/culture courses.

CONCENTRATION IN RUSSIAN LITERATURE

This concentration is addressed to serious literature students who would like to pursue Russian literature but have no training in Russian. It allows students to explore the Russian literary tradition, while perfecting their critical skills and their techniques of close reading in a variety of challenging courses in translation.

The program of study consists of 8 courses, with no language requirements, distributed as follows:

Select two of the following Russian literature surveys (in translation):

RUSS UN3220	Literature and Empire: The Reign of the Novel in Russia (19th Century) [In English]
RUSS UN3221	Literature & Revolution [In English]

Six additional courses, focused primarily on Russian literature, culture, and history, though courses in other Slavic literatures are also acceptable if approved by the director of undergraduate studies.

Relevant literature courses from other departments may count toward the concentration only if approved by the director of undergraduate studies.

SOCIOLOGY

Department Office: 501A Knox; 212-854-4226
<http://www.sociology.columbia.edu>

Director of Undergraduate Studies: Teresa Sharpe, 501 Knox;
 ts2785@columbia.edu

Director of Academic Administration and Finance: Jacqueline Pineda-Vega, 501B Knox; 212-854-9890; jp2280@columbia.edu

Undergraduate Program Assistant: Dora Arenas, 501A Knox;
 212-854-4226; da9@columbia.edu

Sociology is the study of associational life. In examining patterns of association, sociologists explore the interactions of people, communities, and organizations. In this sense, sociology is not the study of people; it is the study of the relationships among people. This study includes the associations between people and the products of human interaction, such as organizations, technologies, economies, cities, culture, media, and religion. In the kinds of questions it asks, sociology is a deeply humanist discipline and sociologists demand the analytic rigor of scientific investigation.

In training students in our department, we encourage them to ask big questions and we work to give them the tools to provide answers. These tools might mean ethnographic observation, pouring through historical archives, looking at census data, analyzing social networks, or interviewing people in various walks of life.

As a bridging discipline that seeks the scientific exploration of questions that matter to human communities, such as inequality and social injustice, sociology addresses many of the same areas of life as our neighboring social science disciplines. Yet we often approach these areas quite differently. For example, problems of economic and political life are a central concern to sociologists. Rather than explore these as independent or particular features of society, we seek to embed them within the complex whole of the social world. Students will find the Department of Sociology to be a broad, demanding department that provides its students with the conceptual and methodological tools to make sense of the opportunities and social problems of the global communities in which we live.

GRADING

A letter grade of C- or better is needed in all Sociology courses in order to satisfy the program requirements.

DEPARTMENTAL HONORS

In order to be considered for departmental honors, majors must have a minimum GPA of 3.6 overall and 3.8 in courses in the Department of Sociology. In addition, students must produce an exceptional honors thesis in the two-semester *Senior Seminar* (SOCI UN3995-SOCI UN3996 Senior Seminar).

In order to register for the *Senior Seminar*, students must have completed SOCI UN3010 Methods for Social Research and have had their research project accepted by the faculty member teaching the Senior Seminar. Submissions of research projects are due by May 1 preceding the seminar. Normally no more than 10% of graduating majors receive departmental honors in a given academic year.

PROFESSORS

- Karen Barkey
- Peter Bearman
- Courtney Bender (Religion)
- Yinon Cohen
- Jonathan R. Cole
- Thomas A. DiPrete
- Gil Eyal
- Priscilla Ferguson (*emerita*)
- Todd Gitlin (Journalism)
- Shamus Khan (Chair)
- Bruce Kogut (Business)
- Jennifer Lee
- Bruce Link (School of Public Health)
- Debra C. Minkoff (Chair, Barnard)
- Alondra Nelson
- Aaron Pallas (Teachers College)
- Jonathan Rieder (Barnard)
- Saskia Sassen
- Seymour Spilerman
- David Stark (also School of International and Public Affairs)
- Julien Teitler (Social Work)
- Diane Vaughan
- Sudhir Alladi Venkatesh
- Amy Stuart Wells (Teachers College)
- Bruce Western
- Andreas Wimmer

ASSOCIATE PROFESSORS

- Elizabeth Bernstein (Barnard)
-
- Jennifer Lena (Teachers College)
- Mignon Moore (Barnard)
- Emmanuelle Saada (French and Romance Philology)
- Josh Whitford (Director of Graduate Studies)

ASSISTANT PROFESSORS

- Maria Abascal
- Debbie Becher (Barnard)
- Christel Kesler (Barnard)
- Yao Lu
- Adam Reich

- Carla Shedd
- Van Tran
- Dan Wang (Business School)

LECTURERS

- Denise Milstein
- Teresa Sharpe

ON LEAVE

- Prof. Barkey, Prof. Bearman, Prof. Stark, Prof. Venkatesh (2017-2018)
- Prof. Eyal, Prof. Reich (*Fall 2017*)
- Prof. Spilerman, Prof. Meadow (*Spring 2018*)

MAJOR IN SOCIOLOGY

The major in sociology requires a minimum of 30-31 points as follows:

Core Courses

The following three courses are required (10 points):

SOCI UN1000	The Social World
SOCI UN3000	Social Theory
SOCI UN3010	Methods for Social Research

Elective Courses

Select six courses (20-21 points) in the Department of Sociology, to include at least three lecture courses (2000- or 3000-level, 3 points each) and at least two seminars (4 points each). The sixth course could be either a lecture course (to a total of 30 points) or a seminar (to a total of 31 points). For students taking the two-semester Senior Seminar, the sixth course must be a seminar. Some examples of electives include: *

SOCI UN3020	Social Statistics
SOCI UN3213	Sociology of African American Life
SOCI UN3235	Social Movements: Collective Action
SOCI UN3490	Mistake, Misconduct, Disaster
SOCI UN3285	Israeli Society and the Israeli-Palestinian Conflict
SOCI UN3264	The Changing American Family
SOCI UN3900	Societal Adaptations to Terrorism
SOCI UN3914	Seminar in Inequality, Poverty, and Mobility
SOCI UN3931	Sociology of the Body
SOCI UN3974	Sociology of Schools, Teaching and Learning
SOCI UN3995	Senior Seminar
SOCI UN3996	Senior Seminar

* These may include the two-semester *Senior Seminar* (SOCI UN3995-SOCI UN3996).

