

COLUMBIA COLLEGE

COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK



BULLETIN | 2015-2016

FEBRUARY 26, 2016

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COLUMBIA COLLEGE BULLETIN

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ACADEMIC CALENDAR

The Academic Calendar was correct and complete when compiled; however, the University reserves the right to revise or amend it, in whole or in part, at any time. Registration and Change-of-Program dates are tentative, and students should consult their registration materials. Updated calendar information is available on the Registrar's website (<http://registrar.columbia.edu/event/academic-calendar>).

FALL TERM 2015

August	3	Monday. Last day for new Fall 2015 students to submit vaccination documentation for measles, mumps, and rubella; and to certify meningitis decision on-line. Vaccination documentation is due 30 days prior to registration; students are not permitted to register for classes without this documentation.	11, 14	Friday and Monday. Deferred examination dates.
	3–7	Monday–Friday. On-line registration for Fall 2015 via Student Services Online (SSOL) appointment: continuing students only.	17	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.
	25–27	Tuesday–Thursday. On-line registration for Fall 2015 via Student Services Online (SSOL) appointment: continuing students only.	18	Friday. End of Change-of-Program period. Last day to add courses. Last day to uncover grade for Spring or Summer 2015 course taken Pass/D/Fail. Last day to drop a Core Curriculum course. Must be registered for a minimum of 12 points.
	31	Monday. Orientation begins for entering Fall 2015 students.	21–October 13	Weekdays only. Post Change-of-Program Add/Drop period by on-line appointment via Student Services Online (SSOL).
September	1	Tuesday. Last day to apply or reapply for the B.A. degree to be awarded in October. Applications received after this date are automatically applied to the next conferral date.	30	Wednesday. Last day to confirm, upgrade, or request a waiver from the Columbia Student Health Insurance Plan.
	3–4	Thursday–Friday. On-line registration for Fall 2015 via Student Services Online (SSOL) appointment: first-year students.	October 13	Tuesday. Last day for students to drop individual courses.
	5	Saturday. On-line registration for Fall 2015 via Student Services Online (SSOL) appointment: first-year and continuing students.	21	Wednesday. Award of October degrees.
	7	Monday. Labor Day. University holiday.	22	Thursday. Midterm Date.
	8	Tuesday. Classes begin for the 262nd academic year.	November 2	Monday. 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.
	8–18	Weekdays only. Change-of-Program period by on-line appointment via Student Services Online (SSOL): all students.	2	Monday. Academic holiday.
			3	Tuesday. Election Day. University holiday.
			16–20	Monday–Friday. On-line registration for Spring 2016 via Student Services Online (SSOL) appointment: continuing students only.
			19	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.
			26–29	Thursday–Sunday. Thanksgiving holidays.
December	1	Tuesday. 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.		

4	Friday. Last day for new Spring 2016 students to submit vaccination documentation for measles, mumps, and rubella; and to certify meningitis decision on-line. Vaccination documentation is due 30 days prior to registration; students are not permitted to register for classes without this documentation.
7–11	Monday–Friday. On-line registration for Spring 2016 via Student Services Online (SSOL) appointment: continuing students only.
14	Monday. Last day of classes.
15–16	Tuesday–Wednesday. Study days.
17–23	Thursday–Wednesday. Final examinations.
23	Wednesday. Fall term ends.
24	Thursday, through January 18, 2016, Monday. Winter holidays.

SPRING TERM 2016

January	1	Friday. Last day for applicants to the Class of 2020 to apply for admission.
	5–15	Weekdays only. On-line registration for Spring 2016 via Student Services Online (SSOL) appointment: continuing and transfer students only.
	18	Monday. Martin Luther King, Jr. Day. University holiday.
	19	Tuesday. Classes begin.
	19–29	Weekdays only. Change-of-Program period by on-line appointment via Student Services Online (SSOL).
	22, 25	Friday and Monday. Deferred examination dates.
	28	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.
	29	Friday. End of Change-of-Program period. Last day to add courses. Last day to uncover grade for Fall 2015 course taken Pass/D/Fail. Last day to drop a Core Curriculum course. Must be registered for a minimum of 12 points.
February	15	Monday. Last day for new Spring 2016 students to confirm, upgrade, or request a waiver from the Columbia Student Health Insurance Plan.
	1–23	Weekdays only. Post Change-of-Program Add/Drop period by on-line appointment via Student Services Online (SSOL).
	10	Wednesday. Award of February degrees.

	23	Tuesday. Last day for students to drop individual courses.
March	7	Monday. Midterm date.
	8–11	Tuesday–Friday. Major Declaration.
	14–18	Monday–Friday. Spring recess.
	24	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	18–22	Monday–Friday. On-line registration for Fall 2016 via Student Services Online (SSOL) appointment: continuing students only.
May	2	Monday. Last day of classes.
	3–5	Tuesday–Thursday. Study days.
	5	Thursday. Deadline for continuing students to apply for financial aid for 2016-2017.
	6–13	Friday–Friday. Final examinations.
	13	Friday. Spring term ends.

COMMENCEMENT

May	15	Sunday. Baccalaureate Service.
	17	Tuesday. Columbia College Class Day. Academic Awards and Prizes Ceremony. Phi Beta Kappa Induction Ceremony.
	18	Wednesday. Award of May degrees. University Commencement, 2016.

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John Coatsworth, Ph.D.
Provost of the University

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FACULTY

FACULTY A-Z LISTING

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D (p. 13) E (p. 15) F (p. 16)
G (p. 17) H (p. 18) I (p. 20) J
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(p. 38)

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ADMISSION

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Website: <http://undergrad.admissions.columbia.edu>

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 e-mail.

FEES, EXPENSES, AND FINANCIAL AID

ESTIMATED EXPENSES FOR THE ACADEMIC YEAR

An itemized estimate of the cost of attending Columbia College for the 2015–2016 academic year of nine months is as follows:

Tuition	\$50,526
Mandatory Fees	\$2,474
Average Room and Board Cost	\$12,860
Books and Personal Expenses	\$3,224
Travel	varies
Total	\$69,084 + Travel

There is an additional charge of \$418 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 2015–2016 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 2015–2016

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 2015–2016 is \$25,263 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 \$1,686.

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	\$1,524
Columbia Health Fee	\$950
Total	\$2,474

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 \$60 each term, totaling \$120 for academic year 2015-2016. This fee supports the University's services to international students.

Columbia Health Fee and Student Health Insurance Premiums

Columbia Health Fee

Columbia Health services and programs are supported by the Columbia Health 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 Fee pay no additional charges for most on-campus services. Paying the Columbia Health 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 Fee is billed separately for each term. The periods of coverage and fees for 2015–2016 are as follows:

Fall Term	August 15, 2015– December 31, 2015	\$475
Spring Term	January 1, 2016– August 14, 2016	\$475

Student Health Insurance Premiums

The University policy also requires all registered 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 Fee. Half-time and part-time students may elect enrollment in the Columbia Plan, which also initiates payment of the Columbia Health Fee, described above.

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 Summer enrollment). All waiver requests are considered, but approval is not guaranteed.

The following rates are for the 2015–2016 plan year. Columbia Plan rates and benefits change annually.

Fall Term: August 15, 2015–December 31, 2015

Gold Plan	\$1,057
Platinum Plan	\$1,539

Spring Term and Summer Session: January 1, 2016–August 14, 2016

Gold Plan	\$1,726
Platinum Plan	\$2,510

Students who wish to enroll in the Columbia Plan should make an on-line enrollment selection on SSOL (<https://ssol.columbia.edu>) annually. 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 (p. 4) will have their Columbia Health Fee and Columbia Plan premiums reversed.

For detailed information about Columbia Health, the Student Health Insurance Plan, or submitting a waiver request, visit <http://www.health.columbia.edu> 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. The Columbia Health Fee, the Columbia Health Insurance Plan Premium, and 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.

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 (p. 4), 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.

FINANCIAL AID

Mailing Address: Office of Financial Aid and Educational Financing, Columbia College, 100 Hamilton Hall, Mail Code 2802, 1130 Amsterdam Avenue, 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

E-mail: 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-years and transfers pursuing their first undergraduate degree. Financial aid is available for all four undergraduate years, provided that students continue to demonstrate financial need. 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.

SCHOLARSHIP FUNDS

The following listing of scholarship funds is the cornerstone of Columbia College's need-blind and full-funding financial aid program. These funds have been generously donated by alumni, parents, and friends of the College to provide an opportunity for students who would otherwise be unable to afford the cost of a Columbia education. More than 40% of Columbia College students receive a Columbia grant toward their demonstrated need and are thus eligible to be chosen to receive the honor of representing a designated scholarship. The commitment of alumni and loyal donors enables the college to maintain one of the most economically, ethnically, and racially diverse student bodies among its peer institutions.

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 (p. 45) B (p. 46) C (p. 48) D (p. 51) E (p. 52) F (p. 53) G (p. 54) H (p. 55) I (p. 56) J (p. 57) K (p. 57) L (p. 58) M (p. 60) N (p. 61) O (p. 62) P (p. 62) Q (p. 63) R (p. 63) S (p. 64) T (p. 67) U (p. 67) V (p. 67) W (p. 68) X (p. 69) Y (p. 69) Z (p. 69)

A

FREDERICK F. AND HELEN M. ABDOO SCHOLARSHIP FUND
(1998) Gifts of the family of Helen M. Abdoo ° and Frederick F. Abdoo '41, LAW'47 °, P: GS'88.

CHARLOTTE ACKERMAN SCHOLARSHIP FUND
(2010) Gift of an anonymous donor.

CARROLL ADAMS SCHOLARSHIP FUND

(1997) Gift of Russell F. Warren '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 '80, P: '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 '21.

SHEPARD L. ALEXANDER SCHOLARSHIP FUND
(2011) Bequest of Patricia and Shepard L. Alexander '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 '39.

ALAN J. ALTHEIMER SCHOLARSHIP FUND
(1992) Gift of the Jewish Students Scholarship Fund in honor of Alan Altheimer '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 '37 °.

ERICA L. AMSTERDAM FAMILY SCHOLARSHIP FUND FOR COLUMBIA COLLEGE
(2002) Gift of Mark Lemle Amsterdam '66, LAW'69, P: '07, '10 in honor of his mother, Erica Amsterdam P: '66, LAW'69.

CATHERINE AND DENIS ANDREUZZI SCHOLARSHIP FUND
(1995) Gift of Denis M. Andreuzzi '53.

JULIO LOUIS ANON AND ROBERT A. KAMINSKI SCHOLARSHIP FUND
(2013) Gift of J. Louis Anon '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 '37, GSAS'40.

AQUILA FAMILY SCHOLARSHIP FUND

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

ROONE P. ARLEDGE SCHOLARSHIP FUND

(1987) Gift of Rooney P. Arledge '52 °.

NICHOLAS F. AND FRANCES N. ARTUSO SCHOLARSHIP FUND

(2006) Gift of Anthony A. Artuso '80, P: '08, '12 and various donors in memory of Anthony's parents, Frances N. and Nicholas F. Artuso SEAS'49, P: '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 '62 in memory of his parents, Louis and Theonie Aslanides P: '62.

CHARLES B. ASSIFF SCHOLARSHIP FUND

(1996) Gift of Matthew J. Assiff '89 in memory of his father, Charles B. Assiff P: '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 '49.

BERTHA AND WILLIAM AUGENBRAUN ENDOWED SCHOLARSHIP FUND AT COLUMBIA COLLEGE

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

FRANK AND HARRIET AYER SCHOLARSHIP FUND

(1977) Bequest of Frank A. Ayer SEAS 1911.

B

A. JAMES AND VONA HOPKINS BACH SCHOLARSHIP FUND

(1992) Gift of A. James Bach '53.

FREDERICK AND ELEANORE BACKER SCHOLARSHIP FUND

(1984) Bequest of Eleanore W. Backer.

BAKER FAMILY SCHOLARSHIP FUND

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

GARY THOMAS BAKER SCHOLARSHIP FUND

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

ADELLE PHYLLIS BALFUS SCHOLARSHIP FUND

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

ALFRED M. BARABAS MEMORIAL FUND

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

M. BENJAMIN BARON PRE-MEDICAL SCHOLARSHIP FUND

(1993) Bequest of Etta Baron in memory of her husband, M. Benjamin Baron.

KYRA TIRANA BARRY AND DAVID BARRY SCHOLARSHIP FUND

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

MICHAEL BARRY '89 SCHOLARSHIP FUND

(2010) Gift of Michael I. Barry '89.

FREDERIC D. BARSTOW SCHOLARSHIP FUND

(1943) Bequest of William S. Barstow.

ANDREW AND AVERY BARTH SCHOLARSHIP FUND

(2009) Gift of Andrew F. Barth '83, BUS'85, P: '16.

MILTON B. AND EDITH C. BASSON ENDOWMENT FUND

(1987) Bequest of Milton B. Basson '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 '89.

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 '28, LAW'30.

THE ROBERT BERNE SCHOLARSHIP FUND
(2005) Gift of Robert Berne '60, BUS'62.

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 '55, P: '92 and Morris Lamer ° in honor of Samara B. Meshel '92, P: '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 '69, GSAS'73, SIPA'73, LAW'74.

BIKHCHANDANI SCHOLARSHIP FUND
(2013) Gift of an anonymous donor.

JERRY AND EVELYN BISHOP SCHOLARSHIP FUND
(1984) Gift of Evelyn Bishop W: '42, SEAS'43, P: LAW'79 and Franklin G. Bishop '42, SEAS'43 °, P: LAW'79.

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

BLACK ALUMNI COUNCIL SCHOLARSHIP FUND
(2002) Gift of Columbia College Black Alumni Council, alumni, and friends.

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

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

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

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

BOCKLAGE FAMILY SCHOLARSHIP FUND
(2010) Gift of Alanna and Chandler B. Bocklage '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 '54, SEAS'55, SEAS'64.

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

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

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

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

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

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

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

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

LAURENCE AND MARION BREWER '38 CC SCHOLARSHIP FUND
(2006) Bequest of Marion and Laurence A. Brewer '38.

JOHN B. BRIDGWOOD SCHOLARSHIP FUND
(1985) Gift of John B. Bridgwood °.

BRILLO-SONNINO FAMILY SCHOLARSHIP FUND
(2009) Gift of Lyn Brillo and Mark D. Sonnino '82.

THE CRAIG B. BROD SCHOLARSHIP
(2011) Gift of Craig B. Brod '77.

HAROLD BROD MEMORIAL ROOM SCHOLARSHIP FUND
(1958) Gift of Beth Brod W: '47 in memory of her husband, Harold Brod '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 '69.

ROBERT R. BROOKHART MEMORIAL SCHOLARSHIP FUND

(1991) Bequest of Herbert A. Deane '42, GSAS'53 in honor of Robert R. Brookhart '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 '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 '46, GSAS'46, GSAS'49.

SAMUEL POTTER BROWN SCHOLARSHIP FUND
(1998) Bequest of Samuel P. Brown '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 '25.

LOUISE AND ROBERT BRUNNER FAMILY SCHOLARSHIP FUND
(2014) Gift of Rochelle L. and Thomas W. Brunner '66, P: '95.

MICHAEL S. BRUNO, M.D. SCHOLARSHIP FUND
(1989) Gift of Michael S. Bruno '43, PS'45, P: BUS'70.

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

BRYNJOLFFSSON FAMILY UNDERGRADUATE SCHOLARSHIP FUND
(2008) Gift of Margaret and John Brynjolfur Brynjolfsson '86.

BUCHMAN FAMILY SCHOLARSHIP FUND
(1989) Gift of Stephen L. Buchman '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 '63.

DR. IRVIN J. BUSSING SCHOLARSHIP FUND
(1996) Gift of Irvin J. Bussing '22, GSAS'35 °.

RICHARD BUTLER FOUNDATION
(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'92, P'95, BUS'02, the Charles H. Revson Foundation, and various donors in memory of Benjamin J. Buttenwieser CC 1919.

MICHAEL BYOWITZ / RUTH HOLZER / SUZANNE BYOWITZ SCHOLARSHIP FUND
(2008) Gift of Ruth Holzer and Michael H. Byowitz '73, P: '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 '24.

EDWARD F. CALESA SCHOLARSHIP FUND
(1989) Gift of Edward Calesa '63 in honor of Joel Larus GSAS'60.

STEVEN C. CALICCHIO FUND
(2013) Gift of Steven C. Calicchio Foundation.

WILLIAM CAMPBELL SCHOLARSHIP FUND
(2000) Gift of William V. Campbell '62, TC'64, P: '04, '13, SIPA'08.

JOHN AND BETTY CARROLL MEMORIAL SCHOLARSHIP FUND
(2004) Gift of Barbara Bartlik and David S. Carroll '76, LAW'79, P: '11 in honor of David's parents, John and Betty Carroll P: '76, LAW'79.

PROFESSOR JOHN P. CARTER SCHOLARSHIP FUND
(2001) Bequest of Rachel H. Carter in memory of her husband, John P. Carter '36.

EDWIN H. CASE MEMORIAL SCHOLARSHIP FUND
(1994) Gift of Stephen H. Case '64, LAW'68, P: '92 and various donors in memory of Stephen's son, Edwin H. Case '92.

CENTRAL DELICATESSEN FUND
(2015) Gift of an anonymous donor.

DOUGLAS A. CHADWICK, JR. SCHOLARSHIP FUND
(2004) Gift of Douglas A. Chadwick '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 '02.

CHANG ROBBINS FAMILY SCHOLARSHIP FUND
(2012) Gift of Joyce Chang '87.

CHANG CHAN YUK PING SCHOLARSHIP FUND

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

CHAPMAN FAMILY SCHOLARSHIP FUND

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

JOHN CHEE SCHOLARSHIP FUND

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

CHARLIE CHO SCHOLARSHIP FUND

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

THE CHODASH FAMILY SCHOLARSHIP FUND

(2015) Gift of Craig L. Chodash '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.

JEREMIAH AND YOLANDA CIANCIA FAMILY SCHOLARSHIP FUND

(2008) Gift of Jeremiah and Yolanda Ciancia 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 '67.

JOHN J. CIRIGLIANO SCHOLARSHIP FUND

(1987) Gift of John J. Cirigliano '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 '77, PS'86 and the George A. Hyman Revocable Trust in memory of Barry's father, George A. Hyman '42, PS'45, P: '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 '56, SEAS'57, BUS'58, P: '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 '58, BUS'59 °, P: '91, Bernard W. Nussbaum '58, P: '93, 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 '61, GSAS'64.

ETHEL CLYDE SCHOLARSHIP FUND

(1979) Bequest of Ethel Clyde GS'31, P: '30 °.

DONN COFFEE MEMORIAL SCHOLARSHIP FUND

(2005) Gift of Toni Coffee BC'56, W: '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 '83.

PETER AND JOAN COHN SCHOLARSHIP FUND
(2004) Gift of Peter F. Cohn '58, PS'58, P: '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 Higgins '74, LAW'78 in honor of Henry S. Coleman '46, SEAS'46 °.

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

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

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 AND FELLOWSHIP FUND
(1968) 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.

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

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

CORNACCHIA FAMILY SCHOLARSHIP FUND
(2010) Gift of Thomas W. Cornacchia '85, P: '17, '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 '25.

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

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

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

HORACE E. DAVENPORT FUND
(1958) Gift of Horace E. Davenport '29 °.

VERA B. DAVID SCHOLARSHIP FUND
(1963) Bequest of Vera B. David.

ARTHUR M. DAVIS SCHOLARSHIP FUND
(1989) Bequest of Arthur M. Davis '24.

A.M. DAVIS SCHOLARSHIP FUND
(1944) Gift of A.M. Davis °.

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 '75, SIPA'76, LAW'80, P: '05, '07.

SARAH DAVIS FINANCIAL AID SCHOLARSHIP FUND
(1998) Gift of Hank Davis '63.

JUDGE ARCHIE DAWSON MEMORIAL SCHOLARSHIP FUND
(1964) Gift of various donors in memory of Archie Dawson '21.

THE RAUL J. DE LOS REYES MEMORIAL SCHOLARSHIP FUND
(2005) Gift of Richard N. de los Reyes '97.

HERBERT A. DEANE SCHOLARSHIP FUND
(1991) Bequest of Herbert A. Deane '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 '39.

ROBERT STEVEN DENNING SCHOLARSHIP FUND
(2008) Gift of Roberta B. and Steven A. Denning P: '06.

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

CARL W. DESCH SCHOLARSHIP FUND IN MEMORY OF KATHARINE W. DESCH
(1992) Gift of Carl W. Desch '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.

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 '25, LAW'26 ° and Sidney R. Diamond '20, LAW'22 °.

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 '91.

WILLIAM A.S. DOLLARD AND BERNARD F. KELLEY SCHOLARSHIP
(2001) Bequest of William A.S. Dollard '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 '04, BUS'09.

ELIZABETH AND DANIEL DWYER SCHOLARSHIP FUND
(2010) Gift of Elizabeth A. Dwyer '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 '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 '91, BUS'98.

ADOLPHUS EHRLICH SCHOLARSHIP FUND

(2011) Bequest of Adolphus O. Ehrlich.

THE ERIC EISNER SCHOLARSHIP FUND

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

ABIGAIL ELBAUM SCHOLARSHIP FUND

(2007) Gift of Abigail Black Elbaum '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 '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: '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 '71, P: '12, '14 and Pamela S. Falk LAW'92, P: '12, '14.

HAMEN AND PHYLLIS FAN FAMILY SCHOLARSHIP FUND

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

FANG FAMILY SCHOLARSHIP FUND

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

GERALD FEINBERG MEMORIAL SCHOLARSHIP FUND

(2007) Bequest of Barbara J. Feinberg P: '92, '95, LAW'95 in memory of her husband, Gerald Feinberg '53, GSAS'54, GSAS'57, P: '92, '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 '76, PS'80.

FERGANG FAMILY SCHOLARSHIP FUND

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

E. ALVIN AND ELAINE M. FIDANQUE FUND

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

PETER AND SUSAN FISCHBEIN FAMILY SCHOLARSHIP FUND

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

ANDREW L. FISHER '66 CC SCHOLARSHIP FUND

(2005) Gift of Phebe and Louis A. Goodman '65.

ELIZA AND CANNING FOK ENDOWED FUND FOR INTERNATIONAL STUDENT FINANCIAL AID

(2011) Gift of Canning Fok P: '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.

IAN FORBES FRASER SCHOLARSHIP FUND

(1974) Bequest of Ian Forbes Fraser '29, GSAS'39.

JOHN AND MAY FRASER SCHOLARSHIP FUND

(1974) Bequest of Ian Forbes Fraser '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 '62, in memory of his parents, Doris and Jesse Freidin P: '62.

ALBERT W. FRIBOURG SCHOLARSHIP FUND

(1993) Bequest of Albert W. Fribourg '24, LAW'27.

A. ALAN FRIEDBERG SCHOLARSHIP FUND

(1986) Gift of A. Alan Friedberg '53.

LAWRENCE N. FRIEDLAND SCHOLARSHIP FUND

(1991) Gift of Lawrence N. Friedland '47, LAW'49.

JACOB W. FRIEDMAN SCHOLARSHIP FUND

(1995) Gift of Jacob W. Friedman '33, LAW'35 °.

ROBERT AND BARBARA FRIEDMAN SCHOLARSHIP FUND

(2010) Gift of Robert L. Friedman '64.

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

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

G

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

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

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

GEHRIG SCHOLARSHIP FUND
(1958) Gift of Mel Allen and various donors in honor of Lou
Gehrig '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 '32, LAW'34.

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

GM/EEOC ENDOWED SCHOLARSHIP FUND -
COLUMBIA COLLEGE
(1984) Gift of General Motors/EEOC Endowed Scholarship
Program.

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

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

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

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

GOLDSCHMIDT FAMILY SCHOLARSHIP FUND

(2010) Gift of Lawrence E. Goldschmidt '64, LAW'67, P:
LAW'99 and Beatrice C. Goldschmidt TC'41, W: '32, P: '64,
LAW'67.

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

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

JOHN P. GOMMES SCHOLARSHIP FUND
(2011) Gift of Thomas D. Gommès '98, LAW'02, JRN'06 in
honor of his father, John P. Gommès P: '98, LAW'02, JRN'06.

EMANUEL GOODMAN SCHOLARSHIP FUND
(1989) Bequest of Emanuel Goodman JRN'22.

MAURICE AND SARA GOODMAN SCHOLARSHIP
FUND
(1988) Gift of Maurice B. Goodman BUS'23 ° in honor of Sara
Goodman.

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

ALAN GORNICK SCHOLARSHIP FUND
(1990) Gift of Alan L. Gornick '35, LAW'37 °.

EUGENE AND PHYLLIS GOTTFRIED SCHOLARSHIP
FUND
(2013) Gift of Phyllis Swain Gottfried ° and Eugene L. Gottfried
'50, PS'54.

THE SARAH E. GRANT SCHOLARSHIP FUND AT
COLUMBIA COLLEGE
(2007) Gift of Annette M. Grant BC'83, P: '12, '17, '18 and
Geoffrey T. Grant SEAS'82, P: '12, '17, '18.

GREATER NEW YORK MUTUAL INSURANCE
COMPANY FUND
(1967) Gift of the Greater New York Mutual Insurance
Company.

MATTHEW S. GREER SCHOLARSHIP FUND
(2010) Gift of Matthew S. Greer '00, GSAPP'03.

THE GEOFFREY E. GROSSMAN SCHOLARSHIP FUND
(2007) Gift of Geoffrey E. Grossman '08, GSAS'11.

THE MATTHEW C. GROSSMAN SCHOLARSHIP FUND
(2007) Gift of Matthew C. Grossman '05, GSAS'07.

THE SHARON AND PETER GROSSMAN FAMILY
SCHOLARSHIP
(2005) Gift of Sharon and Peter A. Grossman '79, P: '05, '08,
GSAS'07, GSAS'11.

PETER GRUENBERGER FAMILY SCHOLARSHIP FUND
(2000) Gift of Peter Gruenberger '58, LAW'61.

GRUENSTEIN FAMILY SCHOLARSHIP FUND

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

WALTER GUENSCH SCHOLARSHIP FUND

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

LEE AND ELIZABETH GUITTAR SCHOLARSHIP FUND

(1994) Gift of Lee J. Guittar '53, GS'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 '79, LAW'83, GSAS'03, P: '13.

LAWRENCE GUSSMAN COLUMBIA COLLEGE
SCHOLARSHIP FUND

(1987) Gift of Lawrence A. Gussman '37, SEAS'38, SEAS'39
°, P: '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 '37, GSAS'39.

ALBERT J. HAMBRET FUND

(1969) Bequest of Albert J. Hambret.

ALEXANDER HAMILTON SCHOLARSHIP FUND

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

GEORGE HAMMOND SCHOLARSHIP FUND AT
COLUMBIA COLLEGE

(2004) Bequest of George Hammond '28.

JINDUK HAN AND FAMILY SCHOLARSHIP FUND

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

ELLEN KING HAND MEMORIAL FUND

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

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 '68, LAW'71, P: '99 in honor
of his father, C. Lowell Harriss GSAS'40 °, P: '68, LAW'71,
BUS'72, LAW'74, BUS'75, LAW'76.

LAWRENCE S. HARTE SCHOLARSHIP FUND

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

THE PETER AND HILARY HATCH SCHOLARSHIP
FUND

(2008) Gift of Hilary R. Hatch '92 and Peter A. Hatch '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 O'Malley '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 SEAS'36.

WILLIAM C. HEFFERNAN SCHOLARSHIP FUND

(1987) Gift of William C. Heffernan '68.

HELLENIC STUDENT FUND

(2013) Gift of an anonymous donor.

M. AND M. HERMAN SCHOLARSHIP FUND

(1988) Gift of Paul R. Herman '58, LAW'61, P: '97, '98 in
memory of his parents, Miriam R. and Murry S. Herman P: '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: '38 in memory of her
son, Richard Herpers '38.

DAVID B. HERTZ COLLEGE/ENGINEERING
INTER-SCHOOL SCHOLARSHIP FUND

(1989) Gift of David Bedndel Hertz '39, SEAS'40, SEAS'49.

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 '68, LAW'71.

ROBERT IRWIN HERZ MEMORIAL FUND

(1969) Gift of Fred S. Herz °, P'66 ° in honor of his son, Robert
I. Herz '66 °.

ABRAM S. HEWITT MEMORIAL

(1953) Gift of Norvin H. Green CC 1919 ° in memory of Abram S. Hewitt LAW'28.

PROFESSOR GEORGE W. HIBBITT MEMORIAL SCHOLARSHIP FUND

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

RICHARD AND CHRISTIANE HIEGEL SCHOLARSHIP FUND

(2012) Gift of Richard J. Hiegel '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 '67.

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 '42.

HOFFEN FAMILY SCHOLARSHIP FUND

(2013) Gift of Sandra H. Kim Hoffen '87 and Howard I. Hoffen SEAS'85.

ROBERTA L. AND JOEL S. HOFFMAN SCHOLARSHIP FUND

(1996) Gift of Joel S. Hoffman '67, P: '05.

FRANK AND MARY HOGAN SCHOLARSHIP FUND

(1975) Gift of Mary R. Hogan ° in memory of her husband, Frank Smithwick Hogan '24, LAW'28.

JOHAN JØRGEN HOLST SCHOLARSHIP FUND

(1994) Gift of the American Scandinavian Foundation.

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 '48, LAW'50 °.

ELISSA HOROWITZ SCHOLARSHIP FUND

(2004) Gift of Benjamin A. Horowitz '88, P: '11, '16.

FELICIA AND BEN HOROWITZ SCHOLARSHIP FUND

(2010) Gift of Benjamin A. Horowitz '88, P: '11, '16.

GEDALE B. AND BARBARA S. HOROWITZ SCHOLARSHIP FUND

(2000) Gift of Gedale B. Horowitz '53, LAW'55, P: BC'83, LAW'89.

LIBBY HOROWITZ SCHOLARSHIP FUND

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

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

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

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

(1970) Bequest of Francis D. Huber '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: '65 in memory of her son, John L. Huemer '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 '49 in honor of Jacques Barzun '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 '55, P: '85, '88 °, PS'90.

ANDREW HYMAN AND MOLLY CHREIN SCHOLARSHIP FUND

(2007) Gift of Andrew D. Hyman '88 °.

I

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 '43.

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 '75 in memory of his father, Martin D. Jacobs '25, LAW'27, P: '75.

JACOBSON BERLINSKI FAMILY SCHOLARSHIP FUND

(2011) Gift of Britta Wilson Jacobson '96.

HOWARD I. JACOBY PRESIDENTIAL SCHOLARSHIP FUND

(1981) Bequest of Jacob J. Jacoby.

JAFFE FAMILY SCHOLARSHIP FUND

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

GEORGE M. JAFFIN SCHOLARSHIP FUND

(1986) Gift of George M. Jaffin '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 '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 '71 ° in memory of his father Lee Johnson and later renamed in his memory by his wife, WeiWei Du W: '71.

AL JOLSON FUND

(1962) Bequest of Al Jolson.

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 '80.

K**THEODORE KAHAN SCHOLARSHIP FUND**

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

ALAN R. KAHN FAMILY SCHOLARSHIP FUND

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

PROCTOR WILLIAM E. KAHN SCHOLARSHIP FUND

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

THE KAISER FAMILY SCHOLARSHIP

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

KAMATH FAMILY SCHOLARSHIP FUND

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

SANDRA AND MICHAEL KAMEN SCHOLARSHIP FUND

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

VICTOR V. KAMINSKI III MEMORIAL SCHOLARSHIP FUND

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

LAMONT AND LEAH KAPLAN SCHOLARSHIP FUND

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

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

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

RAVI KAPUR SCHOLARSHIP FUND

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

JUDY AND JEANETTE KATEMAN MEMORIAL SCHOLARSHIP FUND

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

RALPH KEEN SCHOLARSHIP FUND

(2001) Gift of Ralph Keen '79.

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

(1990) Bequest of Morris Kemp '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 '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 '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 '85 in memory of his fiancée, Seilai Khoo '86.

KHOSROWSHAHI FAMILY SCHOLARSHIP FUND

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

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 '90.

SANG AND BORAH KIM FAMILY SCHOLARSHIP FUND

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

THE MARK AND ANLA CHENG KINGDON FUND

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

GRAYSON KIRK SCHOLARSHIP FUND

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

KN SCHOLARSHIP FUND GIFT

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

JEFFREY D. KNOWLES SCHOLARSHIP

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

LAWRENCE AND RUTH KOBRIN SCHOLARSHIP FUND

(1993) Gift of Lawrence A. Kobrin '54, LAW'57, P: '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 '23, LAW'25.

DAVID H. KRAFT SCHOLARSHIP FUND

(1995) Gift of Gilman Kraft '47 °.

ROBERT KRAFT FAMILY SCHOLARSHIP FUND

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

KRAMER ENDOWED SCHOLARSHIP FUND

(1965) Gift of the Kramer Foundation.

FREDERICK AND RICHARD KRAMER FAMILY SCHOLARSHIP

(2003) Gift of Richard A. Kramer '87.

ROBERT J. KRANE AND JULIUS Y. GRAFF SCHOLARSHIP FUND

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

MARCY AND JOSH KREVITT SCHOLARSHIP FUND

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

THE KRISBERG FAMILY SCHOLARSHIP

(2006) Gift of Brian C. Krisberg '81, LAW'84, P: '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 '72.

THE KUNG AND YEUNG SCHOLARSHIP FUND

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

MARY KUO AND ALLEN CHU FAMILY SCHOLARSHIP FUND

(2015) Gift of Allen Chu and Mary A. Kuo '92.

PAUL SAMUEL KURZWEIL SCHOLARSHIP FUND

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

L

LATINO AMERICAN ALUMNI ASSOCIATION OF COLUMBIA UNIVERSITY SCHOLARSHIP FUND

(2009) Gift of various donors.

PREM LACHMAN SCHOLARSHIP FUND

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

AMNON AND Yael LANDAN SCHOLARSHIP FUND

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

NORMAN JOSEPH LANDAU SCHOLARSHIP FUND

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

JERRY G. LANDAUER SCHOLARSHIP FUND

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

PATRICIA LANDMAN AND DANIELLE LANDMAN
MEMORIAL FUND

(2007) Bequest of Shirley Landman.

DENNIS H. AND SUSAN F. LANGER SCHOLARSHIP
FUND

(1997) Gift of Susan F. and Dennis H. Langer '71, P: '04, P'08.

DENNIS H. AND WILLIAM A.F. LANGER SCHOLARSHIP

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

GEORGE R. LANYI MEMORIAL FOUNDATION
SCHOLARSHIP FUND

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

MARTHA C. LAPPAS SCHOLARSHIP FUND

(1991) Bequest of Martha C. Lappas.

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 '88, P: '16, '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 '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: '08, '13.

FRANK LAMPSON LEE SCHOLARSHIP FUND

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

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

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

KAI-FU AND SHEN-LING LEE SCHOLARSHIP FUND

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

K.C. LEE SCHOLARSHIP FUND

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

ROBERT AND ALISON LEE FAMILY SCHOLARSHIP
FUND

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

ERWIN H. LEIWANT SCHOLARSHIP FUND

(1991) Gift of Irene K. Leiwant LS'70, W: '41, P: '71, '74, LAW'75 in memory of her husband, Erwin H. Leiwant '41, P: '71, '74, LAW'75, on the fiftieth anniversary of his graduation.

NICHOLAS LEONE FAMILY SCHOLARSHIP FUND

(2014) Gift of Nicholas P. Leone '88.

HAROLD LEVENTHAL SCHOLARSHIP FUND

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

THE LEVINE FAMILY SCHOLARSHIP FUND

(2004) Gift of Karen and Joseph H. Levine '76, P: '07.

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 '74.

SALLY LIPPER MEMORIAL SCHOLARSHIP

(1993) Gift of Kenneth Lipper '62 in memory of his mother, Sally Lipper P: '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 '31.

FRANK A. LLOYD, JR. SCHOLARSHIP FUND

(2012) Bequest of Frank A. Lloyd, Jr. '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 '83.

JAMES J. AND JOVIN C. LOMBARDO SCHOLARSHIP
FUND

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

FRANK AND VICTOR LOPEZ-BALBOA SCHOLARSHIP
FUND

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

THE BENJAMIN B. AND BETSY A. LOPATA
SCHOLARSHIP FUND

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

LORENZO FAMILY SCHOLARSHIP FUND

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

OLEGARIO LORENZO MEMORIAL SCHOLARSHIP FUND

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

IRWIN AND MARIANETTE L. LOWELL SCHOLARSHIP FUND

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

LI LU '96 SCHOLARSHIP FUND

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

STANLEY B. AND JUDITH M. LUBMAN SCHOLARSHIP FUND

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

A. LEONARD LUHBY CLASS OF 1938 SCHOLARSHIP FUND

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

LUI FAMILY SCHOLARSHIP

(2011) Gift of Frederick Lui P: '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.

THOMAS MACIOCE SCHOLARSHIP FUND

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

THE MADDON FAMILY SCIENCE SCHOLARSHIP FUND

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

DR. LEO C. MAITLAND SCHOLARSHIP FUND

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

MALIN-SERLE FAMILY SCHOLARSHIP FUND

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

DONALD LEE MARGOLIS SCHOLARSHIP FUND

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

JAMES, DONALD, AND EMILY MARGOLIS SCHOLARSHIP FUND

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

HERBERT MARK '42 MEMORIAL SCHOLARSHIP FUND

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

DR. JEROME & CORA MARKS SCHOLARSHIP FUND

(2012) Bequest of Cora M. Marks.

MICHAEL E. MARTOCCI SCHOLARSHIP FUND

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

THE AARON LEO MAYER SCHOLARSHIP FUND

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

BARBARA MAZUR SCHOLARSHIP FUND

(1999) Gift of Ilana B. Mazur SW'86 and Marc B. Mazur '81 P: '12, '15 in memory of their mother, Barbara Mazur P: '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 '61, LAW'64.

PAUL C. MCCORMICK SCHOLARSHIP FUND

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

WILLIAM MCDAVID SCHOLARSHIP FUND

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

KATHLEEN MCDERMOTT SCHOLARSHIP FUND

(2011) Gift of various donors in memory of Kathleen McDermott.

PATRICK AND YVETTE MCGARRIGLE COLLEGE SCHOLARSHIP

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

MCKEEVER FAMILY SCHOLARSHIP

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

NICHOLAS MCDOWELL MCKNIGHT SCHOLARSHIP FUND

(1962) Bequest of Carl J. McKnight.

SPENCER J. MCGRADY SCHOLARSHIP FUND

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

MABEL C. MEAD FUND

(1958) Bequest of Mabel C. Mead.

RAPHAEL MEISELS SCHOLARSHIP FUND

(1985) Gift of Raphael Meisels '21 °.

BARBARA MELCHER MEMORIAL SCHOLARSHIP FUND

(2009) Gift of Elizabeth Melcher Luckett '90.

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

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

SAMUEL AND BLANCHE MENDELSON MEMORIAL SCHOLARSHIP FUND

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

MERLAU FAMILY SCHOLARSHIP FUND

(2014) Gift of Jo A. and Kenneth A. Merlau P: '16.

MESHEL FAMILY SCHOLARSHIP FUND

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

CHARLES AND JEANNE METZNER SCHOLARSHIP FUND

(2013) Bequest of Jeanne Metzner °.

ASENATH KENYON AND DUNCAN MERRIWETHER SCHOLARSHIP FUND

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

LILLIAN S. MICHAELSON SCHOLARSHIP FUND

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

JOSEPH S. MICH TOM SCHOLARSHIP FUND

(1948) Bequest of Joseph Stewart Michtom.

THE IRA L. MILLER FAMILY SCHOLARSHIP FUND

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

JAMES MILLER SCHOLARSHIP FUND

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

MILLER-HEDIN FAMILY SCHOLARSHIP

(2008) Gift of Evan Miller '78.

MAX MILLER SCHOLARSHIP FUND

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

MEREDITH G. MILSTEIN SCHOLARSHIP FUND

(2011) Gift of Meredith G. Milstein '09.

THE PHILIP AND CHERYL MILSTEIN SCHOLARSHIP FUND

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

SEYMOUR MILSTEIN SCHOLARSHIP FUND

(2002) Gift of Philip Milstein '71, P: '09, '10.

THOMAS AND JOY MISTELE SCHOLARSHIP FUND

(2008) Gift of C. Joy and Thomas M. Mistele P: '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 '24 °.

DR. ROYAL M. MONTGOMERY SCHOLARSHIP FUND

(1992) Gift of Maxine C. Montgomery ° in honor of her husband, Royal M. Montgomery '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 '30 °, P: '63 in memory of his son, Peter N. Morrison '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 '30.

MOXIE'S CREATIVE INTELLECT SCHOLARSHIP FUND

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

MUKHERJEE-RUSSELL MEMORIAL FUND

(2010) Gift of Tanmoy Mukherjee '86.

PROFESSOR HERMAN J. MULLER SCHOLARSHIP FUND

(2008) Bequest of Charles S. Lyons.

GLADYS H. MUÑOZ SCHOLARSHIP FUND

(1996) Gift of Carlos R. Muñoz '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 '33.

ALI NAMVAR SCHOLARSHIP FUND

(2011) Gift of Ali Namvar '91.

JON NARCUS SCHOLARSHIP FUND

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

AMERICO C. NARDIS SCHOLARSHIP FUND

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

MURRAY AND BELLE NATHAN SCHOLARSHIP ENDOWMENT

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

NAWN FAMILY SCHOLARSHIP FUND

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

THE NAYYAR FAMILY SCHOLARSHIP FUND

(2013) Gift of Ashok Nayar '85.

THOMAS B. NEFF SCHOLARSHIP FUND

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

THE CHARLES E. AND DOROTHY C. NEWLON SCHOLARSHIP FUND

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

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 '01, GSAPP'10.

NG TENG FONG SCHOLARSHIP FUND

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

LOUIS AND MARINA NICHOLAS SCHOLARSHIP FUND

(1998) Gift of Socrates Nicholas '56.

9/11 MEMORIAL FUND SCHOLARSHIP

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

ADRIANE NOCCO SCHOLARSHIP FUND

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

DAVID NORR, CLASS OF 1943 SCHOLARSHIP FUND

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

NORRY FAMILY SCHOLARSHIP FUND FOR THE COLLEGE

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

O

DOROTHY O'BRIEN AND FERDINAND J. SIEGHARDT SCHOLARSHIP FUND

(1977) Bequest of Ferdinand J. Sieghardt.

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 '36.

GIDEON H. OPPENHEIMER SCHOLARSHIP FUND

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

GEORGE M. ORPHANOS SCHOLARSHIP FUND

(2007) Bequest of George M. Orphanos '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 '99, JRN'00 and Scott D. Ostfeld '98, BUS'02, LAW'02.

OUZOUNIAN FAMILY SCHOLARSHIP FUND

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

OZ FAMILY SCHOLARSHIP FUND

(2009) Gift of Lisa J. and Mehmet C. Oz P: '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 '82.

STELIOS AND ESPERANZA PAPADOPOULOS SCHOLARSHIP FUND

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

EMANUEL M. PAPPER AND PATRICIA M. SCHOLARSHIP FUND

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

MAX PAPPER SCHOLARSHIP FUND

(1961) Gift of Lillian M. Jaffe; Emanuel M. Papper '35, '88 HON °; and Solomon Papper '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 '69.

ROBERT I. PEARLMAN SCHOLARSHIP FUND - CC

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

B. DAVID AND ROSANN PECK SCHOLARSHIP FUND

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

ROBERT L. PELZ SCHOLARSHIP FUND

(1989) Gift of Robert L. Pelz '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 '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 '51, SIPA'54.

WILLIAM E. PETERSEN SCHOLARSHIP FUND
(1992) Gift of William E. Petersen '27, BUS'28, '80 HON °, P: '68, BUS'73.

THE PETITO FAMILY SCHOLARSHIP FUND
(2007) Gift of Paula K. and Dominic A. Petito '77, P'13.

MARY ELLEN AND BRUCE EBEN PINDYCK SCHOLARSHIP FUND
(1981) Gift of Bruce E. Pindyck '67, LAW'70, BUS'71, P: '03 and Mary Ellen Pindyck LAW'73, GSAPP'75, P: '03.

FRANK R. PITT SCHOLARSHIP FUND
(1967) Gift of Frank R. Pitt '28, LAW'30 °.

FRANK R. PITT SCHOLARSHIP FUND
(2000) Bequest of Frank R. Pitt '28, LAW'30.

PLANALP TREVOR FAMILY SCHOLARSHIP FUND
(2010) Gift of Stephen S. Trevor '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 '74, LAW'77 in honor of Peter R. Pouncey GSAS'69, P: '00, SOA'08.

LEONARD PRICE SCHOLARSHIP FUND
(2006) Bequest of Leonard Price '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 '12 and Gabriele Quandt P: '12.

ROBERT T. AND MARILYN L. QUITTMAYER SCHOLARSHIP FUND
(1986) Gift of Robert T. Quittmeyer '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 '58, SEAS'59.

THOMAS D. RABIN SCHOLARSHIP FUND
(1997) Gift of Ruth H. and I. Stephen Rabin '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 '69; Robert D. Rapaport BUS'59; Martin S. Rapaport '62, LAW'65, P: '09; Richard A. Rapaport '69; and M. Murray Peshkin °.

BROOKE AND RICHARD RAPAPORT SCHOLARSHIP FUND
(1999) Gift of Richard A. Rapaport '69.

PROFESSOR WILLIAM H. REINMUTH SCHOLARSHIP FUND
(1988) Gift of Curtis Instruments in memory of William H. Reinmuth P: '89.

ROSE AND SAM REISS SCHOLARSHIP FUND
(1987) Gift of Robert S. Reiss '52, in honor of his parents, Sam and Rose Reiss P: '52.

HUBERT M. RELYEA SCHOLARSHIP FUND
(1993) Bequest of Hubert M. Relyea '31.

REMMER (GENE) SCHOLARSHIP FUND GIFT
(1995) Gift of Patricia C. Remmer BC'45 °.

PATRICIA REMMER BC '45 - COLUMBIA COLLEGE SCHOLARSHIP FUND
(2004) Gift of Patricia C. Remmer BC'45 °.

THE PROFESSOR EMERITUS JOSEPH V. RIDGELY SCHOLARSHIP
(2014) Gift of Julia S. Ridgely BC'85, JRN'86.

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.