CONCENTRATION IN SOCIOLOGY

The concentration in sociology requires a minimum of 20 points as follows:

Core Courses

The following three courses are required (10 points):

SOCI UN1000	The Social World
SOCI UN3000	Social Theory
SOCI UN3010	Methods for Social Research

Elective Courses

Select three courses (10 points) in the Department of Sociology, one of which must be a seminar. Some examples of electives include:

SOCI UN3900	Societal Adaptations to Terrorism
SOCI UN3914	Seminar in Inequality, Poverty, and Mobility
SOCI UN3915	Stigma and Discrimination
SOCI UN3931	Sociology of the Body
SOCI UN3974	Sociology of Schools, Teaching and Learning
SOCI UN3985	Queer Practice
SOCI UN3995	Senior Seminar
SOCI UN3996	Senior Seminar

STATISTICS

The Statistics Department Office:

1005 School of Social Work (1255 Amsterdam Avenue);
212-851-2132
<http://www.stat.columbia.edu>

Statistics Major and Concentration Advising:

Banu Baydil, 611 Watson; 212-853-1397; bb2717@columbia.edu
Ronald Neath, 612 Watson; 212-853-1398;
rcn2112@columbia.edu

Data Science Major Advising:

Computer Science: Adam Cannon, 459 CSB; 212-939-7016;
cannon@cs.columbia.edu
Statistics: Banu Baydil, 611 Watson; 212-853-1397;
bb2717@columbia.edu
Statistics: Ronald Neath, 612 Watson; 212-853-1398;
rcn2112@columbia.edu

Economics - Statistics Major Advising:

Economics: Susan Elmes, 1006 IAB; 212-854-9124;
se5@columbia.edu
Statistics: Banu Baydil, 611 Watson; 212-853-1397;
bb2717@columbia.edu
Statistics: Ronald Neath, 612 Watson; 212-853-1398;
rcn2112@columbia.edu

Mathematics - Statistics Major Advising:

Mathematics: Julien Dubedat, 601 Mathematics;
212-854-8806; jd2653@columbia.edu
Statistics: Banu Baydil, 611 Watson; 212-853-1397;
bb2717@columbia.edu
Statistics: Ronald Neath, 612 Watson; 212-853-1398;
rcn2112@columbia.edu

Political Science - Statistic Major Advising:

Political Science: Robert Shapiro, 730 IAB; 212-854-3944;
rys3@columbia.edu
Statistics: Banu Baydil, 611 Watson; 212-853-1397;
bb2717@columbia.edu
Statistics: Ronald Neath, 612 Watson; 212-853-1398;
rcn2112@columbia.edu

Department Administrator:

Dood Kalicharan, 1003 School of Social Work;
212-851-2130; dk@stat.columbia.edu

The Department offers several introductory courses. Students interested in statistical concepts, who plan on consuming, but not creating statistics, should take STAT UN1001 Introduction to Statistical Reasoning. The course is designed for students who have taken a pre-calculus course, and the focus is on general principles. It is suitable for students seeking to satisfy the Barnard quantitative reasoning requirements. Students seeking an introduction to applied statistics should take STAT UN1101 Introduction to Statistics. The course is designed for students who have some mathematical maturity, but who may not have

taken a course in calculus, and the focus is on the elements of data analysis. It is recommended for pre-med students, and students contemplating the concentration in statistics. Students seeking a foundation for further study of probability theory and statistical theory and methods should take STAT UN1201 Calculus-Based Introduction to Statistics. The course is designed for students who have taken a semester of college calculus or the equivalent, and the focus is on preparation for a mathematical study of probability and statistics. It is recommended for students seeking to complete the prerequisite for econometrics, and for students contemplating the major in statistics. Students seeking a one-semester calculus-based survey of probability theory and statistical theory and methods should take STAT GU4001 Introduction to Probability and Statistics. This course is designed for students who have taken calculus, and is meant as a terminal course. It provides a somewhat abridged version of the more demanding sequence STAT GU4203 PROBABILITY THEORY and STAT GU4204 Statistical Inference. While some mathematically mature students take the more demanding sequence as an introduction to the field, it is generally recommended that students prepare for the sequence by taking STAT UN1201 Calculus-Based Introduction to Statistics.

The Department offers the Major in Statistics, the Concentration in Statistics, and interdisciplinary majors with Computer Science, Economics, Mathematics, and Political Science. The concentration is suitable for students preparing for work or study where substantial skills in data analysis are valued and may be taken without mathematical prerequisites. The concentration consists of a sequence of six courses in applied statistics, but students may substitute statistics electives numbered 4203 or above with permission of the concentration advisors. The major consists of mathematical and computational prerequisites, an introductory course, and five core courses in probability theory and theoretical and applied statistics together with three electives. The training in the undergraduate major is comparable to a masters degree in statistics.

Students may wish to consult the following guidelines when undertaking course planning. It is advisable to take STAT UN1101 Introduction to Statistics and STAT UN2102 Applied Statistical Computing before taking any of the more advanced concentration courses, STAT UN2103 Applied Linear Regression Analysis, STAT UN2104 Applied Categorical Data Analysis, STAT UN3105 Applied Statistical Methods, and STAT UN3106 Applied Data Mining. It is advisable to take STAT UN1201 Calculus-Based Introduction to Statistics, STAT GU4203 PROBABILITY THEORY, STAT GU4204 Statistical Inference, and STAT GU4205 Linear Regression Models in sequence. Courses in stochastic analysis should be preceded by STAT GU4203 PROBABILITY THEORY, and for many students, it is advisable to take STAT GU4207 Elementary Stochastic Processes before embarking on STAT GU4262 Stochastic Processes for Finance, STAT GU4264 Stochastic Processes and Applications, or STAT GU4265 Stochastic Methods in Finance. Most of the statistics courses numbered

from 4221 to 4234 are best preceded by STAT GU4205 Linear Regression Models. The data science courses STAT GU4206 Statistical Computing and Introduction to Data Science, STAT GU4241 Statistical Machine Learning, and STAT GU4242 Advanced Machine Learning should be taken in sequence.

ADVANCED PLACEMENT

The Department offers three points of advanced credit for a score of 5 on the AP statistics exam. Students who are required to take an introductory statistics course for their major should check with their major advisor to determine whether this credit provides exemption from their requirement.

DEPARTMENTAL HONORS

Students are considered for department honors on the basis of GPA and the comprehensiveness and difficulty of their course work in the Department. The Department is generally permitted to nominate one tenth of graduating students for departmental honors.

UNDERGRADUATE RESEARCH IN STATISTICS AND THE SUMMER INTERNSHIP

Matriculated students who will be undergraduates at Columbia College, Barnard College, the School of General Studies, or the School of Engineering and Applied Sciences may apply to the Department's summer internship program. The internship provides summer housing and a stipend. Students work with Statistics Department faculty mentors. Applicants should send a brief statement of interest and a copy of their transcript to Ms. Dood Kalicharan in the Statistics Department office by the end of March to be considered. If summer project descriptions are posted on the Department's website, please indicate in the statement of interest which project is of interest. Students seeking research opportunities with Statistics Department faculty during the academic year are advised to be entrepreneurial and proactive: identify congenial faculty whose research is appealing, request an opportunity to meet, and provide some indication of previous course work when asking for a project.

PROFESSORS

- David Blei (with Computer Science)
- Mark Brown
- Richard R. Davis
- Victor H. de la Peña
- Andrew Gelman (with Political Science)
- Shaw-Hwa Lo
- David Madigan
- Ioannis Karatzas (Mathematics)
- Liam Paninski
- Philip Protter
- Michael Sobel

- Daniel Rabinowitz
- Zhiliang Ying

ASSOCIATE PROFESSORS

- Jose Blanchet (with Industrial Engineering and Operations Research)
- Jingchen Liu
- Bodhisattva Sen
- Tian Zheng

ASSISTANT PROFESSORS

- John Cunningham
- Yang Feng
- Lauren Hannah
- Arian Maleki
- Sumit Mukherjee
- Marcel Nutz
- Peter Orbanz

TERM ASSISTANT PROFESSORS

- Yuchong Zhang
- Abolfazl Safikhani

ADJUNCT PROFESSORS

- Demissie Alemayehu
- Flavio Bartmann
- Guy Cohen
- Regina Dolgoarshinnykh
- Anthony Donoghue
- Hammou Elbarmi
- Birol Emir
- Irene Hueter
- James Landwehr
- Ha Nguyen

LECTURERS IN DISCIPLINE

- Banu Baydil
- Ronald Neath
- David Rios
- Gabriel Young
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MAJOR IN STATISTICS

The requirements for this program were modified in March 2016. Students who declared this program before this date should contact the director of undergraduate studies for the department in order to confirm their options for major requirements.

The major should be planned with the director of undergraduate studies. Courses in which the grade of D has been received do not

count toward the major. The requirements for the major are as follows:

Mathematics and Computer Science Prerequisites

MATH UN1101	Calculus I
MATH UN1102	Calculus II
MATH UN1201	Calculus III
MATH UN2010	Linear Algebra

One of the following five courses

COMS W1007	Honors Introduction to Computer Science
ENGI E1006	Introduction to Computing for Engineers and Applied Scientists
COMS W1005	Introduction to Computer Science and Programming in MATLAB
STAT UN2102	Applied Statistical Computing
COMS W1004	Introduction to Computer Science and Programming in Java

Core courses in probability and statistics

STAT UN1201	Calculus-Based Introduction to Statistics
STAT GU4203	PROBABILITY THEORY
STAT GU4204	Statistical Inference
STAT GU4205	Linear Regression Models
STAT GU4206	Statistical Computing and Introduction to Data Science
STAT GU4207	Elementary Stochastic Processes

Three approved electives in statistics or, with permission, a cognate field.

- Students preparing for a career in actuarial science are encouraged to replace STAT GU4205 Linear Regression Models with STAT GU4282 Linear Regression and Time Series Methods, and should take as one of their electives STAT GU4281 Theory of Interest.
- Students preparing for graduate study in statistics are encouraged to replace two electives with MATH GU4061 Introduction To Modern Analysis I and MATH GU4062 Introduction To Modern Analysis II .

CONCENTRATION IN STATISTICS

Courses in which the grade of D has been received do not count towards the concentration. The requirements for the concentration are as follows.

STAT UN1101	Introduction to Statistics
STAT UN2102	Applied Statistical Computing
STAT UN2103	Applied Linear Regression Analysis
STAT UN2104	Applied Categorical Data Analysis
STAT UN3105	Applied Statistical Methods
STAT UN3106	Applied Data Mining

- Students may replace courses required for the concentration by approved Statistics Department courses.

MAJOR IN DATA SCIENCE

In response to the ever growing importance of "big data" in scientific and policy endeavors, the last few years have seen an explosive growth in theory, methods, and applications at the interface between computer science and statistics. The Statistics Department and the Department of Computer Science have responded with a joint-major that emphasizes the interface between the disciplines.

Mathematical Prerequisites

MATH UN1101	Calculus I
MATH UN1102	Calculus II
MATH UN1201	Calculus III
MATH UN2010	Linear Algebra

Statistics Required Courses

STAT UN1201	Calculus-Based Introduction to Statistics
STAT GU4203	PROBABILITY THEORY
STAT GU4204	Statistical Inference
STAT GU4205	Linear Regression Models
STAT GU4241	Statistical Machine Learning

Statistics Electives

Select two of the following courses:

STAT UN3106	Applied Data Mining
STAT GU4206	Statistical Computing and Introduction to Data Science
STAT GU4243	Applied Data Science
STAT GU4224	Bayesian Statistics
STAT GU4242	Advanced Machine Learning

Computer Science Introductory Courses

Select one of the following courses:

COMS W1004	Introduction to Computer Science and Programming in Java
COMS W1005	Introduction to Computer Science and Programming in MATLAB
ENGI E1006	Introduction to Computing for Engineers and Applied Scientists
COMS W1007	Honors Introduction to Computer Science

And select one of the following courses:

COMS W3134	Data Structures in Java
COMS W3136	Data Structures with C/C++
COMS W3137	Honors Data Structures and Algorithms

Computer Science Required Courses

COMS W3203	Discrete Mathematics: Introduction to Combinatorics and Graph Theory
CSOR W4231	Analysis of Algorithms I

Computer Science Electives

Select three of the following courses:

COMS W3261	Computer Science Theory
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COMS W4236	Introduction to Computational Complexity
COMS W4252	Introduction to Computational Learning Theory
COMS W4111	Introduction to Databases
COMS W4130	Principles and Practice of Parallel Programming
Any COMS W47xx course EXCEPT W4771	

MAJOR IN ECONOMICS-STATISTICS

Please read *Requirements for all Economics Majors, Concentrators, and Interdepartmental Majors* in the Economics (p. 229) section of this Bulletin.

The major in Economics-Statistics provides students with a grounding in economic theory comparable to that of the general economics major, but also exposes students to a more rigorous and extensive statistics training. This program is recommended for students with strong quantitative skills and for those contemplating graduate studies in economics.

Two advisers are assigned for the interdepartmental major, one in the Department of Economics and one in the Department of Statistics. The economics adviser can only advise on economics requirements and the statistics adviser can only advise on statistics requirements.

Students who declare prior to Spring 2014:

The economics-statistics major requires a total of 53 points: 23 in economics, 15 points in statistics, 12 points in mathematics, and 3 points in computer science, as follows:

Economics Core Courses

Complete the Economics core courses.

Economics Electives

Select two electives at the 3000-level or above, of which no more than one may be a Barnard course.