EDWIN ROBBINS CC 1953 RESIDENTIAL SCHOLARSHIP FUND

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

EDWIN ROBBINS CC 1953 RESIDENTIAL SCHOLARSHIP FUND II

(2014) Gift of Edwin Robbins '53, LAW'55, P: 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 '50, PS'55.

RODIN LEVINE FAMILY SCHOLARSHIP

(2011) Gift of John D. Rodin '97 and Rachel L. Rodin '97, BUS'01.

ROELOFFS FAMILY SCHOLARSHIP

(2012) Gift of Kurt W. Roeloffs '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 '89.

ARTHUR G. ROSEN FAMILY SCHOLARSHIP FUND

(1991) Gift of Arthur G. Rosen '65.

PROFESSOR JOHN D. ROSENBERG SCHOLARSHIP FUND

(2008) Gift of John A. Carey '71 in honor of John D. Rosenberg '50, GSAS'60, P: '97.

IDA ROSENBERG SCHOLARSHIP FUND

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

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 '59.

LEWIS A. ROSENTHAL SCHOLARSHIP FUND

(1951) Gift of William Rosenthal P: '28 in memory of his son, Lewis A. Rosenthal '28.

KATHLEEN ROSKOT MEMORIAL SCHOLARSHIP FUND

(2005) Gift of various donors in memory of Kathleen Roskot '02.

EUGENE T. ROSSIDES SCHOLARSHIP FUND

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

SAMUEL H. ROTHFELD CC 1934 SCHOLARSHIP FUND

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

DAVID H. ROUS SCHOLARSHIP FUND

(1973) Gift of various donors in memory of David H. Rous '25, LAW'28.

JOSEPH RUBIN SCHOLARSHIP FUND

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

SAMUEL RUDIN SCHOLARSHIP FUND

(2000) Gift of Joan H. and Paul A. Marks '46, PS'49, '00 HON, P: '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 '62.

THE RICHARD RUZIKA SCHOLARSHIP FUND

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

THE FRIENDS OF RICH RUZIKA SCHOLARSHIP FUND

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

S

DAVID G. SACKS SCHOLARSHIP FUND

(2005) Bequest of David G. Sacks '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 '36 °, P: '67, '69.

ARNOLD A. SALTZMAN SCHOLARSHIP FUND FOR DOUBLE DISCOVERY PROGRAM

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

ERIC F. SALTZMAN SCHOLARSHIP FUND

(1986) Gift of Eric F. Saltzman '69, P: '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: '13.

HERB AND PEARL SANDICK SCHOLARSHIP FUND

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

AARON AND JAMES SATLOFF SCHOLARSHIP FUND

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

SATOW FAMILY SCHOLARSHIP FUND

(1988) Gift of Phillip M. Satow '63, P: '88, '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 '69.

SCHENLEY INDUSTRIES, INC., SCHOLARSHIP FUND

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

JONATHAN SCHILLER SCHOLARSHIP FUND

(2011) Gift of Jonathan D. Schiller '69, LAW'73, P: '01, '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 '32.

SAMUEL SCHOLNICK SCHOLARSHIP FUND

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

SAMUEL AND ANNA SCHREIBER SCHOLARSHIP FUND

(1987) Gift of Leonard I. Schreiber '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: '60.

WILLIAM P. SCHWEITZER SCHOLARSHIP FUND

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

MARY H. SCRANTON SCHOLARSHIP FUND

(1936) Bequest of Mary N. Scranton.

LEONARD T. SCULLY SCHOLARSHIP FUND

(1957) Bequest of Millicent White Smyth in honor of her friend, Leonard T. Scully '32 °.

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 '81, P: '08, '09.

KARL LUDWIG SELIG SCHOLARSHIP FUND

(2001) Gift of Thomas H. Glocer '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 '63, GSAPP'87, P: '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: '48, P: '73, '75, BUS'76 and Arthur J. Shadek LAW'48 °, P: '73, '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 '72, P: BUS'07.

SOLOMON AND DORA MONNESS SHAPIRO SCHOLARSHIP FUND

(1952) Bequest of Dora Monness Shapiro.

GEORGE SHAW SCHOLARSHIP FUND

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

PO-CHIEH SHAW SCHOLARSHIP FUND

(2013) Gift of Gordon Shaw BUS'92.

JAMES PATRICK SHENTON SCHOLARSHIP FUND

(1998) Gift of Socrates Nicholas '56.

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

EDITH SHIH SCHOLARSHIP FUND
(2008) Gift of Edith Shih TC'77, TC'78.

WILLIAM BROCK SHOEMAKER FUND
(1908) Gift of Henry F. Shoemaker ° and Ella de Peyster Shoemaker °.

JESSE SIEGEL SCHOLARSHIP FUND
(1984) Gift of Jesse S. Siegel '49 °, P: BC'80, SW'83.

SIDNEY J. SILBERMAN SCHOLARSHIP FUND AT COLUMBIA COLLEGE
(1998) Gift of Sidney J. Silberman '42, LAW'47 °.

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

SINGH FAMILY SCHOLARSHIP FUND
(2001) Gift of Ravi M. Singh '88.

LUCIANO SIRACUSANO SCHOLARSHIP FUND
(2013) Gift of Luciano Siracusano '87, P: '18.

MARVIN SIROT SCHOLARSHIP FUND
(1984) Gift of Margaret Sirot W: '56, BUS'57 and various donors in memory of Marvin Sirot '56, BUS'57.

SAMUEL T. SKIDMORE SCHOLARSHIP FUND
(1990) Bequest of Samuel T. Skidmore.

JOSEPH M. SKRYPSKI SCHOLARSHIP FUND
(2007) Bequest of Joseph M. Skrypski '39.

LAWRENCE SLAUGHTER SCHOLARSHIP FUND
(2010) Gift of Lawrence D. Slaughter '85, P: '19.

ELLIOT SLOANE AND POLLY LEIDER SCHOLARSHIP
(2012) Gift of Elliot B. Sloane '83 and Polly Leider BC'84.

ERIC V. SMITH SCHOLARSHIP FUND
(1994) Gift of Blair W. Smith BUS'85 and various donors in memory of Eric V. Smith '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 °.

SOLENDER FAMILY FUND
(2011) Gift of Michael S. Solender '86, P: '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 '63, LAW'66.

SOL SPIEGELMAN SCHOLARSHIP FUND
(1992) Gift of Richard Axel '67, P: SIPA'11.

SPINGARN FAMILY SCHOLARSHIP FUND
(1990) Gift of James L. Spingarn '62, P: '89, BC'92, BUS'94.

ARTHUR B. SPINGARN SCHOLARSHIP FUND
(1993) Bequest of Arthur B. Spingarn CC1897, GSAS 1899, LAW 1900.

LISA AND DAVID STANTON FAMILY SCHOLARSHIP
(2011) Gift of David B. Stanton '77, P: '09, '11.

EARLE J. STARKEY MEMORIAL SCHOLARSHIP FUND
(2009) Gift of Charles P. Starkey '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 '52, P: BUS'85.

ALAN W. STEINBERG SCHOLARSHIP FUND
(1990) Gift of Suzanne and Alan W. Steinberg '48, SEAS'50.

MRS. RICHARD STEINSCHNEIDER SCHOLARSHIP FUND
(1958) Gift of Marie R. ° and Richard Steinschneider CC 1919 °, P: '43, SEAS'43 °.

MICHAEL D. STEPHENS SCHOLARSHIP FUND
(2002) Gift of Michael D. Stephens '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 '59, P: '07, SOA'12.

WARREN AND SUSAN STERN FAMILY SCHOLARSHIP FUND
(2014) Gift of Warren R. Stern '74.

ARNOLD AND MATILE STIEFEL SCHOLARSHIP FUND
(1948) Bequest of Matile L. Stiefel.

SAMUEL STONE MEMORIAL SCHOLARSHIP FUND
(1992) Gift of Robert S. Stone '59, P: '91; Chester I. Stone '67; and Phyllis B. Stone '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: '51.

SOLON 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 '46, P: '79, GSAS'83, GSAS'89, GSAS'91 and Marjorie H. Sunshine LS'69, P: '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 '64 and Barbara Ellis BC'64, GSAS'65.

SWERGOLD FAMILY SCHOLARSHIP FUND

(1990) Gift of Leopold Swergold '62.

ANNA WARE AND MACRAE SYKES SCHOLARSHIP FUND

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

ROBERT J. SZARNICKI FAMILY SCHOLARSHIP FUND

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

T

DANIEL TAMKIN AND CINDY CARDINAL SCHOLARSHIP FUND

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

THE ANGELO TARALLO MEMORIAL SCHOLARSHIP FUND

(2005) Gift of Patricia Tarallo W: '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 '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 '76, P: '18.

FRANKLIN A. THOMAS SCHOLARSHIP FUND

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

BRIAN J. THOMSON SCHOLARSHIP

(2012) Gift of Brian J. Thomson '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: '54, GSAPP '62 and various donors in memory of Isabel's husband, Irving Tolkin P: '54, 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 '79, LAW'81 and Laurie J. Tolkin BC'79, DM'83.

LILLIAN AND TRYGVE H. TONNESSEN SCHOLARSHIP FUND

(1989) Gift of Trygve H. Tonnessen '39.

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 '93 in honor of his grandfather, Kyriakos Tsakopoulos.

THE TUKMAN FAMILY SCHOLARSHIP FUND

(2007) Gift of Lois and Melvin Tukman P: '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.

SAMUEL AND SUSAN VARGHESE FAMILY SCHOLARSHIP FUND

(2014) Gift of Tajar S. Varghese '01.

IVAN B. VEIT ENDOWMENT FUND

(2005) Bequest of Ivan B. Veit '28.

SIGMUND AND MARY VIOLIN SCHOLARSHIP FUND

(1996) Gift of George A. Violin '63, SIPA'66, PS'67.

MARTIN AND SELMA VIRSOTSKY SCHOLARSHIP FUND

(2012) Bequest of Martin Virsotsky PS'49.

VISA FINANCIAL AID ENDOWMENT FUND

(1994) Proceeds from VISA credit card receipts.

WILLIAM F. VOELKER MEMORIAL SCHOLARSHIP FUND

(1976) Bequest of William F. Voelker '42, LAW'48 and gift of various donors in his memory.

VOLLBRECHTHAUSEN FAMILY - GOLDMAN SACHS SCHOLARSHIP FUND

(2014) Gift of Alejandro Vollbrechthausen P: '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 '26.

W

LEO J. WALSH MEMORIAL SCHOLARSHIP FUND

(2006) Bequest of Leo J. Walsh '53, GSAS'56, GSAS'62.

JOHN C. WALTER MEMORIAL SCHOLARSHIP FUND

(1964) Bequest of John C. Walter Class of 1904.

WANG FAMILY SCHOLARSHIP FUND

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

WILLIAM H. WARDEN MEMORIAL SCHOLARSHIP FUND

(1996) Bequest of Dorothy Warden.

THE WARREN FAMILY SCHOLARSHIP FUND

(2005) Gift of Irwin H. Warren '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 '24, SEAS'26.

MORRIS W. WATKINS SCHOLARSHIP FUND

(1987) Gift of William E. Collin '24 ° in honor of Morris W. Watkins '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 '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 Donna Weiner W: '36 and Joshua H. Weiner '36 °.

ARTHUR S. AND MARIAN E. WEINSTOCK SCHOLARSHIP FUND

(1995) Gift of Marian E. K. and Arthur S. Weinstock '41 °.

GEORGE J. AND FRANCES K. WEINSTOCK SCHOLARSHIP FUND

(2006) Gift of Arthur S. Weinstock '41 ° in memory of his parents, Frances K. and George J. Weinstock P: '41 °.

EDWARD S. WEISIK SCHOLARSHIP FUND

(2004) Bequest of Edward S. Weisik '37.

RABBI SHELDON J. WELTMAN, PH.D., SCHOLARSHIP FUND

(1992) Bequest of Rabbi Sheldon J. Weltman '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.

H. A. WHEELER SCHOLARSHIP FUND

(1923) Gift of Herbert A. Wheeler SM 1880 °.

THE JOHN AND MARY JO WHITE SCHOLARSHIP

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

JOSEPH THOMAS WIDOWFIELD SCHOLARSHIP FUND

(1994) Bequest of Joseph T. Widowfield '83.

MARK HINCKLEY WILLES SCHOLARSHIP FUND

(1985) Gift of Mark H. Willes '63, BUS'67.

MARK HINCKLEY WILLES SCHOLARSHIP FUND

(1989) Gift of Mark H. Willes '63, BUS'67.

THE WILLNER FAMILY SCHOLARSHIP FUND

(2002) Gift of Jane and David Bloomgarden, and Joseph H. Willner PS'77.

GEORGE LEO WINGSHEE MEMORIAL SCHOLARSHIP FUND

(2004) Gift of Donna W. Loo P: '11.

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

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

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

GORDON W. WOOD SCHOLARSHIP FUND
(1992) Gift of Gordon W. Wood 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 '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: '80 ° and various donors in memory of Helen's son, Philip C. Yacos '80.

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

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

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

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

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

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

THE YU FAMILY FUND
(2005) Gift of Kyung-Sun Yu P: '09, '13.

YU FAMILY SCHOLARSHIP FUND

(2014) Gift of Raymond Yu '89, SEAS'90.

TUNG LI AND HUI HSI YUAN MEMORIAL SCHOLARSHIP FUND
(1967) Gifts of various donors in memory of Tung Li Yuan '22 and later renamed in memory of Tung Li and Hui Hsi Yuan.

Z

VICTOR AND BETTY ZARO SCHOLARSHIP FUND
(1995) Gift of Victor J. Zaro '42 °.

TIMOTHY ZARO SCHOLARSHIP FUND
(1998) Gift of Victor J. Zaro '42 ° in honor of Timothy Zaro.

VICTOR J. ZARO SCHOLARSHIP FUND
(1996) Gift of Victor J. Zaro '42 °.

JESSICA ZAUNER MEMORIAL SCHOLARSHIP FUND
(2006) Gift of Anton Zauner '73, BUS'75, P: '08 °, BUS'11 and Anna E. Zauner GSAS'11, P: '08 °, BUS '11 in memory of their daughter, Jessica Zauner '08.

JOSEPH C. ZAVATT SCHOLARSHIP FUND—COLUMBIA COLLEGE
(2006) Bequest of Anna Maas Zavatt in memory of her husband, Joseph C. Zavatt '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 '58.

DAVID AND RAY MOONEY ZWERLING SCHOLARSHIP FUND
(1991) Gift of L. Steven Zwerling '60, GSAS'61 and Leonard J. Zwerling '65 in honor of their parents, Ray M. and David Zwerling P: '60, '65, on their anniversary.

° Deceased; P: Parent; W: Widow

ACADEMIC REQUIREMENTS

In order to graduate from Columbia College and earn 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 (p. 114).

Normally, one course may not be taken to fulfill more than one requirement for the degree. However, a course that satisfies the Global Core, Science, or Foreign Language requirements may be double counted in order to satisfy the requirements for one major or concentration.

Courses may not be repeated for credit. All courses taken multiple times appear on the student's official transcript, but the GPA factors only the grade received in a course taken for the first time. 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 (AP, IB, GCE, etc.) has been granted. For more information, see *Academic Regulations*—Placement and Advanced Standing.

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, since such courses might not bear College credit (e.g., MATH W1003 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 James H. and Christine Turk 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. 73). They include general education requirements in major disciplines and, except for Physical Education, must be taken for a letter grade:

Literature Humanities

HUMA C1001 - HUMA C1002	Masterpieces of Western Literature and Philosophy and Masterpieces of Western Literature and Philosophy
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Frontiers of Science

SCNC C1000	Frontiers of Science
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University Writing

ENGL C1010	University Writing
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Contemporary Civilization

COCI C1101 - COCI C1102	Introduction To Contemporary Civilization and Introduction To Contemporary Civilization
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Art Humanities

HUMA C1121	Masterpieces of Western Art
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Music Humanities

HUMA C1123	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 generally 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* by the end of the sophomore year, and *Art Humanities* and *Music Humanities* by the end of junior year. Failure to complete these in the specified year will not, however, result in the student being placed on academic probation.

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, may be satisfied at Barnard College. Other exceptions to this rule are granted only with the approval of the Center for Student Advising's Committee on Academic Standing, except for the Global Core and the Science requirements, which students must petition the appropriate faculty committee and must first meet with their advising dean. Students who wish to satisfy degree requirements with courses taken at other universities in the summer must meet with their advising dean in the Center for Student Advising 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, shall 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 in 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 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 read carefully 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, 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 Center for Student Advising.

Normally, courses for a major or concentration, including related courses, may not be used to satisfy the course requirements for a second major or concentration. Rare exceptions to this may be made only by the faculty Committee on Instruction (COI), based on what it regards to be intellectually compelling grounds. Students wishing to request a waiver of this policy are required to submit a petition to the COI through the Office of the Dean, in 208 Hamilton.

Double Majors/Concentrations

All students attempting to complete double majors, double concentrations, or a combination of a major and a concentration should keep in mind that they must complete separate sets of **required** and **related** courses for each field. A single course may not count twice for more than one major or 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).

Interdisciplinary and Interdepartmental Majors and Concentrations

Interdisciplinary and interdepartmental majors and concentrations combine course work 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.

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*).

PLANNING A PROGRAM

All students are expected to consult with their advising deans in the Center for Student Advising and with departmental advisers, who will assist them in selecting appropriate courses

and planning their programs. Advising deans serve as the primary adviser for all academic planning, other than that for the major or concentration. 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 James H. and Christine Turk Berick Center for Student Advising (CSA) (<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 a source of referrals - so that students may plan and prepare, in the broadest sense, over the course of their years at Columbia. Students can make appointments with their advising deans using the online Comprehensive Advising Management System (<http://bulletin.columbia.edu/columbia-college/requirements-degree-bachelor-arts/%20http://studentaffairs.columbia.edu/csa/appointments>).

Though students are assigned an advising dean, students may make appointments with any of the advisers in the CSA. If a student wishes to change advisers permanently, they should not hesitate to make an appointment with the dean of advising to have a new advising dean assigned to them immediately.

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 sciences 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 departments 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 C1010), *Frontiers of Science* (SCNC C1000), *Masterpieces of Western Literature and Philosophy I & II* (HUMA C1001-HUMA C1002), as well as *Introduction to Contemporary Civilization in the West* (COCI C1101

-*COCI C1102* (<http://bulletin.columbia.edu/search/?P=COCI%20C1102>)) *by the end of the sophomore year*;

3. Choose a major or concentration in their fourth term. Students must submit the completed major declaration form on-line or to the Center for Student Advising, 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 Center for Student Advising.

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* prior to their first advising appointment. Students will receive information by e-mail 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 preregistered for either *Frontiers of Science* or *University Writing* in the fall term and take the other course in the spring term.)

Each incoming student is expected to meet with their advising dean during the summer, 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 to build their own community of advisers 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 follow-up with their advising dean throughout their years 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 1 to 6 points of credit may be awarded for this work; the 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 admitted at the discretion of the departmental representative. Acceptance depends on the quality of the proposal, the student's qualifications, and the availability of an appropriate faculty adviser.

CORE CURRICULUM

The Center for the Core Curriculum (<http://www.college.columbia.edu/core>): 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—observation, analysis, argument, imaginative comparison, respect for ideas, nuances, and differences—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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LITERATURE HUMANITIES

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Literature Humanities Website (<http://www.college.columbia.edu/core/lithum>)

HUMA C1001-HUMA C1002 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 intellectual 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 C1001-HUMA C1002 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 C1001 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 2015: HUMA C1001

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
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HUMA 1002	001/14697	M W 8:10am - 10:00am 301 Hamilton Hall	Nancy Workman	4	22/21
HUMA 1002	002/14698	M W 8:10am - 10:00am 306 Hamilton Hall	Ross Ufberg	4	21/22
HUMA 1002	003/15945	M W 12:10pm - 2:00pm 301 Hamilton Hall	Mark Lilla	4	21/21
HUMA 1002	004/17198	M W 12:10pm - 2:00pm 307 Pupin Laboratories	Christoph Schaub	4	22/22
HUMA 1002	005/17199	M W 12:10pm - 2:00pm 201 80 Claremont	Jeffrey Wayno	4	21/21
HUMA 1002	006/17202	M W 12:10pm - 2:00pm 303 Hamilton Hall	Amy Johnson	4	22/22
HUMA 1002	007/17203	M W 12:10pm - 2:00pm 222 Pupin Laboratories	Humberto Ballesteros	4	22/21
HUMA 1002	008/18443	M W 2:10pm - 4:00pm 304 Hamilton Hall	James Adams	4	21/22
HUMA 1002	009/10032	M W 2:10pm - 4:00pm 224 Pupin Laboratories	Claire Catenaccio	4	19/21
HUMA 1002	010/10282	M W 2:10pm - 4:00pm 307 Pupin Laboratories	Zachary Roberts	4	22/22
HUMA 1002	011/10283	M W 2:10pm - 4:00pm 602 Northwest Corner	Emily Hayman	4	22/21
HUMA 1002	012/10531	M W 2:10pm - 4:00pm C01 Knox Hall	Clemence Boulouque	4	22/22
HUMA 1002	013/10532	M W 2:10pm - 4:00pm 411 Hamilton Hall	Michael Holquist	4	21/21
HUMA 1002	014/10533	M W 4:10pm - 6:00pm 507 Hamilton Hall	Christoph Schaub	4	19/22
HUMA 1002	015/10534	M W 4:10pm - 6:00pm 306 Hamilton Hall	Steven Baker	4	22/21
HUMA 1002	016/10535	M W 4:10pm - 6:00pm 222 Pupin Laboratories	Kate Brassel	4	19/22
HUMA 1002	017/10780	M W 4:10pm - 6:00pm 303 Hamilton Hall	Eliza Zingesser	4	19/21
HUMA 1002	018/10781	M W 4:10pm - 6:00pm 425 Pupin Laboratories	Arthur Salvo	4	22/22
HUMA 1002	019/10782	M W 4:10pm - 6:00pm 301 Hamilton Hall	Mark Lilla	4	21/21
HUMA 1002	020/10783	M W 4:10pm - 6:00pm	Sahar Ullah	4	22/22

		313 Pupin Laboratories				HUMA 1002	041/14285	T Th 12:10pm - 2:00pm 304 Hamilton Hall	Akash Kumar	4	22/21
HUMA 1002	021/11032	M W 6:10pm - 8:00pm 306 Hamilton Hall	Julia Kostova	4	21/21	HUMA 1002	042/14533	T Th 2:10pm - 4:00pm 325 Pupin Laboratories	Paraskevi Martzavou	4	20/22
HUMA 1002	022/11281	M W 6:10pm - 8:00pm 206 Broadway Residence Hall	Emily Hayman	4	21/22	HUMA 1002	043/14534	T Th 2:10pm - 4:00pm 313 Pupin Laboratories	Debashree Mukherjee	4	21/21
HUMA 1002	023/11530	M W 6:10pm - 8:00pm 301 Hamilton Hall	Maude Meisel	4	21/21	HUMA 1002	044/10799	T Th 2:10pm - 4:00pm 607 Hamilton Hall	Katherine Biers	4	22/22
HUMA 1002	024/11531	T Th 8:10am - 10:00am 607 Hamilton Hall	Bianca Calabresi	4	21/22	HUMA 1002	045/10848	T Th 2:10pm - 4:00pm 424 Pupin Laboratories	John Kuhn	4	18/21
HUMA 1002	025/11784	T Th 8:10am - 10:00am 301 Hamilton Hall	Karen Van Dyck	4	22/21	HUMA 1002	046/10849	T Th 2:10pm - 4:00pm 507 Hamilton Hall	Matthew Hart	4	22/22
HUMA 1002	026/11785	T Th 10:10am - 12:00pm 616 Hamilton Hall	Pier Mattia Tommasino	4	22/22	HUMA 1002	047/10850	T Th 2:10pm - 4:00pm 303 Hamilton Hall	Edward Mendelson	4	22/21
HUMA 1002	027/12032	T Th 10:10am - 12:00pm 303 Hamilton Hall	Joanna Stalnaker	4	20/21	HUMA 1002	048/10851	T Th 2:10pm - 4:00pm 206 Broadway Residence Hall	Janet Lee	4	22/22
HUMA 1002	028/12282	T Th 10:10am - 12:00pm 602 Northwest Corner	Isabelle Levy	4	16/22	HUMA 1002	049/10897	T Th 4:10pm - 6:00pm 109 Hartley Hall	Alexander Rocca	4	17/21
HUMA 1002	029/12532	T Th 10:10am - 12:00pm 401 Hamilton Hall	Nicholas Dames	4	21/21	HUMA 1002	050/10951	T Th 4:10pm - 6:00pm 609 Hamilton Hall	Anne Holt	4	22/22
HUMA 1002	030/13529	T Th 10:10am - 12:00pm 304 Hamilton Hall	Elizabeth Irwin	4	16/22	HUMA 1002	051/10952	T Th 4:10pm - 6:00pm 315 Hamilton Hall	Alexis Soloski	4	21/21
HUMA 1002	031/13530	T Th 10:10am - 12:00pm 707 Hamilton Hall	Liza Knapp	4	21/21	HUMA 1002	052/11000	T Th 4:10pm - 6:00pm 407 Hamilton Hall	Maria Svampa	4	18/22
HUMA 1002	032/13531	T Th 10:10am - 12:00pm 313 Pupin Laboratories	Janet Lee	4	21/22	HUMA 1002	053/11001	T Th 4:10pm - 6:00pm 318 Hamilton Hall	Rebecca Stanton	4	20/21
HUMA 1002	033/13532	T Th 10:10am - 12:00pm C01 80 Claremont	Dustin Stewart	4	17/21	HUMA 1002	054/11002	T Th 4:10pm - 6:00pm 302 Hamilton Hall	Marc Van De Mierop	4	21/22
HUMA 1002	034/13533	T Th 10:10am - 12:00pm 111 Carman Hall	Hiie Saumaa	4	20/22	HUMA 1002	055/11050	T Th 6:10pm - 8:00pm 206 Broadway Residence Hall	Sophie Salvo	4	19/21
HUMA 1002	035/13783	T Th 10:10am - 12:00pm 201 80 Claremont	Humberto Ballesteros	4	21/21	HUMA 1002	056/11098	T Th 6:10pm - 8:00pm 109 Hartley Hall	Lindsay Gibson	4	21/22
HUMA 1002	036/13784	T Th 12:10pm - 2:00pm 206 Broadway Residence Hall	Anne Holt	4	21/22	HUMA 1002	057/11099	T Th 6:10pm - 8:00pm 302 Hamilton Hall	Arthur Salvo	4	21/21
HUMA 1002	037/13785	T Th 12:10pm - 2:00pm 111 Carman Hall	Hiie Saumaa	4	21/21						
HUMA 1002	038/14034	T Th 12:10pm - 2:00pm 303 Hamilton Hall	Richard Sacks	4	22/22						
HUMA 1002	039/14035	T Th 12:10pm - 2:00pm 201 80 Claremont	Joe Sheppard	4	22/21						
HUMA 1002	040/14284	T Th 12:10pm - 2:00pm 301 Hamilton Hall	Margo Rosen	4	22/22						

HUMA C1002 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 2016: HUMA C1002

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment			Laboratories			
HUMA 1002	001/66048	M W 8:10am - 10:00am 301 Hamilton Hall	Nancy Workman	4	22/22	HUMA 1002	021/66498	M W 6:10pm - 8:00pm 306 Hamilton Hall	Julia Kostova	4	22/22
HUMA 1002	002/66096	M W 8:10am - 10:00am 306 Hamilton Hall	Ross Ufberg	4	22/22	HUMA 1002	022/66548	M W 6:10pm - 8:00pm 206 Broadway Residence Hall	Robert Thomas	4	19/22
HUMA 1002	003/66148	M W 12:10pm - 2:00pm 301 Hamilton Hall	Deborah Martinsen	4	22/22	HUMA 1002	023/66549	M W 6:10pm - 8:00pm 301 Hamilton Hall	Maude Meisel	4	22/22
HUMA 1002	004/66197	M W 12:10pm - 2:00pm 325 Pupin Laboratories	Christoph Schaub	4	22/22	HUMA 1002	024/66647	T Th 8:10am - 10:00am 607 Hamilton Hall	Bianca Calabresi	4	21/22
HUMA 1002	005/66198	M W 12:10pm - 2:00pm 201 80 Claremont	Jeffrey Wayno	4	22/22	HUMA 1002	025/66697	T Th 8:10am - 10:00am 301 Hamilton Hall	Karen Van Dyck	4	22/22
HUMA 1002	006/66200	M W 12:10pm - 2:00pm 303 Hamilton Hall	Amy Johnson	4	22/22	HUMA 1002	026/66749	T Th 10:10am - 12:00pm 616 Hamilton Hall	Pier Mattia Tommasino	4	22/22
HUMA 1002	007/66247	M W 12:10pm - 2:00pm 222 Pupin Laboratories	Humberto Ballesteros	4	22/22	HUMA 1002	027/66750	T Th 10:10am - 12:00pm 303 Hamilton Hall	Joanna Stalnaker	4	22/22
HUMA 1002	008/66248	M W 2:10pm - 4:00pm 304 Hamilton Hall	James Adams	4	21/22	HUMA 1002	028/66752	T Th 10:10am - 12:00pm 602 Northwest Corner	Isabelle Levy	4	22/22
HUMA 1002	009/66249	M W 2:10pm - 4:00pm 507 Hamilton Hall	Claire Catenaccio	4	12/22	HUMA 1002	029/66796	T Th 10:10am - 12:00pm 401 Hamilton Hall	Nicholas Dames	4	22/22
HUMA 1002	010/66297	M W 2:10pm - 4:00pm 325 Pupin Laboratories	Zachary Roberts	4	22/22	HUMA 1002	030/66847	T Th 10:10am - 12:00pm 304 Hamilton Hall	Elizabeth Irwin	4	21/22
HUMA 1002	011/66299	M W 2:10pm - 4:00pm 602 Northwest Corner	Robert Thomas	4	22/22	HUMA 1002	031/66996	T Th 10:10am - 12:00pm 707 Hamilton Hall	Liza Knapp	4	21/22
HUMA 1002	012/66300	M W 2:10pm - 4:00pm 103 Knox Hall	Clemence Boulouque	4	22/22	HUMA 1002	032/66997	T Th 10:10am - 12:00pm 412 Pupin Laboratories	Janet Lee	4	22/22
HUMA 1002	013/66346	M W 2:10pm - 4:00pm 609 Hamilton Hall	Sharon Fulton	4	16/22	HUMA 1002	033/66998	T Th 10:10am - 12:00pm C01 80 Claremont	Dustin Stewart	4	20/22
HUMA 1002	014/66347	M W 4:10pm - 6:00pm 507 Hamilton Hall	Christoph Schaub	4	21/22	HUMA 1002	034/66999	T Th 10:10am - 12:00pm 111 Carman Hall	Hiie Saumaa	4	21/22
HUMA 1002	015/66397	M W 4:10pm - 6:00pm 306 Hamilton Hall	Steven Baker	4	22/22	HUMA 1002	035/67046	T Th 10:10am - 12:00pm 201 80 Claremont	Humberto Ballesteros	4	22/22
HUMA 1002	016/66398	M W 4:10pm - 6:00pm 309 Hamilton Hall	Kate Brassel	4	19/22	HUMA 1002	036/67047	T Th 12:10pm - 2:00pm 304 Hamilton Hall	Bianca Calabresi	4	22/22
HUMA 1002	017/66399	M W 4:10pm - 6:00pm 303 Hamilton Hall	Eliza Zingesser	4	20/22	HUMA 1002	037/67048	T Th 12:10pm - 2:00pm 111 Carman Hall	Hiie Saumaa	4	20/22
HUMA 1002	018/66448	M W 4:10pm - 6:00pm 425 Pupin Laboratories	Arthur Salvo	4	22/22	HUMA 1002	038/67146	T Th 12:10pm - 2:00pm 303 Hamilton Hall	David Yerkes	4	21/22
HUMA 1002	019/66449	M W 4:10pm - 6:00pm	John Collins	4	21/22	HUMA 1002	039/67199	T Th 12:10pm - 2:00pm C01 80 Claremont	Joe Sheppard	4	21/22
HUMA 1002						HUMA 1002	040/67297	T Th 12:10pm - 2:00pm	Margo Rosen	4	22/22

HUMA 1002	041/67347	301 Hamilton Hall T Th 12:10pm - 2:00pm	Akash Kumar	4	22/22
HUMA 1002	042/67397	206 Broadway Residence Hall T Th 2:10pm - 4:00pm	David Yerkes	4	21/22
HUMA 1002	043/67446	303 Hamilton Hall T Th 2:10pm - 4:00pm	Debashree Mukherjee	4	21/22
HUMA 1002	044/67447	307 Pupin Laboratories T Th 2:10pm - 4:00pm	Katherine Biers	4	22/22
HUMA 1002	045/67501	206 Broadway Residence Hall T Th 2:10pm - 4:00pm	John Kuhn	4	21/22
HUMA 1002	046/67503	224 Pupin Laboratories T Th 2:10pm - 4:00pm	Matthew Hart	4	19/22
HUMA 1002	047/67597	507 Hamilton Hall T Th 2:10pm - 4:00pm	Edward Mendelson	4	22/22
HUMA 1002	048/67646	301 Hamilton Hall T Th 2:10pm - 4:00pm	Janet Lee	4	22/22
HUMA 1002	049/67697	607 Hamilton Hall T Th 4:10pm - 6:00pm	Alexander Rocca	4	16/22
HUMA 1002	050/67746	109 Hartley Hall T Th 4:10pm - 6:00pm	Margo Rosen	4	22/22
HUMA 1002	051/67748	609 Hamilton Hall T Th 4:10pm - 6:00pm	Alexis Soloski	4	22/22
HUMA 1002	052/67749	315 Hamilton Hall T Th 4:10pm - 6:00pm	Maria Svampa	4	22/22
HUMA 1002	053/67796	C01 80 Claremont T Th 4:10pm - 6:00pm	Rebecca Stanton	4	17/22
HUMA 1002	054/67798	318 Hamilton Hall T Th 4:10pm - 6:00pm	Marc Van De Mierop	4	22/22
HUMA 1002	055/67847	407 Hamilton Hall T Th 6:10pm - 8:00pm	Sophie Salvo	4	16/22
HUMA 1002	056/67897	206 Broadway Residence Hall T Th 6:10pm - 8:00pm	Lindsay Gibson	4	22/22
HUMA 1002	057/67898	109 Hartley Hall T Th 6:10pm - 8:00pm	Arthur Salvo	4	19/22
		302 Hamilton Hall			

CONTEMPORARY CIVILIZATION

Chair of Contemporary Civilization:

Fall 2015: Prof. Matthew L. Jones, 514 Fayerweather;
212-854-2421; mjones@columbia.edu

Spring 2016: 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 C1101-COCI C1102 Introduction To Contemporary Civilization*, 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 C1101-COCI C1102 Introduction To Contemporary Civilization* 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 C1101 Introduction To Contemporary Civilization. 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 2015: COCI C1101

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
COCI 1102 001/91097		M W 8:10am - 10:00am 206 Broadway Residence Hall	Charles McNamara	4	22/21
COCI 1102 002/91147		M W 8:10am - 10:00am 111 Carman Hall	Daniel del Nido	4	21/22
COCI 1102 003/91299		M W 10:10am - 12:00pm 304 Hamilton Hall	Ana Lee	4	21/21
COCI 1102 004/91300		M W 10:10am - 12:00pm 309 Hamilton Hall	Nicole Longpre	4	21/22
COCI 1102 005/91301		M W 10:10am - 12:00pm 302 Hamilton Hall	Michael Gottsegen	4	22/21
COCI 1102 006/91448		M W 10:10am - 12:00pm 303 Hamilton Hall	Michael Stevenson	4	20/22
COCI 1102 007/91449		M W 10:10am - 12:00pm 111 Carman Hall	Kevin Elliott	4	19/21
COCI 1102 008/91450		M W 10:10am - 12:00pm 306 Hamilton Hall	Kathryn Tabb	4	22/22
COCI 1102 009/91499		M W 10:10am - 12:00pm 109 Hartley Hall	Guido Parietti	4	20/21
COCI 1102 010/91500		M W 10:10am - 12:00pm 301 Hamilton Hall	Marcus Folch	4	22/22
COCI 1102 011/91501		M W 12:10pm - 2:00pm 424 Pupin Laboratories	Benjamin Breen	4	20/21
COCI 1102 012/91547		M W 12:10pm - 2:00pm 111 Carman Hall	Kevin Elliott	4	22/22
COCI 1102 013/91596		M W 12:10pm - 2:00pm 304 Hamilton Hall	Jennifer Rudd	4	22/21
COCI 1102 014/91597		M W 12:10pm - 2:00pm	Beau Shaw	4	22/22

COCI 1102 015/91598	206 Broadway Residence Hall M W 2:10pm - 4:00pm	Nathan Schumer	4	21/21
COCI 1102 016/91649	601b Fairchild Life Sciences Bldg M W 2:10pm - 4:00pm	Mana Kia	4	20/22
COCI 1102 017/91747	302 Hamilton Hall M W 2:10pm - 4:00pm	Karen Benzra	4	21/21
COCI 1102 018/91748	303 Hamilton Hall M W 2:10pm - 4:00pm	Alexandre Roberts	4	22/22
COCI 1102 019/91749	318 Hamilton Hall M W 2:10pm - 4:00pm	Francis Hittinger	4	21/21
COCI 1102 020/91947	109 Hartley Hall M W 2:10pm - 4:00pm	Asheesh Siddique	4	19/22
COCI 1102 021/91948	111 Carman Hall M W 2:10pm - 4:00pm	Luke MacInnis	4	22/21
COCI 1102 022/92098	206 Broadway Residence Hall M W 2:10pm - 4:00pm	Oliver Simons	4	22/22
COCI 1102 023/92099	301 Hamilton Hall M W 4:10pm - 6:00pm	Justin Clarke-Doane	4	20/21
COCI 1102 024/92199	411 Hamilton Hall M W 4:10pm - 6:00pm	Peter Pazzaglini	4	21/22
COCI 1102 025/92200	302 Hamilton Hall M W 4:10pm - 6:00pm	Kathy Eden	4	20/21
COCI 1102 026/92247	304 Hamilton Hall M W 4:10pm - 6:00pm	Jessica Lee	4	22/22
COCI 1102 027/92349	511 Hamilton Hall M W 4:10pm - 6:00pm	Mona El-Ghobashy	4	20/21
COCI 1102 028/92399	616 Hamilton Hall M W 4:10pm - 6:00pm	David Marcus	4	22/22
COCI 1102 029/92400	316 Hamilton Hall M W 4:10pm - 6:00pm	Michelle Chun	4	20/21
COCI 1102 030/92401	111 Carman Hall M W 4:10pm - 6:00pm	Luke MacInnis	4	22/22
COCI 1102 031/92402	206 Broadway Residence Hall M W 4:10pm - 6:00pm	Lucy Sheehan	4	21/21
COCI 1102 032/92449	109 Hartley Hall M W 4:10pm - 6:00pm	Jennifer Rudd	4	21/22
COCI 1102 033/92549	407 Hamilton Hall M W 6:10pm - 8:00pm	Yohann Ripert	4	20/21
COCI 1102 034/92550	111 Carman Hall M W 6:10pm - 8:00pm	Aileen Forbes	4	21/22
COCI 1102 035/92601	302 Hamilton Hall T Th 8:10am - 10:00am	John McCaskey	4	22/21

	405 Kent Hall				
COCI 1102 036/92649	T Th 8:10am - 10:00am	Joel Klein	4	22/22	
	401 Hamilton Hall				
COCI 1102 037/92697	T Th 10:10am - 12:00pm	Nicole Callahan	4	21/21	
	313 Hamilton Hall				
COCI 1102 038/92698	T Th 10:10am - 12:00pm	Tolga Kobas	4	22/22	
	224 Pupin Laboratories				
COCI 1102 039/92749	T Th 10:10am - 12:00pm	Nicholas Chong	4	22/21	
	302 Hamilton Hall				
COCI 1102 040/92797	T Th 10:10am - 12:00pm	Evan Neely	4	22/22	
	301 Hamilton Hall				
COCI 1102 041/92798	T Th 10:10am - 12:00pm	Jenny Boulboulle	4	11/21	
	109 Hartley Hall				
COCI 1102 042/92799	T Th 10:10am - 12:00pm	Charles Armstrong	4	21/22	
	306 Hamilton Hall				
COCI 1102 043/92800	T Th 10:10am - 12:00pm	Porter Williams	4	20/21	
	206 Broadway Residence Hall				
COCI 1102 044/92850	T Th 2:10pm - 4:00pm	Carol Rovane	4	22/22	
	301 Hamilton Hall				
COCI 1102 045/92897	T Th 2:10pm - 4:00pm	E. Valentine Daniel	4	22/21	
	302 Hamilton Hall				
COCI 1102 046/92898	T Th 2:10pm - 4:00pm	Owen Miller	4	22/22	
	602 Northwest Corner				
COCI 1102 047/92950	T Th 2:10pm - 4:00pm	Herbert Roseman	4	21/21	
	304 Hamilton Hall				
COCI 1102 048/92951	T Th 2:10pm - 4:00pm	Andreas Avgousti	4	22/22	
	111 Carman Hall				
COCI 1102 049/92952	T Th 2:10pm - 4:00pm	Stephanie Ramsey	4	19/21	
	306 Hamilton Hall				
COCI 1102 050/92997	T Th 2:10pm - 4:00pm	Jason Fitzgerald	4	22/22	
	109 Hartley Hall				
COCI 1102 051/92998	T Th 2:10pm - 4:00pm	Hannes Bajohr	4	21/21	
	412 Pupin Laboratories				
COCI 1102 052/93046	T Th 4:10pm - 6:00pm	Joaquin Barriandos	4	22/22	
	C01 80 Claremont				
COCI 1102 053/93047	T Th 4:10pm - 6:00pm	Douglas Chalmers	4	22/21	
	301 Hamilton Hall				
COCI 1102 054/93097	T Th 4:10pm - 6:00pm	Jay Gundacker	4	21/22	
	206 Broadway Residence Hall				
COCI 1102 055/93098	T Th 4:10pm - 6:00pm	Malgorzata Mazurek	4	20/21	
	303 Hamilton Hall				

COCI 1102 056/93099	T Th 4:10pm - 6:00pm	Andreas Avgousti	4	22/22	
	111 Carman Hall				
COCI 1102 057/93100	T Th 4:10pm - 6:00pm	Luke Mayville	4	20/21	
	413 Hamilton Hall				
COCI 1102 058/93149	T Th 6:10pm - 8:00pm	Lucia Francesca Carbone	4	22/22	
	111 Carman Hall				
COCI 1102 059/93198	T Th 6:10pm - 8:00pm	Alheli Alvarado-Diaz	4	21/21	
	301 Hamilton Hall				

COCI C1102 Introduction To Contemporary Civilization. 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 2016: COCI C1102

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
COCI 1102 001/77147		M W 8:10am - 10:00am 206 Broadway Residence Hall	Charles McNamara	4	22/22
COCI 1102 002/77197		M W 8:10am - 10:00am 111 Carman Hall	Daniel del Nido	4	22/22
COCI 1102 003/77200		M W 10:10am - 12:00pm 304 Hamilton Hall	Ana Lee	4	22/22
COCI 1102 004/77247		M W 10:10am - 12:00pm 309 Hamilton Hall	Nicole Longpre	4	20/22
COCI 1102 005/77296		M W 10:10am - 12:00pm 302 Hamilton Hall	Michael Stanislawski	4	22/22
COCI 1102 006/77297		M W 10:10am - 12:00pm 303 Hamilton Hall	Michael Stevenson	4	22/22
COCI 1102 007/77298		M W 10:10am - 12:00pm 111 Carman Hall	Kevin Elliott	4	20/22
COCI 1102 008/77348		M W 10:10am - 12:00pm 306 Hamilton Hall	Kathryn Tabb	4	22/22
COCI 1102 009/77350		M W 10:10am - 12:00pm 109 Hartley Hall	Guido Parietti	4	21/22
COCI 1102 010/77351		M W 10:10am - 12:00pm 301 Hamilton Hall	Katharina Ivanyi	4	22/22
COCI 1102 011/77356		M W 12:10pm - 2:00pm 424 Pupin Laboratories	Owen Miller	4	22/22

COCI 1102 012/77396	M W 12:10pm - 2:00pm 111 Carman Hall	Kevin Elliott	4	20/22	COCI 1102 033/78196	M W 6:10pm - 8:00pm 111 Carman Hall	Yohann Ripert	4	22/22
COCI 1102 013/77399	M W 12:10pm - 2:00pm 304 Hamilton Hall	Jennifer Rudd	4	22/22	COCI 1102 034/78197	M W 6:10pm - 8:00pm 302 Hamilton Hall	Aileen Forbes	4	20/22
COCI 1102 014/77448	M W 12:10pm - 2:00pm 206 Broadway Residence Hall	Beau Shaw	4	22/22	COCI 1102 035/78298	T Th 8:10am - 10:00am 405 Kent Hall	John McCaskey	4	22/22
COCI 1102 015/77450	M W 2:10pm - 4:00pm 601b Fairchild Life Sciences Bldg	Nathan Schumer	4	20/22	COCI 1102 036/78347	T Th 8:10am - 10:00am 401 Hamilton Hall	Joel Klein	4	22/22
COCI 1102 016/77497	M W 2:10pm - 4:00pm 302 Hamilton Hall	Todd Gitlin	4	22/22	COCI 1102 037/78397	T Th 10:10am - 12:00pm 313 Hamilton Hall	Nicole Callahan	4	22/22
COCI 1102 017/77547	M W 2:10pm - 4:00pm 303 Hamilton Hall	Karen Benezra	4	22/22	COCI 1102 038/78398	T Th 10:10am - 12:00pm 224 Pupin Laboratories	Tolga Kobas	4	22/22
COCI 1102 018/77548	M W 2:10pm - 4:00pm 318 Hamilton Hall	Alexandre Roberts	4	22/22	COCI 1102 039/78446	T Th 10:10am - 12:00pm 302 Hamilton Hall	Nicholas Chong	4	22/22
COCI 1102 019/77597	M W 2:10pm - 4:00pm 109 Hartley Hall	Francis Hittinger	4	19/22	COCI 1102 040/78496	T Th 10:10am - 12:00pm 301 Hamilton Hall	Harro Mueller	4	20/22
COCI 1102 020/77647	M W 2:10pm - 4:00pm 111 Carman Hall	Asheesh Siddique	4	19/22	COCI 1102 041/78546	T Th 10:10am - 12:00pm 109 Hartley Hall	Jenny Boulboulle	4	12/22
COCI 1102 021/77648	M W 2:10pm - 4:00pm 206 Broadway Residence Hall	Luke MacInnis	4	22/22	COCI 1102 042/78599	T Th 10:10am - 12:00pm 306 Hamilton Hall	Charles Armstrong	4	22/22
COCI 1102 022/77698	M W 2:10pm - 4:00pm 301 Hamilton Hall	Oliver Simons	4	22/22	COCI 1102 043/78696	T Th 10:10am - 12:00pm 206 Broadway Residence Hall	Porter Williams	4	21/22
COCI 1102 023/77747	M W 4:10pm - 6:00pm 411 Hamilton Hall	Justin Clarke-Doane	4	22/22	COCI 1102 044/78697	T Th 2:10pm - 4:00pm 407 Hamilton Hall	Carol Rovane	4	22/22
COCI 1102 024/77748	M W 4:10pm - 6:00pm 304 Hamilton Hall	Branka Arsic	4	18/22	COCI 1102 045/78698	T Th 2:10pm - 4:00pm 302 Hamilton Hall	E. Valentine Daniel	4	20/22
COCI 1102 025/77796	M W 4:10pm - 6:00pm 302 Hamilton Hall	Kathy Eden	4	22/22	COCI 1102 046/78699	T Th 2:10pm - 4:00pm 101 80 Claremont	Wayne Proudfoot	4	22/22
COCI 1102 026/77797	M W 4:10pm - 6:00pm 511 Hamilton Hall	Jessica Lee	4	22/22	COCI 1102 047/78746	T Th 2:10pm - 4:00pm 304 Hamilton Hall	Richard Billows	4	22/22
COCI 1102 027/77798	M W 4:10pm - 6:00pm 616 Hamilton Hall	Mona El-Ghobashy	4	21/22	COCI 1102 048/80797	T Th 2:10pm - 4:00pm 111 Carman Hall	Andreas Avgousti	4	22/22
COCI 1102 028/77897	M W 4:10pm - 6:00pm 316 Hamilton Hall	David Marcus	4	22/22	COCI 1102 049/80798	T Th 2:10pm - 4:00pm 306 Hamilton Hall	Stephanie Ramsey	4	21/22
COCI 1102 029/77948	M W 4:10pm - 6:00pm 111 Carman Hall	Michelle Chun	4	21/22	COCI 1102 050/80799	T Th 2:10pm - 4:00pm 109 Hartley Hall	Jason Fitzgerald	4	22/22
COCI 1102 030/78049	M W 4:10pm - 6:00pm 206 Broadway Residence Hall	Luke MacInnis	4	22/22	COCI 1102 051/80800	T Th 2:10pm - 4:00pm C01 80 Claremont	Hannes Bajohr	4	18/22
COCI 1102 031/78097	M W 4:10pm - 6:00pm 109 Hartley Hall	Lucy Sheehan	4	22/22	COCI 1102 052/80848	T Th 4:10pm - 6:00pm 302 Hamilton Hall	Roosevelt Montas	4	22/22
COCI 1102 032/78146	M W 4:10pm - 6:00pm 407 Hamilton Hall	Jennifer Rudd	4	22/22	COCI 1102 053/80901	T Th 4:10pm - 6:00pm 301 Hamilton Hall	Douglas Chalmers	4	22/22
					COCI 1102 054/80902	T Th 4:10pm - 6:00pm	Jay Gundacker	4	20/22

	206 Broadway Residence Hall			
COCI 1102 055/80947	T Th 4:10pm - 6:00pm 303 Hamilton Hall	Malgorzata Mazurek	4	20/22
COCI 1102 056/80948	T Th 4:10pm - 6:00pm 111 Carman Hall	Andreas Avgousti	4	19/22
COCI 1102 057/80949	T Th 4:10pm - 6:00pm 413 Hamilton Hall	Luke Mayville	4	21/22
COCI 1102 058/80996	T Th 6:10pm - 8:00pm 111 Carman Hall	Michael Gottsegen	4	21/22
COCI 1102 059/80997	T Th 6:10pm - 8:00pm 301 Hamilton Hall	Alheli Alvarado- Diaz	4	22/22

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/arhum.php>)

HUMA W1121 (<http://bulletin.columbia.edu/search/?P=HUMA%20W1121>) *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/arhumanities/>.