Mathematics

Select one of the following sequences:

MATH UN1101	Calculus I
MATH UN1102	Calculus II
MATH UN1201	Calculus III
MATH UN2010	Linear Algebra

or

MATH UN1207	Honors Mathematics A
MATH UN1208	Honors Mathematics B

Statistics

STAT UN1201	Calculus-Based Introduction to Statistics
STAT GU4203	PROBABILITY THEORY
STAT GU4204	Statistical Inference
STAT GU4205	Linear Regression Models

One elective from among courses numbered STAT GU4206 through GU4266.

Computer Science

Select one of the following courses:

COMS W1004	Introduction to Computer Science and Programming in Java
COMS W1005	Introduction to Computer Science and Programming in MATLAB
COMS W1007	Honors Introduction to Computer Science
STAT UN2102	Applied Statistical Computing

Seminar

ECON GU4918	Seminar In Econometrics
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Students who declare in Spring 2014 or beyond:

In addition to the above requirements, students are required to take three ECON electives at the 3000-level or above.

MAJOR IN MATHEMATICS-STATISTICS

The program is designed to prepare the student for: (1) a career in industries such as finance and insurance that require a high level of mathematical sophistication and a substantial knowledge of probability and statistics; and (2) graduate study in quantitative disciplines. Students choose electives in finance, actuarial science, operations research, or other quantitative fields to complement requirements in mathematics, statistics, and computer science.

Mathematics

Select one of the following sequences:

MATH UN1101	Calculus I
MATH UN1102	Calculus II
MATH UN1201	Calculus III
MATH UN2010	Linear Algebra
MATH UN2500	Analysis and Optimization

OR

MATH UN1101	Calculus I
MATH UN1102	Calculus II
MATH UN1205	Accelerated Multivariable Calculus
MATH UN2010	Linear Algebra
MATH UN2500	Analysis and Optimization

OR

MATH UN1207	Honors Mathematics A
MATH UN1208	Honors Mathematics B
MATH UN2500	Analysis and Optimization

Statistics required courses

STAT UN1201	Calculus-Based Introduction to Statistics
STAT GU4203	PROBABILITY THEORY
STAT GU4204	Statistical Inference
STAT GU4205	Linear Regression Models

And select one of the following courses:

STAT GU4207	Elementary Stochastic Processes
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STAT GU4262	Stochastic Processes for Finance
STAT GU4264	Stochastic Processes and Applications
STAT GU4265	Stochastic Methods in Finance

Computer Science

Select one of the following courses:

COMS W1004	Introduction to Computer Science and Programming in Java
COMS W1005	Introduction to Computer Science and Programming in MATLAB
ENGI E1006	Introduction to Computing for Engineers and Applied Scientists
COMS W1007	Honors Introduction to Computer Science
or an advanced Computer Science offering in programming	

Electives

An approved selection of three advanced courses in mathematics, statistics, applied mathematics, industrial engineering and operations research, computer science, or approved mathematical methods courses in a quantitative discipline. At least one elective must be a Mathematics Department course numbered 3000 or above.

- Students interested in modeling applications are recommended to take MATH UN3027 Ordinary Differential Equations and MATH UN3028 Partial Differential Equations
- Students interested in finance are recommended to include among their electives, MATH GR5010 Introduction to the Mathematics of Finance, STAT GU4261 Statistical Methods in Finance, and STAT GU4221 Time Series Analysis.
- Students interested in graduate study in mathematics or in statistics are recommended to take MATH GU4061 Introduction To Modern Analysis I and MATH GU4062 Introduction To Modern Analysis II.
- Students preparing for a career in actuarial science are encouraged to replace STAT GU4205 Linear Regression Models with STAT GU4282 Linear Regression and Time Series Methods, and to take among their electives STAT GU4281 Theory of Interest.

MAJOR IN POLITICAL SCIENCE–STATISTICS

The interdepartmental major of political science–statistics is designed for students who desire an understanding of political science to pursue advanced study in this field and who also wish to have at their command a broad range of sophisticated statistical tools to analyze data related to social science and public policy research.

Students should be aware of the rules regarding the use of the Pass/D/Fail option. Courses in which a grade of D has been received do not count toward the major requirements.

Political science–statistics students are eligible for all prizes reserved for political science majors.

Students take courses in mathematics and 31 or 34 points in political science, statistics, and computer science.

Political Science

Students must choose a primary subfield to study. Within the subfield, students must take a minimum of three courses, including the subfield's introductory course. The subfields and their corresponding introductory courses are as follows:

American Politics:

POLS UN1201	Introduction To American Government and Politics
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Comparative Politics:

POLS UN1501	Introduction to Comparative Politics
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International Relations:

POLS UN1601	Introduction to International Politics
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Political Theory:

POLS UN1101	Political Theory I
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Additionally, students must take a 4-point seminar in their primary subfield.

Research Methods

Students must take the following two research methods courses:

POLS GU4710	Principles of Quantitative Political Research
or POLS UN3704	Data Analysis and Statistics for Political Science Research
POLS GU4712	Analysis of Political Data

Statistics

Select one of the following two sequences.

Sequence recommended for students preparing for graduate study in statistics.

MATH UN1101	Calculus I
MATH UN1102	Calculus II
MATH UN2010	Linear Algebra
STAT UN1201	Calculus-Based Introduction to Statistics
STAT GU4203	PROBABILITY THEORY
STAT GU4204	Statistical Inference
STAT GU4205	Linear Regression Models
STAT GU4206	Statistical Computing and Introduction to Data Science

Students taking the first track may replace the Mathematics prerequisites with both of MATH UN1207 and MATH UN1208

or

Sequence recommend for students preparing to apply statistical methods in the social sciences.

STAT UN1101	Introduction to Statistics
STAT UN2102	Applied Statistical Computing
STAT UN2103	Applied Linear Regression Analysis
STAT UN2104	Applied Categorical Data Analysis
STAT UN3105	Applied Statistical Methods
STAT UN3106	Applied Data Mining

Statistics elective:

Students must take an approved elective in a statistics or a quantitatively oriented course in a social science.

SUSTAINABLE DEVELOPMENT

Departmental Office: The Earth Institute, Office of Academic and Research Programs, Hogan, B-Level; <http://sdev.ei.columbia.edu>

Co-Directors of Undergraduate Studies:

Ruth DeFries, 212-851-1647; rd2402@columbia.edu
Jason Smerdon, 845-365-8493; jsmerdon@ldeo.columbia.edu

Program Administrators:

Natalie Unwin-Kuruner, 212-854-8536; natalie@ei.columbia.edu
Cari Shimkus, 212-851-9350; cshimkus@ei.columbia.edu

Sustainable development is founded on the premise that human well-being should advance without irreparable harm to ecosystems and the vital services they provide, without depleting essential resources, and without posing risks to future generations. The term "sustainable" refers to managing the world's economy in a manner consistent with the continued healthy functioning of Earth's ecosystems, oceans, atmosphere and climate. In this context, "development" refers to continued social, political, and economic progress aimed at improving the well-being of the global community, especially for the poorest people.