REGISTRATION PROCEDURE

All information concerning registration in *HUMA W1121* (<http://bulletin.columbia.edu/search/?P=HUMA%20W1121>) *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 W1121 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 2015: HUMA W1121

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
HUMA 1121	001/27401	M W 8:40am - 9:55am 607 Schermerhorn Hall	Olivia Powell	3	22/21
HUMA 1121	002/29052	M W 8:40am - 9:55am 608 Schermerhorn Hall	Elizabeth Perkins	3	21/21
HUMA 1121	003/22614	M W 10:10am - 11:25am 604 Schermerhorn Hall	Alexandra Helprin	3	22/21
HUMA 1121	004/16413	M W 10:10am - 11:25am 607 Schermerhorn Hall	Daria Foner	3	20/21
HUMA 1121	005/14269	M W 10:10am - 11:25am 608 Schermerhorn Hall	Yasmine Espert	3	20/21
HUMA 1121	006/12372	M W 11:40am - 12:55pm 604 Schermerhorn Hall	Hwanhee Suh	3	22/21
HUMA 1121	007/23498	M W 11:40am - 12:55pm 607 Schermerhorn Hall	Jack Hartnell	3	20/21
HUMA 1121	008/69371	M W 11:40am - 12:55pm 608 Schermerhorn Hall	Kevin Lotery	3	21/21
HUMA 1121	009/70466	M W 1:10pm - 2:25pm 607 Schermerhorn Hall	Zachary Stewart	3	21/21
HUMA 1121	010/70206	M W 1:10pm - 2:25pm 608 Schermerhorn Hall	Alex Weintraub	3	21/21
HUMA 1121	011/70090	M W 2:40pm - 3:55pm 604 Schermerhorn Hall	Gale Berninghausen	3	22/21
HUMA 1121	012/10100	M W 2:40pm - 3:55pm 607 Schermerhorn Hall	Zachary Stewart	3	20/21
HUMA 1121	013/74256	M W 2:40pm - 3:55pm 608 Schermerhorn Hall	Sandrine Larrive-Bass	3	19/21
HUMA 1121	014/69169	M W 4:10pm - 5:25pm	Susan Sivard	3	21/21

HUMA 1121	015/61998	604 Schermerhorn Hall M W 4:10pm - 5:25pm	Lynn Catterson	3	22/21	HUMA 1121	032/20916	608 Schermerhorn Hall T Th 4:10pm - 5:25pm	Michael Sanchez	3	20/21
HUMA 1121	016/70547	607 Schermerhorn Hall M W 4:10pm - 5:25pm	Sandrine Larrive-Bass	3	20/21	HUMA 1121	033/72540	604 Schermerhorn Hall T Th 4:10pm - 5:25pm	Matthew Teti	3	20/21
HUMA 1121	017/72480	608 Schermerhorn Hall M W 5:40pm - 6:55pm	Julia Siemon	3	22/21	HUMA 1121	034/61801	607 Schermerhorn Hall T Th 4:10pm - 5:25pm	Susan Wager	3	20/21
HUMA 1121	018/61565	604 Schermerhorn Hall T Th 8:40am - 9:55am	Johanna Gosse	3	20/21	HUMA 1121	035/71549	608 Schermerhorn Hall M W 8:40am - 9:55am	Xiaohan Du	3	20/21
HUMA 1121	019/70196	604 Schermerhorn Hall T Th 8:40am - 9:55am	Natasha Llorens	3	18/21	HUMA 1121	036/76203	604 Schermerhorn Hall M W 5:40pm - 6:55pm	Amanda Gannaway	3	21/21
HUMA 1121	020/27519	607 Schermerhorn Hall T Th 8:40am - 9:55am	Page Knox	3	22/21	HUMA 1121	037/13450	607 Schermerhorn Hall T Th 11:40am - 12:55pm	Martina Mims	3	22/21
HUMA 1121	021/21994	608 Schermerhorn Hall T Th 10:10am - 11:25am	Diane Bodart	3	22/21	HUMA 1121	038/11499	604 Schermerhorn Hall T Th 5:40pm - 6:55pm	Irina Oryshkevich	3	21/21
HUMA 1121	022/22163	604 Schermerhorn Hall T Th 10:10am - 11:25am	Noam Elcott	3	20/21	HUMA 1121	039/65956	604 Schermerhorn Hall T Th 8:40am - 9:55am	Margot Bernstein	3	20/21
HUMA 1121	023/76240	607 Schermerhorn Hall T Th 10:10am - 11:25am	Matthew Peebles	3	21/21	Spring 2016: HUMA W1121					
HUMA 1121	024/23795	608 Schermerhorn Hall T Th 11:40am - 12:55pm	Giulia Paoletti	3	20/21	HUMA 1121	001/73847	608 Schermerhorn Hall M W 8:40am - 9:55am	Molly Allen	3	22/22
HUMA 1121	025/68576	607 Schermerhorn Hall T Th 11:40am - 12:55pm	Catherine Girard	3	20/21	HUMA 1121	002/75942	604 Schermerhorn Hall M W 8:40am - 9:55am	Olivia Powell	3	22/22
HUMA 1121	026/60624	608 Schermerhorn Hall T Th 1:10pm - 2:25pm	Martina Mims	3	20/21	HUMA 1121	003/28216	607 Schermerhorn Hall M W 8:40am - 9:55am	Caroline Wamsler	3	22/22
HUMA 1121	027/69154	604 Schermerhorn Hall T Th 1:10pm - 2:25pm	Rachel Silveri	3	22/21	HUMA 1121	004/13649	608 Schermerhorn Hall M W 10:10am - 11:25am	Joseph Ackley	3	22/21
HUMA 1121	028/27751	607 Schermerhorn Hall T Th 1:10pm - 2:25pm	Catherine Girard	3	18/21	HUMA 1121	005/10120	604 Schermerhorn Hall M W 10:10am - 11:25am	Matthew McKelway	3	20/22
HUMA 1121	029/11868	608 Schermerhorn Hall T Th 2:40pm - 3:55pm	Martina Mims, Frederique Baumgartner	3	22/21	HUMA 1121	006/66686	607 Schermerhorn Hall M W 10:10am - 11:25am	Matthew Peebles	3	22/22
HUMA 1121	030/28745	604 Schermerhorn Hall T Th 2:40pm - 3:55pm	Giulia Paoletti	3	22/21	HUMA 1121	007/17839	608 Schermerhorn Hall M W 11:40am - 12:55pm	Daria Foner	3	22/22
HUMA 1121	031/20600	607 Schermerhorn Hall T Th 2:40pm - 3:55pm	Susan Wager	3	20/21	HUMA 1121	008/60398	604 Schermerhorn Hall M W 11:40am - 12:55pm	Jack Hartnell	3	22/22

HUMA 1121	009/63645	607 Schermerhorn Hall M W 11:40am - 12:55pm 608 Schermerhorn Hall	Hwanhee Suh	3	22/22
HUMA 1121	010/71582	M W 1:10pm - 2:25pm 604 Schermerhorn Hall	Zachary Stewart	3	22/22
HUMA 1121	011/77322	M W 1:10pm - 2:25pm 607 Schermerhorn Hall	Yasmine Espert	3	21/22
HUMA 1121	012/11250	M W 1:10pm - 2:25pm 608 Schermerhorn Hall	Alex Weintraub	3	21/22
HUMA 1121	013/20378	M W 2:40pm - 3:55pm 604 Schermerhorn Hall	Zachary Stewart	3	21/22
HUMA 1121	014/25621	M W 2:40pm - 3:55pm 607 Schermerhorn Hall	Susan Wager	3	21/22
HUMA 1121	015/63257	M W 2:40pm - 3:55pm 608 Schermerhorn Hall	Sandrine Larrive-Bass	3	22/22
HUMA 1121	016/72056	M W 4:10pm - 5:25pm 604 Schermerhorn Hall	Susan Sivard	3	22/22
HUMA 1121	017/15740	M W 4:10pm - 5:25pm 607 Schermerhorn Hall	Susan Wager	3	22/22
HUMA 1121	018/64674	M W 4:10pm - 5:25pm 608 Schermerhorn Hall	Sandrine Larrive-Bass	3	20/22
HUMA 1121	019/70141	M W 5:40pm - 6:55pm 604 Schermerhorn Hall	Amanda Gannaway	3	21/22
HUMA 1121	020/21492	M W 6:10pm - 7:25pm 608 Schermerhorn Hall	Julia Siemon	3	22/22
HUMA 1121	021/75894	T Th 8:40am - 9:55am 604 Schermerhorn Hall	Elizabeth Perkins	3	20/22
HUMA 1121	022/27500	T Th 8:40am - 9:55am 607 Schermerhorn Hall	Natasha Llorens	3	17/22
HUMA 1121	023/22607	T Th 8:40am - 9:55am 608 Schermerhorn Hall	Page Knox	3	22/22
HUMA 1121	024/14100	T Th 8:40am - 9:55am 930 Schermerhorn Hall	Margot Bernstein	3	20/22
HUMA 1121	025/65275	T Th 10:10am - 11:25am	Zoe Strother	3	14/22

HUMA 1121	026/61091	604 Schermerhorn Hall T Th 10:10am - 11:25am 607 Schermerhorn Hall	Johanna Gosse	3	22/22
HUMA 1121	027/68152	T Th 10:10am - 11:25am 608 Schermerhorn Hall	Alexandra Helprin	3	21/22
HUMA 1121	028/62816	T Th 11:40am - 12:55pm 604 Schermerhorn Hall	Martina Mims	3	22/22
HUMA 1121	029/63566	T Th 11:40am - 12:55pm 608 Schermerhorn Hall	Giulia Paoletti	3	22/22
HUMA 1121	030/13322	T Th 1:10pm - 2:25pm 604 Schermerhorn Hall	Martina Mims	3	22/22
HUMA 1121	031/19547	T Th 1:10pm - 2:25pm 607 Schermerhorn Hall	Rachel Silveri	3	22/22
HUMA 1121	032/62806	T Th 2:40pm - 3:55pm 604 Schermerhorn Hall	Xiaohan Du	3	20/22
HUMA 1121	033/72339	T Th 2:40pm - 3:55pm 608 Schermerhorn Hall	Giulia Paoletti	3	22/22
HUMA 1121	034/67530	T Th 4:10pm - 5:25pm 608 Schermerhorn Hall	Kevin Lotery	3	20/22
HUMA 1121	035/65964	T Th 7:40pm - 8:55pm 604 Schermerhorn Hall	Irina Oryshkevich	3	21/22

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 W1123 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 W1123 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 W1123 Masterpieces of Western Music. 3 points.

Analysis and discussion of representative works from the Middle Ages to the present.

Fall 2015: HUMA W1123

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
HUMA 1123	001/65334	M W 8:40am - 9:55am 404 Dodge Building	Ruth Longobardi	3	24/24
HUMA 1123	002/23456	M W 8:40am - 9:55am 405 Dodge Building	Ashley Nail	3	24/24
HUMA 1123	003/64039	M W 8:40am - 9:55am 622 Dodge Building	Joshua Navon	3	22/24
HUMA 1123	004/63798	M W 8:40am - 9:55am 716 Hamilton Hall	Mahir Cetiz	3	24/24
HUMA 1123	005/25903	M W 10:10am - 11:25am 404 Dodge Building	Julia Doe	3	22/24
HUMA 1123	006/70498	M W 10:10am - 11:25am 405 Dodge Building	Ashley Nail	3	25/24
HUMA 1123	007/69419	M W 10:10am - 11:25am 716 Hamilton Hall	Mahir Cetiz	3	24/24
HUMA 1123	008/15512	M W 1:10pm - 2:25pm 716 Hamilton Hall	Deborah Bradley-Kramer	3	23/24
HUMA 1123	009/60692	M W 2:40pm - 3:55pm 716 Hamilton Hall	Caleb Mutch	3	23/24
HUMA 1123	010/24446	M W 4:10pm - 5:25pm 404 Dodge Building	Benjamin Steege	3	23/24

HUMA 1123	011/62105	M W 4:10pm - 5:25pm 405 Dodge Building	Vilde Aaslid	3	18/24
HUMA 1123	012/64945	M W 4:10pm - 5:25pm 716 Hamilton Hall	Caleb Mutch	3	24/24
HUMA 1123	013/25837	M W 6:10pm - 7:25pm 404 Dodge Building	Kathryn Radishofski	3	22/24
HUMA 1123	014/68355	M W 6:10pm - 7:25pm 405 Dodge Building	Brian Glasenapp	3	20/24
HUMA 1123	015/68580	M W 6:10pm - 7:25pm 716 Hamilton Hall	Thomas Fogg	3	22/24
HUMA 1123	016/65365	T Th 8:40am - 9:55am 404 Dodge Building	Mario Diaz de Leon	3	24/24
HUMA 1123	017/12079	T Th 8:40am - 9:55am 405 Dodge Building	Sky Macklay	3	22/24
HUMA 1123	018/68105	T Th 8:40am - 9:55am 622 Dodge Building	Russell O'Rourke	3	23/24
HUMA 1123	019/74876	T Th 8:40am - 9:55am 716 Hamilton Hall	Matthew Goodheart	3	22/24
HUMA 1123	020/14384	T Th 10:10am - 11:25am 404 Dodge Building	Mario Diaz de Leon	3	23/24
HUMA 1123	021/16958	T Th 10:10am - 11:25am 716 Hamilton Hall	Ralph Whyte	3	20/24
HUMA 1123	022/17566	T Th 1:10pm - 2:25pm 405 Dodge Building	Martha Newland	3	24/24
HUMA 1123	023/22033	T Th 1:10pm - 2:25pm 716 Hamilton Hall	Paul Clift	3	25/24
HUMA 1123	024/10049	T Th 2:40pm - 3:55pm 405 Dodge Building	Marilyn McCoy	3	25/24
HUMA 1123	025/27427	T Th 2:40pm - 3:55pm 404 Dodge Building	Magdalena Baczewska	3	21/24
HUMA 1123	026/63365	T Th 2:40pm - 3:55pm 716 Hamilton Hall	Paula Harper	3	23/24
HUMA 1123	027/67583	T Th 4:10pm - 5:25pm 405 Dodge Building	Edgardo Salinas	3	22/24
HUMA 1123	028/19685	T Th 4:10pm - 5:25pm 716 Hamilton Hall	Rodolfo Toledo	3	24/24
HUMA 1123	029/13060	T Th 6:10pm - 7:25pm 404 Dodge Building	Ryan Pratt	3	23/24
HUMA 1123	030/67071	T Th 6:10pm - 7:25pm 716 Hamilton Hall	David Gutkin	3	24/24
HUMA 1123	031/12153	M W 8:40am - 9:55am 814 Dodge Building	Ashkan Behzadi	3	21/24
HUMA 1123	032/12451	T Th 8:40am - 9:55am 814 Dodge Building	John Rot	3	25/24

HUMA 1123	033/12651	T Th 10:10am - 11:25am 405 Dodge Building	Martha Newland	3	25/24
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Spring 2016: HUMA W1123

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
HUMA 1123	001/15775	M W 8:40am - 9:55am 404 Dodge Building	Ashley Nail	3	25/25
HUMA 1123	002/61521	M W 8:40am - 9:55am 716 Hamilton Hall	Tina Fruehauf	3	24/25
HUMA 1123	003/67089	M W 8:40am - 9:55am 405 Dodge Building	Ruth Longobardi	3	24/25
HUMA 1123	004/64031	M W 8:40am - 9:55am 622 Dodge Building	Paula Harper	3	25/25
HUMA 1123	005/77397	M W 10:10am - 11:25am 404 Dodge Building	Ashley Nail	3	24/25
HUMA 1123	006/20184	M W 10:10am - 11:25am 405 Dodge Building	Deborah Bradley- Kramer	3	23/25
HUMA 1123	007/73538	M W 10:10am - 11:25am 814 Dodge Building	Paul Clift	3	25/25
HUMA 1123	008/76978	M W 1:10pm - 2:25pm 716 Hamilton Hall	Matthew Ricketts	3	25/25
HUMA 1123	009/65311	M W 2:40pm - 3:55pm 404 Dodge Building	Mahir Cetiz	3	25/25
HUMA 1123	010/76393	M W 4:10pm - 5:25pm 404 Dodge Building	Mahir Cetiz	3	24/25
HUMA 1123	011/17379	M W 4:10pm - 5:25pm 405 Dodge Building	Russell O'Rourke	3	25/25
HUMA 1123	012/68479	M W 4:10pm - 5:25pm 716 Hamilton Hall	Edgardo Salinas	3	22/25
HUMA 1123	013/61226	M W 6:10pm - 7:25pm 404 Dodge Building	Kathryn Radishofski	3	24/25
HUMA 1123	014/64767	M W 6:10pm - 7:25pm 405 Dodge Building	Ryan Pratt	3	25/25
HUMA 1123	015/28350	M W 6:10pm - 7:25pm 716 Hamilton Hall	Thomas Fogg	3	25/25
HUMA 1123	016/74373	T Th 8:40am - 9:55am 404 Dodge Building	Mario Diaz de Leon	3	25/25
HUMA 1123	017/65201	T Th 8:40am - 9:55am 405 Dodge Building	Brian Glasenapp	3	23/25
HUMA 1123	018/14893	T Th 8:40am - 9:55am 622 Dodge Building	John Rot	3	23/25
HUMA 1123	019/24581	T Th 8:40am - 9:55am 716 Hamilton Hall	Benjamin Hansberry	3	22/25
HUMA 1123	020/64476	T Th 10:10am - 11:25am 404 Dodge Building	Mario Diaz de Leon	3	25/25

HUMA 1123	021/28899	T Th 10:10am - 11:25am 405 Dodge Building	Susan Boynnton	3	22/22
HUMA 1123	022/73193	T Th 1:10pm - 2:25pm 405 Dodge Building	Bradford Garton	3	25/25
HUMA 1123	023/19102	T Th 1:10pm - 2:25pm 716 Hamilton Hall	Caleb Mutch	3	23/25
HUMA 1123	024/22154	T Th 2:40pm - 3:55pm 404 Dodge Building	Magdalena Baczewska	3	24/25
HUMA 1123	025/60819	T Th 2:40pm - 3:55pm 405 Dodge Building	Vilde Aaslid	3	25/25
HUMA 1123	026/61055	T Th 2:40pm - 3:55pm 716 Hamilton Hall	Caleb Mutch	3	25/25
HUMA 1123	027/77770	T Th 4:10pm - 5:25pm 404 Dodge Building	Ashkan Behzadi	3	21/25
HUMA 1123	028/15361	T Th 4:10pm - 5:25pm 405 Dodge Building	Giuseppe Gerbino	3	25/25
HUMA 1123	029/20638	T Th 6:10pm - 7:25pm 404 Dodge Building	Ralph Whyte	3	23/25
HUMA 1123	030/72068	T Th 6:10pm - 7:25pm 716 Hamilton Hall	Carmel Raz	3	20/25
HUMA 1123	031/17403	M W 10:10am - 11:25am 716 Hamilton Hall	Matthew Goodheart	3	25/25
HUMA 1123	032/69082	T Th 10:10am - 11:25am 716 Hamilton Hall	Joshua Navon	3	25/25
HUMA 1123	033/12066	T Th 4:10pm - 5:25pm 716 Hamilton Hall	Elliott Cairns	3	20/25

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 Core Curriculum Office.

FRONTIERS OF SCIENCE

Chair of Frontiers of Science

Fall 2015: Prof. Emlyn W. Hughes, 718 Pupin;

212-854-0796; ewh42@columbia.edu

Spring 2016: Prof. Don J. Melnick, Schermerhorn

Extension, 11th floor; 212-854-8186; djm7@columbia.edu

Frontiers of Science Website (<http://www.college.columbia.edu/core/classes/fos.php>)

SCNC C1000 Frontiers of Science and *SCNC C1100 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 C1000 Frontiers of Science* is included in the registration materials sent to students. All first-year students are preregistered in *Frontiers of Science* (one half of the alphabet in each semester). 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 C1001);
2. A mathematics course;
3. A language course at the elementary II level or above;
4. One of the following science major sequences:

CHEM W3045 Intensive Organic Chemistry I
- CHEM W3046 (Lecture)
and Intensive Organic
Chemistry II (Lecture)

PHYS W1601 Physics, I: Mechanics and
- PHYS W1602 Relativity
and Physics, II:
Thermodynamics, Electricity,
and Magnetism

PHYS W2801 Accelerated Physics I
- PHYS W2802 and Accelerated Physics II

Students wishing to petition should do so in the Center for the Core Curriculum, located in 208 Hamilton.

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 C1000 Frontiers of Science. 4 points.

CC/GS: Partial Fulfillment of Science Requirement, Discussion Section Required

Corequisites: SCNC C1100

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 evolution of human language, brain dynamics, global climate change, the nanoworld, and biodiversity, among others. Taught by members of the natural science departments and Columbia post-doctoral science fellows.

Fall 2015: SCNC C1000

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
SCNC 1000	001/61747	M 10:30am - 12:00pm 147 Horace Mann Bldg	Don Melnick	4	544/570

Spring 2016: SCNC C1000

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
SCNC 1000	001/90946	M 10:30am - 12:00pm 147 Horace Mann Bldg		4	530/570

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 C1010 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.

COURSES OF INSTRUCTION

ENGL C1010 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 below 100)*. Features contemporary essays from a variety of fields. *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 Women's and Gender Studies (sections in the 200s)*. Features essays that examine relationships among sex, gender, sexuality, race, class, and other forms of identity. *UW: Readings in Sustainable Development (sections in the 300s)*. Features essays that ask how we can develop global communities that meet people's needs now without diminishing the ability of people in the future to do the same. *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 and Engineering (sections in the 500s)*. Features essays that study how our data-saturated society challenges conceptions of cognition, autonomy, identity, and privacy. *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 2015: ENGL C1010

Course Number	Section/Call Number	Times/Location	Instructor	Points	Enrollment
ENGL 1010	001/63447	M W 8:40am - 9:55am 201b Philosophy Hall	Aled Roberts	3	14/14
ENGL 1010	002/71948	M W 8:40am - 9:55am 201d Philosophy Hall	Gianmarco Saretto	3	13/14
ENGL 1010	003/91750	M W 8:40am - 9:55am 408a Philosophy Hall	Sarah Thomas	3	13/14
ENGL 1010	004/95800	M W 8:40am - 9:55am 313 Hamilton Hall	Harald Sundt	3	14/14
ENGL 1010	007/77781	M W 10:10am - 11:25am	Raluca Albu	3	13/14

ENGL 1010	008/63747	408a Philosophy Hall M W 11:40am - 12:55pm	Buck Wanner	3	14/13
ENGL 1010	009/77947	408a Philosophy Hall M W 11:40am - 12:55pm 325 Pupin Laboratories	Valerio Amoretti	3	14/14
ENGL 1010	016/23328	M W 2:40pm - 3:55pm 407 Hamilton Hall	Katherine McIntyre	3	14/14
ENGL 1010	018/76499	M W 2:40pm - 3:55pm 408a Philosophy Hall	Rebecca Hildebrand	3	12/14
ENGL 1010	020/11351	M W 4:10pm - 5:25pm 201b Philosophy Hall	Jessica Hallock	3	13/14
ENGL 1010	021/20943	M W 4:10pm - 5:25pm 318 Hamilton Hall	Therese Cox	3	14/14
ENGL 1010	022/78282	M W 4:10pm - 5:25pm 307 Mathematics Building	Alexis Fabrizio	3	14/14
ENGL 1010	024/75949	M W 5:40pm - 6:55pm 412 Pupin Laboratories	Julia Sirmons	3	14/14
ENGL 1010	026/83287	M W 5:40pm - 6:55pm 413 Hamilton Hall	Noah Shannon	3	14/14
ENGL 1010	027/69266	T Th 8:40am - 9:55am 408a Philosophy Hall	Richard Trist	3	14/14
ENGL 1010	028/72098	T Th 8:40am - 9:55am 201b Philosophy Hall	Lynn Strong	3	14/14
ENGL 1010	029/82600	T Th 8:40am - 9:55am 201d Philosophy Hall	Susan Hanrahan	3	13/14
ENGL 1010	030/86652	T Th 8:40am - 9:55am 413 Hamilton Hall	Miranda Pennington	3	14/14
ENGL 1010	032/88654	T Th 10:10am - 11:25am 408a Philosophy Hall	Sarah Arkebauer	3	14/14
ENGL 1010	033/97155	T Th 10:10am - 11:25am 201d Philosophy Hall	Warren Kluber	3	14/14
ENGL 1010	034/82947	T Th 11:40am - 12:55pm 408a Philosophy Hall	Samuel Mitchell	3	13/14
ENGL 1010	036/96947	T Th 11:40am - 12:55pm 407 Hamilton Hall	Chin-chi Wang	3	13/14
ENGL 1010	038/82195	T Th 1:10pm - 2:25pm	Jaime Green	3	14/14

ENGL 1010	041/13036	222 Pupin Laboratories T Th 2:40pm - 3:55pm 408a Philosophy Hall	Abigail Rabinowitz	3	14/14	ENGL 1010	303/14287	408a Philosophy Hall T Th 1:10pm - 2:25pm 652 Schermerhorn Hall	Jordan Kisner	3	14/14
ENGL 1010	043/17549	T Th 2:40pm - 3:55pm 616 Hamilton Hall	Paula Hopkins	3	14/14	ENGL 1010	401/66246	M W 11:40am - 12:55pm 411 Hamilton Hall	Meredith Shepard	3	14/14
ENGL 1010	044/27449	T Th 2:40pm - 3:55pm 407 Hamilton Hall	Gabriel Bloomfield	3	14/14	ENGL 1010	402/97900	M W 5:40pm - 6:55pm 201b Philosophy Hall	Daniel Pearce	3	14/14
ENGL 1010	045/19268	T Th 4:10pm - 5:25pm 507 Hamilton Hall	Rebecca Pawel	3	14/14	ENGL 1010	403/13020	T Th 11:40am - 12:55pm 201b Philosophy Hall	Rebecca Wisor	3	14/14
ENGL 1010	046/99782	T Th 4:10pm - 5:25pm 502 Northwest Corner	Ida Tvedt	3	14/14	ENGL 1010	404/17097	T Th 5:40pm - 6:55pm 201b Philosophy Hall	Nina Sharma	3	13/14
ENGL 1010	050/78031	T Th 5:40pm - 6:55pm 307 Mathematics Building	Jessica Stevens	3	12/14	ENGL 1010	501/28748	M W 10:10am - 11:25am 201d Philosophy Hall	Simon Porzak	3	14/14
ENGL 1010	052/19272	T Th 5:40pm - 6:55pm 408a Philosophy Hall	Savannah Cooper-Ramsey	3	14/14	ENGL 1010	502/25514	T Th 1:10pm - 2:25pm 408a Philosophy Hall	Catherine Kirch	3	13/14
ENGL 1010	101/11397	M W 10:10am - 11:25am 201b Philosophy Hall	Valeria Tsygankova	3	14/14	ENGL 1010	503/60798	T Th 4:10pm - 5:25pm 201b Philosophy Hall	Avery Erwin	3	14/14
ENGL 1010	102/22047	M W 1:10pm - 2:25pm 502 Northwest Corner	Elina Mishuris	3	14/14	ENGL 1010	901/71299	M W 2:40pm - 3:55pm 201b Philosophy Hall	Elizabeth Walters	3	14/14
ENGL 1010	103/24781	M W 2:40pm - 3:55pm 502 Northwest Corner	Rachel Schwerin	3	14/14	ENGL 1010	902/98599	T Th 4:10pm - 5:25pm 511 Hamilton Hall	Taarini Mookherjee	3	14/14
ENGL 1010	104/73326	T Th 10:10am - 11:25am 502 Northwest Corner	Craig Gurian	3	14/14	ENGL 1010	903/12100	T Th 5:40pm - 6:55pm 507 Hamilton Hall	Justin Snider	3	14/14
ENGL 1010	105/23339	M W 1:10pm - 2:25pm 507 Hamilton Hall	Nicholas Mayer	3	14/14	Spring 2016: ENGL C1010					
ENGL 1010	201/12284	M W 1:10pm - 2:25pm 201b Philosophy Hall	Allen Durgin	3	14/14	ENGL 1010	001/76653	M W 8:40am - 9:55am 201b Philosophy Hall	Gianmarco Saretto	3	13/14
ENGL 1010	202/92081	M W 5:40pm - 6:55pm 408a Philosophy Hall	Trevor Corson	3	12/14	ENGL 1010	002/78648	M W 8:40am - 9:55am 408a Philosophy Hall	Ida Tvedt	3	14/14
ENGL 1010	203/88947	T Th 1:10pm - 2:25pm 201b Philosophy Hall	Glenn Gordon	3	12/14	ENGL 1010	003/82500	M W 8:40am - 9:55am 313 Hamilton Hall	Rosa Schneider	3	14/14
ENGL 1010	204/68649	T Th 2:40pm - 3:55pm 609 Hamilton Hall	Kristin Slaney	3	13/14	ENGL 1010	004/86098	M W 8:40am - 9:55am 315 Hamilton Hall	Caitlin Rimshnick	3	14/14
ENGL 1010	205/77547	M W 4:10pm - 5:25pm 408a Philosophy Hall	Liza St. James	3	14/14	ENGL 1010	007/27249	M W 10:10am - 11:25am 408a Philosophy Hall	Sabrina Alli	3	14/14
ENGL 1010	301/90848	M W 1:10pm - 2:25pm	Phillip Polefrone	3	14/14	ENGL 1010	010/25524	M W 11:40am - 12:55pm	Alexander Lash	3	14/14

ENGL 1010	013/68348	201b Philosophy Hall M W 1:10pm - 2:25pm 408a Philosophy Hall	Samantha Miller Khaikin	3	13/14	ENGL 1010	040/63598	408a Philosophy Hall T Th 1:10pm - 2:25pm 201b Philosophy Hall	Warren Kluber	3	14/14
ENGL 1010	014/72298	M W 1:10pm - 2:25pm 307 Mathematics Building	Kristen Martin	3	14/14	ENGL 1010	043/81150	T Th 2:40pm - 3:55pm 408a Philosophy Hall	Kaveh Landsverk	3	14/14
ENGL 1010	017/11784	M W 2:40pm - 3:55pm 201b Philosophy Hall	Katherine McIntyre	3	14/14	ENGL 1010	044/82899	T Th 2:40pm - 3:55pm 707 Hamilton Hall	Leah Zander	3	14/14
ENGL 1010	018/11996	M W 2:40pm - 3:55pm 408a Philosophy Hall	Richard Trist	3	14/14	ENGL 1010	047/96648	T Th 4:10pm - 5:25pm 408a Philosophy Hall	Emily Hainze	3	14/14
ENGL 1010	019/82052	M W 4:10pm - 5:25pm 502 Northwest Corner	Allen Durgin	3	13/14	ENGL 1010	048/98297	T Th 4:10pm - 5:25pm 507 Hamilton Hall	Rebecca Pawel	3	14/14
ENGL 1010	021/90852	M W 4:10pm - 5:25pm 325 Pupin Laboratories	Therese Cox	3	14/14	ENGL 1010	050/94693	T Th 5:40pm - 6:55pm 408a Philosophy Hall	Shoshana Akabas	3	14/14
ENGL 1010	022/92997	M W 4:10pm - 5:25pm 307 Mathematics Building	Julia Sirmons	3	14/14	ENGL 1010	051/13286	T Th 5:40pm - 6:55pm 201b Philosophy Hall	Jessica Hallock	3	14/14
ENGL 1010	024/84531	M W 5:40pm - 6:55pm 307 Mathematics Building	Jessica Stevens	3	13/14	ENGL 1010	101/82597	M W 2:40pm - 3:55pm 502 Northwest Corner	Rachel Schwerin	3	14/14
ENGL 1010	025/87194	M W 5:40pm - 6:55pm 201b Philosophy Hall	Eugene Petracca	3	14/14	ENGL 1010	102/12750	T Th 8:40am - 9:55am 201b Philosophy Hall	Tana Wojczuk	3	14/14
ENGL 1010	026/11785	M W 5:40pm - 6:55pm 408a Philosophy Hall	Noah Shannon	3	14/14	ENGL 1010	103/83531	T Th 11:40am - 12:55pm 511 Hamilton Hall	Elina Mishuris	3	14/14
ENGL 1010	029/25799	T Th 8:40am - 9:55am 408a Philosophy Hall	John McCormack	3	14/14	ENGL 1010	104/75512	T Th 1:10pm - 2:25pm 502 Northwest Corner	Nicholas Mayer	3	14/14
ENGL 1010	030/27498	T Th 8:40am - 9:55am 315 Hamilton Hall	Lynn Strong	3	14/14	ENGL 1010	201/17051	M W 10:10am - 11:25am 424 Pupin Laboratories	Harald Sundt	3	14/14
ENGL 1010	032/27208	T Th 10:10am - 11:25am 408a Philosophy Hall	Christopher Williams	3	14/14	ENGL 1010	202/63652	M W 1:10pm - 2:25pm 315 Hamilton Hall	Liza St. James	3	14/14
ENGL 1010	033/68461	T Th 10:10am - 11:25am 601b Fairchild Life Sciences Bldg	Raluca Albu	3	14/14	ENGL 1010	203/71746	T Th 2:40pm - 3:55pm C01 Knox Hall	Kristin Slaney	3	14/14
ENGL 1010	035/19267	T Th 11:40am - 12:55pm 201b Philosophy Hall	Paula Hopkins	3	14/14	ENGL 1010	204/81033	T Th 5:40pm - 6:55pm 502 Northwest Corner	Trevor Corson	3	13/14
ENGL 1010	036/25785	T Th 11:40am - 12:55pm 408a Philosophy Hall	Ariel Franklin- Hudson	3	14/14	ENGL 1010	301/27783	M W 11:40am - 12:55pm 408a Philosophy Hall	Phillip Polefrone	3	14/14
ENGL 1010	039/61948	T Th 1:10pm - 2:25pm	Buck Wanner	3	14/14	ENGL 1010	302/67506	T Th 2:40pm - 3:55pm 201b Philosophy Hall	Abigail Rabinowitz	3	13/14
						ENGL 1010	303/92349	T Th 4:10pm - 5:25pm 411 Hamilton Hall	Jaime Green	3	14/14

ENGL 1010	401/60832	M W 11:40am - 12:55pm 313 Hamilton Hall	Meredith Shepard	3	14/14
ENGL 1010	402/86250	M W 4:10pm - 5:25pm 413 Hamilton Hall	Daniel Pearce	3	14/14
ENGL 1010	403/18697	T Th 8:40am - 9:55am 413 Hamilton Hall	Miranda Pennington	3	14/14
ENGL 1010	404/28534	T Th 10:10am - 11:25am 413 Hamilton Hall	Nina Sharma	3	14/14
ENGL 1010	501/77530	M W 10:10am - 11:25am 325 Pupin Laboratories	Aled Roberts	3	14/14
ENGL 1010	502/62285	M W 1:10pm - 2:25pm 201b Philosophy Hall	Simon Porzak	3	14/14
ENGL 1010	503/88150	T Th 4:10pm - 5:25pm 114 Knox Hall	Avery Erwin	3	14/14
ENGL 1010	901/98348	M W 2:40pm - 3:55pm 315 Hamilton Hall	Alexis Fabrizio	3	13/14
ENGL 1010	902/97296	M W 5:40pm - 6:55pm 502 Northwest Corner	Justin Snider	3	14/14
ENGL 1010	903/93639	T Th 1:10pm - 2:25pm 307 Mathematics Building	Elizabeth Walters	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 Affairs, 208 Hamilton; 212-854-2441; cc-academicaffairs@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 *1202* 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. 243)
- **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**
Middle Eastern, South Asian, and African Studies

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 Affairs, 202 Hamilton; 212-854-2442; cc-academicaffairs@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.

FALL 2015 APPROVED COURSES

African-American Studies

AFAS C1001	Introduction to African-American Studies
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Anthropology

ANTH V3933	Arabia Imagined
ANHS W4001	The Ancient Empires

Art History and Archaeology

AHUM V3340	Art In China, Japan, and Korea
AHUM V3342	Masterpieces of Indian Art and Architecture

Center for the Core Curriculum

AFCV C1020	African Civilizations
LACV C1020	Primary Texts of Latin American Civilization

Center for the Study of Ethnicity and Race

CSER W1010	Introduction to Comparative Ethnic Studies
CSER W1601	Introduction to Latino/a Studies
CSER W3922	Asian American Cinema
CSER W3926	Latin Music and Identity
CSER W3928	Colonization/Decolonization

Classics

CLCV W3244	Global Histories of the Book (Effective beginning Fall 2015)
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Colloquia and Interdepartmental Seminars

INSM W3920	Nobility and Civility
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East Asian Languages and Cultures

ASCE V2002	Introduction to Major Topics in Asian Civilizations: East Asia
ASCE V2359	Introduction to East Asian Civilizations: China
ASCE V2361	Introduction to East Asian Civilization: Japan
ASCE V2365	Introduction to East Asian Civilizations: Tibet
EAAS W3342	Mythology of East Asia (Effective beginning Fall 2015)

AHUM V3400	Colloquium on Major Texts: East Asia
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HSEA W3880	History of Modern China I (Effective beginning Fall 2015)
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EAAS V3927	China in the Modern World
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Economics

ECON W4325	Economic Organization and Development of Japan
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Germanic Languages

GERM W3780	Berlin/Istanbul: Migration, Culture, Values (GER) (Effective beginning Fall 2015)
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History

HIST W3719	History of the Modern Middle East
HIST W3764	History of East Africa: Early Time to the Present (Effective beginning Spring 2014)

HSME W3810	History of South Asia I: al-Hind to Hindustan
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HIST W4601	Jews in the Later Roman Empire, 300-600 CE (Effective beginning Fall 2014)
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Latin American and Iberian Cultures

SPAN W3349	Hispanic Cultures I: Islamic Spain through the Colonial Period
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SPAN W3350	Hispanic Cultures II: Enlightenment to the Present
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Middle Eastern, South Asian, and African Studies

ASCM V2003	Introduction to Islamic Civilization
MDES W2030	Major Debates in the Study of Africa (Effective beginning Spring 2014; formerly ANTH V2010)

ASCM V2357	Introduction to Indian Civilization
MDES W3000	Theory and Culture

AHUM V3399	Colloquium on Major Texts: Middle East and South Asia
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CLME W3928	Arabic Prison Writing (Effective beginning Fall 2014)
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Music

MUSI V2020	Salsa, Soca, and Reggae: Popular Musics of the Caribbean
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MUSI V2430	Listening and Sound in Cross-Cultural Perspective (Effective beginning Fall 2014; formerly MUSI W4430)
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AHMM V3321	Introduction To the Musics of India and West Asia
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Religion

RELI V2008	Buddhism: East Asian
RELI V2305	Islam

Slavic Languages

CLRS W4022	Russia and Asia: Orientalism, Eurasianism, Internationalism
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Sociology

SOCI W3324	Global Urbanism
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Theatre

THTR V3000	Theatre Traditions in a Global Context (Effective beginning Fall 2014)
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SPRING 2016 APPROVED COURSES

As Spring 2016 schedules become available, more courses will be added to this list. Please check back for additional updates. Last updated on January 19, 2016.

Art History and Archaeology

AHIS W3832	Sacred Landscapes of the Ancient Andes (Effective beginning Spring 2016)
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Center for the Core Curriculum

AFCV C1020	African Civilizations
LACV C1020	Primary Texts of Latin American Civilization

Center for the Study of Ethnicity and Race

CSER W3928	Colonization/Decolonization
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Colloquia and Interdepartmental Seminars

INSM W3921	Nobility and Civility II
INSM W3950	Friendship in Asian and Western Civilization

Comparative Literature and Society

CLGM V3920	The World Responds to the Greeks: Greece Faces East
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East Asian Languages and Cultures

ASCE V2002	Introduction to Major Topics in Asian Civilizations: East Asia
ASCE V2359	Introduction to East Asian Civilizations: China
ASCE V2361	Introduction to East Asian Civilization: Japan
AHUM V3400	Colloquium on Major Texts: East Asia
EARL W4127	Mediations, Perceptions, Words: Poetry in Buddhist Literature (Effective beginning Spring 2016)
EAAS W4277	Japanese Anime and Beyond: Gender, Power and Transnational Media (Effective beginning Spring 2016)
EARL W4310	Life-Writing in Tibetan Buddhist Literature (Effective beginning Spring 2015)

English and Comparative Literature

ENGL W4650	Novels of Immigration, Relocation, Diaspora (Effective Spring 2015; formerly ENGL W3510)
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History

HIST W1054	Introduction to Byzantine History (Effective beginning Spring 2016)
HIST W3618	The Modern Caribbean
HIST W3661	Latin American Civilization II
HIST W3811	South Asia II: Empire and Its Aftermath

HSEA W3898	The Mongols in History
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Latin American and Iberian Cultures

SPAN W3349	Hispanic Cultures I: Islamic Spain through the Colonial Period
PORT W3350	Lusophone Africa and Afro Brazilian Culture
SPAN W3350	Hispanic Cultures II: Enlightenment to the Present

Middle Eastern, South Asian, and African Studies

ASCM V2008	Contemporary Islamic Civilization
MDES W2650	Gandhi and His Interlocutors (Effective beginning Spring 2015)
AHUM V3399	Colloquium on Major Texts: Middle East and South Asia
CLME W4031	Cinema and Society In Asia and Africa
CLME G4241	Sufism: Primary Texts and Contexts (Effective beginning Spring 2016)

Music

AHMM V3320	Introduction To the Musics of East Asia and Southeast Asia
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Religion

RELI V2205	Hinduism
RELI V2405	Chinese Religious Traditions
RELI V3307	Muslims in Diaspora (Effective beginning Spring 2016)

ALL APPROVED COURSES

Not all courses are taught each academic year. Below is the full list of all courses approved for the Global Core Requirement, regardless of semester offered. Last updated on November 12, 2015.

African-American Studies

AFAS C1001	Introduction to African-American Studies
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Anthropology

ANTH V1008	The Rise of Civilization
ANTH V1130	Africa and the Anthropologist
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 V2035	Introduction to the Anthropology of South Asia
ANTH V2100	Muslim Societies
ANTH V3300	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 V3821	Native America (formerly V3090)
ANTH V3892	Contemporary Central Asia (formerly ANTH V2029)
ANTH V3933	Arabia Imagined
ANTH V3947	Text, Magic, Performance
ANHS W4001	The Ancient Empires
ANTH G4065	Archaeology of Idols

Art History and Archaeology

AHIS V3201	Arts of China
AHIS W3208	The Arts of Africa
AHUM V3340	Art In China, Japan, and Korea
AHUM V3342	Masterpieces of Indian Art and Architecture
AHIS W3832	Sacred Landscapes of the Ancient Andes (Effective beginning Spring 2016)
AHIS W3898	Yoruba and the Diaspora (Effective beginning Fall 2014)
AHIS G4085	Andean Art and Architecture

Center for the Core Curriculum

AFCV C1020	African Civilizations
LACV C1020	Primary Texts of Latin American Civilization

Center for the Study of Ethnicity and Race

CSER W1010	Introduction to Comparative Ethnic Studies
CSER W1600	
CSER W1601	Introduction to Latino/a Studies
CSER W3510	Immigration, Relocation, and Diaspora
CSER W3922	Asian American Cinema
CSER W3926	Latin Music and Identity
CSER W3928	Colonization/Decolonization
CSER W3961	Wealth and Poverty in America (Effective beginning Fall 2013)

Classics

CLCV W3111	Plato and Confucius: Comparative Ancient Philosophies (Effective beginning Spring 2015)
CLCV W3244	Global Histories of the Book (Effective beginning Fall 2015)

Colloquia and Interdepartmental Seminars

INSM W3920	Nobility and Civility
INSM W3921	Nobility and Civility II
INSM C3940	Science Across Cultures
INSM W3950	Friendship in Asian and Western Civilization

Comparative Literature and Society

CPLS W3333	East/West Frametale Narratives
CPLS W3454	Blood/Lust: Staging the Early Modern Mediterranean
CLGM V3920	The World Responds to the Greeks: Greece Faces East

CPLS W3945	Transnational Memory Politics and the Culture of Human Rights (Effective beginning Spring 2014)
CPLS W3955	The West in Global Thought
CPLS W3956	Postcolonial Narrative and the Limits of the Human
CPLS W4100	Andalusian Symbiosis: Islam and the West (Effective beginning Fall 2014)

East Asian Languages and Cultures

ASCE V2002	Introduction to Major Topics in Asian Civilizations: East Asia
ASCE V2359	Introduction to East Asian Civilizations: China
ASCE V2361	Introduction to East Asian Civilization: Japan
ASCE V2363	Introduction to East Asian Civilizations: Korea
ASCE V2365	Introduction to East Asian Civilizations: Tibet
EAAS W3342	Mythology of East Asia (Effective beginning Fall 2015)
EAAS V3350	Japanese Fiction and Film (Effective beginning Fall 2014)
AHUM V3400	Colloquium on Major Texts: East Asia
AHUM V3830	Colloquium On Modern East Asian Texts
HSEA W3880	History of Modern China I (Effective beginning Fall 2015)
EAAS V3927	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 W4277	Japanese Anime and Beyond: Gender, Power and Transnational Media (Effective beginning Spring 2016)
EARL W4310	Life-Writing in Tibetan Buddhist Literature (Effective beginning Spring 2015)
HSEA W4866	Competing Nationalisms in East Asia: Representing Chinese and Tibetan Relations in History (Effective beginning Fall 2015)
HSEA W4870	Japan Before 1600 (Effective beginning Spring 2015)

Economics

ECON W4325	Economic Organization and Development of Japan
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English and Comparative Literature

CLEN W4200	Caribbean Diaspora Literature
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ENGL W4650 Novels of Immigration, Relocation, Diaspora (Effective Spring 2015; formerly ENGL W3510)

Germanic Languages

GERM W3780 Berlin/Istanbul: Migration, Culture, Values (GER) (Effective beginning Fall 2015)

History

HIST W1004 Ancient History of Egypt (Effective beginning Spring 2015)

HIST W1054 Introduction to Byzantine History (Effective beginning Spring 2016)

HIST W3618 The Modern Caribbean

HIST W3657 Medieval Jewish Cultures

HIST W3660 Latin American Civilization I

HIST W3661 Latin American Civilization II

HIST W3665

HIST W3701 Ottoman Empire (Effective beginning Fall 2013)

HIST W3719 History of the Modern Middle East

HIST W3764 History of East Africa: Early Time to the Present (Effective beginning Spring 2014)

HIST W3772 West African History

HIST W3800 Gandhi's India

HIST W3803 The Worlds of Mughal India (Effective beginning Spring 2014)

HSME W3810 History of South Asia I: al-Hind to Hindustan

HIST W3811 South Asia II: Empire and Its Aftermath

HSEA W3898 The Mongols in History

HIST W3902 History of the World to 1450 CE (Effective beginning Fall 2014)

HIST W3903 History of the World from 1450 CE to the Present (Effective beginning Fall 2013)

HIST W3943 Cultures of Empire

HIST W4103 Empires and Cultures of the Early Modern Atlantic World (Effective only for Spring 2014)

HIST W4404 Native American History

HIST W4601 Jews in the Later Roman Empire, 300-600 CE (Effective beginning Fall 2014)

HIST W4678 Indigenous Worlds in Early Latin America (Effective beginning Spring 2015)

HIST W4779 Africa and France

Latin American and Iberian Cultures

SPAN W3349 Hispanic Cultures I: Islamic Spain through the Colonial Period

PORT W3350 Lusophone Africa and Afro Brazilian Culture

SPAN W3350 Hispanic Cultures II: Enlightenment to the Present

SPAN W3490 Latin American Humanities I: From Pre-Columbian Civilizations to the Creation of New Nations

SPAN W3491 Latin American Humanities II: From Modernity to the Present [In English]

Middle Eastern, South Asian, and African Studies

ASCM V2001 Introduction to Major Topics in the Civilizations of the Middle East and India

ASCM V2003 Introduction to Islamic Civilization

ASCM V2008 Contemporary Islamic Civilization

MDES W2030 Major Debates in the Study of Africa (Effective beginning Spring 2014; formerly ANTH V2010)

MDES W2041 Introduction to Indian Philosophy (Effective beginning Spring 2015)

ASCM V2357 Introduction to Indian Civilization

MDES W2650 Gandhi and His Interlocutors (Effective beginning Spring 2015)

MDES W3000 Theory and Culture

CLME W3032 Colonialism: Film, Fiction, History & Theory

MDES W3130 East Africa and the Swahili Coast in an Interconnected World (Effective beginning Spring 2015)

AHUM V3399 Colloquium on Major Texts: Middle East and South Asia

MDES W3445 Societies & Cultures Across the Indian Ocean (Effective beginning Fall 2013)

CLME W3928 Arabic Prison Writing (Effective beginning Fall 2014)

CLME W4031 Cinema and Society In Asia and Africa

MDES G4052 Locating Africa in the Early 20th Century World

CLME G4241 Sufism: Primary Texts and Contexts (Effective beginning Spring 2016)

CLME G4261 Popular Islam: Asia and Africa

MDES G4326 The Armenian Genocide and the Holocaust: Memory and Representation

Music

MUSI V2020 Salsa, Soca, and Reggae: Popular Musics of the Caribbean

MUSI V2430 Listening and Sound in Cross-Cultural Perspective (Effective beginning Fall 2014; formerly MUSI W4430)

AHMM V3320 Introduction To the Musics of East Asia and Southeast Asia

AHMM V3321 Introduction To the Musics of India and West Asia

Religion

RELI V2008 Buddhism: East Asian

RELI V2205	Hinduism
RELI V2305	Islam
RELI V2405	Chinese Religious Traditions
RELI V2645	Religion in Black America: An Introduction
RELI V3307	Muslims in Diaspora (Effective beginning Spring 2016)
RELI V3411	Tantra in South Asia, East Asia & the West (Effective beginning Spring 2015)
Slavic Languages	
SLCL W3001	Slavic Cultures
CLRS W4022	Russia and Asia: Orientalism, Eurasianism, Internationalism (Effective beginning Spring 2015)
CLRS W4190	Race, Ethnicity, and Narrative, in the Russian/Soviet Empire
Sociology	
SOCI W3324	Global Urbanism
Theatre	
THTR V3000	Theatre Traditions in a Global Context (Effective beginning Fall 2014)

SCIENCE REQUIREMENT

General Information: Office of Academic Affairs, 208 Hamilton; 212-854-2441; cc-academicaaffairs@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 C1000 Frontiers of Science* in their first year in the term in which they are not taking *ENGL C1010 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]

ASTR W1234	The Universal Timekeeper: Reconstructing History Atom by Atom (previously offered as ASTR C1234)
ASTR W1403	Earth, Moon and Planets (Lecture) (previously offered as ASTR C1403)
ASTR W1404	Stars, Galaxies and Cosmology (Lecture) (previously offered as ASTR C1404)
ASTR W1420	Galaxies and Cosmology (previously offered as ASTR C1420)
ASTR W1453	Another Earth (previously offered as ASTR C1453)
ASTR W1610	Theories of the Universe: From Babylon to the Big Bang (previously offered as ASTR C1610)
ASTR BC1753	Life in the Universe
ASTR BC1754	Stars, Galaxies, and Cosmology

ASTR W1836	Stars and Atoms (previously offered as ASTR C1836)
Recommended Sequences:	
ASTR W1403 - ASTR W1404	Earth, Moon and Planets (Lecture) and Stars, Galaxies and Cosmology (Lecture)
ASTR W1403 - ASTR W1420	Earth, Moon and Planets (Lecture) and Galaxies and Cosmology
ASTR W1403 - ASTR BC1754	Earth, Moon and Planets (Lecture) and Stars, Galaxies, and Cosmology
ASTR W1403 - ASTR W1836	Earth, Moon and Planets (Lecture) and Stars and Atoms
ASTR BC1753 - ASTR W1404	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]	
BIOL C1002	Theory and Practice of Science: Biology
BIOL W1130	Genes and Development
Computer Science [COMS]	
COMS W1001	Introduction to Information Science
CSEN W1002	
Earth and Environmental Engineering [EAEE]	
EAEE E2100	A better planet by design
Earth and Environmental Sciences [EESC]	
EESC W1001	Dinosaurs and the History of Life: Lectures and Lab (previously offered as EESC V1001)
EESC W1003	Climate and Society: Case Studies (previously offered as EESC V1003)
EESC W1011	Earth: Origin, Evolution, Processes, Future (previously offered as EESC V1011)
EESC W1030	Oceanography (previously offered as EESC V1030)
EESC W1053	Planet Earth (previously offered as EESC V1053)
EESC W1201	Environmental Risks and Disasters (previously offered as EESC V1201)
EESC W1401	Dinosaurs and the History of Life: Lectures (previously offered as EESC V1401)
EESC W1411	Earth: Origin, Evolution, Processes, Future: Lectures (previously offered as EESC V1411)
EESC W1600	Earth Resources and Sustainable Development (previously offered as EESC V1600)
Ecology, Evolution, and Environmental Biology [EEEB]	
EEEB W1001	Biodiversity

EEEB W1010	Human Origins and Evolution (previously offered as EEEB V1010)
EEEB W1011	Behavioral Biology of the Living Primates (previously offered as EEEB V1011)
Recommended Sequences:	
EEEB W1001 - EEEB W3087	Biodiversity and Conservation Biology (see Additional Courses Approved for the Sequence Requirement)
EEEB W1010 - EEEB W1011	Human Origins and Evolution and Behavioral Biology of the Living Primates (previously offered as EEEB V1010)
Electrical Engineering [ELEN]	
ELEN E1101	The digital information age
Mathematics [MATH]	
PHIL V3411	Symbolic Logic
PHIL G4424	Modal Logic
Physics [PHYS]	
PHYS W1001	Physics for Poets
PHYS W3018	Weapons of Mass Destruction
Psychology [PSYC]	
PSYC W1001	The Science of Psychology
PSYC W1010	Mind, Brain and Behavior
Recommended Sequences:	
PSYC W1001 - PSYC W1010	The Science of Psychology and Mind, Brain and Behavior
PSYC W1001	The Science of Psychology (and any PSYC course numbered 22xx or 24xx. 2600-level psychology courses may not be used to fulfill the science requirement.)
Science [SCNC]	
SCNC W1800	From the Conservation of Energy to Energy Conservation
Statistics [STAT]	
STAT W1001	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 W1403	General Chemistry I (Lecture) (previously offered as CHEM C1403)
CHEM W1404	General Chemistry II (Lecture) (previously offered as CHEM C1404)
CHEM W1500	General Chemistry Laboratory (previously offered as CHEM C1500)
CHEM W1604	Intensive General Chemistry (Lecture) (previously offered as CHEM C1604)
CHEM W2507	Intensive General Chemistry Laboratory (previously offered as CHEM C2507)

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
COMS W1007	Honors Introduction to Computer Science

Any 3-point course numbered 3000 or higher

Earth and Environmental Sciences [EESC]

EESC W2100	Earth's Environmental Systems: The Climate System (previously offered as EESC V2100)
EESC W2200	Earth's Environmental Systems: The Solid Earth System (previously offered as EESC V2200)
EESC W2300	Earth's Environmental Systems: The Life System (previously offered as EESC V2300)
EESC W2330	Science for Sustainable Development

Any course numbered 3000 or higher

Ecology, Evolution, and Environmental Biology [EEEB]

EEEB W2001	Environmental Biology I: Elements to Organisms
EEEB W2002	Environmental Biology II: Organisms to the Biosphere
EEEB W3087	Conservation Biology

Any course numbered 3000 or higher except W4321 and W4700

Mathematics [MATH]

Any 3-point MATH course numbered 1100 or higher

CSPH G4801	Mathematical Logic I
CSPH G4802	Math Logic II: Incompleteness

Physics [PHYS]

PHYS W1201	General Physics I (previously offered as PHYS V1201/F1201)
PHYS W1202	General Physics II (previously offered as PHYS V1202/F1202)

PHYS W1401	Introduction To Mechanics and Thermodynamics (previously offered as PHYS C1401)
PHYS W1402	Introduction To Electricity, Magnetism, and Optics (previously offered as PHYS C1402)
PHYS W1403	Introduction to Classical and Quantum Waves (previously offered as PHYS C1403)
PHYS W1601	Physics, I: Mechanics and Relativity (previously offered as PHYS C1601)
PHYS W1602	Physics, II: Thermodynamics, Electricity, and Magnetism (previously offered as PHYS C1602)

Any 3-point course numbered 2000 or higher

Psychology [PSYC]

With prior departmental approval, any 3- or 4-point course
numbered 32xx, 34xx, 42xx, or 44xx

Statistics [STAT]

Any 3-point course except STAT C3997

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/](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/
#studyoutsidecolumbiacollegetext](http://bulletin.columbia.edu/columbia-college/regulations/#studyoutsidecolumbiacollegetext)) Summer Study ([http://
bulletin.columbia.edu/columbia-college/regulations/
#studyoutsidecolumbiacollegetext](http://bulletin.columbia.edu/columbia-college/regulations/#studyoutsidecolumbiacollegetext)) 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](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://www.dodgefitnesscenter.com>)

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. 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 C1005 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: <http://www.dodgefitnesscenter.com>

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

DEGREE REGULATIONS POINTS PER TERM

Columbia College students must register for no fewer than 12 points per term. Part-time status, i.e., registration of fewer than 12 points, is not permissible. Students must petition the Committee on Academic Standing in order to register for more than 22 points. First-year students may not petition to register for more than 22 points in their first semester. The average load for a Columbia College student is 15-16 points per term. Final semester students may petition the Committee on Academic Standing to register for fewer than 12 points if they will complete the degree in that term.

Students not registered for at least 12 points by the end of the Change-of-Program period (p. 4) will be withdrawn from Columbia College.

ATTENDANCE

Students are expected to attend their classes and laboratory periods. 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*—Religious Holidays.

LENGTH OF CANDIDACY

A student is normally permitted eight terms in which to earn the Bachelor of Arts (B.A.) degree at Columbia College. A student 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. Study beyond the eighth semester 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 semester 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 James H. and Christine Turk 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 Center for Student Advising, where all appropriate approvals will be coordinated with the relevant academic departments.

Degree Completion

Transfer students are expected to graduate in eight semesters, 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 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 the student 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 in 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 the College to determine student standing, including academic warning, academic probation, suspension, and dismissal.

Academic Probation

Students may be placed on academic probation for the following reasons: failure to successfully complete 12 points in a term; a term or cumulative grade point average below 2.0; or failure

to make satisfactory progress toward the degree (an average of 15.5 points per term). Students are notified when placed on academic warning. 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 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, suspension, and dismissal remain 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 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 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 or suspension, or are academically dismissed from the College.

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 in one term, will be suspended and required to withdraw from the 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 e-mail and express mail. The decision of the appeals committee is final.

International students in 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) to discuss any options available.

EXAMS AND GRADES EXAMINATIONS

Midterm Examinations

Midterm examinations are generally scheduled by instructors in late October and the middle of March.

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 shortly after the midterm examinations.

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 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 will occasionally have two exams scheduled for the same time and no student is obliged to take three exams 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 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 (November 1 in the fall semester and March 31 in the spring semester).

Failure to Complete a Final Exam

If a student does not take a final exam, or begins but does not complete a final exam, the grade of zero or F will be factored for

that portion of the final grade. No make-up 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 (p. 102) section.

GRADES

The grading system is as follows: A, excellent; B, good; C, fair; D, poor but passing; F, failure (a final grade, not subject to reexamination). Plus and minus grades may also be used, except with D or F. Pass (P) is awarded when students receive a C- or higher in a course 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 twenty-three 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 the College in the fall and spring, and in the Columbia School of Continuing Education in the summer terms, 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 one course each semester during the regular academic year to take on a Pass/D/Fail basis. This is 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 grade Pass/D/Fail. All Core Curriculum courses (i.e., *Literature Humanities*, *Frontiers of Science*, *Contemporary Civilization*, *Art Humanities*, *Music Humanities*, *University Writing*, Global Core, 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, are also excluded from this option, except the first such one-term course taken by the student in his or her eventual major, unless otherwise specified by the department.

The purposes of this option are to encourage students to take courses of interest to them outside of the 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 this grading option may designate in Student Services Online (SSOL) (<https://ssol.columbia.edu>) a single course for the grade of Pass/D/Fail when registering each term in the College until the end of the Change-of-Program period (p. 4). After this and no later than the dates specified on the *Academic Calendar*, i.e., November 19 in Fall 2015 and March 24 in Spring 2016, students may e-mail their request to the Registrar's Office at registrar@columbia.edu and include their full name, UNI, course title and call number, along with the desired grading option.

During the semester and no later than these deadlines, students may elect to change the course designated to be taken on a Pass/D/Fail basis via e-mail. No more than one course may be designated to be taken on a Pass/D/Fail basis at any point in a given semester. If a student elects more than one course to be taken on a Pass/D/Fail basis, the Office of the University Registrar will automatically remove the Pass/D/Fail option from that of the most recently elected course.

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 within two weeks of the start of the semester immediately following that in which the grade of Pass was received. Students have until the end of the add period in the spring semester to uncover the grade of a fall course and until the end of the add period in the fall semester to uncover the grade of a spring or summer term course. Seniors who graduate

in May have until June 1 to uncover the grade of a final spring course.

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 6 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 degree. Degree credit for 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).

The Mark of W (Withdrawal)

Columbia College students are not permitted to have a course deleted from their academic record after the drop deadline (the fifth week of the semester). If a student withdraws from a course after the drop deadline and no later than the Pass/D/Fail deadline (the eleventh week of the semester), 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).

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 (p. 4)). 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.

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 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 probation, suspension, or dismissal.

To withdraw from a class, students must first meet with their advising dean to discuss their plans and then submit a Columbia College Acknowledgment of Course Withdrawal form to their

advising dean in the Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>), 403 Lerner.

Failure to attend classes or unofficial notification to the instructor does not constitute dropping 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 class merits something other than grades A through F, and 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 the dean of advising, whose staff will follow up with the instructor to help determine what final grade is appropriate.

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 and confirmed by Health Services at Columbia), grave family emergency, or circumstances of comparable gravity.

Students who wish to receive the mark of IN must speak with their advising dean in order to petition the Committee on Academic Standing in writing (petition forms are available in the Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>)) before the last day of classes, in the case of course work, or no later than the day before the final examination when requesting permission to miss the examination. To be granted an IN, it is expected that students will have completed all work in the class with the exception of the final project or exam. If a student has not completed all work in the class up to the final 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 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, are eligible for Dean's List only after all IN grades are changed to letter

grades (see *Academic Honors, Prizes, and Fellowships*—Dean's List).

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 Center for Student Advising 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 registers 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 (see *Academic Honors, Prizes, and Fellowships*—Dean's List).

The Mark of CP (Credit Pending)

With specific permission of the Columbia College Committee on Instruction, certain seminars may allow students to complete their research over the winter break and submit their final papers on a pre-arranged date after the start of the spring term. In such instances, a mark of CP will appear on the students' transcripts until the final grade is submitted. The mark of CP cannot be used for individual students but, rather, can only be granted on a course-wide basis. In any given semester, the mark of CP precludes the attainment of Dean's List status (see *Academic Honors, Prizes, and Fellowships*—Dean's List).

Report of Grades

Grades are available on SSOL (<https://ssol.columbia.edu>) on the first business day after they are received by the Registrar. 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>).

PLACEMENT & ADVANCED STANDING

LANGUAGE PLACEMENT EXAMINATIONS

First-year students can select appropriate levels in French, German, Hebrew, Latin, Italian, 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. The exact exam times and dates are provided in the orientation schedule distributed to first-year students when they arrive on campus. Upperclass students should contact departments before the beginning of each semester to inquire about placement exam options other than those provided during the New Student Orientation Program.

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 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 accomplish this, students must submit a transcript and the relevant syllabi to their advising dean in the 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 the course into which placement was awarded (or, the College may require a student to complete a particular course in order to receive advanced credit).

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 and provide the relevant transcript/certificate.

For information about advanced standing for transfer students, see *Academic Regulations*—Regulations for Transfer Students.

ADVANCED PLACEMENT (AP) EXAMINATIONS

College Board Advanced Placement scores cannot be used toward exemption from any of the Core Curriculum courses; however, scores may be used toward satisfying the foreign language requirement (see *The Core Curriculum* (p. 90)—Foreign Language Requirement (p. 90)). Each year, individual departments review the College Board AP curriculum and determine appropriate placements, credit, and/or exemptions.

Students entering in the 2015–2016 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 6 points of credit for each score of 6 or 7 in IB Higher Level examinations if taken in disciplines offered as undergraduate programs at Columbia College, up to a total maximum of 16 points. For further information, students should consult with their advising dean in the 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 6 points of credit for each taken in the disciplines offered as undergraduate programs at Columbia, up to

a total maximum of 16 points. For further information, students should consult with their advising dean in the 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 Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>).

STUDY OUTSIDE COLUMBIA COLLEGE 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 programs and course descriptions.

The Fu Foundation School of Engineering and Applied Science

A maximum of four courses offered by the Fu Foundation School of Engineering and Applied Science may be taken on a space-available basis. The four-course limit does not apply to students in the 3-2 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. 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 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*. 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 Center for Student Advising. Deadlines are often earlier than the College registration and Change-of-Program periods.

School of Continuing Education

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 Continuing Education. The School of Continuing Education sponsors the Summer Session at Columbia. For additional information on taking courses at Columbia during the summer, please see the Summer Study (p. 106) 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 of Academic Affairs, 407E Journalism.

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 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 in the Center for Student Advising.

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 Public Health permissions are secured, students must also receive signed permission from the 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.

The Public Health Cross Registration Form can be found at <http://www.mailman.columbia.edu/students/student-academics/registration-course-info/downloadable-forms>.

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 affairs of Columbia College, 208 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 the dean of advising in the 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. There is a 16-point limit per Summer Session, with no more than 8 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. This is 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 section of this Bulletin.

Students who plan to take any summer courses toward their major or concentration must consult with their major department. **Not all courses in the Summer Session Bulletin 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 Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>), 403 Lerner.
2. Read carefully the procedures to follow 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 or successful completion of a 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 the study plans with their advising dean in the 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. Submitted to students' advising deans, the request is 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 Center for Student Advising for approval by the appropriate faculty committee, prior to taking the course. Note that only non-Columbia study abroad courses may be petitioned towards the Global Core requirement. Approval to receive College credit for summer school courses does **not** ensure approval of the course toward 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 (p. 114), or to participate in approved exchange programs (p. 117). Exceptions may be granted for study during the summer. See the Summer Study (p. 106) 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, only one of 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.

WITHDRAWALS, LEAVES, & READMISSION

Withdrawal is defined as the dropping of one's entire program in a given term and thus withdrawal from the College. 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.**

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 (whether cumulatively or consecutively).

Unless a student is granted an exception in extenuating circumstances, a student is permanently withdrawn after they exceed this maximum time period and must reapply for admission through the school's regular admissions process. Students may only return in the fall or spring term. Under no circumstances will students be readmitted from medical leave to enroll in courses for the Columbia Summer Session. The length of the leave must fall within these parameters and be accompanied by an individualized assessment by a healthcare practitioner at the start and end of leave.

Students must consult with their advising dean 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 e-mail as this is the official means of communication by the University. All questions can continue to be addressed to students' advising deans.

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 Pass/D/Fail deadline, the semester will not appear on the record and will not count toward the eight-semester limit. If a leave begins after that deadline, courses will remain on the transcript, and the semester will count toward the eight total semesters granted every undergraduate in the College. Ordinarily, Columbia College students who are authorized to withdraw for medical reasons after the Pass/D/Fail 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 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 this, the student must have completed all work for the course except the final paper, exam, or project; the course must not have required attendance; and the student must have obtained the approval of the relevant deans in the Center for Student Advising and the faculty. Students should consult with their advising deans for more details.

As noted, in rare cases, students who initiate a leave beyond the deadline listed above may qualify for authorized Incompletes in their courses. 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 during the deferred exam period. If the work is not completed during the deferred exam period of the semester in which the student returns, the grade will convert to the contingency grade or an F. Due dates of incomplete work should be determined in consultation with the CSA advising dean 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 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 completion of the degree in eight terms.

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.

Additionally, if a student matriculates at another institution while on leave from Columbia, s/he will have to apply to Columbia as a transfer student through the Office of Undergraduate Admissions (p. 42) and cannot be readmitted via the medical leave readmission process.

Readmission from Medical Leave of Absence

Students must complete all parts of the following readmission procedures by the following deadlines:

- Fall semester readmission – June 1
- Spring semester readmission – November 1
- Summer Session readmission – not permitted

In order to begin readmission, students must first discuss their plans with their advising dean and then submit by e-mail or fax to their advising deans the following letters:

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, progress made, an evaluation of students' readiness to return to full-time study at Columbia, and the recommended continued care plan.

The Medical Leave Readmission Committee, made up of representatives of Columbia University Health Services and the Center for Student Advising, meets in June and November to consider readmission requests for the fall and spring, respectively. Committee review is not guaranteed when documentation is submitted late. Students will receive notification regarding one of the following three outcomes of the Committee's assessment of readmission requests:

1. Applicants are approved for interview by a Columbia University Health Services practitioner for final adjudication. Students may then be officially readmitted or denied readmission and will be notified by the Center for Student Advising by letter and email;
2. Additional information is requested;
3. Readmission denied. Students may reapply.

Once officially readmitted, students will be provided an on-line 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 housing application by following the instructions in the readmission letter. Students on leave cannot participate in housing lotteries until readmitted.

Students must note that all financial obligations to the University must be cleared before readmission is finalized.

Students are urged to meet with their advising dean and a Residential Programs staff member, if applicable, during the first two weeks upon return to campus to ensure a smooth transition to the campus community.

VOLUNTARY LEAVE OF ABSENCE

A voluntary leave of absence (VLOA) 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 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 while on leave from Columbia, s/he will have to apply to Columbia as a transfer student through the Office of Undergraduate Admissions (p. 42) and cannot be readmitted via the voluntary leave readmission process.

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 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 semester, the semester will be deleted if the leave begins prior to the drop deadline. Normally, if a student leaves after the drop deadline, all courses will receive a mark of W (authorized withdrawal). In certain circumstances, a student may qualify for an Incomplete, which would have to be completed by the first week of the semester in which the student returns to Columbia. If the Incomplete is not completed by that time, a W will be inserted.

To return to Columbia College, students must notify the 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.

Students may not take courses for transferable credit while on leave. If a student matriculates at another institution while on leave from Columbia, s/he will have to apply to Columbia as a transfer student through the Office of Undergraduate Admissions (p. 42) and cannot be readmitted via the family emergency leave readmission process.

Students who decide not to return must notify the Center for Student Advising of their decision. Leaves may not extend beyond four semesters. Students who do not notify the Center for Student Advising of their intentions by the end of the two-year period will be permanently withdrawn from the College.

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 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 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 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 in 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 while on leave from Columbia, s/he will have to apply to Columbia as a transfer student through the Office of Undergraduate Admissions (p. 42) and cannot be readmitted via the voluntary/medical/family leave readmission process.

GOVERNANCE

DEGREE REQUIREMENTS

The Committee on Instruction and the faculty of Columbia College review College degree requirements and curricular matters each year. The Bulletin reflects these faculty recommendations and curricular changes in its annual publication. College policy requires students to fulfill the degree requirements as stated in the bulletin of the first year of their matriculation into the 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 Arts and Sciences. Students wishing to petition the Committee are advised to discuss their requests with their advising dean.

THE COLUMBIA COLLEGE COMMITTEE ON ACADEMIC STANDING

The Columbia College Committee on Academic Standing 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 is expected to uphold the policies and regulations of the Committee on Instruction.

The Committee on Academic Standing is composed of advising deans, the associate dean of advising, and the dean of advising.

REGISTRATION

University Registrar (<http://registrar.columbia.edu>): 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. 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 in Vergil (<https://vergil.registrar.columbia.edu>) for all of the approvals required.

To comply with current and anticipated Internal Revenue Service mandates, Columbia 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 (telephone: 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 Columbia University or of any other institution, without specific authorization of 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>).

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.

No Columbia College student may register for fewer than 12 points in any given semester without the express permission of the Committee on Academic Standing (<https://www.cc-seas.columbia.edu/csa/cas>). 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 point will be withdrawn from the College unless permission to remain is granted by the Committee on Academic Standing. Questions should be directed to the James H. and Christine Turk Berick Center for Student Advising (CSA) (<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. Students should also consult the Registrar's website (<http://registrar.columbia.edu>) for additional information.

REGISTERING FOR CLASSES

Registration for classes is by appointment on-line via Student Services Online (SSOL) (<https://ssol.columbia.edu>). Some classes may be blocked for on-line registration and require written approval; students should check the directory of classes in Vergil (<https://vergil.registrar.columbia.edu>) for approval information. Courses blocked from on-line registration can only be added to a student's academic program by the Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) and require a completed Registration Adjustment form, with all necessary approvals confirmed. Students cannot use the Registration Adjustment form to register for courses not blocked from on-line registration.

Students otherwise unable to register through SSOL must submit to the Center for Student Advising a completed Registration Adjustment form, with all necessary approvals confirmed.

Students are not permitted to register for more than 22 points or for overlapping classes. They are responsible for ensuring that their academic programs are in accordance with these policies. If students are accepted into courses through the Wait List mechanism which results in registration for more than 22 points and/or for overlapping courses, students are required to bring their enrollment down to 22 points or fewer and to resolve the overlaps by dropping courses by the end of the Change-of-Program period (p. 4). The Committee on Academic Standing in the Center for Student Advising 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 on-line by appointment until the drop deadline. With the exception of certain Core Curriculum courses (see below (p. 112)), the final dates for dropping courses are October 13 for Fall 2015 and February 23 for Spring 2016.

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 (the eleventh week of the semester), 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.

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). 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.

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 face academic probation, suspension, or dismissal. Students who do not make adequate progress to the degree (an average of 15.5 points per term) will also face probation, suspension, or dismissal.

To withdraw from a class, students must first meet with their advising dean to discuss their plans and then submit a Columbia College Acknowledgment of Course Withdrawal form to their advising dean in the Center for Student Advising (CSA) (<https://www.cc-seas.columbia.edu/csa>), 403 Lerner.

Failure to attend classes or unofficial notification to the instructor does not constitute dropping a course. Students who stop attending classes without dropping or officially withdrawing are assigned the letter grade earned by factoring as zero or F for any missing work.

DROPPING CORE COURSES

Students may drop a Core Curriculum course, using the on-line registration system, no later than September 18 for Fall 2015 and January 29 for Spring 2016. Note that these deadlines differ from

the deadlines 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 *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 CSA advising dean 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 19 for Fall 2015 and by Thursday, March 24 for Spring 2016.

If the grading option change is not available in Student Services Online (SSOL) (<https://ssol.columbia.edu>) at the time that students wish to change it, they should email the Registrar's Office at registrar@columbia.edu and include their full name, UNI, course title and call number, along with the desired grading option. Please refer to *Academic Regulations—Exams and Grades* 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 (p. 73);
- Complete the Core foreign language requirement (p. 90) (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
- The Consortium for Advanced Studies in Barcelona
- 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.

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 Office of Financial Aid and Educational Financing (<https://cc-seas.financialaid.columbia.edu>), 618 Lerner; 212-854-3711; ugrad-finaid@columbia.edu.

SPONSORED PROGRAMS

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 e-mail 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 e-mail 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 e-mail 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 e-mail 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.bcgs.columbia.edu> and e-mail 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>).

Spain: The Consortium for Advanced Studies in Barcelona

The Consortium for Advanced Studies in Barcelona (CASB) offers a full-immersion program designed to accommodate students in any major with advanced Spanish or Catalan skills. Students are immersed in the local university environment and take their courses at one or more of the Consortium's four distinguished partner universities: the Universitat de Barcelona (UB), the Universitat Autònoma de Barcelona (UAB), the Universitat Pompeu Fabra (UPF), and the Universitat Politècnica de Catalunya (UPC). The combined course offerings of the four universities offer students a vast array of opportunities in the humanities, social sciences, physical and natural sciences, and the arts. All students also attend a language and culture pro-seminar course during the first three weeks of the program which provides basic Catalan instruction, Spanish review, an overview of Spanish history and culture as well as a variety of excursions and activities. Comprehensive student services support the academic and social experience. The program runs the full academic year, although a semester option is also available.

Applicants must have the equivalent of five semesters of college-level Spanish or Catalan.

For program information, students may consult <http://www.ogp.columbia.edu> and e-mail ogp@columbia.edu.

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 e-mail ogp@columbia.edu.

EUROPE AND THE MIDDLE EAST

Turkey: Columbia Global Seminar in Istanbul: Byzantine and Modern Greek Encounters

The Columbia Global Seminar in Istanbul allows students to combine courses taken at Boğaziçi University with two seminars taught by Columbia faculty. The two seminars, composed of not more than 15 American, Turkish, and Greek students, will be taught consecutively in condensed sessions over the spring term. Students will also take a Turkish language course and two other courses in any discipline. Boğaziçi University 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.

This program is available only in the spring term.

For program information, students may consult <http://www.ogp.columbia.edu> and e-mail ogp@columbia.edu.

LATIN AMERICA AND THE CARIBBEAN

Cuba: The Consortium for Advanced Studies in Cuba

The Consortium for Advanced Studies Abroad's (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 e-mail ogp@columbia.edu.

SUMMER STUDY ABROAD

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 e-mail 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 3-point 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 e-mail 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 e-mail 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 e-mail 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 e-mail 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 e-mail ogp@columbia.edu.

Korea: The Columbia Global Seminar in Seoul: Visual Cultures at Yonsei University

This four-week program provides Columbia students with the opportunity to study alongside Yonsei University students and examines the connections between visual culture and the urban space, with a focus on the modern history of Seoul as site of the local and the global. Students participate in field trips related to readings/film screenings, as well as a Korean language and culture workshop.

For program information, students may consult <http://www.ogp.columbia.edu> and e-mail 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 e-mail ogp@columbia.edu.

Art Humanities and Music Humanities in Paris

This six-week program enables students to complete two Core Curriculum (p. 73) 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 e-mail ogp@columbia.edu.

Italy: The Archaeological Fieldwork at Hadrian's Villa Program in Rome

This four-week program provides students with the unique opportunity to excavate at Hadrian's Villa, a UNESCO World Heritage site near Rome and the most important of Roman imperial villas. Students learn archaeological techniques at all levels and think critically about how excavation work allows for deeper insight into the social, political, economic, architectural, and artistic history of classical antiquity.

For program information, students may consult <http://www.ogp.columbia.edu> and e-mail 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 e-mail ogp@columbia.edu.

LATIN AMERICA

Brazil: The Summer Portuguese Program in Rio de Janeiro

This four-week program is based at the Pontificia Universidade Catolica (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 e-mail ogp@columbia.edu.

THE MIDDLE EAST

Turkey: The Columbia-Boğaziçi Byzantine Studies and Urban Mapping in Istanbul

This six-week program explores the history, urban development, and historic monuments of the city of Byzantium/Constantinople/Istanbul. Participants are encouraged to explore and understand Istanbul's modern topography as an exciting palimpsest of empires, cultures, and religions first hand.

For program information, students may consult <http://www.ogp.columbia.edu> and e-mail 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).

INTERNATIONAL EXCHANGE

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
- Universität der Künste
- 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 Office of Financial Aid and Educational Financing (<https://cc-seas.financialaid.columbia.edu>), 618 Lerner; 212-854-3711; ugrad-finaid@columbia.edu.

SPECIAL PROGRAMS

HEALTH PROFESSIONS

Preprofessional Advising (<https://www.cc-seas.columbia.edu/preprofessional>): James H. and Christine Turk Berick Center for Student Advising, 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 (p. 73) 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 James H. and Christine Turk Berick Center for Student Advising, as well as their major adviser in planning a program that meets all of 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 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 the spring of 2015, for which the recommended minimum preparation is:

- 1 year of General Chemistry and General Chemistry Lab
- 1 year of Organic Chemistry and Organic Chemistry Lab
- 1 year of Introductory Biology and Biology Lab
- 1 year of General Physics and Physics Lab
- 1 semester of Introductory Psychology

At Columbia, the following courses correspond to the above requirements:

Chemistry

Select one of the following three options:

Option 1:

CHEM W1403 - CHEM W1404	General Chemistry I (Lecture) and General Chemistry II (Lecture)
CHEM W1500	General Chemistry Laboratory

Option 2: for students who place into the accelerated track:

CHEM W1604	Intensive General Chemistry (Lecture)
CHEM W2507 or CHEM W1500	Intensive General Chemistry Laboratory General Chemistry Laboratory

Option 3: available to students depending on results of placement exam:

CHEM W2507	Intensive General Chemistry Laboratory
CHEM W3045 - CHEM W3046	Intensive Organic Chemistry I (Lecture) and Intensive Organic Chemistry II (Lecture)
CHEM W3545	Intensive Organic Chemistry Laboratory

Organic Chemistry

CHEM W3443 - CHEM W3444	Organic Chemistry I (Lecture) and Organic Chemistry II (Lecture)
CHEM W3493 - CHEM W3494	Organic Chemistry Laboratory I (Techniques) and Organic Chemistry Laboratory II (Synthesis)

Biology

BIOL C2005 - BIOL C2006	Introductory Biology I: Biochemistry, Genetics & Molecular Biology and Introductory Biology II: Cell Biology, Development & Physiology
BIOL W2501	Contemporary Biology Laboratory (or other Biology laboratory approved by premedical adviser)

Physics

Select one of the following three options:

Option 1:

PHYS W1201 - PHYS W1202	General Physics I and General Physics II
PHYS W1291 - PHYS W1292	General Physics Laboratory and General Physics Laboratory II

Option 2:

PHYS W1401 - PHYS W1402	Introduction To Mechanics and Thermodynamics and Introduction To Electricity, Magnetism, and Optics
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Or

PHYS W1601 - PHYS W1602	Physics, I: Mechanics and Relativity and Physics, II: Thermodynamics, Electricity, and Magnetism
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Also select one of the following laboratories:

PHYS W1291 - PHYS W1292	General Physics Laboratory and General Physics Laboratory II
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PHYS W1493	Introduction to Experimental Physics
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PHYS W1494	Introduction to Experimental Physics
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PHYS W2699	Experiments in Classical and Modern Physics
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PHYS W3081	Intermediate Laboratory Work
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Option 3:

PHYS W2801 - PHYS W2802	Accelerated Physics I and Accelerated Physics II
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Also select one of the following laboratories:

PHYS W1493	Introduction to Experimental Physics
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PHYS W1494	Introduction to Experimental Physics
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PHYS W2699	Experiments in Classical and Modern Physics
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PHYS W3081	Intermediate Laboratory Work
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Psychology

PSYC W1001	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 C1010) and *Masterpieces of Western Literature and Philosophy (Literature Humanities)* (HUMA C1001-HUMA C1002).
- **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 small 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 in the Association of American Medical Colleges (AAMC) website (<https://services.aamc.org/30/msar/home>).

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 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 Advanced Placement 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 summer following the junior year. It is entirely acceptable (and often preferred) for students to take time between undergraduate and health profession school and thus delay application 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 Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>), 403 Lerner; 212-854-6378; preprofessional@columbia.edu.

VOLUNTEER PROGRAM

Preprofessional Advising (<https://www.cc-seas.columbia.edu/preprofessional>) maintains an on-line listing of many different clinical 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.

DUAL/JOINT DEGREE PROGRAMS 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 V1101 - MATH V1102 - MATH V1201	Calculus I and Calculus II and Calculus III (at a minimum)
MATH V1202	Calculus IV (required for some programs)
MATH V2030	Ordinary Differential Equations (formerly MATH E1210)

Chemistry

Select one of the following three sequences:

CHEM W1403 - CHEM W1404	General Chemistry I (Lecture) and General Chemistry II (Lecture)
CHEM W1604	Intensive General Chemistry (Lecture)
CHEM W3045 - CHEM W3046	Intensive Organic Chemistry I (Lecture) and Intensive Organic Chemistry II (Lecture)

Laboratory requirement depends on specific program

Physics

Select one of the following three sequences:

PHYS W1401 - PHYS W1402	Introduction To Mechanics and Thermodynamics and Introduction To Electricity, Magnetism, and Optics
PHYS W1601 - PHYS W1602	Physics, I: Mechanics and Relativity and Physics, II: Thermodynamics, Electricity, and Magnetism
PHYS W2801 - PHYS C2802	Accelerated Physics I and General Physics

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 W1105	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 website (<http://undergrad.admissions.columbia.edu/apply/combined-plan>)). 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, the Undergraduate Admissions Office conducts information sessions in which students meet with the Combined Plan Program administrator. For more information, students should contact their advising dean in the Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>), 403 Lerner, or e-mail 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 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 program is selective, and admission is based on the following factors: granting of the B.S. at SEAS at the end of the fourth

year; the fulfillment of the College Core Curriculum (p. 73) requirements by the end of the fourth year at SEAS; maintaining a minimum GPA of 3.0 in College Core and other courses; the successful completion of any prerequisites for the College major or concentration; and creating a plan to complete a 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 Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>), 403 Lerner; 212-854-6378; csa@columbia.edu.

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 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, 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 (p. 73) 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 grade point average. 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 Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>), 403 Lerner; 212-854-6378; csa@columbia.edu.

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 Exchange Program

Students can be invited to cross-register for weekly instrumental (classical and jazz), composition, and vocal instruction with the

Juilliard faculty, but not participate in Juilliard ensembles or classes, 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.

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 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, 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 Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>). To apply, Columbia College students must have completed 94 points of course work, including the Core Curriculum (p. 73) 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 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 annually provides up to one or two 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 College Core Curriculum (p. 73) 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 Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>).

The College nominates one or two juniors each year; 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 course work 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 dean of their plans to graduate in order to be considered for honors and Phi Beta Kappa. AILE students receive 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 the Office of 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 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, 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 (p. 73) 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 grade point average. 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 Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>), 403 Lerner; 212-854-6378; csa@columbia.edu.

EXCHANGE PROGRAMS 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 Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>), 403 Lerner; 212-854-6378; csa@columbia.edu.

ACADEMIC HONORS, PRIZES, AND FELLOWSHIPS

HONORS

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), YC (year course), or CP (credit pending) during the term are not eligible for consideration. 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.

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.

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.

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 three criteria:

1. 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);
2. A grade point average (GPA) of at least 3.6 in major courses is expected for a student to be considered for departmental honors;
3. An honors thesis or equivalent project of high quality should be required by each department or academic program in order to receive 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 is inducted into Phi Beta Kappa by faculty who are members of the society. Two percent is elected in November and the other eight percent is 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.

PRIZES

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.

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.

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.

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 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.

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

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.

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.

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.

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.

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.

SCIENCE RESEARCH FELLOWS PROGRAM

A four-year fellowship program awarded to the most promising science students at the College. Fellows are guaranteed two summer research experiences with a Columbia scientist and their research culminates with a presentation at the annual Science Research Symposium.

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.

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.

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 Columbia University.

Violations of academic integrity may be intentional or unintentional and can include, but is 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 application, petition, or documents submitted to the 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.

The Office of Judicial Affairs and Community Standards is responsible for all disciplinary affairs concerning undergraduate students that are not reserved to some other body.

Columbia College students are expected to familiarize themselves with the [Handbook of Standards and Discipline](#) and the comprehensive list of policies and expectations available on

the website of the Office of Judicial Affairs and Community Standards.

COLUMBIA UNIVERSITY POLICIES

Since policies and procedures are subject to change, please check the Columbia University website (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.

The Bulletin sets forth in general 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*: 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/Rules of University Conduct
- Student E-mail Communication Policy
- CUIT Computer and Network Use Policy
- Policies on Alcohol and Drugs
- Equal Opportunity and Nondiscrimination Policies
- Gender-Based Misconduct Policies
- 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
- 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>) in Alfred Lerner Hall, 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 e-mail for privacy and security reasons. The blood test and MMR immunizations can be obtained at Columbia Health Medical Services.