ACADEMIC PROGRAMS

The Earth Institute—in collaboration with Columbia College, the School of General Studies, the School of International and Public Affairs, and the Departments of Earth and Environmental Science; Ecology, Evolution, and Environmental Biology; and Earth and Environmental Engineering—offers a major and a special concentration in sustainable development.

These programs are designed to: engage students in this emergent interdisciplinary discussion, provide knowledge of the theory and practice of sustainable development, stimulate a critical examination of historical and conceptual antecedents, provide experience in the complex challenges of sustainable development through direct engagement, and help them imagine alternative futures for our rapidly changing world. With help from the Earth Institute faculty, courses are specifically created to address the very real and complex issues of development as they relate to the interactions of the natural and social systems.

The major focuses heavily on the sciences and provides students with a working knowledge of issues on a range of interacting subject areas. After declaring the major, students are assigned an academic adviser from within the Earth Institute, who advises on class selection and career development. Students benefit from a support system of faculty, advisers, and program managers, and have access to the multitude of resources for internships, study abroad programs, and career development.

The special concentration is intentionally more flexible, but its structure allows students to benefit from the cross-disciplinary

courses and to build the expertise to allow them to address the fundamental issue of how to move towards a trajectory of sustainability.

The sustainable development program is structured to ensure that students graduate with the skills and knowledge to enable them to advance professionally in the public, private, governmental, and nonprofit sectors, and to pursue advanced degrees. Those interested in sustainable development are encouraged to participate in lectures, conferences, and other programs sponsored by the Earth Institute.

GRADING

A letter grade of C- or better is needed in all program-related courses in order to satisfy the program requirements.

SUSTAINABLE DEVELOPMENT FACULTY

- Susana Adamo (Center for International Earth Information Network)

Satyajit Bose (School of International and Public Affairs)

Steve Cohen (The Earth Institute; School of International and Public Affairs)

Lisa Dale (The Earth Institute; Ecology, Evolution, and Environmental Biology)

Ruth DeFries (Ecology, Evolution, and Environmental Biology) (Co-Director)

Stuart Gaffin (Center for Climate Systems Research)

Michael Gerrard (Center for Climate Change Law and Columbia Law School)

Adela Gondek (Ecology, Evolution and Environmental Biology)

Giovani Graziosi (Ecology, Evolution and Environmental Biology)

Radley Horton (Center for Climate Systems Research)

Jacqueline Klopp (The Earth Institute)

Upmanu Lall (Columbia Water Center; International Research Institute for Climate and Society)

Peter Marcotullio (Architecture, Planning and Preservation)

Kytt McManus (Ecology, Evolution and Environmental Biology)

Dara Mendeloff (Center for International Earth Science Information Network)

Rachel Moresky (Population and Family Health)

John Mutter (Earth and Environmental Sciences; School of International and Public Affairs)

Stephanie Pfirman (Lamont-Doherty Earth Observatory; Environmental Science; Barnard College)

Robert Pollack (Biological Sciences)

Peter Schlosser (Earth and Environmental Engineering)

Elliott Sclar (The Earth Institute; Architecture, Planning, and Preservation; School of International and Public Affairs)

Jason Smerdon (Lamont-Doherty Earth Observatory; School of International and Public Affairs) (Co-Director)

Marni Sommer (Mailman School of Public Health)

Martin Stute (Lamont-Doherty Earth Observatory)

Phil Weinberg (Ecology, Evolution and Environmental Biology)

Jason Wong (School of International and Public Affairs)

MAJOR IN SUSTAINABLE DEVELOPMENT

The sustainable development foundation courses should be taken first and students should then work with the program adviser on further course selection and sequencing.

The major in sustainable development requires a minimum of 15 courses and a practicum as follows:

Sustainable Development Foundation

SDEV UN1900	Introduction to Sustainable Development Seminar
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SDEV UN2300	Challenges of Sustainable Development
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EESC UN2330	Science for Sustainable Development
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Basic Disciplinary Foundation

Select one of the following science sequences:

PHYS UN1202 - PHYS UN1202	General Physics II and General Physics II
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CHEM UN1403 - CHEM UN1404	General Chemistry I (Lecture) and General Chemistry II (Lecture)
------------------------------	---

EEEB UN2001 - EEEB UN2002	Environmental Biology I: Elements to Organisms and Environmental Biology II: Organisms to the Biosphere
------------------------------	--

EESC UN2100 - EESC UN2200	Earth's Environmental Systems: The Climate System and Earth's Environmental Systems: The Solid Earth System
------------------------------	--

EESC UN2100 - EESC UN2300	Earth's Environmental Systems: The Climate System and Earth's Environmental Systems: The Life System
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EESC UN2200 - EESC UN2300	Earth's Environmental Systems: The Solid Earth System and Earth's Environmental Systems: The Life System
------------------------------	---

EESC UN1600 - EESC UN2100	Earth Resources and Sustainable Development and Earth's Environmental Systems: The Climate System
------------------------------	--

EESC UN1600 - EESC UN2300	Earth Resources and Sustainable Development and Earth's Environmental Systems: The Life System
------------------------------	---

Select two of the following social science courses:

SOCI UN1000	The Social World
ANTH UN1002	The Interpretation of Culture
ECON UN1105	Principles of Economics
POLS UN1501	Introduction to Comparative Politics

POLS UN1601	Introduction to International Politics
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SDEV UN2000	Introduction to Environmental Law
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SDEV UN3400	Human Populations and Sustainable Development
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Select one of the following quantitative foundations courses:

EEEB UN3005	Introduction to Statistics for Ecology and Evolutionary Biology
EESC BC3017	Environmental Data Analysis
MATH UN2010	Linear Algebra
STAT UN1201	Calculus-Based Introduction to Statistics

STAT UN2103	Applied Linear Regression Analysis
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STAT UN3106	Applied Data Mining
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STAT GU4203	PROBABILITY THEORY
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STAT GU4204	Statistical Inference
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STAT GU4207	Elementary Stochastic Processes
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Analysis and Solutions to Complex Problems

Select two of the following courses:

CIEE E3260	Engineering for developing communities
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EAEE W4304	Closing the carbon cycle
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ECIA W4100	Management and development of water systems
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EESC BC3032	Agricultural and Urban Land Use: Human-Environment Interactions
-------------	--

EESC BC3045	Responding to Climate Change
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EESC GU4600	Earth Resources and Sustainable Development
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PLAN A4579	Introduction to Environmental Planning
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PUBH W3100	
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SDEV UN3330	Ecological and Social Systems for Sustainable Development
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SDEV UN3355	Climate Change and Law
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SDEV UN3360	Disasters and Development
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SDEV UN3366	Energy Law
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SDEV UN3410	Urbanization and Sustainable Development
SOCI BC3932	Climate Change, Global Migration, and Human Rights in the Anthropocene
URBS UN3565	Cities in Developing Countries: Problems and Prospects
The Summer Ecosystems Experience for Undergraduates (SEE-U) *	
Skills/Actions	
Select two of the following courses:	
EAEE E4257	Environmental data analysis and modeling
EESC GU4050	Global Assessment and Monitoring Using Remote Sensing
SDEV UN2320	Economic and Financial Methods for Sustainable Development
SDEV UN3390	GIS for Sustainable Development
SDEV UN3450	Spatial Analysis and Modeling for Sustainable Development
SDEV GU4015	Complexity Science
SOCI UN3010	Methods for Social Research
SUMA PS4100	Sustainability Management
The Summer Ecosystems Experience for Undergraduates (SEE-U) *	
Electives	
Select one of the following courses:	
INAF U4420	Oil, Rights and Development
SDEV UN3998	Sustainable Development Independent Study
SUMA PS4310	Practicum in Innovation Sustainability Leadership
SUMA PS4734	Earth Institute Practicum
Select two of the following:	
Additional courses from analysis and solutions to complex problem	
Additional courses from skills/actions	
Senior Thesis Seminar (EESC BC3800 and EESC UN3901)	
Upper division courses from the list approved by program adviser	
Capstone Workshop	
SDEV UN3280	Workshop in Sustainable Development

* The Summer Ecosystem Experiences for Undergraduates (SEE-U): Please note that students in the major or the special concentration who take SEE-U as a 6-point course can use 3 points towards the Complex Problems requirement and 3 points towards the Skills/Action requirement. If SEE-U is taken for 3 points, it can only count as one Complex Problems class.

* Sustainable Development Website for Majors: <http://sdev.ei.columbia.edu/curriculum/major/>

SPECIAL CONCENTRATION IN SUSTAINABLE DEVELOPMENT

In addition to the requirements of the special concentration, students must complete a major or a full concentration.

The sustainable development foundation courses should be taken first and students should then work with the program adviser on further course selection and sequencing.

The special concentration in sustainable development requires a minimum of 9 courses and a practicum as follows:

Sustainable Development Foundation

SDEV UN1900	Introduction to Sustainable Development Seminar
SDEV UN2300	Challenges of Sustainable Development
EESC UN2330	Science for Sustainable Development

Natural Science Systems

Select one of the following courses:

CHEM UN1403	General Chemistry I (Lecture)
EEEB UN1001	Biodiversity
EEEB UN2002	Environmental Biology II: Organisms to the Biosphere
EESC UN1003	Climate and Society: Case Studies
EESC UN1011	Earth: Origin, Evolution, Processes, Future
EESC UN1600	Earth Resources and Sustainable Development
EESC UN2100	Earth's Environmental Systems: The Climate System
EESC UN2200	Earth's Environmental Systems: The Solid Earth System
PHYS UN1201	General Physics I

Human Science Systems

Select one of the following courses:

ANTH UN1002	The Interpretation of Culture
ECON UN1105	Principles of Economics
POLS UN1501	Introduction to Comparative Politics
POLS UN1601	Introduction to International Politics
SDEV UN2000	Introduction to Environmental Law
SDEV UN3400	Human Populations and Sustainable Development
SOCI UN1000	The Social World

Analysis and Solutions to Complex Problems

Select two of the following courses:

CIEE E3260	Engineering for developing communities
EAEE W4304	Closing the carbon cycle
ECIA W4100	Management and development of water systems

EESC BC3032	Agricultural and Urban Land Use: Human-Environment Interactions
EESC BC3045	Responding to Climate Change
EESC GU4600	Earth Resources and Sustainable Development
PLAN A4579	Introduction to Environmental Planning
PUBH W3100	
SDEV UN3330	Ecological and Social Systems for Sustainable Development
SDEV UN3355	Climate Change and Law
SDEV UN3360	Disasters and Development
SDEV UN3366	Energy Law
SDEV UN3410	Urbanization and Sustainable Development
SOCI BC3932	Climate Change, Global Migration, and Human Rights in the Anthropocene
URBS UN3565	Cities in Developing Countries: Problems and Prospects
The Summer Ecosystem Experiences for Undergraduates (SEE-U) *	

Skills/Actions

Select one of the following courses:

EAAE E4257	Environmental data analysis and modeling
EESC GU4050	Global Assessment and Monitoring Using Remote Sensing
SCNC W3010	Science, technology and society
SDEV UN2320	Economic and Financial Methods for Sustainable Development
SDEV UN3390	GIS for Sustainable Development
SOCI UN3010	Methods for Social Research
SDEV UN3450	Spatial Analysis and Modeling for Sustainable Development
SDEV GU4015	Complexity Science
SUMA PS4100	Sustainability Management
The Summer Ecosystem Experiences for Undergraduates (SEE-U) *	

Practicum

Select one of the following courses:

SDEV UN3998	Sustainable Development Independent Study
INAF U4420	Oil, Rights and Development
SUMA PS4310	Practicum in Innovation Sustainability Leadership
SUMA PS4734	Earth Institute Practicum

Capstone Workshop

SDEV UN3280	Workshop in Sustainable Development
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* The Summer Ecosystem Experiences for Undergraduates (SEE-U): Please note that students in the major or the special concentration who take SEE-U as a 6-point course can use 3 points towards the Complex Problems requirement and 3 points towards the Skills/Action requirement. If SEE-U is taken for 3 points, it can only count as one Complex Problems class.

* Sustainable Development Website for Special Concentrators: <http://sdev.ci.columbia.edu/curriculum/special-concentration/>

URBAN STUDIES

Urban Studies at Columbia (<http://urban.barnard.edu>)

Columbia Adviser: Prof. Kathryn Yatrakis; kby1@columbia.edu; 917-689-0931

503 Milbank Hall

212-854-4073

Department Assistant: Coretta Grant

MISSION

The Barnard–Columbia Urban Studies program enables students to explore and understand the urban experience in all of its richness and complexity. It recognizes the city as an amalgam of diverse peoples and their social, political, economic, and cultural interactions within a distinctive built environment. Students study the evolution and variety of urban forms and governance structures, which create opportunities for, as well as constrain, the exercise of human agency, individual and collective. They explore the place of the city in different historical and comparative contexts, as well as in the human imagination.

Majors build an intellectual foundation that combines interdisciplinary coursework and a concentration of study within a single field. Through the two-semester junior colloquium, students study urban history and contemporary issues, and at the same time hone their interdisciplinary, analytical and research skills. This shared experience prepares them for their independent research project in their senior year. We encourage our majors to use New York City as a laboratory, and many courses draw on the vast resources of the city and include an off-campus experience.