For information about these requirements, visit the Columbia Health Insurance and Immunization Compliance website (<http://health.columbia.edu/insurance-and-immunization-compliance-offices>), call 212-854-7210, or e-mail hs-enrollment@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-line (<https://ssol.columbia.edu/ssv/crt/menIntro.html>). Full instructions are given on-line, 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 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 Medical Services. Students paying the Columbia Health Fee are not charged for the following vaccines when administered at Medical Services: MMR, Hepatitis A, Hepatitis B, Hepatitis

Combination A and B, Influenza, Meningococcal Meningitis, Pneumococcal (if clinically indicated), Tetanus-Diphtheria, Tetanus-Diphtheria-Pertussis, and 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 e-mail immunizationcompliance@columbia.edu.

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 commencement ceremony in May (see *Academic Calendar*).

Application or Renewal of Application for the Degree

Students pick up and file applications for their degree at the Center for Student Advising (<https://www.cc-seas.columbia.edu/csa>) in 403 Lerner Hall. General deadlines for applying for graduation are August 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 e-mail the Registrar's Office at registrar@columbia.edu.

If students wish to change their name, they must submit the Name Change Affidavit located on the back of the degree application form. The affidavit must be notarized and filed by the application deadline.

If students' 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 at registrar.columbia.edu/registrar-forms/application-replacement-diploma

For additional information, see the following websites:
www.columbia.edu/cu/registrar/docs/forms/app-for-deg-or-cert.html
registrar.columbia.edu/students/graduation-and-diplomas
www.columbia.edu/cu/ceremonies/commencement/

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.

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 and the professional staff of the School in which the student is enrolled.

The Ombuds Office 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 involving faculty misconduct in an instructional setting. Students may wish to consult with the Ombuds Office before taking their concerns to the School, or they may wish to consult with the Ombuds Office 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, each of the Schools has a professional staff ready to help students with concerns and complaints of many kinds, including those involving 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.

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.

Due to the size and diverse nature of our scholarly community, each school maintains its own processes for addressing a variety of student life issues, including students' concerns about

experiences in the classroom or with faculty at their school. Experience has shown that most student concerns are best resolved in a collaborative way at the school level, starting with the advising dean or dean of students, as explained below for your particular school.

The grievance procedures available through the office of the Vice President for Arts and Sciences 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>).

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 can learn more about how to initiate a concern, complaint, or grievance on the Columbia College website (<http://www.college.columbia.edu/academics/complaints-studentinformation>).

We welcome students' thoughts on ways to clarify or enhance these procedures: Columbia College students may e-mail cc-academicaffairs@columbia.edu.

Timeframe for Proceedings

A student should ordinarily bring any concern or complaint within thirty (30) days of the end of the semester in which the offending conduct occurred or by the beginning of the following semester. The school process will ordinarily take thirty (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, any concern may be raised with the University's Ombuds Officer, a neutral complaint handler for the University. The office offers a range of options and communication channels. Students, however, must be aware that the Ombuds Office 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.

Columbia 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
Melissa Rooker, Associate Provost
Office of Equal Opportunity and Affirmative Action, 103 Low Library
mrooker@columbia.edu; 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 or 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 Student Services for Gender-Based and

Sexual Misconduct (<http://ssgbsm.columbia.edu>). For additional information on these issues, policies and resources, please visit the Sexual Respect website at: <https://titleix.columbia.edu/>.

Complaints against students for gender-based misconduct are processed in accord with the Gender-Based Misconduct Policies for Students (http://ssgbsm.columbia.edu/files/gbsm/content/Gender-Based_Misconduct_Policies_Students.pdf). 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/files/eoaa/content/ement_discrim_harass_april_2013_final.pdf). 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/files/eoaa/content/consensual_relationship_policy_2d_july_2012_brochure.pdf) 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/files/eoaa/content/consensual_relationship_staff_to_student.march2013.pdf) 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

103 Low Library, MC 4333
<http://eoaa.columbia.edu/>; eoaa@columbia.edu; 212-854-5511

Title IX Coordinator/Section 504 Officer for Columbia University
Melissa Rooker, Associate Provost
Office of Equal Opportunity and Affirmative Action, 103 Low Library
mrooker@columbia.edu; 212-854-5511

Deputy Title IX Coordinator for Staff and Faculty Concerns
Michael K. Dunn, Director of Investigations
Office of Equal Opportunity and Affirmative Action, 103 Low Library
mkd2010@columbia.edu; 212-854-6699

Deputy Title IX Coordinator for Student Concerns (temporary)
Virginia Ryan, Interim Assistant Director
Student Services for Gender-Based and Sexual Misconduct, 108I Wien Hall
vmr2105@columbia.edu, 212-854-1717

Deputy Title IX Coordinator for Student Concerns
Jeri Henry, Interim Director
Gender-Based Misconduct, Office of Judicial Affairs and Community Standards, 2852 Broadway, Second Floor
jh3079@columbia.edu; 212-854-1717

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:

Counseling Services
Columbia Morningside: 212-854-2878, CUMC: 212-496-8491

Rape Crisis/Anti-Violence Support Center, 212-854-HELP

Office of the University Chaplain, 212-854-6242

Columbia Health*
Columbia Morningside (212) 854-2284, Columbia Morningside clinician-on-call (212)854-9797
CUMC: 212-305-3400, CUMC clinician-on-call: 212-305-3400

** Medical providers are considered confidential resources in the context of providing medical treatment to a patient.*

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.

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- American Studies (p. 140)
- Ancient Studies (p. 142)
- Anthropology (p. 144)
- Archaeology (p. 147)
- Architecture (p. 149)
- Art History and Archaeology (p. 151)
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- Business (p. 164)
- Chemistry (p. 166)
- Classics (p. 173)
- Colloquia, Interdepartmental Seminars, and Professional School Offerings (p. 177)
- Comparative Literature and Society (p. 178)
- Computer Science (p. 181)
- Creative Writing (p. 188)
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- Drama and Theatre Arts (p. 194)
- Earth and Environmental Sciences (p. 198)
- East Asian Languages and Cultures (p. 205)
- Ecology, Evolution, and Environmental Biology (p. 209)
- Economics (p. 217)
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- Ethnicity and Race Studies (p. 234)
- Film Studies (p. 237)
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- Jazz Studies (p. 256)
- Jewish Studies (p. 258)
- Language Resource Center (p. 260)
- Latin American and Caribbean Studies (p. 261)
- Latin American and Iberian Cultures (p. 263)
- Linguistics (p. 267)
- Mathematics (p. 270)
- Medieval and Renaissance Studies (p. 275)
- Middle Eastern, South Asian, and African Studies (p. 276)
- Music (p. 279)
- Philosophy (p. 283)
- Physical Education and Intercollegiate Athletics (p. 286)
- Physics (p. 288)
- Political Science (p. 291)
- Psychology (p. 299)
- Regional Studies (p. 306)
- Religion (p. 307)
- Slavic Languages (p. 310)
- Sociology (p. 314)
- Statistics (p. 316)
- Sustainable Development (p. 323)
- Urban Studies (p. 327)
- Visual Arts (p. 329)
- Women's and Gender Studies (p. 331)

AFRICAN-AMERICAN STUDIES

Institute for Research in African-American Studies: 758 Schermerhorn Extension; 212-854-7080
<http://www.columbia.edu/cu/iraas/>

Director of the Institute for Research in African-American Studies:

Prof. Samuel K. Roberts, 758 Schermerhorn Extension;
 212-854-7080; skr2001@columbia.edu

Director of Undergraduate Studies: Prof. Josef Sorett, 80 Claremont Avenue; 212-854-4141; 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).

FACULTY

SENIOR FACULTY

- Robert Gooding-Williams (Philosophy)
- Steven Gregory (Anthropology)
- Farah J. Griffin (English and Comparative Literature)
- Samuel K. Roberts (History)

- Sudhir A. Venkatesh (Sociology)

JUNIOR FACULTY

- Kevin Fellezs (Music)
- Carla Shedd (Sociology)
- Josef Sorett (Religion)

RESEARCH FELLOWS

- Marcellus Blount (English and Comparative Literature)
- Fredrick C. Harris (Political Science)
- Carl Hart (Psychology)
- Kellie E. Jones (Art History and Archaeology)
- Natasha Lightfoot (History)
- Dorian Warren (Political Science)
- Mabel Wilson (Architecture, Planning and Preservation)

AFFILIATED FACULTY

- Christopher Brown (History)
- Maguette Camara (Dance, Barnard)
- 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)

REQUIREMENTS

MAJOR IN AFRICAN-AMERICAN STUDIES

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 36 points is required for the major as follows:

AFAS C1001	Introduction to African-American Studies
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AFAS C3936	Black Intellectuals Seminar
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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

A minimum of 24 points is required for the concentration. All students must take the introductory course, AFAS C1001 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 C3936 Black Intellectuals Seminar 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: Terri Rivera, 319 Hamilton;
 212-854-6698; tr2454@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.

FACULTY

AFFILIATED FACULTY

- Rachel Adams (English and Comparative Literature)
- Casey N. Blake (History; American Studies)
- Jeremy Dauber (Germanic Languages)
- Andrew Delbanco (English and Comparative Literature; American Studies)
- Robert A. Ferguson (Law; English and Comparative Literature)
- Eric Foner (History)
- Todd Gitlin (Journalism; Sociology)
- Farah Griffin (English and Comparative Literature)
- Alice Kessler-Harris (History)
- Shamus Khan (Sociology)

- Rebecca Kobrin (History)
- Roosevelt Montás (Core Curriculum)
- Ross Posnock (English and Comparative Literature; American Studies)
- Wayne Proudfoot (Religion)
- Jonathan Rieder (Sociology, Barnard)
- Maura Spiegel (English and Comparative Literature)

REQUIREMENTS

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

The major in American studies requires a minimum of 30 points, as follows:

Introductory Course

AMST W1010	Introduction to American Studies (Not offered 2014-2016)
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Seminars

Select two seminars in American studies.

Core Courses

Complete two American studies core courses:

ENGL W3267	Foundations of American Literature
HIST W3478	U.S. Intellectual History, 1865 To the Present

Additional Courses

Select three additional courses, in consultation with the adviser. These courses must be drawn from at least two departments, one of which must be history.

Senior Research Project

The final requirement for the major is the completion of a senior essay, to be written in the spring of senior year. Alternatively, students may fulfill this requirement by taking an additional seminar where 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 AMST W3920, Senior Project Colloquium, in the fall of the senior year.

CONCENTRATION IN AMERICAN STUDIES

The concentration in American studies requires a minimum of 21 points, as follows:

Introductory Course

AMST W1010	Introduction to American Studies (Not offered 2014-2016)
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Core Courses

Two American studies core courses:

ENGL W3267	Foundations of American Literature
HIST W3478	U.S. Intellectual History, 1865 To the Present

Additional Courses

Select four additional courses, in consultation with the adviser. These courses must be drawn from at least two departments, one of which must be history.

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

Program Administrator: Gerry Visco, 617 Hamilton; 212-854-2726; gvw1@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 V3995 The Major Seminar during the fall, and ANCS V3998 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.

REQUIREMENTS

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 V3995	The Major Seminar (fall term of senior year)
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Senior Thesis

ANCS V3998	Directed Research In Ancient Studies (spring term of senior year)
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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 W1010	The Ancient Greeks 800-146 B.C.E.
or HIST W1020	The Romans, 754 BC to 565 AD
AHIS V3248	Greek Art and Architecture
or AHIS V3250	Roman Art and Architecture
PHIL V2101	History of Philosophy I: Pre-Socratics through Augustine
CLLT V3132	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>

Director of Undergraduate Studies:

Prof. Audra Simpson, 857 Schermerhorn Extension;
 212-854-5901; as3575@columbia.edu

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

Departmental Administrator: Esperanza Soriano, 452

Schermerhorn Extension; 212-854-4552; ecs2@columbia.edu

Undergraduate Secretary: Marilyn Astwood, 452 Schermerhorn

Extension; 212-854-4552; mp20@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 V3999 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.

FACULTY PROFESSORS

- Nadia Abu El-Haj (Barnard)
- Lila Abu-Lughod
- Partha Chatterjee
- Myron L. Cohen
- Terence D'Altroy
- E. Valentine Daniel
- Steven Gregory
- Ralph L. Holloway
- Claudio Lomnitz
- Mahmood Mamdani
- Brinkley Messick
- Rosalind Morris
- Elizabeth Povinelli
- Nan Rothschild (Barnard, *emerita*)
- David Scott
- Lesley A. Sharp (Barnard)
- Michael Taussig
- Paige West (Barnard)

ASSOCIATE PROFESSORS

- Elaine Combs-Schilling
- Zoe Crossland
- Catherine Fennell
- Severin Fowles (Barnard)
- Marilyn Ivy
- Brian Larkin (Barnard)
- John Pemberton
- Audra Simpson

ASSISTANT PROFESSORS

- Sarah Muir (Barnard)
- Stephen K. Scott (Barnard)
- Maxine Weisgrau (Barnard)

LECTURERS

- Brian Boyd
- Gokce Gunel
- Ellen Marakowitz

- Karen Seeley

ADJUNCT RESEARCH SCHOLAR

- Laurel Kendall

REQUIREMENTS 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 program of study should be planned as early as possible in consultation with the director of undergraduate studies and/or department consultants. A minimum of 30 points in the Department of Anthropology and 6 points of related courses taken in other departments are required as follows:

Sociocultural Focus

ANTH V1002	The Interpretation of Culture
ANTH V2004	Introduction to Social and Cultural Theory
ANTH V2005	Ethnographic Imagination

Two courses (from within anthropology or from another department) that focus on a particular culture, nation, or literature.

Additional courses (from within anthropology or from another department) to meet the required minimum points for the major.

Archaeology Focus

ANTH V1002	The Interpretation of Culture
ANTH V2004	Introduction to Social and Cultural Theory
ACLG V2028	Pasts, Presents & Futures: An Introduction to 21st Century Archaeology

Two courses (from within anthropology or from another department) that focus on a particular culture, nation, or literature.

Additional courses (from within anthropology or from another department) to meet the required minimum points for the major.

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

A minimum of 20 points in the Department of Anthropology are required as follows:

Sociocultural Focus

ANTH V1002 The Interpretation of Culture

Additional courses (from within anthropology or from another department) to meet the required minimum points for the concentration.

Archaeology Focus

ACLG V2028 Pasts, Presents & Futures: An
Introduction to 21st Century
Archaeology

Additional courses (from within anthropology or from another department) to meet the required minimum points for the concentration.

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: 965 Schermerhorn Extension
<http://www.columbia.edu/cu/archaeology>

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.

FACULTY 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 Mieroop

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)

REQUIREMENTS

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 V2028	Pasts, Presents & Futures: An Introduction to 21st Century Archaeology
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ANTH V1008	The Rise of Civilization
or ANTH V1007	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 V3993	World Archaeologies/Global Perspectives **
------------	--

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 W3997 Supervised Individual Research Course In Anthropology or AHIS C3997 Senior Thesis, 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 V1007	The Origins of Human Society
ANTH V1008	The Rise of Civilization
ACLG V2028	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

500 Diana Center

212-854-8430

212-854-8442 (fax)

architecture.barnard.edu (<https://architecture.barnard.edu>)

architecture@barnard.edu

Department Assistant: Rachel Garcia-Grossman

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.

FACULTY

Chair: Karen Fairbanks (Professor of Professional Practice)

Professor of Professional Practice: Kadambari Baxi

Term Professors: Leah Meisterlin, Ralph Ghoche

Adjunct Professors: Joeb Moore, Madeline Schwartzman, Suzanne Stephens

Adjunct Assistant Professors: Marcelo Lopez-Dinardi, Diana Martinez, Nicole Robertson, Todd Rouhe, Irina Schneid, Don Shillingburg, Fred Tang, Irina Verona, Peter Zuspan

REQUIREMENTS

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 V3101	Architectural Representation: Abstraction
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ARCH V3103	Architectural Representation: Perception
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ARCH V3201	Architectural Design, I
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ARCH V3202	Architectural Design, II
------------	--------------------------

Required History/Theory Courses *

Five elective courses following the distribution requirement below:

ARCH V3117	Perceptions of Architecture
------------	-----------------------------

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 V3901	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 which together focus student interest in a related department or departments. (These may not overlap with history/theory courses or senior courses.)

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. Kellie Jones, 909 Schermerhorn; 212-854-8084; kej2110@columbia.edu

Director of Art Humanities: Prof. Matthew McKelway, 919 Schermerhorn; 212-854-3182; mpm8@columbia.edu

Undergraduate Program Coordinator: Amanda Young, 826 Schermerhorn; 212-854-4505; ary2110@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 W3895 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 departmental website (<http://www.columbia.edu/cu/arthistory/undergraduate/forms.html>). Courses taken at Reid Hall and through the Berlin Consortium are counted as regular Columbia courses, not transfer credits.

All newly declared majors and concentrators should visit the departmental 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 e-mail 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 W3895 Majors' Colloquium: the Literature and Methods of Art History*, students should consult with 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 on-line form, which will be available on the departmental website. Enrollment is limited and admission is at the discretion of the instructor. It is recommended that students begin signing 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 departmental website (<http://www.columbia.edu/cu/arthistory/undergraduate/forms.html>). Students should wait list the seminars to which they apply on SSOL.

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 traveling 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.

Columbia-Bogazici Byzantine Studies and Urban Mapping in Istanbul

Columbia University and Boğaziçi University offer a joint summer program for advanced undergraduate and beginning graduate students that provides an opportunity to learn about the history, urban development, and historic monuments of the city of Byzantium/Constantinople-Istanbul. Through coursework and site visits, students explore Istanbul's modern topography as an exciting palimpsest of empires, cultures, and religions first hand. A research and fieldwork component adds practical experience in architectural site survey and documentation, still and panoramic photography, archival work, and issues of architectural conservation.

While previous coursework or experience in history, art history, or archaeology is preferred, the program can accommodate students with varying academic backgrounds who have a strong interest in understanding the evolution of the city of Istanbul through a historical and cultural lens. No prior knowledge of Turkish is required. For more information, visit the program website (http://ogp.columbia.edu/index.cfm?FuseAction=Programs.ViewProgram&Program_ID=10574).

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).

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.

FACULTY 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
- Keith Moxey (Barnard)
- Stephen Murray
- Jonathan Reynolds (Barnard)
- Simon Schama
- Avinoam Shalem
- Zoë Strother

ASSOCIATE PROFESSORS

- Francesco de Angelis
- Elizabeth Hutchinson (Barnard)
- Kellie Jones
- John Miller (Barnard)
- Ioannis Mylonopoulos

ASSISTANT PROFESSORS

- Diane Bodart
- Noam M. Elcott

- Jack McGrath (Barnard)

ADJUNCT FACULTY

- Maryan Ainsworth (Barnard)
- Lynn Catterson
- Dawn Delbanco
- Patricio del Real
- Rosalyn Deutsche (Barnard)
- Page Knox
- Irina Oryshkevich
- Christopher Phillips (Barnard)
- Olivia Powell
- John Rajchman
- Stefaan Van Liefferinge
- Carolina Wamsler

LECTURERS

- Joseph Ackley
- Frederique Baumgartner
- Anastassia Botchkareva
- Maggie Cao
- Amanda Gannaway
- Catherine Girard
- Johanna Gosse
- Jack Hartnell
- Janet Kraynak
- Kevin Lotery
- Martina Mims
- Giulia Paoletti
- Zachary Stewart
- Susan Wager

ON LEAVE

- Profs. Freedberg, Harrist (2015-2016)
- Profs. Higonnet, Murray (Fall 2015)
- Profs. Delbanco, Moxey (Spring 2016)
- Prof. Klein (Reid Hall, 2015-2016)

REQUIREMENTS

GUIDELINES FOR ALL ART HISTORY AND ARCHAEOLOGY MAJORS, CONCENTRATORS, AND INTERDEPARTMENTAL MAJORS

Courses

HUMA W1121 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 department to fulfill the studio requirement may be taken for a grade of Pass/D/Fail.

Senior Thesis

The senior thesis consists of a research paper 35-45 pages in length. It is a yearlong project, and students writing a thesis are registered by the department for *AHIS C3997 Senior Thesis* for the fall and spring terms. Normally the fall semester is devoted to research and the spring semester is devoted to writing.

All thesis writers are required to participate in a 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 to the 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. The student is asked to identify a topic for the senior thesis and an adviser among the faculty of the Art History and Archaeology Department. The student then submits an application, with an indication of 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 subject, the goals, and the methodology of the thesis.

The deadline for the submission is typically set for the August before the senior year. Submissions may be delivered in person or e-mailed to the undergraduate program coordinator. The director of undergraduate studies, in consultation with the thesis adviser and class instructor, evaluates the applications and decides on their approval or rejection.

Students intending 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 fellowships for which students may apply that support thesis-related research and travel during the summer. Funding for senior thesis research 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>.

Senior Thesis Research Fellowships

The department offers Senior Thesis Research Fellowships for travel to distant museums and building sites, libraries, or archives. This travel is normally undertaken during the summer before the senior year.

Fellowship applications consisting of a carefully edited thesis proposal, budget, and supporting letter from a faculty sponsor should be submitted in the spring semester. Students will be notified of deadlines and further information as they become available. Please contact the undergraduate program coordinator with any questions.

MAJOR IN ART HISTORY

Please read *Guidelines for all for Art History and Archaeology Majors, Concentrators, and Interdepartmental Majors* above.

The yearlong senior thesis (for qualified students; see below) *AHIS C3997 Senior Thesis* may substitute for one lecture course. Seminars may substitute for lecture courses, and may count toward fulfilling the area distribution requirement. Barnard art history courses count toward the majors and concentrations.

The requirements for the major are as follows:

AHIS W3895 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 drawn from at least two different world regions, as listed below

Two additional lectures of the student's choice

Two seminars in art history

A studio course in the visual arts or architecture (which may be taken Pass/D/ Fail)

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

NOTE: These chronological divisions are approximate. In case of ambiguities about the eligibility of a course to fill the requirement, please consult with 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 adviser.

The requirements for the major are as follows:

AHIS W3895 Majors' Colloquium: the Literature and Methods of Art History

Seven lecture courses in art history, one of which must be AHIS C3001 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 V1020 Introduction To Architectural Design and Visual Culture

MAJOR IN ART HISTORY AND VISUAL ARTS

Please read *Guidelines for all for Art History and Archaeology Majors, Concentrators, and Interdepartmental Majors* above.

Students electing the combined major should consult with the undergraduate program coordinator in the history department, as well as with the director of undergraduate studies in the visual arts department.

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. The combined major requires fulfillment of sixteen or seventeen courses. It is recommended that students interested in this major begin work toward the requirements in their sophomore year.

The requirements for the major are as follows:

AHIS W3895 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 drawn from at least two different world regions, as listed below

Two additional lectures of the student's choice

21 points in Visual Arts covering:

VIAR R1001 Basic Drawing

VIAR R3330 Sculpture I

Five additional VIAR R3000-level or above course

In the senior year, students undertake 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 about the eligibility of a course to fill the requirement, please consult the director of undergraduate studies.

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

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, 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

NOTE: These chronological divisions are approximate. In case of ambiguities about the eligibility of a course to fill the requirement, please consult the director of undergraduate studies.

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

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-19th 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 2015: Prof. Mary E. Putman, 1318 Pupin;
212-854-6831; mputman@astro.columbia.edu
Spring 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 W3997 Independent Research-ASTR W3998 Independent Research*, preferably in their senior year. Students begin the research project in the fall and complete the written thesis in the spring. *ASTR W3997 Independent Research* and *ASTR W3998 Independent Research* 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 W2001 Introduction To Astrophysics, I-ASTR W2002 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 W4260 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 W3996 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.

FACULTY 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
- Edward A. Spiegel (*emeritus*)
- Jacqueline van Gorkom

ASSOCIATE PROFESSORS

- Mary E. Putman
- David Schiminovich

ASSISTANT PROFESSOR

- Marcel Agüeros
- David Kipping

ADJUNCT PROFESSOR

- Michael Shara (Hayden Planetarium)

ADJUNCT ASSOCIATE PROFESSORS

- Mordecai-Mark MacLow (Hayden Planetarium)
- Rebecca Oppenheimer (Hayden Planetarium)
- Caleb Scharf

ON LEAVE

- Profs. Agüeros, Ostriker, Paerels (*Fall 2015*)
- Profs. Putman (*Spring 2016*)
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REQUIREMENTS

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:

Calculus sequence through MATH V1202 Calculus IV or
MATH V1208 Honors Mathematics IV

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 W2001 Introduction To Astrophysics, I
- ASTR W2002 and Introduction To
Astrophysics, II

9 points in astronomy at the 3000-level or above

Select one of the following physics sequences:

PHYS W1401 Introduction To Mechanics and
- PHYS W1402 Thermodynamics
- PHYS W1403 and Introduction To Electricity,
Magnetism, and Optics
and Introduction to Classical and
Quantum Waves

PHYS W1601 Physics, I: Mechanics and
- PHYS W1602 Relativity
- PHYS W2601 and Physics, II:
Thermodynamics, Electricity, and
Magnetism
and Physics, III: Classical and
Quantum Waves

PHYS W2801 Accelerated Physics I
- PHYS W2802 and Accelerated Physics II

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 W3003 Mechanics
PHYS W3007 Electricity and Magnetism
PHYS W4021 Quantum Mechanics
- PHYS W4022 and Quantum Mechanics II
or PHYS BC3006 Quantum Physics

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.

Calculus sequence through MATH V1202 Calculus IV or
MATH V1208 Honors Mathematics IV

ASTR W2001 Introduction To Astrophysics, I
- ASTR W2002 and Introduction To
Astrophysics, II

6 points in astronomy at the 3000-level or above

Select one of the following physics sequences:

PHYS W1401 Introduction To Mechanics and
- PHYS W1402 Thermodynamics
- PHYS W1403 and Introduction To Electricity,
Magnetism, and Optics
and Introduction to Classical and
Quantum Waves

PHYS W1601 Physics, I: Mechanics and
- PHYS W1602 Relativity
- PHYS W2601 and Physics, II:
Thermodynamics, Electricity, and
Magnetism
and Physics, III: Classical and
Quantum Waves

PHYS W2801 Accelerated Physics I
- PHYS W2802 and Accelerated Physics II

PHYS W3003 Mechanics

PHYS W3007 Electricity and Magnetism

PHYS W3008 Electromagnetic Waves and Optics

PHYS W4021 Quantum Mechanics

or PHYS BC3006 Quantum Physics

PHYS W4022 Quantum Mechanics II
or PHYS W4023 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:

9 points of mathematics

15 points of astronomy, nine of which must be at or above the
2000-level

9 points of physics

BIOLOGICAL SCIENCES

Departmental Office: 600 Fairchild, 212-854-4581;
undergrad@biology.columbia.edu
<http://www.columbia.edu/cu/biology/>

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://www.columbia.edu/cu/biology/pages/undergrad/cur/advising/index.html>.

- 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: Prof. Frances Champagne, 315 Schermerhorn;
212-854-2589; fchampag@psych.columbia.edu
or Prof. James Curley, 317 Schermerhorn; 212-854-7033;
jc3181@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://www.columbia.edu/cu/biology/pages/undergrad/cur/majors/>
- *Additional course information:* <http://www.columbia.edu/cu/biology/pages/crs/main/all/>
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- 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 C2005 Introductory Biology I: Biochemistry, Genetics & Molecular Biology, which has a prerequisite of chemistry, or EEEB W2001 Environmental Biology I: Elements to Organisms, which does not require chemistry. EEEB W2001 Environmental Biology I: Elements to Organisms may be taken in the first year.

BIOL C2005 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 C2908 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 W1130 Genes and Development. They may also take, with the instructor's permission, BIOL W3208 Introduction to Evolutionary Biology or EEEB W2001 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 C2005 Introductory Biology I: Biochemistry, Genetics & Molecular Biology and BIOL C2006 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. Miller. 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. Fernandez. Students who cannot contact their adviser should consult with Prof. Mowshowitz.

For additional information, including office hours, please visit <http://www.columbia.edu/cu/biology/pages/undergrad/cur/advising/>.

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://www.columbia.edu/cu/biology/pages/undergrad/cur/honors/>.

FACULTY 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
- Dana Pe'er
- Ozgur Sahin
- Guy Sella

ASSISTANT PROFESSOR

- Lars Dietrich

LECTURERS

- Claire Elise Hazen
- Alice Hecklen
- Lili Yamasaki

ADJUNCT FACULTY

- Ava Brent-Jamali
- Nataliya Galifianakis
- Jay Hammel
- Danny Nam Ho
- John Loike
- Deborah B. Mowshowitz
- Solomon Mowshowitz
- David Newman

- Vincent R. Racaniello

REQUIREMENTS

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 C2005 Introductory Biology I: Biochemistry, Genetics & Molecular Biology-BIOL C2006 Introductory Biology II: Cell Biology, Development & Physiology, taken in the sophomore year, or EEEB W2001 Environmental Biology I: Elements to Organisms-BIOL C2006 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 C2005 Introductory Biology I: Biochemistry, Genetics & Molecular Biology-BIOL C2006 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 C2005 Introductory Biology I: Biochemistry, Genetics & Molecular Biology-BIOL C2006 Introductory Biology II: Cell Biology, Development & Physiology after a year of general chemistry; premedical students interested in the environmental sciences may take EEEB W2001 *Environmental Biology I: Elements to Organisms* followed by BIOL C2006 Introductory Biology II: Cell Biology, Development & Physiology.

Students with advanced placement in biology are expected but not required to take EEEB W2001 Environmental Biology I: Elements to Organisms or BIOL C2005 Introductory Biology I: Biochemistry, Genetics & Molecular Biology as their initial biology course, because BIOL C2005 Introductory Biology I: Biochemistry, Genetics & Molecular Biology-BIOL C2006 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 C2005 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 W3022	Developmental Biology
BIOL W3031	Genetics
BIOL W3041	Cell Biology
BIOC C3501	Biochemistry: Structure and Metabolism
BIOC C3512	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 W3050	Project Laboratory In Protein Biochemistry
BIOL C3052	Project Laboratory in Molecular Genetics
BIOL W3058	Project Laboratory in Microbiology

Option 2:

BIOL W2501 Contemporary Biology Laboratory
Select an additional 3-point lab such as BIOL W3040 or a Barnard lab.

Option 3:

Two terms of BIOL W3500 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 W3500 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 W3500 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 W3500 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 W1403 - CHEM W1404	General Chemistry I (Lecture) and General Chemistry II (Lecture)
CHEM W1500	General Chemistry Laboratory
CHEM W3443 - CHEM W3444	Organic Chemistry I (Lecture) and Organic Chemistry II (Lecture)

Option 2:

For students who qualify for intensive chemistry

CHEM W1604 - CHEM W2507	Intensive General Chemistry (Lecture) and Intensive General Chemistry Laboratory
CHEM W3443 - CHEM W3444	Organic Chemistry I (Lecture) and Organic Chemistry II (Lecture)

Option 3:

For students who qualify for first year organic chemistry

CHEM W2507	Intensive General Chemistry Laboratory
CHEM W3045 - CHEM W3046	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 V1201-PHYS V1202 General Physics II and PHYS W1291-PHYS W1292 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 V1102 Calculus II, MATH V1201 Calculus III, or MATH V1207 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://www.columbia.edu/cu/biology/pages/undergrad/cur/majors/biomajor.html>.

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://www.columbia.edu/cu/biology/pages/undergrad/cur/majors/biochem.html>.

MAJOR IN BIOPHYSICS

The requirements for the biophysics major are as follows:

One year of introductory biology:

BIOL C2005	Introductory Biology I:
- BIOL C2006	Biochemistry, Genetics & Molecular Biology and Introductory Biology II: Cell Biology, Development & Physiology

Select at least one of the following laboratory courses:

BIOL W3050	Project Laboratory In Protein Biochemistry
BIOL C3052	Project Laboratory in Molecular Genetics
BIOL W3058	Project Laboratory in Microbiology
BIOL W3500	Independent Biological Research

One course in biochemistry or molecular biology:

BIOC C3501	Biochemistry: Structure and Metabolism
or BIOC C3512	Molecular Biology

Select one of the following options:

Option 1 - Genetics:

BIOL W3031	Genetics
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Option 2 - Neurobiology:

BIOL W3004	Neurobiology I: Cellular and Molecular Neurobiology
or BIOL W3005	Neurobiology II: Development & Systems

Option 3 - Developmental Biology:

BIOL W3022	Developmental Biology
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Select one of the following sequences to be completed at the end of sophomore year:

PHYS W1401	Introduction To Mechanics and Thermodynamics
- PHYS W1402	and Introduction To Electricity, Magnetism, and Optics
- PHYS W1403	and Introduction to Classical and Quantum Waves
- PHYS W1494	and Introduction to Experimental Physics

PHYS W1601	Physics, I: Mechanics and Relativity
- PHYS W1602	and Physics, II: Thermodynamics, Electricity, and Magnetism
- PHYS W2601	and Physics, III: Classical and Quantum Waves
- PHYS W2699	and Experiments in Classical and Modern Physics

PHYS W2801	Accelerated Physics I
- PHYS W2802	and Accelerated Physics II
- PHYS W3081	and Intermediate Laboratory Work

Select any two physics courses at the 3000-level or above, chosen in consultation with the adviser.

Calculus through MATH V1202 or MATH V1208, 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://www.columbia.edu/cu/biology/pages/undergrad/cur/majors/biophysics.html>.

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://www.columbia.edu/cu/biology/pages/undergrad/cur/majors/neuro.html>.

MAJOR IN ENVIRONMENTAL BIOLOGY

For a description of the environmental biology major, see the *Ecology, Evolution, and Environmental Biology* section in this Bulletin.

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 *C*, *W*, and *G* courses listed in the Biological Sciences section of

the Bulletin. Additional courses in physics, chemistry, and mathematics are required as detailed below.

BIOL W1130 Genes and Development and BIOL W3500 Independent Biological Research **cannot** be used to fulfill the 22-point concentration requirement, and only one 5-point laboratory can be counted toward the 22 points. A project laboratory and BIOL W2501 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 C2005	Introductory Biology I: Biochemistry, Genetics & Molecular Biology
or EEEB W2001	Environmental Biology I: Elements to Organisms

BIOL C2006	Introductory Biology II: Cell Biology, Development & Physiology
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Select at least one of the following core courses:

BIOL W3022	Developmental Biology
BIOL W3031	Genetics
BIOL W3041	Cell Biology
BIOL C3501	Biochemistry: Structure and Metabolism
BIOL C3512	Molecular Biology

Select a 5-point laboratory course:

BIOL W2501	Contemporary Biology Laboratory (plus a second course including laboratory work [usually BIOL W3040])
BIOL W3050	Project Laboratory In Protein Biochemistry
BIOL C3052	Project Laboratory in Molecular Genetics

Select additional biology or biochemistry courses to complete a total of 22 points. Only one of these courses may be for 1-2 points. All the rest must be at least 3 points.

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://www.columbia.edu/cu/biology/pages/undergrad/cur/majors/biocon.html>.

BUSINESS

Program Manager: Cara Mandarino, 104 Uris; 212-854-0140;
BusinessManagement@gsb.columbia.edu

<http://www8.gsb.columbia.edu/programs-admissions/special-concentration/>

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.

NOTE: There are two ways to complete the special concentration in business management.

1. Apply and be accepted to the program. Students who are accepted to the program are guaranteed seats in the required undergraduate business courses. Application instructions are below.
2. Take the required undergraduate courses by the final term. It is essential to note that there is no guarantee that the special concentration can be completed without formal acceptance into the program. A seat in the required business courses is not guaranteed. Students who pursue the completion of the special concentration in business management in this way are not guaranteed completion by graduation.

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 W1001	Introduction to Statistical Reasoning
STAT W1111	Introduction to Statistics (without calculus)
STAT W1211	Introduction to Statistics (with calculus)
PSYC W1610	Introductory Statistics for Behavioral Scientists
SOCI W3020	Social Statistics

Economics Prerequisite

ECON W1105	Principles of Economics
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Psychology/Sociology Prerequisite

Select one of the following:

PSYC W1001	The Science of Psychology
PSYC W1010	Mind, Brain and Behavior
SOCI W1000	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.

FACULTY

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>)

REQUIREMENTS

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 and elective courses **cannot** be double counted.

For information about this special concentration, including the application process, visit <http://www8.gsb.columbia.edu/programs-admissions/special-concentration/application-information>.

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 W1001	Introduction to Statistical Reasoning
STAT W1111	Introduction to Statistics (without calculus)

STAT W1211	Introduction to Statistics (with calculus)
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PSYC W1610	Introductory Statistics for Behavioral Scientists
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SOCI W3020	Social Statistics
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Select the following Economics course:

ECON W1105	Principles of Economics
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Select one of the following Psychology/Sociology courses:

PSYC W1001	The Science of Psychology
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PSYC W1010	Mind, Brain and Behavior
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SOCI W1000	The Social World
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Core

Select one of the following Financial Core courses:

BUSI W3013	Financial Accounting
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ECON W4280	Corporate Finance
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Select two of the following Managerial Core courses:

BUSI W3021	Marketing Management
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BUSI W3701	Strategy Formulation
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BUSI W3703	Leadership in Organizations
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Electives

Select two of the following courses:

ECON V3025	Financial Economics
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ECON V3265	The Economics of Money and Banking
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PSYC W2235	Thinking and Decision Making
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PSYC W2630	Social Psychology
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PSYC W2640	Introduction to Social Cognition
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PSYC W2650	Introduction to Cultural Psychology
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SOCI W2240	Economy and Society
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SOCI W3490	Mistake, Misconduct, Disaster
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SOCI W3670	Culture, Markets, and Consumption
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SOCI W3675	Organizing Innovation
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SOCI G4032	Sociology of Labor Markets
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URBS V3550	Community Building and Economic Development
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ECON W4505	International Macroeconomics
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POLS V3615	Globalization and International Politics
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PSYC BC1136	Social Psychology
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PSYC BC1138	Social Psychology
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PSYC BC2151	Organizational Psychology
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NOTE: Students may not receive credit for two or more of PSYC BC1136 Social Psychology, PSYC BC1138 Social Psychology, and PSYC W2630 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. Laura Kaufman, 628 Havemeyer; 212-854-9025; kaufman@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: Prof. Virginia Cornish, Northwest Corner Building; 212-854-5209; vc114@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 W1604 Intensive General Chemistry (Lecture) are granted 3 points of credit; students who are placed into CHEM W3045-CHEM W3046 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 W2408. This seminar focuses on topics in modern chemistry, and is offered to all qualified students.

Biochemistry (BIOC C3501, BIOC C3512) is recommended for students interested in the biomedical sciences.

Physical chemistry (CHEM W3079-CHEM W3080), a one-year program, requires prior preparation in mathematics and physics. The accompanying laboratory is CHEM W3085-CHEM W3086.

Also offered are a senior seminar (CHEM W3920); advanced courses in biochemistry, inorganic, organic, and physical chemistry; and an introduction to research (CHEM W3098).

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 W1403	General Chemistry I (Lecture)
CHEM W1404	General Chemistry II (Lecture)
CHEM W1500	General Chemistry Laboratory
CHEM W2408	First-Year Seminar in Chemical Research

Calculus and physics as required.

Second Year

CHEM W3443	Organic Chemistry I (Lecture)
CHEM W3444	Organic Chemistry II (Lecture)
CHEM W3493	Organic Chemistry Laboratory I (Techniques)
CHEM W3494	Organic Chemistry Laboratory II (Synthesis)

Calculus and physics as required.

Third Year

CHEM W3079	Physical Chemistry I
CHEM W3080	Physical Chemistry II
CHEM W3098	Supervised Independent Research
BIOC C3501	Biochemistry: Structure and Metabolism
- BIOC C3512 (for biochemistry majors)	
CHEM W3546	Advanced Organic Chemistry Laboratory

Fourth Year

CHEM W3085	Physical and Analytical Chemistry Laboratory I
CHEM W3086	Physical and Analytical Chemistry Laboratory II
CHEM W3920	Senior Seminar in Chemical Research
CHEM G4071	Inorganic Chemistry
Advanced courses (4000-level or higher)	

Track 2

First Year

CHEM W1604	Intensive General Chemistry (Lecture)
CHEM W2408	First-Year Seminar in Chemical Research
CHEM W2507 or W1500	Intensive General Chemistry Laboratory

Calculus and physics as required.

Second Year

CHEM W3443	Organic Chemistry I (Lecture)
CHEM W3444	Organic Chemistry II (Lecture)
CHEM W3493	Organic Chemistry Laboratory I (Techniques)
CHEM W3494	Organic Chemistry Laboratory II (Synthesis)

Calculus and physics as required.

Third Year

CHEM W3079	Physical Chemistry I
CHEM W3080	Physical Chemistry II
CHEM W3098	Supervised Independent Research
BIOC C3501	Biochemistry: Structure and Metabolism
- BIOC C3512 (for biochemistry majors)	
CHEM W3546	Advanced Organic Chemistry Laboratory

Fourth Year

CHEM W3085	Physical and Analytical Chemistry Laboratory I
CHEM W3086	Physical and Analytical Chemistry Laboratory II
CHEM W3920	Senior Seminar in Chemical Research
CHEM G4071	Inorganic Chemistry
Advanced courses (4000-level or higher)	

Track 3

First Year

CHEM W2408	First-Year Seminar in Chemical Research
CHEM W2507	Intensive General Chemistry Laboratory
CHEM W3045	Intensive Organic Chemistry I (Lecture)
CHEM W3046	Intensive Organic Chemistry II (Lecture)

Calculus and physics as required.

Second Year

CHEM W3079	Physical Chemistry I
CHEM W3080	Physical Chemistry II
CHEM W3545	Intensive Organic Chemistry Laboratory
CHEM W3546	Advanced Organic Chemistry Laboratory

Calculus and physics as required.

Third Year

CHEM W3085	Physical and Analytical Chemistry Laboratory I
CHEM W3086	Physical and Analytical Chemistry Laboratory II
CHEM W3098	Supervised Independent Research

BIOC C3501 Biochemistry: Structure and Metabolism
- BIOC C3512 (for
biochemistry majors)

CHEM G4071 Inorganic Chemistry

Fourth Year

CHEM W3920 Senior Seminar in Chemical Research

Advanced courses (4000-level or higher)

FACULTY 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
- Brent Stockwell
- James J. Valentini
- Xiaoyang Zhu

ASSOCIATE PROFESSORS

- Angelo Cacciuto
- Tristan Lambert
- Wei Min
- Jonathan Owen
- Dalibor Sames

ASSISTANT PROFESSORS

- Luis Campos
- Xavier Roy

LECTURERS

- Luis Avila
- Robert Beer
- John Decatur
- Charles E. Doubleday
- Sarah Hansen
- Fay Ng
- Ruben Savizky

ASSOCIATES

- Anna Ghurbanyan

- Danielle Sedbrook
- Joseph Ulichny

REQUIREMENTS

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 W1403	General Chemistry I (Lecture)
CHEM W1404	General Chemistry II (Lecture)
CHEM W1500	General Chemistry Laboratory
CHEM W3443	Organic Chemistry I (Lecture)
CHEM W3444	Organic Chemistry II (Lecture)
CHEM W3493	Organic Chemistry Laboratory I (Techniques)
CHEM W3494	Organic Chemistry Laboratory II (Synthesis)

Track 2

CHEM W1500 or CHEM W2507	General Chemistry Laboratory Intensive General Chemistry Laboratory
CHEM W1604	Intensive General Chemistry (Lecture)
CHEM W3443	Organic Chemistry I (Lecture)
CHEM W3444	Organic Chemistry II (Lecture)
CHEM W3493	Organic Chemistry Laboratory I (Techniques)
CHEM W3494	Organic Chemistry Laboratory II (Synthesis)

Track 3

CHEM W2507	Intensive General Chemistry Laboratory
CHEM W3045	Intensive Organic Chemistry I (Lecture)
CHEM W3046	Intensive Organic Chemistry II (Lecture)

CHEM W3545	Intensive Organic Chemistry Laboratory
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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 W1401	Introduction To Mechanics and Thermodynamics
PHYS W1402	Introduction To Electricity, Magnetism, and Optics
PHYS W1403	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 W1493	Introduction to Experimental Physics
or PHYS W1494	Introduction to Experimental Physics
PHYS W2699	Experiments in Classical and Modern Physics
PHYS W3081	Intermediate Laboratory Work

Sequence B

PHYS W1601	Physics, I: Mechanics and Relativity
PHYS W1602	Physics, II: Thermodynamics, Electricity, and Magnetism
PHYS W2601	Physics, III: 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 W2699	Experiments in Classical and Modern Physics
or PHYS W3081	Intermediate Laboratory Work

Sequence C

For students with advanced preparation in physics and mathematics:

PHYS C2801 - PHYS C2802	General Physics and General Physics
For chemistry majors, the following laboratory courses are recommended NOT required. For chemical physics majors, the following laboratory courses are required:	
PHYS W2699	Experiments in Classical and Modern Physics

or PHYS W3081	Intermediate Laboratory Work
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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 W2408	First-Year Seminar in Chemical Research (Recommended NOT required)
CHEM W3079	Physical Chemistry I
CHEM W3080	Physical Chemistry II
CHEM W3085	Physical and Analytical Chemistry Laboratory I
CHEM W3086	Physical and Analytical Chemistry Laboratory II
CHEM W3546	Advanced Organic Chemistry Laboratory
CHEM W3920	Senior Seminar in Chemical Research
CHEM G4071	Inorganic Chemistry
Select one course from the following:	
CHEM W3098	Supervised Independent Research
OR Chemistry courses numbered CHEM G4000 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 V1101	Calculus I
- MATH V1102	and Calculus II
- MATH V1201	and Calculus III
- MATH V1202	and Calculus IV
Two semesters of honors mathematics:	
MATH V1207	Honors Mathematics A
- MATH V1208	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 W2408	First-Year Seminar in Chemical Research (Recommended NOT required)
CHEM W3079	Physical Chemistry I
CHEM W3080	Physical Chemistry II

or BIOL W4082 Theoretical Foundations and Applications of Biophysical Methods

Biology

BIOL C2005	Introductory Biology I: Biochemistry, Genetics & Molecular Biology
BIOL C2006	Introductory Biology II: Cell Biology, Development & Physiology
BIOC C3501	Biochemistry: Structure and Metabolism
BIOC C3512	Molecular Biology
BIOL C2908	First-Year Seminar in Modern Biology (recommended but not required)

Select one of the following laboratory courses:

BIOL W3050	Project Laboratory In Protein Biochemistry
BIOL C3052	Project Laboratory in Molecular Genetics
BIOL W3500	Independent Biological Research

Physics

Select one of the following physics sequences:

Sequence A:

PHYS V1201	General Physics I
- PHYS V1202	and General Physics II

Sequence B:

PHYS W1401	Introduction To Mechanics and Thermodynamics
- PHYS W1402	and Introduction To Electricity, Magnetism, and Optics
- PHYS W1403	and Introduction to Classical and Quantum Waves (PHYS W1403 is recommended NOT required)

Sequence C:

PHYS W1601	Physics, I: Mechanics and Relativity
- PHYS W1602	and Physics, II: Thermodynamics, Electricity, and Magnetism
- PHYS W2601	and Physics, III: Classical and Quantum Waves (PHYS W2601 is recommended but not required)

Sequence D:

PHYS C2801	General Physics
- PHYS C2802	and General Physics

Mathematics

Select one of the following sequences:

Two semesters of calculus:

MATH V1101	Calculus I
- MATH V1102	and Calculus II
- MATH V1201	and Calculus III
- MATH V1202	and Calculus IV

Two semesters of honors mathematics:

MATH V1207	Honors Mathematics A
- MATH V1208	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 W3040	Lab in Molecular Biology
- BIOL W2501	and Contemporary Biology Laboratory
BIOL W3050	Project Laboratory In Protein Biochemistry
BIOL C3052	Project Laboratory in Molecular Genetics
BIOL W3500	Independent Biological Research
CHEM W3085	Physical and Analytical Chemistry Laboratory I
CHEM W3086	Physical and Analytical Chemistry Laboratory II
CHEM W3098	Supervised Independent Research
CHEM W3546	Advanced Organic Chemistry Laboratory

Select any three courses from the following:

CHEM G4071	Inorganic Chemistry
CHEM G4102	Chemistry for the Brain
CHEM G4147	Advanced Organic Chemistry
MATH V3027	Ordinary Differential Equations
or MATH V2030	Ordinary Differential Equations

One additional semester of calculus

One additional semester of honors math:

MATH V1207	Honors Mathematics A
or MATH V1208	Honors Mathematics B

Any biology course at the 3000/4000 level for 3 or more points. The following are recommended:

BIOL W3004	Neurobiology I: Cellular and Molecular Neurobiology
or BIOL W3005	Neurobiology II: Development & Systems
BIOL W3008	The Cellular Physiology of Disease
BIOL W3022	Developmental Biology
BIOL W3034	Biotechnology
BIOL W3041	Cell Biology
BIOL W3073	Cellular and Molecular Immunology
BIOL W4065	Molecular Biology of Disease
BIOL W4300	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 W3079	Physical Chemistry I
CHEM W3080	Physical Chemistry II
CHEM W3085	Physical and Analytical Chemistry Laboratory I
CHEM W3086	Physical and Analytical Chemistry Laboratory II

CHEM W3098	Supervised Independent Research
CHEM G4221	Quantum Chemistry
or PHYS G4021	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 W3003	Mechanics
PHYS W3007	Electricity and Magnetism
PHYS W3008	Electromagnetic Waves and Optics

Mathematics

Select one of the following sequences:

Four semesters of calculus:

MATH V1101	Calculus I
- MATH V1102	and Calculus II
- MATH V1201	and Calculus III
- MATH V1202	and Calculus IV

Two semesters of honors mathematics:

MATH V1207	Honors Mathematics A
- MATH V1208	and Honors Mathematics B
- MATH V3027	and Ordinary Differential Equations

Two semesters of advanced calculus:

MATH V1202	Calculus IV
- MATH V3027	and Ordinary Differential Equations

MAJOR IN ENVIRONMENTAL 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. A second semester of Organic Chemistry lecture is recommended NOT required.