STUDENT LEARNING OUTCOMES

Having successfully completed the major in Urban Studies, the student will be able to:

- Apply concepts or methods from more than one social science or adjacent discipline to analyze an urban issue or problem.
- Describe the distinctive social, cultural, and spatial features of cities and illustrate their impacts on the urban experience.
- Apply basic skills of empirical reasoning to an urban problem.
- Explain how the idea of the city varies in different historical and comparative contexts.
- Demonstrate familiarity with a particular disciplinary approach to the city as an object of study.
- Demonstrate understanding of the history and variety of urban forms and governance structures.
- Articulate a well-defined research question, conduct independent research using primary sources and a variety of theoretical and methodological approaches, and write a substantive research paper.
- Communicate ideas effectively in written or oral form.
- Organize and present group research projects.

Director: Kimberley S. Johnson (Associate Professor, Political Science and Urban Studies)

Columbia College Advisor: Kathryn Yatrakis (Dean of Academic Affairs, Columbia College)

Professors: Liz Abzug (Adjunct)

Assistant Professors: Gergely Baics (History and Urban Studies), Deborah Becher (Sociology), Susan Fine (Adjunct), Cindy Gorn (Adjunct), Thomas Kamber (Adjunct), Meredith Linn (Term, Urban Studies), Aaron Passell (Term, Urban Studies), Tom Waters (Adjunct), Şevin Yıldız (Term, Urban Studies)

This program is supervised by the Committee on Urban Studies:

Director: Kimberley S. Johnson (Associate Professor, Political Science)

Professor of Professional Practice: Karen Fairbanks (Chair, Architecture)

Columbia College Advisor: Kathryn Yatrakis (Dean of Academic Affairs, Columbia College)

Professors: Ester Fuchs (International and Public Affairs, CU), Kenneth T. Jackson (History), Jose Moya (History), Elliot Sclar (Urban Planning and Public Policy), Sudhir Venkatesh (Sociology), David Weiman (Economics)

Associate Professor: Randall Reback (Economics), Samuel Roberts (History and Sociomedical Sciences).

Assistant Professors: Gergely Baics (History), Deborah Becher (Sociology), Catherine Fennell (Anthropology), Meredith Linn (Term, Urban Studies), Maria Rivera Maulucci (Education)

MAJOR IN URBAN STUDIES

The major in urban studies is comprised of six curricular requirements:

Requirement A: Urban-Related Social Sciences (3 courses)

One course dealing primarily with urban subject matter from *each of three* of the following disciplines: Anthropology, Economics, History, Political Science, Sociology.

Many courses offered through Urban Studies may count towards Requirement A. For example, URBS V3420 Introduction to Urban Sociology counts as a Sociology course, URBS UN3550 counts as a Political Science course, etc. Students must complete at least two of the Requirement A courses before taking the Junior Colloquia (see Requirement E, below). It is recommended that majors fulfill this requirement before their junior year.

Requirement B: Urban-Related Non-Social Science (1 course)

One course dealing primarily with urban subject matter from a discipline not listed above (such as Architecture, Art History, English, Environmental Science, etc.)

Requirement C: Methods of Analysis (1 course)

One course in methods of analysis, such as URBS UN3200 .

Requirement D: Specialization (5 courses)

Five or more courses in a specialization from one of the participating departments. Barnard College students can double-count one A, B, or C course toward this requirement (only one of five), with the approval of the Director; Columbia College and General Studies students cannot double-count courses. Barnard majors also have specific requirements for each specialization, which are outlined in detail on the program's website, urban.barnard.edu (<http://urban.barnard.edu>).

Requirement E: Junior Colloquia (2 courses)

URBS UN3545	Junior Colloquium: The Shaping of the Modern City	4
URBS UN3546	Junior Colloquium: Contemporary Urban Issues	4

Requirement F: Senior Seminar (2 courses)

A senior thesis written in conjunction with a two-semester research seminar, chosen from the following four options:

URBS UN3992 - URBS V3993	Senior Seminar: The Built Environment and Senior Seminar: The Built Environment	8
URBS UN3994 - URBS V3995	Senior Seminar: New York Field Research and Senior Seminar: New York Field Research	8
URBS UN3996 - URBS V3997	Senior Seminar: International Topics in Urban Studies and Senior Seminar: International Topics in Urban Studies	8

A research seminar in the department of specialization. This option must be approved by the Program Director.

A complete list and courses that fulfill requirements A–E can be found on the program's website, urban.barnard.edu (<http://urban.barnard.edu>).

Appropriate substitutions may be made for courses listed above with the approval of the Program Director.

There is no concentration in urban studies.

VISUAL ARTS

Departmental Office: 310 Dodge; 212-854-4065
<http://arts.columbia.edu/visual-arts>

Director of Undergraduate Studies: Prof. Nicola López;
 ngl1@columbia.edu

Director of Academic Administration: Carrie Gundersdorf;
 cg2817@columbia.edu

Visual Arts Program Assistant: Alexander Barnett;
 ab3961@columbia.edu

The Visual Arts Program in the School of the Arts offers studio art classes as a component of a liberal arts education and as a means to an art major, concentration, and joint major with the Art History and Archaeology Department.

REGISTRATION

Visual Arts courses are open for on-line registration. If a Visual Arts class is full, visit arts.columbia.edu/undergraduate-visual-arts-program.

DECLARING A MAJOR IN VISUAL ARTS

The Visual Arts Undergraduate Program requires a departmental signature when declaring a major. After meeting with their college academic adviser, students should set up a meeting to consult with the director of undergraduate studies, Professor Nicola López. Please email Alex Barnett (ab3961@columbia.edu) for the current Requirements Worksheet for the Visual Arts Major, Art History and Visual Arts Interdepartmental Major or Visual Arts Concentration.

PROFESSORS

- Gregory Amenoff
- Jon Kessler
- Thomas Roma
- Sarah Sze
- Rirkrit Tiravanija
- Tomas Vu-Daniel

ASSOCIATE PROFESSORS

- Sanford Biggers
- Matthew Buckingham (Chair)
- Shelly Silver

ASSISTANT PROFESSORS

- Nicola López (Director of Undergraduate Studies)
- Leeza Meksin
- Aliza Nisenbaum (Director of Graduate Studies)

GUIDELINES FOR ALL VISUAL ARTS MAJORS, CONCENTRATORS, AND INTERDEPARTMENTAL MAJORS

A maximum of 12 credits from other degree-granting institutions may be counted toward the major, only with the approval of the director of undergraduate studies.

MAJOR IN VISUAL ARTS

A total of 35 points are required as follows:

Visual Arts (32 points)

VIAR UN1000	Basic Drawing (formerly VIAR R1001)
VIAR UN2300	Sculpture I
Five additional VIAR 3-point studio courses (15 points)	
VIAR UN3800	Seminar in Contemporary Art Practice
Senior Thesis consists of the following four courses:	
VIAR UN3900	Senior Thesis I
- VIAR UN3910	and Visiting Critic I (formerly VIAR R3901 and VIAR R3921)
VIAR UN3901	Senior Thesis II
- VIAR UN3911	and Visiting Critic II

Art History (3 points)

One 20th-century Art History 3-point course or equivalent, such as:	
AHIS UN2405	Twentieth-Century Art (formerly AHIS W3650)

Senior Thesis

Before taking the Senior Thesis, majors are advised to complete 18 points of required Visual Arts courses. Senior Thesis consists of four 2-point courses taken over two semesters: VIAR UN3900 Senior Thesis I-VIAR UN3901 Senior Thesis II (4 points) and VIAR UN3910 Visiting Critic I-VIAR UN3911 Visiting Critic II (4 points). (*Senior Thesis I* and *Visiting Critic I* run concurrently and *Senior Thesis II* and *Visiting Critic II* run concurrently).

Visual arts majors must sign up for a portfolio review to enroll in Senior Thesis. Portfolio reviews are scheduled in April preceding the semester for which students seek entry. Portfolios are evaluated by the director of undergraduate studies and a faculty committee. After each semester of Senior Thesis, a faculty committee evaluates the work and performance completed.

MAJOR IN ART HISTORY AND VISUAL ARTS

A total of 46 points are required as follows:

Art History (25 points)

AHIS UN3000	Majors' Colloquium: the Literature and Methods of Art History (formerly VIAR W3895)
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Seven additional art history (AHIS) 3-point lecture courses: *

At least one course in three of four historical periods, as listed below

An additional two courses drawn from at least two different world regions, as listed below

Two additional lectures of the student's choice

Visual Arts (21 points)

VIAR UN1000 Basic Drawing (formerly VIAR R1001)

VIAR UN2300 Sculpture I (formerly VIAR R3330)

Five additional VIAR 3-point studio courses (15 points)

* Up to two of the seven 3-point courses in art history may be replaced by a specifically related course in another department with approval of the adviser.

Students electing the combined major should consult with the director of undergraduate studies in Visual Arts, as well as with the undergraduate program coordinator in the Art History and Archaeology Department.

It is recommended that students interested in this major begin the requirements in their sophomore year. In the senior year, students undertake either a seminar in the Department of Art History and Archaeology or a Senior Thesis in Visual Arts (pending approval by the Visual Arts Department).

NOTE: Chronological divisions are approximate. In case of ambiguities about course eligibility to fill the requirement, consult the director of undergraduate studies in Art History and Archaeology.

Historical Periods

- Ancient (up to 400 CE/AD)
- 400 - 1400
- 1400 - 1700
- 1700 - present

World Regions

- Africa
- Asia
- Europe, North America, Australia
- Latin America
- Middle East

One 20th-century Art History 3-point course or equivalent, such as:

AHIS UN2405

Twentieth-Century Art (formerly AHIS W3650)

CONCENTRATION IN VISUAL ARTS

A total of 21 points are required as follows:

Visual Arts (18 points)

VIAR UN1000 Basic Drawing (formerly VIAR R1001)

VIAR UN2300 Sculpture I (formerly VIAR R3330)

Four additional VIAR 3-point studio courses (12 points)

Art History (3 points)

WOMEN'S AND GENDER STUDIES

Program Office: 763 Schermerhorn Extension; 212-854-3277; 212-854-7466 (fax)
http://irwgs.columbia.edu/

Director of Undergraduate Studies: Prof. Christia Mercer, 707 Philosophy Hall; 212-854-3190; cm50@columbia.edu

Located within the Institute for Research on Women, Gender, and Sexuality and taught in cooperation with Barnard College's Department of Women's, Gender and Sexuality Studies, the program in women's and gender studies provides students with a culturally and historically situated, theoretically diverse understanding of feminist scholarship and its contributions to the disciplines. The program introduces students to feminist discourse on the cultural and historical representation of nature, power, and the social construction of difference. It encourages students to engage in the debates regarding the ethical and political issues of equality and justice that emerge in such discussion, and links the questions of gender and sexuality to those of racial, ethnic, and other kinds of hierarchical difference.

Through sequentially organized courses in women's, gender, and sexuality studies, as well as required discipline-based courses in the humanities and social sciences, the major provides a thoroughly interdisciplinary framework, methodological training, and substantive guidance in specialized areas of research. Small classes and mentored thesis-writing give students an education that is both comprehensive and tailored to individual needs. The major culminates in a thesis-writing class, in which students undertake original research and produce advanced scholarship.

Graduates leave the program well prepared for future scholarly work in women's, gender, and sexuality studies, as well as for careers and future training in law, public policy, social work, community organizing, journalism, and professions in which there is a need for critical and creative interdisciplinary thought.

MAJOR IN WOMEN'S AND GENDER STUDIES

The requirements for this program were modified on September 22, 2014. Students who declared this program before this date should contact the director of undergraduate studies for the department in order to confirm their correct course of study.

Students should plan their course of study with the undergraduate director as early in their academic careers as possible. The requirements for the major are:

WMST UN1001	Introduction to Women's and Gender Studies
or WMST UN3125	Introduction to Sexuality Studies
WMST UN3311	Colloquium in Feminist Theory

WMST UN3514	Historical Approaches to Feminist Questions
WMST UN3521	Senior Seminar I
WMST UN3915	Gender and Power in Transnational Perspective

Six approved Elective Courses on women, gender, and/or sexuality in consultation with the director of undergraduate studies.*

* Electives will be selected in coordination with the director of undergraduate studies to best suit students' specific interests and to provide them with the appropriate range of courses, whether their focus is ethnic studies, pre-med, pre-law, sociology, public health, queer studies, visual culture, literature, or another area of interest. Students are encouraged to take a broad interdisciplinary approach. The director of undergraduate studies will help students fine-tune their academic program in conjunction with IRWGS courses, cross-listed courses, and other courses offered at Columbia.

CONCENTRATION IN WOMEN'S AND GENDER STUDIES

The requirements for this program were modified on September 22, 2014. Students who declared this program before this date should contact the director of undergraduate studies for the department in order to confirm their correct course of study.

The same requirements as for the major, with the exception of WMST UN3521 Senior Seminar I.

SPECIAL CONCENTRATION FOR THOSE MAJORING IN ANOTHER DEPARTMENT

The requirements for this program were modified on September 22, 2014. Students who declared this program before this date should contact the director of undergraduate studies for the department in order to confirm their correct course of study.

WMST UN1001 Introduction to Women's and Gender Studies; plus four additional approved elective courses on gender.

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