CHEM W3079	Physical Chemistry I
CHEM G4071	Inorganic Chemistry
The following courses are recommended NOT required.	
CHEM W2408	First-Year Seminar in Chemical Research
CHEM W3920	Senior Seminar in Chemical Research

Earth and Environmental Science

Select TWO of the following three classes:

EESC V2100	Earth's Environmental Systems: Climate
EESC V2200	Earth's Environmental Systems: Solid Earth
EESC V2300	Earth's Environmental Systems: Life Systems

Additional course required:

EESC W3101	Geochemistry for a Habitable Planet
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Select ONE of the following labs:

EESC BC3016	Environmental Measurements
CHEM W3085	Physical and Analytical Chemistry Laboratory I

Choose ONE option for Independent Research in Environmental Chemistry

EESC BC3800	Senior Research Seminar
- EESC BC3801	and Senior Research Seminar
CHEM W3098	Supervised Independent Research (It is strongly recommended to take CHEM W3920 if taking CHEM W3098)

Physics

Select one of the following physics sequences:

Sequence A

PHYS W1201	General Physics I
- PHYS W1202	and General Physics II

Sequence B

PHYS W1401	Introduction To Mechanics and Thermodynamics
- PHYS W1402	and Introduction To Electricity, Magnetism, and Optics
- PHYS W1403	and Introduction to Classical and Quantum Waves (Recommended NOT required)

Sequence C

PHYS W1601	Physics, I: Mechanics and Relativity
- PHYS W1602	and Physics, II: Thermodynamics, Electricity, and Magnetism
- PHYS W2601	and Physics, III: Classical and Quantum Waves (Recommended NOT required.)

Sequence D

PHYS W2801	Accelerated Physics I
- PHYS W2802	and Accelerated Physics II

Mathematics

Two semesters of calculus:

MATH V1101	Calculus I
MATH V1102	Calculus II
MATH V1201	Calculus III
MATH V1202	Calculus IV

Additional Courses

Select any two of the following:

Chemistry classes:

CHEM W3080	Physical Chemistry II
CHEM G4103	Organometallic Chemistry
CHEM G4147	Advanced Organic Chemistry

Earth & Environmental Science classes:

EESC BC3017	Environmental Data Analysis
EESC BC3025	Hydrology

EESC W4008	Introduction to Atmospheric Science
EESC W4009	Chemical Geology
EESC W4040	Climate Thermodynamics and Energy Transfer
EESC W4050	Global Assessment and Monitoring Using Remote Sensing
EESC W4600	Earth Resources and Sustainable Development
EESC W4835	Wetlands and Climate Change
EESC W4885	The Chemistry of Continental Waters
EESC W4924	Introduction to Atmospheric Chemistry
EESC W4925	Principles of Physical Oceanography
EESC W4926	Principles of Chemical Oceanography
Earth & Environmental Engineering classes:	
EAEE E4001	Industrial ecology of earth resources
EAEE E4003	Introduction to aquatic chemistry
Mathematics classes:	
One additional semester of calculus	

CHEM W3046 Intensive Organic Chemistry II (Lecture)

Select 18 points of chemistry at the 3000-level or higher

CONCENTRATION IN CHEMISTRY

No more than four points of CHEM W3098 Supervised Independent Research may be counted toward the concentration.

Select one of the three chemistry tracks listed below.

PHYS V1201	General Physics I
- PHYS V1202	and General Physics II

Two semesters of calculus

Chemistry Tracks

Track 1

CHEM W1403	General Chemistry I (Lecture)
CHEM W1404	General Chemistry II (Lecture)
CHEM W1500	General Chemistry Laboratory
Select 22 points of chemistry at the 3000-level or higher	

Track 2

CHEM W1500	General Chemistry Laboratory
or CHEM W2507	Intensive General Chemistry Laboratory
CHEM W1604	Intensive General Chemistry (Lecture)

Select 22 points of chemistry at the 3000-level or higher

Track 3

CHEM W2507	Intensive General Chemistry Laboratory
CHEM W3045	Intensive Organic Chemistry I (Lecture)

CLASSICS

Departmental Office: 617 Hamilton; 212-854-3902;
classics@columbia.edu
<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. Maria Hadjipolycarpou; 212-854-6988; mh3505@columbia.edu

Departmental Administrator: Gerry Visco; 212-854-2726; gwv1@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 V1101 - GREK V1102	Elementary Greek I and Elementary Greek II
GREK V1201 - GREK V1202	Intermediate Greek I and Intermediate Greek II: Homer

Latin

LATN V1101 - LATN V1102	Elementary Latin I and Elementary Latin II
LATN V1201 - LATN V1202	Intermediate Latin I and Intermediate Latin II

With the permission of the director of undergraduate studies, GREK V1202 Intermediate Greek II: Homer may be taken before GREK V1201 Intermediate Greek I.

The intensive elementary courses GREK V1121 Intensive Elementary Greek and LATN V1121 Intensive Elementary Latin may be substituted for the two-term *V1101-V1102* sequence. The intensive intermediate courses GREK S1221 Intensive Intermediate Greek and LATN S1221 Intensive Intermediate Latin may be substituted for the two-term *V1201-V1202* sequence.

LATN V1201 Intermediate Latin I should be taken before LATN V1202 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 (*W4105-W4106*) 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 (*V3998*). 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.

V3998 is required in the classical studies track. Otherwise, students in classical studies are not required to take advanced courses beyond *V3996 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.

**FACULTY
PROFESSORS**

- Kathy Eden
- Marco Fantuzzi
- Helene P. Foley (Barnard)
- Carmela V. Franklin
- Stathis Gourgouris
- John Ma
- Kristina Milnor (Barnard)
- Seth R. Schwartz
- Deborah T. Steiner (Chair)
- Karen Van Dyck
- Katharina Volk
- Gareth D. Williams
- Nancy Worman (Barnard)
- James E. G. Zetzel

ASSOCIATE PROFESSORS

- Marcus Folch
- Elizabeth Irwin
- Ellen Morris (Barnard)

ASSISTANT PROFESSORS

- Joseph Howley

LECTURERS

- Maria Hadjipolycarpou
- Collomia Charles
- Elizabeth Scharffenberger

REQUIREMENTS

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 *V1200*-level;
 - *The Major Seminar V3996*;
 - Two courses from the following four advanced options: *W4105*, *W4106*, *W4139*, *V3998* (any others may count toward the four upper level requirement).
2. In a secondary language:
 - Two courses at or above the *V1200*-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 (*1200*-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 *W4105-W4106* 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 *V3998*.

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 *V1102*-level, in either or both Latin and Greek;
2. *The Major Seminar V3996*;

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 V3998*, 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

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 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: *W4105*, *W4106*, *W4139*.
2. One course in Ancient History or Classical Civilization (3 points).

SPECIAL CONCENTRATION IN MODERN GREEK STUDIES

The special concentration in modern Greek studies is designed for students who wish to combine the study of modern Greek with a major or regular concentration. It requires the completion of a minimum of 24 points and must include the following:

1. Language courses (at least 15 points):
 - Four or five modern Greek courses to be taken above the *1202*-level;
 - GRKM *V3998* Senior Research Seminar, to be completed under the supervision of a staff member.
2. Two additional courses to be taken in related fields, including (but not limited to) comparative literature, classics, history,

anthropology, political science, architecture, and sociology. These courses are to be chosen in consultation with the adviser and should conform to the student's overall course of studies (6-8 points).

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

Director of Undergraduate Studies: Associate Prof. Madeleine
Dobie, 510 Philosophy; 212-854-9874; mld2027@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 V3900
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 V3900* ([http://bulletin.columbia.edu/
search/?P=CPLS%20V3900](http://bulletin.columbia.edu/search/?P=CPLS%20V3900)) *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](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](http://icls.columbia.edu/academics/undergraduate/undergraduate_departmental_honors).

FACULTY

EXECUTIVE COMMITTEE OF ICLS

Gil Anidjar (Religion; Middle Eastern, South Asian, and African
Studies)

Jean Louise Cohen (Political Science)

Patricia Dailey (English)

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; Jazz Studies)
 Stathis Gourgouris (Classics; English and Comparative Literature)
 Andreas Huyssen (Germanic Languages)
 Lydia Liu (East Asian Languages and Cultures)
 Reinhold Martin (Architecture)
 Rosalind Morris (Anthropology)
 Anupama Rao (History, Barnard)
 Jesús Rodríguez-Velasco (Latin American and Iberian Cultures)
 Oliver Simons (Germanic Languages)
 Gayatri Chakravorty Spivak (University Professor)
 Nadia Urbinati (Political Science)
 W.B. Worthen (Theatre, Barnard)

REQUIREMENTS

GUIDELINES FOR ALL ICLS MAJORS AND CONCENTRATORS

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. Foreign language 2: four semesters of one language or two semesters of two languages;
3. CPLS V3900 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 courses, in comparative literature and society as follows. 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 V3900 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 V3991 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 15 courses of study. 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 V3900 Introduction to Comparative Literature and Society, required for all ICLS majors and normally taken in the spring of the sophomore year;
2. Three courses with a *CPLS* designator. *CLxx* courses, i.e., courses designated as comparative in nature by various language-literature or social science departments, may count for the major with director of undergraduate studies' approval;
3. Three courses within a given department/discipline that address students' focused interest (Literature and Medicine; Medical Anthropology; History of Medicine/Public Health) and develop the methodological skills of that discipline;
4. 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;
5. Four courses in interdisciplinary studies that address the nexus of the students' 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.);

6. One course of engaged scholarship/service learning/independent project (this may be fulfilled by appropriate study abroad and/or study elsewhere in the United States);
7. CPLS V3992 Senior Seminar in Medicine, Literature, and Society;
8. 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 V3900 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 Education: 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 three majors: computer science; information 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 artificial intelligence 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 and graphics 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 A exam along with exemption from COMS W1004 Introduction to Computer Science and Programming in Java. Students can receive credit for only one introductory computer science sequence.

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.

The computer facilities include a shared infrastructure of Sun and Linux multi-processor file servers; NetApp file servers; a student interactive teaching and research lab of high-end multimedia workstations; a load balanced web cluster with 6 servers and business process servers; a large student laboratory, featuring 18 windows machines and 33 Linux towers each with 8 cores and 24GB memory; a remote Linux cluster with 17 servers; a large Linux compute cluster; and a number of computing facilities for individual research labs. In addition, the data center houses a compute cluster consisting of a Linux cloud with 43 servers each with 2 Nehalem processors, 8 cores, and 24GB memory. This can support about 5000 of VMware instances.

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.

FACULTY PROFESSORS

- Alfred V. Aho
- Peter K. Allen
- Peter Belhumeur
- Steven M. Bellovin
- David Blei
- Michael J. Collins
- Steven K. Feiner
- Luis Gravano
- Jonathan L. Gross
- Julia Hirschberg
- Gail E. Kaiser
- John R. Kender
- Kathleen R. McKeown
- Shree K. Nayar
- Jason Nieh
- Steven M. Nowick
- Kenneth A. Ross
- Henning G. Schulzrinne
- Salvatore J. Stolfo
- Joseph F. Traub
- Henryk Wozniakowski (*emeritus*)
- Mihalis Yannakakis

ASSOCIATE PROFESSORS

- Alexander Andoni
- Luca Carloni
- Xi Chen
- Stephen A. Edwards
- Eitan Grinspun
- Tony Jebara
- Angelos D. Keromytis
- Tal Malkin
- Vishal Misra
- Itshack Pe'er
- Daniel Rubenstein
- Rocco Servedio
- Simha Sethumadhavan

- Junfeng Yang

ASSISTANT PROFESSORS

- Augustin Chaintreau
- Yaniv Erlich
- Roxana Geambasu
- Daniel Hsu
- Suman Jana
- Martha Allen Kim
- Allison Lewko
- Eugene Wu
- Changxi Zheng

SENIOR LECTURER IN DISCIPLINE

- Adam Cannon

LECTURER IN DISCIPLINE

- Paul S. Blaer
- Jae Woo Lee
- Ansaf Salieb-Aouissi

ASSOCIATED FACULTY

- Shih-Fu Chang
- Edward G. Coffman Jr.
- Dana Pe'er
- Clifford Stein
- Steven H. Unger (*emeritus*)
- Vladimir Vapnik
- Yechiam Yemini (*emeritus*)

SENIOR RESEARCH SCIENTISTS

- Arthur G. Werschulz
- Moti Yung

RESEARCH SCIENTISTS

- Rebecca Passonneau
- Anargyros Papageorgiou
- Owen Rambow

ASSOCIATED RESEARCH SCIENTISTS

- Mohit Gupta
- Nizar Habash

REQUIREMENTS 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

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)
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First Year

COMS W1004	Introduction to Computer Science and Programming in Java
or COMS W1007	Honors Introduction to Computer Science

Sophomore Year

COMS W3134 or COMS W3137	Data Structures in Java 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:

COMS W3210	Scientific Computation
COMS W3251	Computational Linear Algebra
SIEO W3600	Introduction to Probability and Statistics

or SIEO W4150 Introduction to Probability and Statistics

Students who have taken AP Computer Science in high school and received a score of 4 or 5 are exempt from COMS W1004 Introduction to Computer Science and Programming in Java, but are encouraged to pursue the honors introductory sequence COMS W1007 Honors Introduction to Computer Science- COMS W3137 Honors Data Structures and Algorithms.

For students who declared prior to Spring 2014:

First Year

COMS W1004	Introduction to Computer Science and Programming in Java
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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

Beyond the CS Core, for students who declare before or after Spring 2014, the major requires 41 or 44 points depending on the track as follows:

Mathematics (3 points)

Calculus II or Calculus III.

Track Requirement (15 or 18 points)

Students must select one of the following six upper-level tracks. Each track, except the combined track, requires five courses consisting of required, elective breadth, and elective track courses. The combined 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, scientific computing, and security.

Required Courses

CSOR W4231	Analysis of Algorithms I
COMS W4236	Introduction to Computational Complexity
COMS W4241	Numerical Algorithms and Complexity

Track Electives

COMS W4203	Graph Theory
COMS W4205	
COMS W4252	Introduction to Computational Learning Theory
COMS W4261	Introduction to Cryptography
COMS W4281	Introduction to Quantum Computing
COMS W4444	Programming and Problem Solving
COMS W4771	Machine Learning
COMS W4772	Advanced 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

COMS W4996

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

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

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

Any COMS W40xx course

COMS W4252	Introduction to Computational Learning Theory
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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

COMS W4996

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

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

COMS W4996

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 and Graphics 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

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

COMS W4996

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. A coherent selection of six courses is required: three 3000- or 4000-level computer science courses and three 3000- or 4000-level courses from another discipline. This track should be selected by the end of the first semester of the junior year and the courses should be planned with the adviser.

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. Students must then select at least six upper-division elective courses, focusing on an information-intensive thematic area.

Core Requirement

COMS W1001	Introduction to Information Science
COMS W1004	Introduction to Computer Science and Programming in Java
COMS W1007	Honors Introduction to Computer Science
COMS W3134	Data Structures in Java
SIEO W4150	Introduction to Probability and Statistics
or SIEO W3600	Introduction to Probability and Statistics

The elective courses should be chosen with a faculty adviser to focus on the modeling and use of information within the context of a disciplinary theme. Following are some suggested programs of instruction:

Information Science and Contemporary Society

Students can focus on the fundamental principles and technologies involved in the organization, searching, transmission, and manipulation of on-line information by studying database management systems, information retrieval systems, Web search engines, and natural language processing technology.

Alternatively, students may focus on how humans use technology and how technology has changed society. Given that these systems and technology often involve substantial interaction with humans, students are encouraged to take courses from human-focused areas such as human-computer interaction, psychology, and sociology.

The requirements include:

Three courses involving processing of text or data such as the following:

COMS W4111	Introduction to Databases
COMS W4705	Natural Language Processing
COMS W4771	Machine Learning

Two courses from human-focused areas such as the following:

COMS W4170	User Interface Design
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PSYC W2215 Cognition and the Brain
Two application courses (e.g., from economics or biology)

Information Science and the Economy

Students can 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 by taking courses in economics, finance, artificial intelligence, and mathematical modeling. For example, students may take courses in machine learning, statistics, and econometrics to understand how computers are enabling prediction modeling in many disciplines.

The requirements include:

Two courses in artificial intelligence and mathematical modeling such as the following:

COMS W4701	Artificial Intelligence
COMS W4771	Machine Learning

One course involving processing of text or data such as the following:

COMS W4111	Introduction to Databases
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Two courses each in economics and finance such as the following:

Economics:

ECON W1105	Principles of Economics
ECON BC3017	Economics of Business Organization

Finance:

IEOR E4007	Optimization Models and Methods for Financial Engineering
IEOR E4308	Industrial Budgeting and Financial Control

Information Science and Health Sciences

Students can focus on understanding information modeling together with existing and emerging needs in health sciences, as well as algorithms and systems to address those needs by taking courses in computational biology, computational genomics, and biomedical informatics. For example, students may take courses that integrate computer science and biology, leading to understanding the role that computational processes play in decoding the human genome.

The requirements include:

Three courses in either artificial intelligence and mathematical modeling, processing of text or data, or human computer interaction such as the following:

Artificial Intelligence and Mathematical Modeling:

COMS W4701	Artificial Intelligence
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Processing of Text or Data:

COMS W4111	Introduction to Databases
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Human Computer Interaction:

COMS W4170	User Interface Design
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Three courses drawn from the biomedical area such as the following:

BINF G4001	Introduction To Computer Applications In Health Care and Biomedicine
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BIOL W4037	Bioinformatics of Gene Expression
ECBM E3060/E4060	Introduction to genomic information science and technology

One course drawn from a human centered area such as the following:

PSYC W2215	Cognition and the Brain
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MAJOR IN COMPUTER SCIENCE-STATISTICS

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 V1101	Calculus I
MATH V1102	Calculus II
MATH V1201	Calculus III
MATH V2010	Linear Algebra

Select one of the following courses:

STAT W1001	Introduction to Statistical Reasoning
STAT W1111	Introduction to Statistics (without calculus)
STAT W1211	Introduction to Statistics (with calculus)

Statistics (12 points)

STAT W3105	Introduction to Probability
or STAT W4105	Introduction to Probability
STAT W3107	Introduction to Statistical Inference
or STAT W4107	Introduction to Statistical Inference
STAT W3315	Linear Regression Models
or STAT W4315	Linear Regression Models
STAT W4400	Statistical Machine Learning
or COMS W4771	Machine Learning

Computer Science (15 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
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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

Three required courses:

COMS W3203	Discrete Mathematics: Introduction to Combinatorics and Graph Theory
COMS W3210	Scientific Computation
CSOR W4231	Analysis of Algorithms I

Electives (12 points)

Select two of the following courses:

STAT W3026	Applied Data Mining
STAT W4199	Statistical Computing in SAS
STAT W4240	Data Mining
STAT W4242	Introduction to Data Science
STAT W4249	Applied Data Science
STAT W4606	Elementary Stochastic Processes

Select two 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

CSEE W3827	Fundamentals of Computer Systems (or any 3 point 4000 -level computer science course)
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Select one of the following courses:

COMS W3210	Scientific Computation
COMS W3251	Computational Linear Algebra
SIEO W3600	Introduction to Probability and Statistics
or SIEO W4150	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)

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

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>.

FACULTY PROFESSORS

- Margo L. Jefferson
- Benjamin Marcus
- Alan Ziegler

ASSOCIATE PROFESSORS

- Susan Bernofsky
- Timothy Donnelly
- Heidi Julavits
- Ben Metcalf
- Deborah Paredez

ASSISTANT PROFESSORS

- Dorothea "Dottie" Lasky
- Victor LaValle

ADJUNCT PROFESSORS

- Kathleen Alcott
- Ellis Avery
- Alexander Chee
- Jon Cotner
- Meehan Crist
- Rebecca Curtis
- Ann DeWitt
- Joseph Fasano
- Alena Graedon
- Elizabeth Greenwwood
- Mitchell Jackson
- Alexandra Kleeman
- Rickey Laurentiis
- Marie Myung-Ok Lee
- Marni Ludwig
- Carey McHugh
- Michelle Orange
- Morgan Parker
- Jennifer Percy
- Emily Pettit
- Mark Rozzo
- Kent Russell
- Kate Zambreno

GRADUATE FACULTY FELLOWS

- Olaya Barr
- Hayden Bennett
- Julia Bosson
- Ena Brdjanovic
- Kelly Crisp
- Amy Feltman
- Leesa Fenderson
- Carlie Hoffman
- Katrine Jensen
- Chukwuma Ndulue
- Daniel Penny
- Colin Ryan
- Casey Samulski
- Sophia Unterman
- Andrew Waldron

REQUIREMENTS

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 W1001	Beginning Fiction Workshop
WRIT W1101	Beginning Nonfiction Workshop
WRIT W1201	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 W2001	Intermediate Fiction Workshop
WRIT W2101	Intermediate Nonfiction Workshop
WRIT W2201	Intermediate Poetry Workshop

Advanced Workshop

Prerequisite: intermediate workshop. Permission required. Admission by writing sample. Enrollment limited to 15. Course may be repeated in fulfillment of the major.

WRIT W3001	Advanced Fiction Workshop
WRIT W3101	Advanced Nonfiction Workshop
WRIT W3201	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 W3697	Senior Fiction Workshop
WRIT W3798	Senior Nonfiction Workshop
WRIT W3898	Senior Poetry Workshop

Seminar Curriculum (12 points)

The creative writing seminars provide the intellectual ballast that informs and deepens the work of student writers. Students read a book each week and engage in roundtable discussions about the artistic attributes of the texts, in order to better understand how literature is created. Only through a deep analysis of outstanding

and diverse works of literature can writers build the resources necessary to produce their own accomplished creative work.

Creative writing majors select 12 points within the division. Any 4 of these seminars fulfill the requirement:

Craft and Practice

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.

WRIT W3301	Fiction Seminar: Techniques of the Short Story
WRIT W3302	Fiction Seminar: Approaches to the Short Story
WRIT W3333	Nonfiction Seminar: Traditions in Nonfiction
WRIT W3336	Translation Seminar
WRIT W3351	Poetry Seminar: Approaches to Poetry
WRIT W3303	Fiction Seminar: The Long and Short of It

History and Context

These seminars offer a broad view of literary history as it relates to the concerns of a writer. They cover specific genres or periods of time, and seek to inform students about the kinds of approaches that are possible in their chosen genre. Extensive readings are required, along with short critical papers or creative exercises.

WRIT W3303	Fiction Seminar: The Long and Short of It
WRIT W3306	Fiction Seminar: Voices from the Edge
WRIT W3308	Cross Genre Seminar: Short Prose Forms
WRIT W3336	Translation Seminar

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

212-854-6943 (fax)

dance@barnard.edu

Administrative Assistant: Sandra Velasquez Dos Santos

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.

FACULTY

Distinguished Guest Artist (2014-15): Twyla Tharp

Professor: Lynn Garafola (co-chair)

Associate Professor: Paul Scolieri

Associate Professor of Professional Practice: Colleen Thomas

Assistant Chair: Katie Glasner (co-chair)

Visiting Associate Professor of Professional Practice: Marjorie Folkman

Faculty:

Mindy Aloff, Cynthia Anderson, Rebecca Bliss, Alex Brady, Siobhan Burke, Maguette Camara, Antonio Carmena, Mary Carpenter, Tessa Chandler, Elizabeth Coker, Uttara Coolawala, Chisa Hidaka, Allegra Kent, Katiti King, Robert LaFosse, Melinda Marquez, Jodi Melnick, Andrea Miller, Margaret Morrison, Rika Okamoto, David Parker, Kathryn Sullivan, Caitlin Trainor, Ashley Tuttle, Adam H. Weinert, Seth Williams, Karla Wolfangle

Artists in Residence: John Heginbotham, Patricia Hoffbauer, Sam Kim, Pam Tanowitz

Technical Director and Lighting Designer: Tricia Toliver

Music Director: Robert Boston

Administrative Assistant: Sandra Velasquez Dos Santos

REQUIREMENTS

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	3-4
DNCE BC3593	Senior Project: Repertory for Dance	

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 BC3580	History of Social Dancing: Dance Crazes from the Waltz to Flash Mobs	15-20
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 the Page to the Dance Stage	
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 BC3577	Performing the Political: Embodying Change in American Performance	
DNCE BC3578	Traditions of African-American Dance	
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	

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

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 the Page to the Dance Stage	
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
212-854-1840 (fax)

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.

FACULTY

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

Assistant Professor: Katherine Biers

Associate Professor of Professional Practice: Steven Chaikelson

Administrator: Mike Cavalier

Technical Director: Greg Winkler

Production Manager: Michael Banta

Costume Shop Manager: Kara Feely

Faculty Department Assistant: Coretta Grant

REQUIREMENTS

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 V3150	Western Theatre Traditions:	6
- THTR V3151	Classic to Romantic and Western Theatre Traditions: Modern	

Select one of the following:

THTR V3000	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 W3701	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 V3132	Sound Design	
THTR V3133	Costume Design	
THTR V3134	Lighting Design	
THTR V3135	Scene Design	
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 V3004	Acting Lab	
THTR V3005	Acting Lab	

Select one of the following courses in directing:

THTR V3200	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 V3997	Senior Thesis: Performance (acting, design, directing, dramaturgy, or playwriting) *	
THTR V3998	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 V2005	Acting Workshop	3
THTR V2007	Scene Lab	3
THTR V2120	Technical Production	3
THTR V3004	Acting Lab	3
THTR V3005	Acting Lab	3
THTR V3006	Advanced Acting Lab	3

THTR V3122	Rehearsal and Performance	1-3
THTR V3172	Rehearsal and Performance - Design and Technical	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>

Directors of Undergraduate Studies:

Prof. Sidney Hemming, Lamont-Doherty Earth Observatory; 845-365-8417; 557 Schermerhorn Extension; 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.

FACULTY PROFESSORS

- Wallace S. Broecker
- Mark A. Cane
- Nicholas Christie-Blick
- Joel E. Cohen
- Peter B. de Menocal
- Hugh Ducklow
- Peter Eisenberger
- Göran Ekström
- Steven L. Goldstein
- Arnold L. Gordon
- Kevin L. Griffin
- Sidney R. Hemming (Vice Chair)
- Peter B. Kelemen (Chair)
- 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 W. Spiegelman
- Martin Stute (Barnard)
- David Walker

ASSOCIATE PROFESSORS

- Sonya Dyhrman
- Arlene M. Fiore
- Bärbel Hönlisch
- Meredith Nettles
- Maria Tolstoy

ASSISTANT PROFESSORS

- Ryan Abernathey
- Tiffany A. Shaw

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
- Andrew Robertson

LECTURERS

Pietro Ceccato

ASSOCIATES

- Anthony Barnston

REQUIREMENTS

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

- 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.
- 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.
- 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.
- 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	Advanced General Geology
EESC W4400	Dynamics of Climate Variability and Climate Change
EESC W4401	Quantitative Models of Climate-Sensitive Natural and Human Systems
EESC W4404	Regional Climate and Climate Impacts
EESC W4930	Earth's Oceans and Atmosphere

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 W2200	Earth's Environmental Systems: The Solid Earth System
EESC W2100	Earth's Environmental Systems: The Climate System
or EESC W2300	Earth's Environmental Systems: The Life System

Students who wish to take both EESC W2100 Earth's Environmental Systems: The Climate System and EESC W2300 Earth's Environmental Systems: The Life System can include one of these under breadth and related fields below.

Supporting Mathematics and Science Courses

MATH V1101	Calculus I
or MATH V1102	Calculus II
Select one of the following three-course sequences:	
CHEM W1403	General Chemistry I (Lecture)
- CHEM W1404	and General Chemistry II
- PHYS W1201	(Lecture)
	and General Physics I
CHEM W1403	General Chemistry I (Lecture)
- PHYS W1201	and General Physics I
- PHYS W1202	and General Physics II

Capstone Experience

Select one of the following:

EESC BC3800	Senior Research Seminar
- EESC W3901	and Environmental Science
	Senior Seminar
EESC BC3801	Senior Research Seminar
- EESC W3901	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 W2100	Earth's Environmental Systems: The Climate System
EESC W2300	Earth's Environmental Systems: The Life System

EESC W3010	Field Geology
EESC BC3017	Environmental Data Analysis
EESC W4050	Global Assessment and Monitoring Using Remote Sensing
EESC W4600	Earth Resources and Sustainable Development
EESC W4917	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 W3101	Geochemistry for a Habitable Planet
or EESC W3201	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 W4076	Geologic Mapping
EESC W4090	Introduction to Geochronology and Thermochronology
EESC W4113	Introduction to Mineralogy
EESC W4223	Sedimentary Geology
EESC W4230	Crustal Deformation
EESC W4480	Paleobiology and Earth System History
EESC W4701	Introduction to Igneous Petrology
EESC W4887	Isotope Geology I
EESC W4947	Plate Tectonics

It is strongly recommended that students focusing in geological science take the summer geology field course as their capstone experience.

Geochemistry

EESC W3015	The Earth's Carbon Cycle
EESC BC3016	Environmental Measurements
EESC BC3200	Ecotoxicology
EESC W4090	Introduction to Geochronology and Thermochronology
EESC W4113	Introduction to Mineralogy
EESC W4701	Introduction to Igneous Petrology

EESC W4885	The Chemistry of Continental Waters
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EESC W4887	Isotope Geology I
EESC W4926	Principles of Chemical Oceanography

It is recommended that students focusing in geochemistry take CHEM C1403-CHEM C1404 General Chemistry I and II, and PHYS V1201 General Physics I as their supporting science sequence.

Atmosphere and Ocean Science

EESC W4008	Introduction to Atmospheric Science
EESC W4924	Introduction to Atmospheric Chemistry
EESC W4925	Principles of Physical Oceanography
EESC W4926	Principles of Chemical Oceanography
EESC W4920	Paleoceanography
EESC W4937	Cenozoic Paleoclimatology

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 W4230	Crustal Deformation
EESC W4300	The Earth's Deep Interior
EESC W4947	Plate Tectonics
EESC W4949	Introduction to Seismology

It is recommended that students focusing in solid Earth geophysics take PHYS V1201-PHYS V1202 General Physics I and II, and CHEM C1403 General Chemistry I as their supporting science sequence and also take MATH V1201 Calculus II.

Climate

EESC W3015	The Earth's Carbon Cycle
EESC BC3025	Hydrology
EESC W4008	Introduction to Atmospheric Science
EESC W4330	Introduction to Terrestrial Paleoclimate
EESC W4835	Wetlands and Climate Change
EESC W4920	Paleoceanography
EESC W4924	Introduction to Atmospheric Chemistry
EESC W4925	Principles of Physical Oceanography
EESC W4937	Cenozoic Paleoclimatology

Paleontology

EESC W4223	Sedimentary Geology
EESC W4480	Paleobiology and Earth System History
EESC W4550	Plant Ecophysiology
EESC W4920	Paleoceanography
EESC W4924	Introduction to Atmospheric Chemistry

EESC W4937 Cenozoic Paleocyanography
It is recommended that students focusing in paleontology take EESC V2300 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 W2100	Earth's Environmental Systems: The Climate System
EESC W2200	Earth's Environmental Systems: The Solid Earth System
EESC W2300	Earth's Environmental Systems: The Life System

Supporting Mathematics and Science Courses

MATH V1101	Calculus I
or MATH V1102	Calculus II

Select one of the following three-course sequences:

CHEM W1403	General Chemistry I (Lecture)
- CHEM W1404	and General Chemistry II
- PHYS W1201	(Lecture)
	and General Physics I
CHEM W1403	General Chemistry I (Lecture)
- PHYS W1201	and General Physics I
- PHYS W1202	and General Physics II
CHEM W1403	General Chemistry I (Lecture)
- EEBB W2001	and Environmental Biology I:
- PHYS W1201	Elements to Organisms
	and General Physics I

Capstone Experience

EESC BC3800	Senior Research Seminar
or EESC BC3801	Senior Research Seminar
EESC W3901	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 W3010	Field Geology
EESC BC3017	Environmental Data Analysis

EESC W4050	Global Assessment and Monitoring Using Remote Sensing
EESC W4600	Earth Resources and Sustainable Development
EESC W4917	Earth/Human Interactions

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 W3101	Geochemistry for a Habitable Planet
or EESC W3201	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 W4076	Geologic Mapping
EESC W4480	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 W3015	The Earth's Carbon Cycle
EESC W4885	The Chemistry of Continental Waters
EESC W4887	Isotope Geology I
EESC W4888	Isotope Geology II
EESC W4924	Introduction to Atmospheric Chemistry
EESC W4926	Principles of Chemical Oceanography

Hydrology

EESC W4076	Geologic Mapping
EESC W4835	Wetlands and Climate Change
EESC W4885	The Chemistry of Continental Waters
EESC BC3025	Hydrology
EAEE E3221	Environmental geophysics

Climate Change

EESC W3015	The Earth's Carbon Cycle
EESC W4008	Introduction to Atmospheric Science

EESC W4330	Introduction to Terrestrial Paleoclimate
EESC W4480	Paleobiology and Earth System History
EESC W4835	Wetlands and Climate Change
EESC W4920	Paleoceanography
It is recommended that students focusing in environmental geology also take EESC W4050 Remote Sensing.	
Energy and Resources	
EESC W4076	Geologic Mapping
EESC W4701	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 W2200	Earth's Environmental Systems: The Solid Earth System
EESC W2100	Earth's Environmental Systems: The Climate System
or EESC W2300	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 Earth science major above.

Depth and Breadth and Related Fields Requirements

A minimum of 10 points (typically three courses) is required as follows:

EESC W3101	Geochemistry for a Habitable Planet
or EESC W3201	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 W2200	Earth's Environmental Systems: The Solid Earth System
EESC W2100	Earth's Environmental Systems: The Climate System
EESC W2300	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 W3101	Geochemistry for a Habitable Planet
or EESC W3201	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 W2100	Earth's Environmental Systems: The Climate System
EESC W2200	Earth's Environmental Systems: The Solid Earth System
EESC W2300	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 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 W2001	Environmental Biology I: Elements to Organisms
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EEEB W2002	Environmental Biology II: Organisms to the Biosphere (equivalent to EESC V2300)
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EESC W2100	Earth's Environmental Systems: The Climate System
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EESC W2200	Earth's Environmental Systems: The Solid Earth System
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Introductory Science (13 points)

Select one of the following chemistry sequences:

CHEM W1403 - CHEM W1404	General Chemistry I (Lecture) and General Chemistry II (Lecture)
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CHEM W1604 - CHEM W2507	Intensive General Chemistry (Lecture) and Intensive General Chemistry Laboratory
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One term of statistics such as the following:

STAT W1111	Introduction to Statistics (without calculus)
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STAT W1211	Introduction to Statistics (with calculus)
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BIOL BC2286	Statistics and Research Design
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EEEB W3005	Introduction to Statistics for Ecology and Evolutionary Biology
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EEEB W3087	Conservation Biology
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Advanced Environmental Biology (9 points)

Three additional advanced EEEB 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, second-year, and third-year Chinese, Japanese, and Korean. These courses include the following:

CHNS C1101 - CHNS C1102	First-Year Chinese I (N) and First-Year Chinese II (N)
CHNS C1111 - CHNS C1112	and First-Year Chinese II (W)
CHNS C1201 - CHNS C1202	Second-Year Chinese I (N) and Second-Year Chinese II (N)
CHNS C1221 - CHNS C1222	Second-Year Chinese I (W) and Second-Year Chinese II (W)

CHNS W4003 - CHNS W4004	Third-Year Chinese I (N) and Third-Year Chinese II (N)
JPNS C1101 - JPNS C1102	First-Year Japanese I and First-Year Japanese II
JPNS C1201 - JPNS C1202	Second-Year Japanese I and Second-Year Japanese II
JPNS W4005 - JPNS W4006	Third-Year Japanese I and Third-Year Japanese II
KORN W1101 - KORN W1102	First-Year Korean I and First-Year Korean II
KORN W1201 - KORN W1202	Second-Year Korean I and Second-Year Korean II
KORN W4005 - KORN W4006	Third-Year Korean I and Third-Year Korean II

Students who plan to take any of the courses listed above 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 25% 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, although not all courses conform to them. Students with questions about the nature of a course should consult with the instructor or the director of undergraduate studies.

- 1000-level: First- and second-year language courses
- 2000-level: Broad introductory undergraduate courses
- 3000-level: Intermediate and advanced undergraduate lectures and seminars
- 4000-level: Third- and fourth-year language courses, and advanced undergraduate seminars, which may be open to graduate students
- 5000-level: Fifth-year 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.

FACULTY

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)
- Gari Ledyard (*emeritus*)
- Feng Li
- Lydia Liu
- Rachel McDermott (Barnard)
- Matthew McKelway (Art History)
- Wei Shang
- Haruo Shirane (Chair)
- Henry Smith (*emeritus*)
- Tomi Suzuki
- Chun-Fang Yu (*emeritus*)
- Madeleine Zelin

ASSOCIATE PROFESSORS

- Lisbeth Kim Brandt
- Michael Como (Religion)
- Theodore Hughes
- Adam McKeown (History)
- Eugenia Lean

- David Lurie
- David (Max) Moerman (Barnard)
- Gregory Pflugfelder
- Jonathan Reynolds (Art History, Barnard)
- Gray Tuttle

ASSISTANT PROFESSORS

- Hikari Hori
- Harrison Huang
- Jue Guo (Barnard)
- Jungwon Kim
- Annabella Pitkin (Barnard)
- Ying Qian
- Zhaohua Yang (Religion)

ADJUNCT FACULTY

- Robert Barnett
- Rachel Chung
- Masato Hasegawa
- Laurel Kendall
- Tuo Li
- Morris Rossabi

SENIOR SCHOLARS

- Conrad Schirokauer

SENIOR LECTURERS

- Shigeru Eguchi
- Lening Liu
- Yuan-Yuan Meng
- Fumiko Nazikian
- Miharuru Nittono
- Carol Schulz
- Zhirong Wang

LECTURERS

- Yushan Cheng
- Eunice Chung
- Lingjun Hu
- Tianqi Jiang
- Rong Jiang
- James Lap
- Beom Lee
- Kyoko Loetscher
- Keiko Okamoto
- Jisuk Park
- Shaoyan Qi
- Zhongqi Shi
- Sunhee Song
- Qiuyu Tan

- Naofumi Tatsumi
- Sonam Tsering
- Asami Tsuda
- Hailong Wang
- Yoshiko Watanabe
- Chen Wu
- Jia Xu
- Ling Yan
- Hyunkyu Yi

ON LEAVE REQUIREMENTS

MAJOR IN EAST ASIAN STUDIES

The requirements for this program, under the 'Disciplinary Specialty' section, were modified on May 1, 2015. 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.

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 *W4005-W4006* level in Chinese, Japanese, or Korean; *TIBT G4611-G4612* level in Tibetan), or the proficiency equivalent (to be demonstrated by placement examination). Students of Chinese may also complete *W4003-W4004* to meet the third year requirement.

One of the following sequences (in the target language):

CHNS W4005	Third-Year Chinese I (W)
- CHNS W4006	and Third-Year Chinese II (W)

Or, for heritage students:

CHNS W4003	Third-Year Chinese I (N)
- CHNS W4004	and Third-Year Chinese II (N)

JPNS W4005	Third-Year Japanese I
- JPNS W4006	and Third-Year Japanese II

KORN W4005	Third-Year Korean I
- KORN W4006	and Third-Year Korean II

TIBT G4611	Third Year Modern Colloquial
- TIBT G4612	Tibetan I
	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 V3400	Colloquium on Major Texts: East Asia
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Students must also select two of the following:

ASCE V2359	Introduction to East Asian Civilizations: China
ASCE V2361	Introduction to East Asian Civilization: Japan
ASCE V2363	Introduction to East Asian Civilizations: Korea
ASCE V2365	Introduction to East Asian Civilizations: Tibet

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.

Disciplinary Specialty

The 'Disciplinary Specialty' requirements for this program were modified on May 1, 2015. 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.

On entering the major, each student must choose an academic discipline in which to specialize and complete a specific number of more specialized East Asia-related disciplinary courses. All majors must also take EAAS W3990 Approaches to East Asian Studies, which is offered every spring.

Disciplinary Specialty

Select one of the following academic disciplines in which to specialize and complete the number of East Asia-related disciplinary courses as required below: *

Anthropology: two courses

Art History: two courses

Economics: three courses

History: two courses

Literature: two courses

Philosophy: two courses

Political Science: three courses

Religion: two courses

Sociology: two courses

Required Methodology Course for All Disciplines

All majors are also required to take:

EAAS W3990	Approaches to East Asian Studies (offered every spring)
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* Courses in closely related disciplines may be substituted with the approval of the director of undergraduate studies.

Elective Courses

For students specializing in history, literature, anthropology, art history, philosophy, religion, or sociology, two courses. For students specializing in economics or political science, one course. Courses are to be chosen in consultation with the

director of undergraduate studies. East Asia–related courses offered in other departments may be counted toward the elective requirement. 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 of the two elective requirements, but placement examinations may not be used to do so.

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 a hard copy of the EALAC Senior Thesis Program Application (see Undergraduate Planning Sheets and Forms (<http://ealac.columbia.edu/undergraduate/planning-sheets-forms>)) to the EALAC Academic Coordinator in 407 Kent by Friday, April 29, 2016, at 5:00 PM. Decisions will be made by June 1, 2016, when grades for the spring semester have been received.

All potential thesis writers are required to enroll in the Senior Thesis Research Workshop (EAAS V3999) 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 W3901).

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 *W4005–W4006* level in Chinese, Japanese, or Korean; *TIBT G4611–G4612* level in Tibetan), or the proficiency equivalent (to be demonstrated by placement examination). Students of

Chinese may also complete *W4003–W4004* to meet the third year requirement.

One of the following sequences (in the target language):

CHNS W4005	Third-Year Chinese I (W)
- CHNS W4006	and Third-Year Chinese II (W)

Or, for heritage students:

CHNS W4003	Third-Year Chinese I (N)
- CHNS W4004	and Third-Year Chinese II (N)

JPNS W4005	Third-Year Japanese I
- JPNS W4006	and Third-Year Japanese II

KORN W4005	Third-Year Korean I
- KORN W4006	and Third-Year Korean II

TIBT G4611	Third Year Modern Colloquial
- TIBT G4612	Tibetan I
	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

AHUM V3400	Colloquium on Major Texts: East Asia
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Select one of the following:

ASCE V2359	Introduction to East Asian Civilizations: China
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ASCE V2361	Introduction to East Asian Civilization: Japan
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ASCE V2363	Introduction to East Asian Civilizations: Korea
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ASCE V2365	Introduction to East Asian Civilizations: Tibet
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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 director of undergraduate studies. 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 Prediction, 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.

FACULTY 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
- Parvies Hosseini

- Kevin Olival
- Melinda Rostal

Cary Institute of Ecosystem Studies

Joshua Ginsberg

NYC Audubon

- Susan Elbin

Woods Hole

- Michael T. Coe

REQUIREMENTS

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 W2001 - EEEB W2002	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 W2100	Earth's Environmental Systems: The Climate System
EESC W2200	Earth's Environmental Systems: The Solid Earth System

Two terms of chemistry such as the following:

CHEM W1403 - CHEM W1404	General Chemistry I (Lecture) and General Chemistry II (Lecture)
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One term of physics such as the following:

PHYS W1201	General Physics I (or higher)
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One term of statistics such as the following:

BIOL BC2286	Statistics and Research Design
EEEB W3005	Introduction to Statistics for Ecology and Evolutionary Biology
STAT W1111	Introduction to Statistics (without calculus)
STAT W1211	Introduction to Statistics (with calculus)

One term of calculus such as the following:

MATH V1101	Calculus I
MATH V1102	Calculus II
MATH V1201	Calculus III
MATH V1202	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 W3991- EEEB W3992 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 W2001	Environmental Biology I: Elements to Organisms
- EEEB W2002	and Environmental Biology II: Organisms to the Biosphere

Two terms of chemistry such as the following:

CHEM W1403	General Chemistry I (Lecture)
- CHEM W1404	and General Chemistry II (Lecture)

Chemistry laboratory such as the following:

CHEM W1500	General Chemistry Laboratory
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Two terms of physics such as the following:

PHYS W1201	General Physics I
- PHYS W1202	and General Physics II

One term of statistics such as the following:

BIOL BC2286	Statistics and Research Design
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EEEB W3005	Introduction to Statistics for Ecology and Evolutionary Biology
STAT W1111	Introduction to Statistics (without calculus)
STAT W1211	Introduction to Statistics (with calculus)

Two terms of calculus, or one term of calculus and second advanced course in math or statistics such as the following:

MATH V1101	Calculus I
MATH V1102	Calculus II
MATH V1201	Calculus III
MATH V1202	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 W3031 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 W3991-EEEB W3992 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's approval. (These include up to 6 points of biology/chemistry or calculus.) Please speak with the major adviser about the extended list of courses from related areas including archaeology; anthropology; biology; biomedical engineering; ecology, evolution and environmental biology; earth and environmental science; and psychology that may be acceptable.

For example, students interested in focusing on paleoanthropology would complement the requirements with courses focusing on the specifics of human evolution

and morphology, evolutionary biology and theory, geology, systematics, and statistics.

Required Courses

EEEB W1010	Human Origins and Evolution
EEEB W1011	Behavioral Biology of the Living Primates

Conservation Courses

EEEB W3087	Conservation Biology (alternatively, students may participate in SEE-U in Brazil, Jordan, or India in fulfillment of this course requirement)
EEEB W3240	Challenges and Strategies of Primate Conservation

Theoretical Foundation from Related Fields

Alternate options may be possible for all courses other than EEEB W1010 Human Origins and Evolution and EEEB W1011 Behavioral Biology of the Living Primates, on an individual basis in consultation with the major/concentration adviser.

Select one course from each subset below:

Cultural Anthropology

ANTH V1002	The Interpretation of Culture
ANTH V2004	Introduction to Social and Cultural Theory
ANTH V3040	Anthropological Theory I
ANTH V3041	Anthropological Theory II

Archaeology

ANTH V1007	The Origins of Human Society
ANTH V2028	Pasts, Presents and Futures: An Introduction to 21st Century Archaeology
ANTH V3064	Death and the Body

Breadth Requirement

A minimum of 9 points, four of which may count toward the seminar requirement:

Genetics/Human Variation

ANTH V3970	Biological Basis of Human Variation
BIOL BC2100	Molecular and Mendelian Genetics
BIOL W3031	Genetics
EEEB W4340	Human Adaptation
EEEB W4700	Race: The Tangled History of a Biological Concept

Primate Behavioral Biology and Ecology

BIOL BC2280	Animal Behavior
EEEB W3030	The Biology, Systematics, and Evolutionary History of the 'Apes' (if needed)

EEEB W3940	Current Controversies in Primate Behavior and Ecology
EEEB W4010	The Evolutionary Basis of Human Behavior
EEEB G4134	Behavioral Ecology
PSYC BC1119	Systems and Behavioral Neuroscience
PSYC W2420	Animal Behavior
PSYC W2450	Behavioral Neuroscience
PSYC W3450	Evolution of Intelligence and Consciousness (Seminar)
PSYC W3470	Brain Evolution: Becoming Human (Seminar)

Human Evolution/Morphology

ANTH G4147	Human Skeletal Biology I
ANTH G4148	The Human Skeletal Biology II
ANTH W4200	Fossil Evidence of Human Evolution
BIOL BC2262	Vertebrate Biology
BIOL BC2278	Evolution
BIOL W3002	Introduction to Animal Structure and Function
BIOL W3006	Physiology
EEEB W3030	The Biology, Systematics, and Evolutionary History of the 'Apes'
EEEB W3204	Dynamics of Human Evolution
EEEB W3208	Explorations in Primate Anatomy
EEEB W3215	Forensic Osteology
EEEB W3220	The Evolution of Human Growth and Development
EEEB W3910	The Neandertals

Additional courses in the student's area of focus to complete the required minimum of 20 points of approved biological anthropology courses.

Seminar

At least one of the following four-point seminars which may also count toward the breadth requirement.

EEEB W3204	Dynamics of Human Evolution
EEEB W3910	The Neandertals
EEEB W3940	Current Controversies in Primate Behavior and Ecology
ANTH V3970	Biological Basis of Human Variation
EEEB W3993 - EEEB W3994	EBHS Senior Seminar and EBHS Senior Seminar

It is strongly suggested that students intending to pursue graduate study in this field broaden their foundation by taking an introductory biology course (optimally EEEB W2001 Environmental Biology I: Elements to Organisms) or advanced evolution course, a 2000- or 3000-level genetics course, and a quantitative methods 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.

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:

EESB W2001 - EESB W2002	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 W2100 - EESC W2200	Earth's Environmental Systems: The Climate System and Earth's Environmental Systems: The Solid Earth System
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Two terms of chemistry such as the following:

CHEM W1403 - CHEM W1404	General Chemistry I (Lecture) and General Chemistry II (Lecture)
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One term of statistics. Select one of the following:

BIOL BC2286 EESB W3005	Statistics and Research Design Introduction to Statistics for Ecology and Evolutionary Biology
STAT W1111	Introduction to Statistics (without calculus)
STAT W1211	Introduction to Statistics (with calculus)

Upper Division Courses

EESB W3087	Conservation Biology
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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 courses EESB W1010 Human Origins and Evolution, EESB W1011 Behavioral Biology of the Living Primates, EESB W3087 Conservation Biology, and three courses for the biological anthropology breadth distribution requirements as described for the major. Students must take a minimum of 15 points from biological

anthropology courses as described for the major. The additional courses may be taken in other departments with adviser's approval.

Concentrators do not have to complete the theoretical foundation courses from cultural anthropology/archaeology or a seminar, though the latter is recommended.

Approved Biological Anthropology Courses

Paleoanthropology and Morphology

ANTH G4147 - ANTH G4148	Human Skeletal Biology I and The Human Skeletal Biology II
ANTH G4200	Fossil Evidence of Human Evolution

EESB W1010	Human Origins and Evolution
EESB W3204	Dynamics of Human Evolution
EESB W3208	Explorations in Primate Anatomy
EESB W3215	Forensic Osteology
EESB W3910	The Neandertals

Primate Behavioral Ecology and Evolution

EESB W1011	Behavioral Biology of the Living Primates
EESB W3030	The Biology, Systematics, and Evolutionary History of the 'Apes'
EESB W3940	Current Controversies in Primate Behavior and Ecology
EESB W4010	The Evolutionary Basis of Human Behavior

Human Variation

ANTH V3970	Biological Basis of Human Variation
EESB W4340	Human Adaptation
EESB W4700	Race: The Tangled History of a Biological Concept

Additional Courses

EESB W3993 - EESB W3994	EBHS Senior Seminar and EBHS Senior Seminar
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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 W2100	Earth's Environmental Systems: The Climate System
EESC W2200	Earth's Environmental Systems: The Solid Earth System
EESC W2300	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 W3015	The Earth's Carbon Cycle
EESC BC3017	Environmental Data Analysis
EESC BC3025	Hydrology
EESC W4008	Introduction to Atmospheric Science
EESC W4050	Global Assessment and Monitoring Using Remote Sensing
EESC W4223	Sedimentary Geology
EESC W4550	Plant Ecophysiology
EESC W4835	Wetlands and Climate Change
EESC W4885	The Chemistry of Continental Waters
EESC W4917	Earth/Human Interactions
EESC W4926	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)

EEEB W2001	Environmental Biology I: Elements to Organisms
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EEEB W2002	Environmental Biology II: Organisms to the Biosphere (equivalent to EESC V2300)
EESC W2100	Earth's Environmental Systems: The Climate System
EESC W2200	Earth's Environmental Systems: The Solid Earth System

Introductory Science (13 points)

Select one of the following chemistry sequences:

CHEM W1403 - CHEM W1404	General Chemistry I (Lecture) and General Chemistry II (Lecture)
CHEM W1604 - CHEM W2507	Intensive General Chemistry (Lecture) and Intensive General Chemistry Laboratory

One term of statistics such as the following:

BIOL BC2286	Statistics and Research Design
EEEB W3005	Introduction to Statistics for Ecology and Evolutionary Biology
STAT W1111	Introduction to Statistics (without calculus)
STAT W1211	Introduction to Statistics (with calculus)
EEEB W3087	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

Departmental Advisers: For a list of Economics Department
advisers for the major, concentration, and interdepartmental
majors, please see the departmental website (<http://www.columbia.edu/cu/economics/>).

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 W1105 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 W4999 Senior Honors Thesis (a one-year course);
3. Receive at least a grade of A- in ECON W4999 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 W4999 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 W4999 Senior Honors Thesis) must have completed the core major requirements and spoken with the director of undergraduate studies in the spring semester of their junior year. Normally no more than 10% of graduating majors receive departmental honors in a given academic year. Please see the departmental honors section in the department FAQ page 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.

FACULTY PROFESSORS

- 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
- Glenn Hubbard (also Business School)
- Navin Kartik
- Wojciech Kopczuk (also School of International and Public Affairs)
- W. Bentley McLeod (also School of International and Public Affairs)
- Perry Mehrling (Barnard)
- Massimo Morelli (also Political Science)
- Robert Mundell (*emeritus*)
- Serena Ng
- Brendan O'Flaherty
- Edmund S. Phelps
- Ricardo Reis
- Michael Riordan
- Jeffrey Sachs (also Earth Institute)
- Xavier Sala-i-Martin
- Bernard Salanié
- José A. Scheinkman
- Stephanie Schmitt-Grohé
- Rajiv Sethi (Barnard)
- Joseph Stiglitz (also Business School)
- Martín Uribe
- Miguel Urquiola (also School of International and Public Affairs)
- David Weiman (Barnard)
- David Weinstein
- Michael Woodford

ASSOCIATE PROFESSORS

- Douglas Almond (also School of International and Public Affairs)
- Lena Edlund
- Katherine Ho
- Qingmin Liu
- Emi Nakamura (also Business School)
- Pietro Ortoleva
- Jón Steinsson
- Eric Verhoogen (also School of International and Public Affairs)
- Jonathan Vogel

ASSISTANT PROFESSORS

- Christopher Conlon
- Mark Dean
- Francois Gerard
- Adam Kapor
- Supreet Kaur
- Jennifer La'O
- Suresh Naidu
- Jaromir Nosal
- Miikka Rokkanen
- Christoph Rothe

LECTURERS

- Tri Vi Dang
- Sally Davidson
- Susan Elmes
- Seyhan Erden
- Sunil Gulati
- Caterina Musatti

ADJUNCT FACULTY

- Ozge Akinci
- Jasmina Arifovic
- Sara Avila
- Jason Barr
- Edward Lincoln
- Neal Masia
- Waseem Noor
- Carl Riskin

ON LEAVE

- Profs. Kaur, Morelli, Nakamura, Reis, Salanié, Steinsson, Verhoogen, Weinstein (*2015-2016*)
- Profs. MacLeod, Rothe (*Fall 2015*)
- Prof. Bai (*Spring 2016*)

REQUIREMENTS

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 W1105 Principles of Economics

ECON W3211	Intermediate Microeconomics (it is recommended that this course be completed no later than the fall semester of the junior year)
ECON W3213	Intermediate Macroeconomics (it is recommended that this course be completed no later than the fall semester of the junior year)
ECON W3412	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 W1105 Principles of Economics	None
MATH V1101 Calculus I	
STAT W1211 Introduction to Statistics (with calculus)	MATH V1101 Calculus I
ECON W3213 Intermediate Macroeconomics	ECON W1105 Principles of Economics MATH V1101 Calculus I
ECON W3211 Intermediate Microeconomics	MATH V1201 Calculus III ECON W1105 Principles of Economics
ECON W3412 Introduction To Econometrics	ECON W3211 Intermediate Microeconomics or W3213 MATH V1201 Calculus III STAT W1211 Introduction to Statistics (with calculus)
ECON 2000-level electives	ECON W1105 Principles of Economics
ECON W4370 Political Economy	ECON W3213 Intermediate Macroeconomics ECON W3211 Intermediate Microeconomics STAT W1211 Introduction to Statistics (with calculus) or POLS W4910

ECON W4211 Advanced Microeconomics	ECON W3211 Intermediate Microeconomics MATH V2010 Linear Algebra Corequisites: MATH V2500 Analysis and Optimization or W4061 ECON W3213 Intermediate Macroeconomics
ECON W4213 Advanced Macroeconomics	ECON W3211 Intermediate Microeconomics
ECON W4412 Advanced Econometrics	ECON W3213 Intermediate Macroeconomics ECON W3412 Introduction To Econometrics MATH V2010 Linear Algebra
ECON W4413 Econometrics of Time Series and Forecasting	ECON W3211 Intermediate Microeconomics ECON W3412 Introduction To Econometrics ECON W3213 Intermediate Macroeconomics Corequisite: MATH V2010 Linear Algebra
ECON W4700 Financial Crises	ECON W3211 Intermediate Microeconomics
ECON W4280 Corporate Finance	ECON W3213 Intermediate Macroeconomics
ECON V3025 Financial Economics	STAT W1211 Introduction to Statistics (with calculus)
ECON W4020 Economics of Uncertainty and Information	
All other ECON 3000- and 4000-level electives	ECON W3213 Intermediate Macroeconomics ECON W3211 Intermediate Microeconomics
ECON W4913 Seminar In Macroeconomics	ECON W3211 Intermediate Microeconomics
ECON W4918 Seminar In Econometrics	ECON W3412 Introduction To Econometrics
ECON W4911 Seminar In Microeconomics	ECON W3213 Intermediate Macroeconomics
ECPS W4921 Seminar In Political Economy	ECON W3211 Intermediate Microeconomics ECON W3412 Introduction To Econometrics or POLS W4911 ECON W3213 Intermediate Macroeconomics ECON W4370 Political Economy
ECPH W4950 Economics and Philosophy Seminar	STAT W1211 Introduction to Statistics (with calculus) ECON W3213 Intermediate Macroeconomics ECON W3211 Intermediate Microeconomics

Barnard electives

See Barnard bulletin

It is **strongly recommended** that students take ECON W3412 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 W3211 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 V1201 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 W3211 Intermediate Microeconomics*, *ECON W3213 Intermediate Macroeconomics*, and *ECON W3412 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 W1105 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 W3211 Intermediate Microeconomics and ECON W3213 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 W3412 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 W4921 Seminar In Political Economy and ECON W4950, 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 V1101 - MATH V1201	Calculus I and Calculus III
MATH V1207 - MATH V1208	Honors Mathematics A and Honors Mathematics B

In addition:

1. Students who receive a grade of D or F in MATH V1201 Calculus III must retake the course but may enroll in ECON W3211 Intermediate Microeconomics.
2. Students who receive a grade of D or F in MATH V1207 Honors Mathematics A may either retake the course or take MATH V1201 Calculus III and enroll in ECON W3211 Intermediate Microeconomics concurrently.

Statistics

Unless otherwise specified below, all students must take STAT W1211 Introduction to Statistics (with calculus), or a higher level course such as SIEO W3600 Introduction to Probability and Statistics, SIEO W4150 Introduction to Probability and Statistics, or STAT W4107 Introduction to Statistical Inference.

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 W4321	Development Economics and Economic Development
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ECON BC3038 - ECON W4505	International Money and Finance and International Macroeconomics
ECON BC3019 - ECON W4400	Labor Economics and Labor Economics
ECON BC3047 - ECON W4500	International Trade and International Trade
ECON BC3039 - ECON W4625	Environmental and Natural Resource Economics and Economics of the Environment
ECON BC3041 - ECON G4235	Theoretical Foundations of Political Economy and 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.

Continuing Education Courses

The Department of Economics does not accept *any* of the courses offered through the School of Continuing Education 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 other than the *economics-philosophy major*, students must complete a minimum of *five* lecture courses in the Columbia department. Students in the economics-philosophy major who declared prior to spring 2014 and economics concentration must complete a minimum of four lecture courses. Students in the economics-philosophy major who declare in or after spring 2014 are required to take a minimum of five lecture courses. 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 (declared prior to Spring 2014)	6	5	1
Economics-statistics (declared in Spring 2014 and beyond)	7	5	2
Economics-philosophy (declared prior to Spring 2014)	5	4	1
Economics-philosophy (declared in Spring 2014 and beyond)	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 V3025 Financial Economics and ECON V3265 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 W1105 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. 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.) above.

The economics major requires a minimum of 32 points in economics, 6 points in mathematics, and 3 points in statistics, for a total of 41 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.) above.

The economics concentration requires a minimum of 22 points in economics, 6 points in mathematics, and 3 points in statistics, for a total of 31 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.) above.

The Department of Economics, in collaboration with the Business School, 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 23 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 47 points as follows:

Economics Core Courses

All economics core courses

Finance Core Courses *

ECON V3025	Financial Economics
ECON W4280	Corporate Finance
BUSI W3013	Financial Accounting
or IEOR E2261	Introduction to Accounting and Finance

*NOTE: The department considers BUSI W3013 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 V3265	The Economics of Money and Banking
ECON W4020	Economics of Uncertainty and Information
ECON W4213	Advanced Macroeconomics
ECON W4251	Industrial Organization
ECON W4260	Market Design
ECON W4412	Advanced Econometrics
ECON W4415	Game Theory
ECON W4465	Public Economics
ECON W4505	International Macroeconomics
or ECON BC3038	International Money and Finance

ECON G4526	Transition Reforms, Globalization and Financial Crisis
ECON W4700	Financial Crises
ECON W4850	Cognitive Mechanisms and Economic Behavior
BIOT W4180	Entrepreneurship in Biotechnology
BUSI W3021	Marketing Management
BUSI W3701	Strategy Formulation
BUSI W3703	Leadership in Organizations
COMS W1002	Computing in Context
HIST W3904	History of Finance
IEOR E3106	Introduction to Operations Research: Stochastic Models
IEOR E4700	Introduction to Financial Engineering
MATH V3050	Discrete Time Models in Finance
MATH W4071	Introduction to the Mathematics of Finance
POLS W3630	Politics of International Economic Relations
STAT W3051	Math Finance in Continuous Time
STAT W4290	Statistical Methods in Finance
STAT W4606	Elementary Stochastic Processes
STAT W4635	Stochastic Processes for Finance
STAT W4840	Theory of Interest **

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 V3025 or ECON W4280 prior to taking their senior seminar.

* Students must complete the finance core no later than fall of their senior year.

** Beginning in Spring 2016, STAT W4840 Theory of Interest will no longer be accepted as an elective for the financial economics major.

MAJOR IN ECONOMICS-MATHEMATICS

Please read *Guidelines for all for Economics Majors, Concentrators, and Interdepartmental Majors* (p.) 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 53 points: 26 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 V1101 Calculus I
 - MATH V1102 and Calculus II
 - MATH V1201 and Calculus III
 - MATH V2010 and Linear Algebra

MATH V1207 Honors Mathematics A
 - MATH V1208 and Honors Mathematics B

MATH V2500 Analysis and Optimization

Select three of the following:

MATH V1202 Calculus IV
 MATH V2030 Ordinary Differential Equations
 Any mathematics course at the 3000-level or above

Statistics

Select one of the following:

SIEO W4150 Introduction to Probability and Statistics
 STAT W3105 Introduction to Probability
 - STAT W3107 and Introduction to Statistical Inference
 STAT W4105 Introduction to Probability
 - STAT W4107 and Introduction to Statistical Inference

Economics Seminar

Select an economics seminar

NOTE:

1. Students who fulfill the statistics requirement with STAT W3105 and STAT W3107, or with STAT W4105 and STAT W4107, may count STAT W3105 or STAT W4105 as one of the three required mathematics electives.
2. Students who choose either of the one year sequence (STAT W3105/ STAT W3107 or STAT W4105/STAT W4107), must complete the year long sequence *prior* to taking ECON W3412. 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.) 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.

Students who declared prior to Spring 2014:

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 W1105 Principles of Economics
 ECON W3211 Intermediate Microeconomics
 ECON W3213 Intermediate Macroeconomics

Mathematics

Select a mathematics sequence

Statistics

Select a statistics course

Economics Electives

Select two of the following:

ECON W4020 Economics of Uncertainty and Information

ECON W4080

ECON W4211 Advanced Microeconomics

ECON W4213 Advanced Macroeconomics

ECON W4228 Urban Economics

ECON G4235 Historical Foundations of Modern Economics: Adam Smith to J.M. Keynes

or ECON BC3041 Theoretical Foundations of Political Economy

ECON W4230 Economics of New York City

ECON G4301 Economic Growth and Development

ECON W4321 Economic Development

ECON W4370 Political Economy

ECON W4400 Labor Economics

or ECON BC3019 Labor Economics

ECON W4415	Game Theory
ECON W4438	Economics of Race in the U.S.
ECON W4465	Public Economics
ECON W4480	Gender and Applied Economics
ECON W4500	International Trade
or ECON BC3047	International Trade
ECON W4615	Law and Economics
ECON W4625	Economics of the Environment
or ECON BC3039	Environmental and Natural Resource Economics
ECON W4750	Globalization and Its Risks
ECON W4850	Cognitive Mechanisms and Economic Behavior
ECON BC3011	Inequality and Poverty
Philosophy Courses	
PHIL C1010	Methods and Problems of Philosophical Thought
PHIL V3411	Symbolic Logic
PHIL V3701	Ethics (or another adviser-approved course in moral or political philosophy)
PHIL V3551	Philosophy of Science
or PHIL W3960	Epistemology
PHIL G4561	Probability and Decision Theory
or PHIL G4565	Rational Choice
Seminar	
ECPH W4950	Economics and Philosophy Seminar (or another seminar in philosophy or economics approved by advisers in both department)

Students who declare in Spring 2014 and beyond:

In addition to the above requirements, students are required to take:

1. ECON W3412 Introduction To Econometrics
2. A third economics elective; two of the three electives must be from the prescribed list above, and the remaining economics elective may be *any* elective at the 3000-level or above.

MAJOR IN ECONOMICS–POLITICAL SCIENCE

Please read *Guidelines for all for Economics Majors, Concentrators, and Interdepartmental Majors* (p.) 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.

Students who declared prior to Spring 2014:

The economics–political science major requires a total of 54 points: 19 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 W1105	Principles of Economics
ECON W3211	Intermediate Microeconomics
ECON W3213	Intermediate Macroeconomics
ECON W4370	Political Economy

Mathematics

Select a mathematics sequence

Statistical Methods

Select one of the following:

ECON W3412	Introduction To Econometrics (and one of the statistics courses listed under Guidelines for all Economics Majors, Concentrators, and Interdepartmental Major)
POLS W4911	Analysis of Political Data (and one of the statistics course listed under Guidelines for all Economics Majors, Concentrators, and Interdepartmental Majors)
POLS W4911 - POLS W4910	Analysis of Political Data and Principles of Quantitative Political Research

Economics Electives

Select two electives (6 points) at the 3000-level or above

Political Science Courses

Major subfield (9 points) - including the introductory course, all in one of the three subfields of American politics, comparative politics, or international relations, coordinated with the economics electives and approved in advance by the adviser

Minor subfield (6 points) - including the introductory course in another subfield, coordinated with the economics electives and approved by the adviser

Seminars

A Political Science Department seminar, to be approved in advance by the adviser, in the major subfield

ECPS W4921

Seminar In Political Economy

NOTE: POLS W4910 Principles of Quantitative Political Research is not equivalent to STAT W1211 Introduction to Statistics (with calculus) and as such cannot be used to fulfill the prerequisite requirements of courses that require STAT W1211 Introduction to Statistics (with calculus), such as ECON W3412 Introduction To Econometrics, ECON V3025 Financial Economics, ECON W4280 Corporate Finance, and ECON W4020 Economics of Uncertainty and Information.

Students who declare in Spring 2014 and beyond:

In addition to the above requirements, students are required to take STAT W1211 Introduction to Statistics (with calculus) to satisfy the statistics requirement. POLS W4910 Principles of Quantitative Political Research will no longer be an accepted alternative course for the statistics requirement.

Students will still have the option to take ECON W3412 Introduction To Econometrics or POLS W4911 Analysis of Political Data to complete the statistical methods requirement.

MAJOR IN ECONOMICS-STATISTICS

Please read *Guidelines for all for Economics Majors, Concentrators, and Interdepartmental Majors* (p.) 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.

Students who declared 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, 3 points in computer science as follows:

Economics Core Courses

All economics core courses

Economics Electives

Select two electives at the 3000-level or above

Mathematics

Select one of the following sequences:

MATH V1101
- MATH V1102
- MATH V1201
- MATH V2010

Calculus I
and Calculus II
and Calculus III
and Linear Algebra

MATH V1207
- MATH V1208

Honors Mathematics A
and Honors Mathematics B

Statistics

STAT W1211 Introduction to Statistics (with calculus)

STAT W3105 Introduction to Probability

STAT W3107 Introduction to Statistical Inference

STAT W4315 Linear Regression Models

One elective (excluding STAT W1001, STAT W1111, STAT W2110 and SIEO W4150)

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

Economics Seminar

ECON W4918 Seminar In Econometrics

Students who declare in Spring 2014 and beyond:

In addition to the above requirements, students are required to take:

1. A third elective in Economics at the 3000-level or above (bringing the total to three electives).

EDUCATION

335-336 Milbank Hall

212-854-7072

education.barnard.edu (<http://education.barnard.edu>)

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 two tracks in Education: Urban Teaching and Educational Studies. In both 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 Track: 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 41 other states.)

This program is registered by the New York State Department of Education and accredited by the Teacher Education Accreditation Council (TEAC). This track prepares 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.

Educational Studies Track: 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.

Both tracks are special concentrations and are intended to complement a major's disciplinary specialization and methodological training. In addition to the requirements of either special concentration, students must complete a major or a full concentration.

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.

FACULTY

Chair: Maria Rivera Maulucci

Associate: Daniela Kempf

Associate: Lisa Edstrom

Advisory Committee on Education: Peter Balsam (Professor, Psychology), Lesley Sharp (Ann Whitney Olin Associate Professor, Anthropology), Herbert Sloan (Professor, History), Kathryn Yatrakis (Dean of Academic Affairs, Columbia College)

REQUIREMENTS

REQUIREMENTS FOR THE URBAN TEACHING TRACK

Childhood Education Urban Teaching Program (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:

Pedagogical Core (Education Program)

EDUC BC2052	Seminar in Multicultural Elementary Pedagogy	4
EDUC BC2055	Urban School Practicum (sec 1)	3
EDUC BC3063	Student Teaching in Urban Schools	6
EDUC BC3064	Seminar on Issues in Urban Teaching	4

Educational Foundations

Select one of the following: 3-4

EDUC BC2032	Contemporary Issues in Education
ECON BC3012	Economics of Education
PHIL V2100	Philosophy of Education
SOCI W3225	Sociology of Education

Psychology

PSYC BC1001 Introduction to Psychology 3

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 W1420	Experimental Psychology: Human Behavior *
PSYC W2220	Cognition: Memory and Stress *
PSYC W2280	Introduction to Developmental Psychology *

Education Electives

Open to all education students. One course may be counted as a second Foundations course for Childhood Education Program only.

EDUC BC3050	Science in the City	4
EDUC BC3052	Math and the City	4

Additional Course

A third course selected from either of the foundations, psychology and education electives categories above. 3

* 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.

Adolescent Education Urban Teaching Program (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:

Pedagogical Core (Education Program)

EDUC BC2052	Seminar in Multicultural Elementary Pedagogy	4
EDUC BC2055	Urban School Practicum	3
EDUC BC3063	Student Teaching in Urban Schools	6
EDUC BC3064	Seminar on Issues in Urban Teaching	4

Educational Foundations

Select one of the following: 3-4

PHIL V2100	Philosophy of Education
SOCI W3225	Sociology of Education
EDUC BC2032	Contemporary Issues in Education
HIST BC4543	Higher Learning in America
ECON BC3012	Economics of Education

Psychology

PSYC BC1001 Introduction to Psychology 3

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 W1420	Experimental Psychology: Human Behavior *
PSYC W2220	Cognition: Memory and Stress *
PSYC W2280	Introduction to Developmental Psychology *
PSYC BC3382	Adolescent Psychology

Content Core (Major or Concentration)

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

Certification is based on demonstrated quality in fieldwork and academic coursework, requisite hours of practice in the field, completing sessions on state-mandated topics, fingerprinting, and passing three New York State Teacher Certification Exams (NYSTCE). Students fulfill 100 hours of pre-student teaching fieldwork experience (60 hours in practicum plus 40 hours of independent fieldwork), and complete 200 hours of student teaching (100 hours of teaching plus 100 hours of observation at two grade levels within the certification age range). Students are required to complete sessions in Identifying and Reporting Child Abuse, Prevention of School Violence, Drug and Alcohol Abuse Prevention, and Inclusion of Students with Special Needs. Graduates of the Education Program have a 100 percent pass rate on the NYSTCE.

REQUIREMENTS FOR THE EDUCATIONAL STUDIES TRACK

To complete the Minor (BC) or Special Concentration (CC/GS) in Educational Studies, students must complete 21-24 points of course work, listed below.

The Educational Studies track requires a minimum of six courses:

Required Courses

EDUC BC2032	Contemporary Issues in Education	4
EDUC BC2055	Urban School Practicum	3
EDUC BC3050	Science in the City	4
or EDUC BC3052	Math and the City	

Educational / Psychology Foundations

Select two of the following: 6

ECON BC3012	Economics of Education
PHIL V2100	Philosophy of Education
PSYC BC2134	Educational Psychology
PSYC BC3382	Adolescent Psychology

SOCI BC3260

Sociology of Education

Additional Course

Students must take a minimum of one course where content can be applied to issues facing schooling in the US and/or the experiences of children and youth in school and community settings (to be approved in advance by Education Adviser). Suggested courses are listed on our website (<http://education.barnard.edu/courses>). 3

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:

EDUC BC2032	Contemporary Issues in Education	4
PSYC BC2134	Educational Psychology	3
or PSYC BC3382	Adolescent Psychology	
ECON BC3012	Economics of Education	3
EDUC BC2052	Seminar in Multicultural Elementary Pedagogy	4
or EDUC BC2062	Seminar in Multicultural Secondary Pedagogy	
EDUC BC2055	Urban School Practicum	3

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. Farah Griffin, 508B Philosophy; fjg8@columbia.edu
Prof. David Yerkes, 615 Philosophy; dmy1@columbia.edu
Prof. Eleanor Johnson, 408J Philosophy; ebj2117@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 W3001 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>).

FACULTY 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

REQUIREMENTS

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 W3001 Literary Texts, Critical Methods, together with its companion seminar, ENGL W3011 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 W3999 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 W3001 Literary Texts, Critical Methods and ENGL W3011 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 W3001 Literary Texts, Critical Methods and
ENGL W3011 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. Frances Negrón-Muntaner, 422

Hamilton; 212-854-0507; 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.

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 the past, students have 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 W3990 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.

FACULTY

EXECUTIVE COMMITTEE

- Catherine Fennel (Anthropology)
- John Gamber (English and Comparative Literature)
- Karl Jacoby (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)
- Gray Tuttle (East Asian Languages and Cultures)
- Christopher Washburne (Ethnomusicology)

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)

- Audra Simpson (Anthropology)
- Dennis Tenen (English and Comparative Literature)

REQUIREMENTS

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 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 W1040	Critical Approaches to the Study of Ethnicity and Race
or CSER W1010	Introduction to Comparative Ethnic Studies
CSER W3919	Modes of Inquiry
CSER W3928	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 W3990 Senior Project Seminar

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 and four elective courses, one of which must be a seminar:

Core Courses

CSER W1040	Critical Approaches to the Study of Ethnicity and Race
or CSER W1010	Introduction to Comparative Ethnic Studies
CSER W3928	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 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 W3000)* 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 W3900), 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 W3900 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

FACULTY

- Nico Baumbach
- Loren-Paul Caplin
- Jane Gaines
- Annette Insdorf
- Caryn James
- Christina Kallas
- Nelson Kim
- Robert King
- Sandra Luckow
- Richard Peña
- James Schamus
- Edward Turk

REQUIREMENTS

MAJOR IN FILM STUDIES

The major in film studies requires a minimum of 36 points distributed as follows:

Introductory Courses

FILM W3000	Introduction to Film and Media Studies
FILM W4000	Film and Media Theory

History Courses

Select two of the following courses, one of which must either be FILM W3003 or FILM W3006:

FILM W3003	Cinema History 1: Beginning-1930
FILM W3006	Cinema History 2: 1930-60
FILM W3008	Cinema History 3: 1960-90
FILM W3010	Cinema History 4: after 1990

Laboratories

Select one of the following courses:

FILM W3820	Laboratory in Writing Film Criticism
FILM W3830	Laboratory In Nonfiction Filmmaking
FILM W3831	Laboratory in Screenwriting
FILM W3832	Laboratory in Fiction Filmmaking

Electives

Select seven of the following electives, one of which must be an international course:

FILM W3050	The Documentary Tradition
FILM W3300	Topics in American Cinema
FILM W3500	Interdisciplinary Studies: History of TV
FILM W3842	Senior Seminar in Filmmaking
FILM W3850	Senior Seminar in Screenwriting
FILM W3851	Narrative Strategies in Screenwriting
FILM W3870 (Section 2)	Seminar in International Film
FILM W3900	Senior Seminar in Film Studies
FILM W4005	Script Analysis
FILM W4108	Auteur Study
FILM W4145 (Section 2)	Topics in World Cinema: India
FILM W4145 (Section 2)	Topics in World Cinema: Contemporary Israeli Cinema
FILM G4310	Experimental Film and Media
FILM G4320	New Directions in Film and Philosophy
FILM R4440	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. Antoine Compagnon, 513 Philosophy; 212-854-5528; amc6@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, composition and stylistics to refine their skills in reading, speaking, and writing French. In a required two-semester survey course (FREN W3333-FREN W3334), 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 W3420 Introduction To French and Francophone Studies I-FREN W3421 Introduction To French and Francophone Studies II;
- FREN W3995 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:

FREN W1101	Elementary Course I
- FREN W1102	and Elementary Course II
FREN W1201	Intermediate Course I
- FREN W1202	and Intermediate Course II

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 W1101 Elementary Course I and FREN W1102 Elementary Course 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 W1201 Intermediate Course I and FREN W1202 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 W3498 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.

FACULTY PROFESSORS

- Madeleine Dobie
- Antoine Compagnon
- Souleymane Bachir Diagne
- Pierre Force

- Elisabeth Ladenson

ASSOCIATE PROFESSORS

- Peter Connor (Barnard)
- Vincent Debaene
- Emmanuelle Saada
- Joanna Stalnaker

ASSISTANT PROFESSORS

Eliza Zingesser

VISITING PROFESSORS

Etienne Balibar

SENIOR LECTURERS

- Pascale Hubert-Leibler
- Sophie Queuniet

LECTURERS

- Vincent Aurora
- Alexandra Borer
- Pascale Crépon
- Heidi Holst-Knudsen
- Samuel Skippon

REQUIREMENTS

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 W1202 Intermediate Course II), distributed as follows:

FREN W3405	Advanced Grammar and Composition I
FREN W3333 - FREN W3334	Introduction to Literary Study I and Introduction to Literary Studies II
FREN W3600	France, Past and Present. An Introduction to French Civilization.
FREN W3995	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 courses (12 points) are to be chosen from 3000-level offerings in French literature, linguistics, or civilization.

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 W3405 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 W1101	Elementary Course I
FREN W1102	Elementary Course II
FREN W1105	Accelerated Elementary French
FREN W1201	Intermediate Course I
FREN W1202	Intermediate Course II
FREN W1206	Rapid Reading and Translation
FREN W1221	Intermediate Conversation I
FREN W1222	Intermediate Conversation II
FREN W3131	Third-Year Conversation I
FREN W3132	Third-Year Conversation II
FREN W3240	French Language, Society, and Culture through film
FREN W3498	French Cultural Workshop

CONCENTRATION IN FRENCH

The concentration in French requires a minimum of 27 points beyond completion of the language requirement (FREN W1202 Intermediate Course II), distributed as follows:

FREN W3405	Advanced Grammar and Composition I
FREN W3600	France, Past and Present. An Introduction to French Civilization.
FREN W3333 - FREN W3334	Introduction to Literary Study I and Introduction to Literary Studies II

The remaining courses (15 points) are to be chosen from 3000-level offerings in French literature, linguistics, or civilization.

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 W1202 Intermediate Course II), distributed as follows:

FREN W3405	Advanced Grammar and Composition I
FREN W3420	Introduction To French and Francophone Studies I
FREN W3421	Introduction To French and Francophone Studies II
FREN W3995	Senior Seminar

Select one course on Francophone/postcolonial French literature.

The remaining 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 are exempted from FREN W3405 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 W1101	Elementary Course I
FREN W1102	Elementary Course II
FREN W1105	Accelerated Elementary French
FREN W1201	Intermediate Course I
FREN W1202	Intermediate Course II
FREN W1206	Rapid Reading and Translation
FREN W1221	Intermediate Conversation I
FREN W1222	Intermediate Conversation II
FREN W3131	Third-Year Conversation I
FREN W3132	Third-Year Conversation II
FREN W3240	French Language , Society, and Culture through film
FREN W3498	French Cultural Workshop

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 27 points beyond completion of the language requirement (FREN W1202 Intermediate Course II), distributed as follows:

FREN W3405	Advanced Grammar and Composition I
FREN W3420	Introduction To French and Francophone Studies I
FREN W3421	Introduction To French and Francophone Studies II

Select one course on Francophone/postcolonial French literature.

The remaining courses (15 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.

CONCENTRATION 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

GERMANIC LANGUAGES

Departmental Office: 414 Hamilton; 212-854-3202
<http://www.columbia.edu/cu/german/>

Director of Undergraduate Studies: Prof. Stefan Andriopoulos,
 418 Hamilton; 212-854-7802; sa610@columbia.edu

Language Instruction: Prof. Richard Korb, 404A Hamilton;
 212-854-2070; 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 V1101 Elementary German Language Course, I-GERM V1102 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 V1102 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 V1201 Intermediate German Language Course, I-GERM V1202 Intermediate German Language Course, 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 V3001 Advanced German, I-GERM V3002 *Advanced German II: Vienna*); on specific cultural areas (e.g., GERM W3220 Berlin: Past and Present [In German] or GERM W4090 German for International and Public Affairs [In German]); and on literary, historical, and philosophical areas in literature-oriented courses (GERM W3333 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 V1101	Elementary German Language
- GERM V1102	Course, I and Elementary German Language Course, II
GERM V1201	Intermediate German Language
- GERM V1202	Course, I and Intermediate German Language Course, II

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 V1201 Intermediate German Language Course, I-GERM V1202 Intermediate German Language Course, II may take GERM V1125 Accelerated Elementary German I & II as preparation for GERM V1201 Intermediate German Language Course, 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.

FACULTY PROFESSORS

- Mark Anderson
- Stefan Andriopoulos
- Jeremy Dauber
- Andreas Huyssen
- Harro Müller
- Dorothea von Mücke (Chair)

ASSOCIATE PROFESSOR

- Oliver Simons

ASSISTANT PROFESSOR

- Tobias Wilke

SENIOR LECTURERS

- Wijnie de Groot (Dutch)
- Richard Korb
- Jutta Schmiers-Heller

LECTURERS

Agnieszka Legutko (Yiddish)

REQUIREMENTS

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 V3001	Advanced German, I
or GERM V3002	Advanced German II: Vienna
GERM W3333	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 W3443	Romanticism, Revolution, Realism [In German]
GERM W3444	Decadence, Modernism, Exile [In German]
GERM W3445	German Literature After 1945 [In German]

One course in German intellectual history

GERM C3991	Senior Seminar: Goethe [In German] (required of all majors in their senior year, but may also be taken as a seminar by juniors)
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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 V3001 and above, including the senior seminar *GERM C3991 Senior Seminar: Goethe [In German]*, 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. Pablo Piccato, 324 Fayerweather; pp143@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 degree 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 and field:

1000-level: Introductory survey lecture

3000-level: Lecture

4000-level: Undergraduate seminar

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>).

FACULTY PROFESSORS

- Charles Armstrong
- Csaba Bekes (Visiting)
- Volker Berghahn
- Richard Billows
- Elizabeth Blackmar
- Casey Blake
- Alan Brinkley
- Christopher Brown
- Richard Bulliet (*emeritus*)
- Elisheva Carlebach
- Mark Carnes (Barnard)
- John Coatsworth (School of International and Public Affairs)
- Matthew Connelly
- Victoria de Grazia
- Abram de Swaan (Visiting)
- Mamadou Diouf (Middle Eastern, South Asian, and African Studies)
- Edhem Eldem (Visiting)
- Barbara Fields
- Eric Foner
- Carol Gluck
- William Harris
- 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
- Rashid Khalidi
- Dorothy Ko (Barnard)
- Adam Kosto
- William Leach
- 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
- Jerome Sgard (Visiting)
- Herbert Sloan (Barnard)
- Pamela Smith (Acting Chair)
- Robert Somerville (Religion)
- Michael Stanislawski
- Anders Stephanson
- Lisa Tiersten (Barnard)
- Adam Tooze
- Deborah Valenze (Barnard)
- Marc Van de Mieroop
- Madeleine Zelin (East Asian Languages and Cultures)

ASSOCIATE PROFESSORS

- Lisbeth Kim Brandt (East Asian Languages and Cultures)
- Marwa Elshakry
- Abosede George (Barnard)
- Frank Guridy
- Meg Jacobs (Visiting)
- Rebecca Kobrin
- Eugenia Lean (East Asian Languages and Cultures)
- Feng Li (East Asian Languages and Cultures)
- Natasha Lightfoot
- David Lurie (East Asian Languages and Cultures)
- Malgorzata Mazurek
- Nara Milanich (Barnard)
- Premilla Nadasen (Barnard)
- Celia Naylor (Barnard)
- Gregory Pflugfelder (East Asian Languages and Cultures)
- Christine Philliou
- Caterina Pizzigoni
- Anupama Rao (Barnard)
- Samuel Roberts
- Neslihan Senocak
- Carl Wennerlind (Barnard)
- Sergei Ivanovich Zhuk (Visiting)

ASSISTANT PROFESSORS

- Manan Ahmed
- Tarik Amar
- Gergely Baics
- Charly Coleman
- Elizabeth Esch (Barnard)
- Hilary-Anne Hallett
- Andrew Lipman (Barnard)
- Alexandre Roberts

- Rhiannon Stephens
- Gray Tuttle (East Asian Languages and Cultures)
- Emma Winter

ON LEAVE

- Profs. Ahmed, Brinkley, Carlebach, Coleman, de Grazia, Foner, Gluck, Howell, Kessler-Harris, Kosto, Lightfoot, Mazower, Pizzigoni, Senocak (2015-2016)
- Profs. Blake, Jackson, Stanislawski, Stephanson (Fall 2015)
- Profs. Connelly, Mann, Pedersen (Spring 2016)

REQUIREMENTS

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. Students must fulfill a breadth requirement by taking three courses outside of their specialization.

The breadth requirement itself has two parts, time and space, which are explained below. Two of the courses taken in the major must be seminars, at least one of which must be in the area of 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-century U.S. history, European diplomatic history, ancient 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 far removed in time and two removed in space.
 - Time: majors must take at least one course removed in time from their specialization
 - Students specializing in the modern period must take one course in the pre-modern period (and *well before* their specialization *if the region remains the same*).
 - Students specializing in the pre-modern period must take one course in the modern period (and *well after* their specialization *if the region remains the same*).

- Space: majors must take at least two additional courses in regional fields not their own, meaning that the courses should cover regions removed from their chosen specialization
 - 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.
 - These two courses must also cover **two different** regions.

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-century U.S. history and takes the class *World War II*, the class is too close to the specialization and may not count as a breadth course in Asian or European history.

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 C1020), Introduction to East Asian Civilizations: China (ASCE V2359), Introduction to East Asian Civilization: Japan (ASCE V2361), and/or Introduction to East Asian Civilizations: Korea (ASCE V2363). 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 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.

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 thesis writers are eligible to be considered for departmental honors. The senior thesis option is not available to concentrators.

The yearlong HIST C4398-HIST C4399 Senior Thesis Seminar carries 8 points, 4 of which typically count as a seminar in the specialization. Students are encouraged to take HIST W4900 Historian's Craft for a more intensive study of historiography. HIST W4900 Historian's Craft does not count toward the specialization or toward the breadth requirements. 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

Students must complete a minimum of *seven* courses in history. At least *three* of the seven courses must be in an area of specialization, *one* far removed in time, and *one* on a geographic region far removed in space. There is no seminar requirement for the concentration.

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.

FACULTY

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

Deborah Coen
History (Barnard)
410 Lehman; 212-854-7449

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
322 Fayerweather; 212-854-2430

David Rosner
History
420 Fayerweather; 212-854-4272

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; humanrightsed@columbia.edu

Departmental Website: <http://humanrightscolumbia.org/education/undergraduate>

Director of Undergraduate Studies: Prof. Andrew Nathan, 931 International Affairs Building; 212-854-6909; ajn1@columbia.edu. Office hours: Wednesday, 10 a.m.–12 p.m., 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 humanrightsed@columbia.edu.

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 W3996 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.

REQUIREMENTS

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 on-line course advising form (<http://humanrightscolumbia.org/education/courseadvising/form>). 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

Transfer credit toward the major and concentration is not awarded for courses taken on a Pass/Fail basis. The minimum grade necessary for transfer credit toward the major or concentration is C-.

No more than 12 transfer credits may count toward the major and 9 for the concentration.

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 32 points as follows. One of the distributional or specialization courses must be a seminar.

Core Courses

HRTS V3001	Introduction to Human Rights (offered in fall only)
HRTS V3190	International Human Rights Law (offered in fall and spring)
HRTS W3995	Human Rights Senior Seminar (offered in fall and spring)

Distributional Requirement *

Students should take one course in three of the four categories:

- 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 offered by a single department or institute.

* Please see the ISHR undergraduate course list (<http://humanrightscolumbia.org/education/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, if a free-standing major is offered by a department, it is approved as a specialization. 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.

Please see the ISHR undergraduate course list (<http://humanrightscolumbia.org/education/undergraduate/courses>) for the current list of courses that fulfill the concentration requirements.

CONCENTRATION IN HUMAN RIGHTS

The concentration in human rights requires a minimum of 25 points as follows:

HRTS V3001	Introduction to Human Rights (offered in fall only)
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Seven additional human rights courses, one of which must be a seminar.

ITALIAN

Departmental Office: 502 Hamilton; 212-854-2308
<http://italian.columbia.edu/>

Director of Undergraduate Studies: Prof. Pier
 Mattia Tommasino, 513 Hamilton; 212-854-0747;
pmt2114@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 V3335 Advanced Italian-ITAL V3336 Advanced Italian II: Italian Language & Culture or ITAL V3337 Advanced Italian Through Cinema) as well as one of the following two sequences:

- *Introduction to Italian Literature I and II* (ITAL V3333-ITAL V3334) 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 W4502-ITAL W4503) 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.

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 V3993 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. It is recommended that advanced undergraduate students take Stylistics (ITAL W4000) if they are considering graduate studies in Italian or a career that requires superior command of spoken and written Italian.

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 V3993 Senior Thesis/Tutorial. Normally no more than one graduating senior receives departmental honors in a given academic year.

FACULTY

PROFESSORS

Teodolinda Barolini
Jo Ann Cavallo (Chair)
Elizabeth Leake

ASSOCIATE PROFESSOR

Nelson Moe (Barnard)

ASSISTANT PROFESSOR

Pier Mattia Tommasino

SENIOR LECTURERS

- Maria Luisa Gozzi
- Carol Rounds (Hungarian)
- Barbara Spinelli

LECTURERS

- Felice Italo Beneduce
- Federica Franze
- Patrizia Palumbo
- Alessandra Saggi

REQUIREMENTS

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 V1101 - ITAL V1102	Elementary Italian I and Elementary Italian II
ITAL V1201 - ITAL V1202	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 V1121 - ITAL V1201 - ITAL V1202	Intensive Elementary Italian and Intermediate Italian I and Intermediate Italian II
ITAL V1101 - ITAL V1102 - ITAL V1203	Elementary Italian I and Elementary Italian II and Intensive Intermediate Italian
ITAL V1121 - ITAL V1203	Intensive Elementary Italian and Intensive Intermediate Italian
And one of the following courses:	
ITAL V3335	Advanced Italian
ITAL V3336	Advanced Italian II: Italian Language & Culture
ITAL V3337	Advanced Italian Through Cinema

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 LITERATURE

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 V1302, to include the following:

Two semesters of Italian Literature

ITAL V3333 - ITAL V3334	Introduction To Italian Literature, I and Introduction To Italian Literature, II
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Two semesters of Advanced Italian

ITAL V3335	Advanced Italian
- ITAL V3336	and Advanced Italian II: Italian Language & Culture
or ITAL V3337	Advanced Italian Through Cinema

Additional Courses

ITAL V3993	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.

MAJOR IN ITALIAN CULTURAL STUDIES

Please read *Guidelines for all Italian Majors and Concentrators* above.

Requirements

The major in Italian cultural studies requires a minimum of 30 points in Italian courses numbered above the intermediate level, i.e., above ITAL V1302, to include the following:

Two semesters of Advanced Italian

ITAL V3335	Advanced Italian
- ITAL V3336	and Advanced Italian II: Italian Language & Culture
or ITAL V3337	Advanced Italian Through Cinema

Two semesters of Italian Cultural Studies

ITAL W4502	Italian Cultural Studies I: From Unification to World War I
- ITAL W4503	and Italian Cultural Studies II: From World War I to the Present

Additional Courses

Select at least two other courses from the department's W4000-level courses.

ITAL V3993	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.

CONCENTRATION IN ITALIAN LITERATURE

Please read *Guidelines for all Italian Majors and Concentrators* above.

The concentration in Italian literature requires a minimum of 24 points in Italian courses numbered above the intermediate level, i.e., above ITAL V1302, to include the following:

Two semesters of Italian Literature

ITAL V3333	Introduction To Italian Literature, I
- ITAL V3334	and Introduction To Italian Literature, II

Two semesters of Advanced Italian

ITAL V3335	Advanced Italian
- ITAL V3336	and Advanced Italian II: Italian Language & Culture
or ITAL V3337	Advanced Italian Through Cinema

CONCENTRATION IN ITALIAN CULTURAL STUDIES

Please read *Guidelines for all Italian Majors and Concentrators* above.

The concentration in Italian cultural studies requires a minimum of 24 points in Italian courses numbered above the intermediate level, i.e., above ITAL V1302, to include the following:

One semester of Advanced Italian

ITAL V3335	Advanced Italian
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Two semesters of Italian Cultural Studies

ITAL W4502	Italian Cultural Studies I: From Unification to World War I
- ITAL W4503	and Italian Cultural Studies II: From World War I to the Present

Additional Courses

Select at least two other courses from the department's W4000-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 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.

FACULTY 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
- David Gibson
- Brad Jones
- Victor Lin
- Ole Mathiesen
- Tony Moreno
- Ugonna Okegwa
- Adriano Santos
- Don Sickler
- Leo Traversa
- Ben Waltzer

REQUIREMENTS

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 W4612	Jazz and American Culture
MUSI V2016	Jazz
MUSI V1002	Fundamentals of Music
Three interdisciplinary courses as approved by the director	
A senior independent study project	

Requirements for Music Majors/ Concentrators

ENGL W4612	Jazz and American Culture
MUSI V2016	Jazz
MUSI G4505	Jazz Arranging and Composition

MUSI G4500	Jazz Transcription and Analysis
MUSI V1618	Columbia University Jazz
- MUSI V1619	Ensemble 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	

JEWISH STUDIES

Program Office: Institute for Israel and Jewish Studies, 511 Fayerweather; 212-854-2581
http://www.iijs.columbia.edu/

Program Director: Prof. Jeremy Dauber, 319 Hamilton; 212-854-9608; jad213@columbia.edu

Assistant Director: Sheridan Gayer, 511 Fayerweather; 212-854-2581; sjg41@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.

FACULTY

AFFILIATED FACULTY

- Nehama R. Bersohn (Middle Eastern, South Asian, and African Studies)
- Beth Berkowitz (Religion, Barnard)
- 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)

- Dan Miron (Middle Eastern, South Asian, and African Studies)
- Seth Schwartz (History)
- Michael Stanislawski (History)

REQUIREMENTS

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 Rabbinics/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 W3657	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	Jews in the Later Roman Empire
HIST W4180	Conversion in Historical Perspective

Modern Judaism

HIST W3630	American Jewish History
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RELI V3571	Judaism, Jewishness, and Modernity
MDES W3542	Introduction to Israeli Literature
Israeli Society	
MDES W3542	Introduction to Israeli Literature
MDES W3541	Zionism: A Cultural Perspective
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 V2505	Intro to Judaism
RELI W4511	Jewish Ethics
HIST W3657	Medieval Jewish Cultures
HIST W4645	Spinoza to Sabbatai: Jews in Early Modern Europe
Jewish Literature	
CLYD W3500	Readings In Jewish Literature: Humor In Jewish Literature [In English]
YIDD W3800	Readings in Yiddish Literature [In English]
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.

FACULTY

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)

REQUIREMENTS 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 W3618	The Modern Caribbean
HIST W3660	Latin American Civilization I
HIST W3661	Latin American Civilization II
LACV C1020	Primary Texts of Latin American Civilization
POLS W4461	Latin American Politics
SPAN W3300	Advanced Language through Content [in Spanish] (course must have Latin American content)

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 W3618	The Modern Caribbean
HIST W3660	Latin American Civilization I
HIST W3661	Latin American Civilization II
LACV C1020	Primary Texts of Latin American Civilization
POLS W4461	Latin American Politics
SPAN W3300	Advanced Language through Content [in Spanish] (Select three of the following history courses, or equivalent lectures)

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. Jesús R. Velasco, 301 Casa Hispánica; 212-854-8486; jvelasco@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, 506 Casa Hispánica; 212-854-8075;
lba2133@columbia.edu

Angelina Craig-Flórez, 404 Casa Hispánica; 212-854-4187;
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 W3349 Hispanic Cultures I: Islamic Spain through the Colonial Period or SPAN W3350 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: *W1101-W1102* (or *W1120*) and *W1201-W1202* (or *W1220*). **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 W3998 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 W3991 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.

FACULTY

PROFESSORS

- Carlos J. Alonso
- 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

REQUIREMENTS

MAJOR IN HISPANIC STUDIES

The major in Hispanic studies requires 11 courses (minimum of 33 points) as follows:

Core Courses

SPAN W3300	Advanced Language through Content [in Spanish]
SPAN W3349	Hispanic Cultures I: Islamic Spain through the Colonial Period
SPAN W3350	Hispanic Cultures II: Enlightenment to the Present

Elective Courses

Select seven elective courses: (21 points): (a minimum of three 3000 or 4000 level electives within the LAIC department and up to three electives related to Hispanic Studies outside the LAIC department.

Senior Seminar

SPAN W3991	Senior Seminar
or SPAN W3992	Senior Seminar: Modern Cities and Global Cities

MAJOR IN HISPANIC STUDIES WITH SPECIALIZATION

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 W3300	Advanced Language through Content [in Spanish]
SPAN W3349	Hispanic Cultures I: Islamic Spain through the Colonial Period
SPAN W3350	Hispanic Cultures II: Enlightenment to the Present

Elective Courses

Select three elective courses (9 points): (three 3000- or 4000-level electives in the LAIC department)

Select seven elective courses in an area of specialization, three of which must be related to Hispanic Studies. Students who wish to complete this interdisciplinary major must choose a specialization in anthropology, art history, economics, film, gender studies, history, Latino studies, Latin American studies, music, political science, sociology, or urban studies. Students' transcripts reflect the discipline of specialization within Hispanic studies. Courses may include basic methodological or foundation courses in the chosen field. In special cases and with the director of undergraduate studies' approval, students may complete some coursework in another discipline closely related to the one chosen.

Senior Seminar *

SPAN W3991	Senior Seminar
or SPAN W3992	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 concentration in Hispanic studies requires eight courses (minimum of 24 points) as follows:

Core Courses

SPAN W3300	Advanced Language through Content [in Spanish]
SPAN W3349	Hispanic Cultures I: Islamic Spain through the Colonial Period
SPAN W3350	Hispanic Cultures II: Enlightenment to the Present

Elective Courses

Select eight courses (24 points): three required foundation courses and five electives (a minimum of four 3000- or 4000-level courses at LAIC and a fifth course related to Hispanic Studies that may be taken in another department).

CONCENTRATION IN PORTUGUESE STUDIES

The concentration in Portuguese studies requires eight courses (minimum 24 points) as follows:

Core Courses

PORT W3101	Conversation about the Lusophone World
PORT W3330	Introduction to Portuguese Studies
PORT W3350	Lusophone Africa and Afro Brazilian Culture

Elective Courses

Select four elective courses: 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. John McWhorter, 309 Hamilton;
212-854-3941; jm3156@columbia.edu

Language is central to all human mental activity and communication. Linguistics investigates language in three ways: as a self-contained system of elements and rules of combination (sounds, words, grammar, syntax); as a component of culture and society; and as a cognitive and neurological operation of individuals.

Courses in linguistics acquaint students with the theoretical ideas, conceptual apparatus, and research techniques of the scientific study of language. Linguistics provides an intellectual context for students who enjoy learning languages and who are fascinated by the diversity of language; linguistics then intersects with a range of academic disciplines whose subject matter, in one way or another, involves language. For this reason, linguistics is valuable for students whose primary field of study is philosophy, anthropology, music, sociology, political science, psychology, computer science, or a national literature.

The small undergraduate program in linguistics at Columbia focuses on language usage and language diversity. Students in linguistics at Columbia have done original research in a range of topics: internet discourse (e.g., hashtag, Tumblr), grammar of Wakhi, code-switching (e.g., trilingual, KiSwahili text-messaging, Egyptian Arabic blogs), language attitudes, prototype theory and Latino identity, evidentiality in Quechua, and more.

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.

FACULTY

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)

REQUIREMENTS

SPECIAL CONCENTRATION IN LINGUISTICS

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 W3101	Introduction to Linguistics
HNGR W3343	Hungarian Descriptive Grammar
ANTH V3906	Functional Linguistics and Language Typology
AMST W3930 (Section 1)	Topics in American Studies: Language Contact
LING W4108	Language History
LING W4120	Language Documentation and Field Methods
LING W4190	Discourse and Pragmatics
LING W4202	Cognitive Linguistics
LING G4206	Advanced Grammar and Grammars
LING W4376	Phonetics and Phonology
LING W4800	Language and Society
ENGL W4901	History of the English Language
LING W4903	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	History of the French Language
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Music

MUSI W4405	Music and Language
MSPS G4233	Language and Music (Seminar)

Philosophy

PHIL V3411	Symbolic Logic
PHIL V3685	Philosophy of Language
PHIL G4490	Language and Mind

Psychology

PSYC W2440	Language and the Brain
PSYC W2450	Behavioral Neuroscience
PSYC W3265	Auditory Perception (Seminar)
PSYC BC3164	Perception and Language
PSYC BC3369	Language Development
PSYC W2215	Cognition and the Brain

Sociology

SOCI G4030	Sociology of Language
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3. One language course at the intermediate level (third-semester), separate from the general language requirement.

Students interested in a major in linguistics should consult with the director of undergraduate studies, John McWhorter (jm3156@columbia.edu).

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 Office: 410 Mathematics; 212-854-2432
<http://www.math.columbia.edu/>

Director of Undergraduate Studies: Prof. Chiu-Chu (Melissa) Liu, 623 Mathematics; 212-854-2499; ccliu@math.columbia.edu

Departmental Adviser: Prof. Mu-Tao Wang, 514 Mathematics; 212-854-3052; mtwang@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. Daniel Rabinowitz, 1244 Amsterdam Avenue, Room 1014; 212-851-2141; dan@stat.columbia.edu

Calculus Director: Prof. Michael Thaddeus, 414 Mathematics; 212-854-4308; thaddeus@math.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 V1207 Honors Mathematics A and MATH V1208 Honors Mathematics B normally take MATH V2010 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 V3411 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 two alternative sequences:

MATH V1101	Calculus I
- MATH V1102	and Calculus II
- MATH V1201	and Calculus III
- MATH V1202	and Calculus IV
MATH V1207	Honors Mathematics A
- MATH V1208	and Honors Mathematics B

Credit is allowed for only one calculus sequence.

The first sequence, *Calculus I, II, III, IV*, is a standard course in 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 both *Calculus II* and *Calculus III* are prerequisites for *Calculus IV*.

The second sequence, *Honors Mathematics A-B*, is for exceptionally well-qualified students who have strong Advanced Placement scores. It covers multivariable calculus (MATH V1201 Calculus III- MATH V1202 Calculus IV) and linear algebra (MATH V2010 Linear Algebra), with an emphasis on theory.

MATH W1003 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 V1102 Calculus II or MATH V1201 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 V1102 Calculus II or MATH V1201 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 V1201 Calculus III or MATH V1207 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 V1101 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 V1102 Calculus II or *MATH V1201 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 V1202 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.

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 V1207 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 the class 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. Normally no more than 10% of graduating majors receive departmental honors in a given academic year.

FACULTY

PROFESSORS

- David A. Bayer (Barnard)
- Panagiota Daskalopoulos
- Aise Johan de Jong
- Robert Friedman
- Patrick X. Gallagher
- Dorian Goldfeld
- Brian Greene
- Richard Hamilton
- Michael Harris
- Troels Jørgensen (*emeritus*)
- Ioannis Karatzas
- Mikhail Khovanov
- Igor Krichever
- Chiu-Chu Liu
- Dusa McDuff (Barnard)
- Daveshe Maulik
- Walter Neumann (Barnard)
- Andrei Okounkov
- D. H. Phong
- Henry Pinkham (Chair)
- Ovidiu Savin
- Eric Urban
- Mu-Tao Wang
- Wei Zhang

ASSOCIATE PROFESSORS

- Mohammed Abouzaid
- Ivan Corwin
- Julien Dubedat
- Robert Lipshitz
- Michael Thaddeus

ASSISTANT PROFESSORS

- Daniela De Silva (Barnard)

J.F. RITT ASSISTANT PROFESSORS

- Akram Alishahi
- Salim Altug
- Hector Chang
- Po-Ning Chen
- Anand Deopurkar
- Gabriele Di Cerbo

- Luis Diogo
- Alexander Drewitz
- Bin Guo
- David Hansen
- BoGwang Jeon
- Chao Li
- Hao Shen
- Xin Wan
- Anton Zeitlin
- Xiangwen Zhang

SENIOR LECTURERS IN DISCIPLINE

- Lars Nielsen
- Mikhail Smirnov
- Peter Woit

ON LEAVE

- Profs. Corwin, De Silva, Friedman, Lipshitz, Maulik, Neumann (*Fall 2015*)
- Profs. Corwin, Lipshitz, Maulik, Neumann (*Spring 2016*)

REQUIREMENTS

MAJOR IN MATHEMATICS

The major requires 42 points as follows:

12 points in Calculus or Honors Mathematics A-B, including Advanced Placement credit.

18 points in mathematics courses numbered 2000 and above, including the following courses:

MATH V2010	Linear Algebra (if Honors Mathematics A-B is not taken)
MATH V3951 - MATH V3952	Undergraduate Seminars in Mathematics I and Undergraduate Seminars in Mathematics II (at least one term)
MATH W4041 - MATH W4042	Introduction to Modern Algebra I and Introduction to Modern Algebra II
MATH W4061 - MATH W4062	Introduction To Modern Analysis I 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 W4061- MATH W4062 Introduction To Modern Analysis II by one or two of the following courses: MATH V2500 Analysis and Optimization, MATH V3007 Complex Variables, MATH V3028 Partial Differential Equations, or MATH W4032 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 V3411 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 40 points as follows:

12 points in Calculus or Honors Mathematics A-B

MATH V2010 Linear Algebra

Select one of the following courses:

MATH V2500	Analysis and Optimization
MATH W4032	Fourier Analysis
MATH W4061	Introduction To Modern Analysis I
APMA E4901	Seminar: Problem in Applied Mathematics (junior year)
APMA E4903	Seminar: Problems in Applied Mathematics (senior year)

18 points in electives, selected from the following (other courses may be used with the approval of the Applied Mathematics Committee):

MATH V2500	Analysis and Optimization
MATH V3007 or MATH W4065 or APMA E4204	Complex Variables Honors Complex Variables Functions of a Complex Variable
MATH V3027	Ordinary Differential Equations
MATH V3028 or APMA E4200 or APMA E6301	Partial Differential Equations Partial Differential Equations Analytic methods for partial differential equations
MATH W4032	Fourier Analysis
APMA E4300	Introduction to Numerical Methods
APMA E4101	Introduction to Dynamical Systems
APMA E4150	Applied Function Analysis

APMA E4400 Introduction to Biophysical Modeling

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 a total of at least 47 points: 20 points in computer science, 21 points in mathematics, and two 3-point electives in either computer science or mathematics.

Computer Science

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
COMS W3261	Computer Science Theory
CSEE W3827	Fundamentals of Computer Systems

Mathematics

Select one of the following sequences:

MATH V1101	Calculus I
- MATH V1102	and Calculus II
- MATH V1201	and Calculus III
- MATH V1202	and Calculus IV
MATH V1207	Honors Mathematics A
- MATH V1208	and Honors Mathematics B
MATH V2010	Linear Algebra (unless MATH V1207 and MATH V1208 are taken)
MATH V3951	Undergraduate Seminars in Mathematics I
or MATH V3952	Undergraduate Seminars in Mathematics II
MATH W4041	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 V2500	Analysis and Optimization
MATH V3007	Complex Variables
MATH V3020	Number Theory and Cryptography
MATH V3386	Differential Geometry
MATH W4051	Topology

MATH W4061 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 V1101	Calculus I
- MATH V1102	and Calculus II
- MATH V1201	and Calculus III
- MATH V2010	and Linear Algebra
- MATH V2500	and Analysis and Optimization
MATH V1207	Honors Mathematics A
- MATH V1208	and Honors Mathematics B
- MATH V2500	and Analysis and Optimization (with approval from the adviser)

Statistics

Introductory Courses

Select one of the following courses:

STAT W1001	Introduction to Statistical Reasoning
STAT W1111	Introduction to Statistics (without calculus)
STAT W1211	Introduction to Statistics (with calculus)

Required Courses

STAT W3105	Introduction to Probability
STAT W3107	Introduction to Statistical Inference
STAT W3315	Linear Regression Models

Select one of the following courses:

STAT W4606	Elementary Stochastic Processes
STAT W4635	Stochastic Processes for Finance
STAT G6505	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

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 V3027 Ordinary Differential Equations and MATH V3028 Partial Differential Equations.

Students interested in finance are recommended to take MATH W4071 Introduction to the Mathematics of Finance, STAT W4290 Statistical Methods in Finance, and STAT W4437 Time Series Analysis.

Students interested in graduate study in mathematics or in statistics are recommended to take MATH W4061 Introduction To Modern Analysis I and MATH W4062 Introduction To Modern Analysis II.

Students interested in actuarial sciences should discuss with the Statistics Department adviser how to include courses approved for the Actuarial Societies' Validation by Education Experience requirements, and how to prepare for the societies' exams. Students must obtain approval for their elective selection from both the mathematics and statistics advisers.

Students may replace STAT W3105 Introduction to Probability with STAT W4105 Introduction to Probability, STAT W3107 Introduction to Statistical Inference with STAT W4107 Introduction to Statistical Inference, and STAT W3315 Linear Regression Models with STAT W4315 Linear Regression Models or STAT W4440 Linear Regression and Time Series Methods.

Students may also replace STAT W3105 Introduction to Probability and STAT W3107 Introduction to Statistical Inference with the combined course STAT W4109 Introduction to Probability and Statistics.

MATH V1207 - MATH V1208	Honors Mathematics A and Honors Mathematics B
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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.

CONCENTRATION IN MATHEMATICS

The concentration requires the following:

Mathematics

Select one of the two following multivariable calculus and linear algebra sequences:

MATH V1201 - MATH V1202 - MATH V2010	Calculus III and Calculus IV and Linear Algebra
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MEDIEVAL AND RENAISSANCE STUDIES

Program Director: Prof. Susan Boynton, 621B Dodge Hall;
slb184@columbia.edu

Program Administrator: Isabella Livorni;
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
- English and Comparative Literature
- French and Romance Philology
- Germanic Languages
- History
- Italian
- Latin American and Iberian Cultures
- Music
- Philosophy
- Religion

For more information about the special concentration in medieval and Renaissance studies, visit <http://medren.columbia.edu/>.

FACULTY

EXECUTIVE COMMITTEE OF THE INTERDEPARTMENTAL COMMITTEE ON MEDIEVAL AND RENAISSANCE STUDIES

- Susan Boynton (Music; Program Director, Medieval and Renaissance Studies)
- Christopher Baswell (English and Comparative Literature)
- Consuelo Dutschke (Rare Book and Manuscript Library)
- Carmela Franklin (Classics)
- Matthew Jones (History)
- Holger Klein (Art History)
- Adam Kosto (History)
- Jesus Rodriguez-Velasco (Latin American and Iberian Cultures)
- Pamela Smith (History)
- Alan Stewart (English and Comparative Literature)

REQUIREMENTS 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.

In addition to fulfilling the requirements for a departmental major or concentration, students with this special concentration should plan on taking an additional 12 points of courses in other departments of the program, to be chosen in consultation with an appropriate member of the committee.

A reading knowledge of two languages is also required: normally they are Latin (as demonstrated by the completion of LATN V1201 Intermediate Latin I or LATN V1202 Intermediate Latin II) and the completion of the fourth term of one Romance or Germanic language. Language courses do not count toward the 12 points required for the special concentration.

MIDDLE EASTERN, SOUTH ASIAN, AND AFRICAN STUDIES

Departmental Office: 401 Knox; 212-854-2556
<http://www.columbia.edu/cu/mesaas/>

Director of Undergraduate Studies: Wael Hallaq, 515 Knox;
 212-851-9729; wh2223@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: Rina Kreitman, 411 Knox; 212-854-6519;
rk2617@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.

FACULTY PROFESSORS

- Muhsin J. Ali al-Musawi
- Partha Chatterjee
- Hamid Dabashi
- Mamadou Diouf
- Wael Hallaq
- Sudipta Kaviraj
- Rashid Khalidi
- Mahmood Mamdani
- Joseph Massad
- Brinkley Messick
- Dan Miron
- Timothy Mitchell
- Sheldon Pollock
- Frances Pritchett (*emeritus*)
- George Saliba

ASSOCIATE PROFESSORS

- Gil Anidjar
- Allison Busch
- Kai Kresse
- Jennifer Wenzel

ASSISTANT PROFESSORS

- Nanor Kebranian
- Mana Kia

SENIOR LECTURERS

- Taoufik Ben Amor
- Abdul Nanji
- Rakesh Ranjan

LECTURERS

- Oujidane Absi
- Aftab Ahmad
- May Ahmar
- Leyla Amzi-Erdogdular
- Ghada Badawi
- Tarik Belhoussein
- Nehama Bersohn
- Rym Bettaieb
- Jane Clayton

- Ihsan Colak
- Zuleyha Colak
- Reem Faraj
- Saeed Honarmand
- Charry Karamanoukian
- Rina Kreitman
- Youssef Nouhi
- Dalpat Rajpurohit
- D. Samuel Sudanandha
- Mariame Sy

ON LEAVE

- Profs. Dabashi, Kresse, Mitchell (*Fall 2015*)
- Profs. Chatterjee, Dabashi, Kresse, Mamdani, Miron, Mitchell, Saliba, Wenzel (*Spring 2016*)

REQUIREMENTS

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 V2003 Introduction to Islamic Civilization or ASCM V2008 Contemporary Islamic Civilization. Students keen on learning more about South Asia would take ASCM V2357 Introduction to Indian Civilization, HSME W3810 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 W2030 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 V3399 Colloquium on Major Texts: Middle East and South Asia (for those focusing on the Middle East and South Asia) or AFCV C1020 African Civilizations (for those focusing on Africa).

With this background, students are ready to take MDES W3000 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 W3960 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.

courses out of the general 15 points may be devoted to language study.

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 V3399	Colloquium on Major Texts: Middle East and South Asia
or AFCV C1020	African Civilizations
MDES W3000	Theory and Culture

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

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

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, 621 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).

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:

- *Columbia University Orchestra* – Jeffrey Milarsky, *Conductor*
 See *MUSI V1591 University Orchestra-MUSI V1592 University Orchestra* for audition and activity information.
- *Chamber Music Ensemble* – Magdalena Stern-Baczewska, *Director, Music Performance Program*

See *MUSI V1598 Chamber Ensemble-MUSI V1599 Chamber Ensemble* for audition and activity information.

- *Barnard-Columbia Chorus and Chamber Singers* – Gail Archer, *Director*
 See *MUSI V1593 Barnard-Columbia Chorus- MUSI V1594 Barnard-Columbia Chorus* and *MUSI V1595 Barnard-Columbia Chamber Singers- MUSI V1596 Barnard-Columbia Chamber Singers* for audition and activity information.
- *Collegium Musicum* – Anne Levitsky, *Director*
 See *MUSI V1580 Collegium Musicum-MUSI V1581 Collegium Musicum* for audition and activity information.
- *Jazz Ensembles* – Christopher Washburne, *Director*
 See *MUSI V1618 Columbia University Jazz Ensemble-MUSI V1619 Columbia University Jazz Ensemble* for audition and activity information.
- *World Music Ensembles* – Ana Maria Ochoa, *Director, Center for Ethnomusicology*
 See the Music Performance website (<http://www.music.columbia.edu/mpp>) for audition and activity information about all of the above, as well as Bluegrass, Gagaku, Hogaku, Klezmer, Latin, Afro-Cuban, and Middle Eastern ensembles.

PRACTICE ROOMS

Piano practice rooms in the Broadway and East Campus dormitories may be reserved annually by students living in any of the Columbia University dormitories, at a nominal fee. Applications will be accepted during the second week of classes in the main Music Department office, 621 Dodge.

Schapiro Hall also has seven “walk-in” practice rooms that are assigned on a first-come, first-served basis. No fee is required for Schapiro Practice Rooms, and those are open to anyone with a valid CU or affiliate ID.

The organ studio in St. Paul’s Chapel is available for organ practice for students taking organ lessons. Arrangements should be made with the associate in organ performance during the first week of classes.

GRADING

Courses in which a grade of D or lower has been received do not count toward the major or concentration requirements.

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.

FACULTY PROFESSORS

- Susan Boynton
- Joseph Dubiel

- Walter Frisch
- Bradford Garton
- Georg Friedrich Haas
- Ellie Hisama
- Alfred Lerdahl
- George Lewis
- Ana Maria Ochoa
- Elaine Sisman

ASSOCIATE PROFESSORS

- Aaron Fox
- Giuseppe Gerbino
- Christopher Washburne

ASSISTANT PROFESSORS

- Alessandra Ciucci
- Sophia di Castri
- Julia Doe
- Kevin A. Fellezs
- Mariusz Kozak
- Benjamin Steege

COORDINATOR OF MUSICIANSHIP

- Peter Susser

LECTURERS

- Vilde Aaslid
- Deborah Bradley-Kramer
- Mahir Cetiz
- Mario Diaz De Leon
- Matthew Goodheart
- Jeffrey Milarsky
- Caleb Mutch
- Ashley Nail
- Martha Newland
- Magdalena Stern-Baczewska

ASSOCIATES IN MUSIC PERFORMANCE

- Sarah Adams
- Gail Archer (Barnard)
- Eliot Bailen
- Bruce Barth
- Cyrus S. Beroukhim
- Allen Blustine
- Vicki Bodner
- Paul Bollenback
- Yari Bond
- Patrick Calleo
- Marco Cappelli

- Vince Cherico
- Christine Correa
- Sebastian Cruz
- Adriano dos Santos
- Amir Elsaffar
- David Fulmer
- Brad Gemeinhardt
- John David Gibson
- June Han
- Brad Jones
- Sue Ann Kahn
- Arthur Kampela
- James Kerr
- Lisa Kim
- Min-Young Kim
- Victor Lin
- Ole Mathisen
- Andy Milne
- Tony Moreno
- Ah-Ling Neu
- Ugonna Okegwo
- Niels J. Østbye
- Muneko Otani
- Susan Palma-Nidel
- Richard Rood
- Susan Rotholz
- Louise Sasaki
- James Nyoraku Schlefer
- Michael Seltzer
- Don Sickler
- Michael Skelly
- Raymond Stewart
- Wendy Sutter
- Jessica Thompson
- Masayo Ishigure Tokue
- Leo Traversa
- Michael Truesdell
- Reiko Uchida
- Jeffrey Warschauer
- James Wilson

ON LEAVE

- Profs. Fellezs, Lerdahl (*2015-2016*)
- Prof. Dubiel (*Spring 2016*)

REQUIREMENTS 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 V1002 Fundamentals of Music and MUSI V1312 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 *MUSI W1517 Keyboard Harmony and Musicianship*-*MUSI W1518 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. 281) above.

The major in music requires a minimum of 40 points, including the following courses:

MUSI V2318	Music Theory I
- MUSI V2319	and Music Theory II

MUSI V3321	Music Theory III
- MUSI V3322	and Music Theory IV

Select four terms of ear training from the following:

MUSI V2314	Ear Training, I
- MUSI V2315	and Ear Training, II

MUSI V3316	Ear Training, III
- MUSI V3317	and Ear Training, IV

MUSI W4318	Ear Training, V
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MUSI V3128	History of Western Music I:
- MUSI V3129	Middle Ages To Baroque
	and History of Western Music II:
	Classical To the 20th Century

MUSI V3400	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:

MUSI V1591	University Orchestra
- MUSI V1592	and University Orchestra

MUSI V1598	Chamber Ensemble
- MUSI V1599	and Chamber Ensemble

MUSI V1618	Columbia University Jazz
- MUSI V1619	Ensemble
	and Columbia University Jazz
	Ensemble

MUSI V1624	and World Music Ensemble
- MUSI V1625	

3. *MUSI W1517 Keyboard Harmony and Musicianship*-*MUSI W1518 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. 281) 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 V2318	Music Theory I
- MUSI V2319	and Music Theory II

MUSI V3321	Music Theory III
- MUSI V3322	and Music Theory IV

Select four terms of ear training from the following:

MUSI V2314	Ear Training, I
- MUSI V2315	and Ear Training, II

MUSI V3316	Ear Training, III
- MUSI V3317	and Ear Training, IV

MUSI W4318	Ear Training, V
- MUSI W4319	and (if offered)

MUSI V3128	History of Western Music I:
- MUSI V3129	Middle Ages To Baroque
	and History of Western Music II:
	Classical To the 20th Century

MUSI V3400	Topics in Music and Society
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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 V1591	University Orchestra
- MUSI V1592	and University Orchestra

MUSI V1598	Chamber Ensemble
- MUSI V1599	and Chamber Ensemble

MUSI V1618	Columbia University Jazz
- MUSI V1619	Ensemble
	and Columbia University Jazz
	Ensemble

MUSI V1624 - MUSI V1625	and World Music Ensemble
MUSI W1517 - MUSI W1518	Keyboard Harmony and Musicianship and Keyboard Harmony and Musicianship *

* 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: Michele Moody-Adams,
702 Philosophy; 212-851-9522; moody-adams@columbia.edu

Economics-Philosophy Adviser: John Collins, 714 Philosophy;
212-854-3970; jdc9@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 C3912), 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

Senior thesis undergraduates majoring in philosophy or economics-philosophy may apply 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 application early in the fall semester of their senior year. Applications are due in early December, and are reviewed by a committee which includes the director of undergraduate studies; students are notified of the committee's decision within two weeks. Students whose applications are approved should register for their faculty adviser's section of Supervised Senior Research for the spring term of the senior year. Theses are due in early April. All students who complete theses are considered for departmental honors.

DEPARTMENTAL HONORS

Departmental honors are highly competitive. Normally no more than 10% of graduating majors receive departmental honors in a given academic year.

In order to qualify for departmental honors in philosophy, a student must have a GPA 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; all students who complete senior theses are considered for honors.
2. A student may be nominated by a faculty member early in the spring semester of the senior year; nominated students are invited to submit a writing sample. 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 then reviews the submitted material and the academic records of the students, and reports to the full faculty. The full faculty then decide which students to recommend for departmental honors.

FACULTY 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 (Chair, Barnard)
- Christopher Peacocke (Chair)
- Carol Rovane
- Achille Varzi
- Katja Vogt

ASSOCIATE PROFESSORS

- John Collins

ASSISTANT PROFESSORS

- Justin Clarke-Doane
- Tamar Lando
- Karen Lewis (Barnard)
- John Morrison (Barnard)
- Elliot Paul (Barnard)
- 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)

REQUIREMENTS

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 C1010 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 C3912.

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 *C*, *G*, *V*, or *W*, including:

PHIL V2101 History of Philosophy I: Pre-Socratics through Augustine (or another course in the history of ancient or medieval philosophy e.g., PHIL V3131)

PHIL V2201 History of Philosophy II: Aquinas to Kant (or another course in the history of late medieval or early modern philosophy e.g., PHIL V3237 or PHIL W3264)

PHIL V3411 Symbolic Logic (or, in exceptional cases, a more advanced course in logic)

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 V2702 Marriage, Morals, and Law

PHIL V3701 Ethics

PHIL V3751 Political Philosophy

A related course to be chosen in consultation with the director of undergraduate studies.

PHIL C3912 (Seminar)

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 *C*, *G*, *V*, or *W*. There are no specific courses required for the concentration.

Students may choose courses prefixed with *G* only with the instructor's permission.

PHIL C3912 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 W1105	Principles of Economics
ECON W3211	Intermediate Microeconomics
ECON W3213	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 C1010	Methods and Problems of Philosophical Thought
PHIL V3411	Symbolic Logic
PHIL V3701	Ethics (or another adviser-approved course in moral or political philosophy)
PHIL V3551 or PHIL W3960	Philosophy of Science Epistemology
PHIL G4561 or PHIL G4565	Probability and Decision Theory Rational Choice

Seminar

ECPH W4950	Economics and Philosophy Seminar (or another seminar in philosophy or economics approved by advisers in both department)
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Students who declare in Spring 2014 and beyond:

In addition to the above requirements, students are required to take:

1. ECON W3412 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.

PHYSICAL EDUCATION AND INTERCOLLEGIATE ATHLETICS

Departmental Office: 336 Dodge Physical Fitness Center;
212-854-3439
<http://www.dodgefitnesscenter.com>

Director of Undergraduate Studies: Abbey Lade, 332 Dodge Physical Fitness Center; 212-854-4001; al3524@columbia.edu

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 and Intercollegiate Athletics’ 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. Unless otherwise indicated, the activities are scheduled on a quarterly basis with each quarter lasting approximately seven weeks. At midterm, the student selects another activity for the remainder of the term, although in many cases the student has the opportunity to continue the same activity. 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 Professor Ken Torrey, 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 Professor Torrey, students may be instructed to contact Dr. Samuel Seward, 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

All students are required to pass a swimming test or take beginning swimming for one semester to fulfill the swimming requirement. The swimming tests are administered in the Uris Pool the first day of classes and are also offered on Wednesdays from 8:30pm-9:30pm, Fridays from 12-2pm and Sundays from 3pm-4pm throughout the semester. The test consists of swimming three laps of the pool (75 yards) without resting, using any stroke or combination of strokes. Those who do not pass are encouraged to take a beginner swimming course at the first opportunity.

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.

THE COLUMBIA AND BARNARD PHYSICAL EDUCATION EXCHANGE PROGRAM

The Columbia and Barnard Physical Education Departments have an exchange program. Space is reserved for Columbia College and Engineering students in selected Barnard physical education courses. A list of the Barnard courses offered through the exchange program is available in the Columbia Physical Education Office and the Barnard Physical Education Office, 200 Barnard Annex.

For Columbia College students, one point of the Physical Education requirement can be fulfilled with a Barnard Physical Education course or a Barnard Dance technique course.

INTERCOLLEGIATE ATHLETICS

Students who are participating on an intercollegiate team should register for the appropriate team section of PHED C1005 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).

FACULTY

DIRECTOR OF PHYSICAL EDUCATION PROGRAMS

- Abbey Lade

ASSOCIATES

- Cemi Abreu
- Scott Alwin
- Kevin Anderson
- Michael Aufrichtig
- Laura Baden
- Al Bagnoli
- Tracey Bartholomew
- James Bolster
- Brett Boretti
- Diana Caskey
- Michelle Chewens
- Brian Chenoweth
- Pete Cruz
- Emerson Curry
- Derek Davis
- Nick Dawe
- Adriano Di Peco
- Howard Endelman
- Roman Fleszar
- Emily Friedman
- Jesse Foglia
- Carl Fronhofer
- Stephanie Glance
- Bid Goswami
- Elizabeth Grubb
- Jumpie Harada
- Matt Herhal
- Kevin Hovde

- Sarana Hyatt
- Colleen Irby
- Daniel Ireland
- Brian Jines
- Maggie Johnson
- Ruben Jones
- Lauren Kahn
- Tara Kalivas
- Brie Katz
- Luke Kelly
- Amphone Keovongmanysar
- Liz Kittleman
- Gustavo Leal
- SeoungWoo Lee
- Peter Maki
- Gaurav Misra
- Richard Mueller
- Caroline Nichols
- Alex Padron
- Nich Lee Parker
- Derrick Phelps
- Ken Pollard
- Scott Ramsey
- Sheila Roux
- Joanne Schickerling
- Brian Schneider
- Anne Marie Skylis
- Allison Slater
- Chris Smith
- Kyle Smith
- Gordon Spencer
- Jennifer Teague
- Dan Tischler
- Jacques Swanepoel
- Christie Switek
- Sara Van Saanen
- Benjamin Waruch
- Ilene Weintraub
- Amy Weeks
- Ajaya William
- Riza Zalameda

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 W1401 Introduction To Mechanics and Thermodynamics - PHYS W1402 Introduction To Electricity, Magnetism, and Optics should take PHYS W2601 Physics, III: Classical and Quantum Waves as the third-semester course.

Introductory Sequences

Nonscience Majors:

PHYS W1001 Physics for Poets

Preprofessional Students:

PHYS W1201 General Physics I
 - PHYS W1202 and General Physics II

Accompanying laboratory course:

PHYS W1291 General Physics Laboratory
 - PHYS W1292 and General Physics Laboratory II

Engineering and Physical Science Majors:

Select one of the following sequences with accompanying laboratory course:

Sequence A:

PHYS W1401 Introduction To Mechanics and
 - PHYS W1402 Thermodynamics
 - PHYS W1403 and Introduction To Electricity,
 Magnetism, and Optics
 and Introduction to Classical and
 Quantum Waves

Sequence B:

PHYS W1601 Physics, I: Mechanics and
 - PHYS W1602 Relativity
 - PHYS W2601 and Physics, II:
 Thermodynamics, Electricity, and
 Magnetism
 and Physics, III: Classical and
 Quantum Waves

Sequence C:

PHYS W2801 Accelerated Physics I
 - PHYS W2802 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 W1001, PHYS W1201, PHYS W1401 or PHYS W1601.

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 W1001, PHYS W1202, PHYS W1402 or PHYS W1602.

FACULTY PROFESSORS

- Igor Aleiner
- Boris Altshuler
- Elena Aprile
- Allan Blaer (*emeritus*)
- Andrei Beloborodov
- Norman Christ
- Brian Cole
- Frederik Denef
- Brian Greene (Mathematics)
- Miklos Gyulassy
- Charles J. Hailey
- Timothy Halpin-Healy (Barnard)
- Emlyn Hughes
- Lam Hui
- Tsung Dao Lee (*emeritus*)
- Robert Mawhinney
- Amber Miller
- Andrew Millis
- Alfred H. Mueller
- Reshmi Mukherjee (Barnard)
- John Parsons
- Aron Pinczuk (Applied Physics)
- Malvin Ruderman
- Michael Shaevitz
- Michael Tuts (Chair)
- Yasutomo Uemura
- Erick Weinberg
- William Zajc

ASSOCIATE PROFESSORS

- Gustaaf Brooijmans
- Janna Levin (Barnard)
- Szabolcs Marka
- Reshmi Mukherjee (Barnard)
- Alberto Nicolis
- Abhay Pasupathy
- Ozgur Sahin (Biology)
- Tanya Zelevinsky

ASSISTANT PROFESSORS

- Cory Dean

- Brian Humensky
- Bradley Johnson
- Brian Metzger
- Rachel Rosen

SENIOR LECTURER IN DISCIPLINE

- Jeremy Dodd

ADJUNCT PROFESSOR

- Morgan May

LECTURER

- Burton Budick
- Joel Gersten

ON LEAVE

REQUIREMENTS

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 W1401	Introduction To Mechanics and
- PHYS W1402	Thermodynamics
- PHYS W2601	and Introduction To Electricity, Magnetism, and Optics and Physics, III: Classical and Quantum Waves

Sequence B:

PHYS W1601	Physics, I: Mechanics and
- PHYS W1602	Relativity
- PHYS W2601	and Physics, II: Thermodynamics, Electricity, and Magnetism and Physics, III: Classical and Quantum Waves

Sequence C: Students with advanced preparation in both physics and mathematics may be eligible to take:

PHYS W2801	Accelerated Physics I
- PHYS W2802	and Accelerated Physics II

Core Physics Courses

PHYS W3003	Mechanics
PHYS W3007	Electricity and Magnetism
PHYS W3008	Electromagnetic Waves and Optics
PHYS W4021	Quantum Mechanics
PHYS W4022	Quantum Mechanics II
PHYS W4023	Thermal and Statistical Physics

Elective Courses

Select at least six points of the following courses:

PHYS W3002	From Quarks To the Cosmos: Applications of Modern Physics
PHYS W4003	Advanced Mechanics
PHYS W4011	Particle Astrophysics and Cosmology
PHYS W4018	Solid-State Physics
PHYS W4019	Mathematical Methods of Physics
PHYS W4040	Introduction to General Relativity
PHYS W4050	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 W3081	Intermediate Laboratory Work (two semesters)
PHYS W3083	Electronics Laboratory

Option 2:

PHYS W3081	Intermediate Laboratory Work (three semesters)
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Senior Seminar

PHYS W3072	Seminar in Current Research Problems
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Mathematics Courses

Calculus through MATH V1202 Calculus IV or MATH V1208 Honors Mathematics B; and MATH V3027 Ordinary Differential Equations or the equivalent.

Recommended cognate courses: MATH V2010 Linear Algebra, MATH V3007 Complex Variables, and MATH V3028 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).

* Approved experimental work with a faculty research group may satisfy one semester of the laboratory requirement.

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: Dr. Susan Elmes, Director of Undergraduate Studies,
1006 International Affairs Building; se5@columbia.edu

Political Science: Prof. John D. Huber, 813 International Affairs
Building; 212-854-7208; jdh39@columbia.edu

Political Science-Statistics Advisers:

Political Science: Prof. Robert Shapiro, 730 International Affairs
Building; 212-854-3944; rys3@columbia.edu

Statistics: Prof. Daniel Rabinowitz, 1255 Amsterdam Avenue,
Room 1014; 212-851-2141; dan@stat.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 W1201 Introduction to American Government & Politics or POLS V1501 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 W3998-POLS W3999 Senior Honors Seminar, 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.

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

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>.

FACULTY PROFESSORS

- Richard K. Betts
- Jagdish Bhagwati (also Economics)
- Partha Chatterjee (also Anthropology)
- Jean L. Cohen
- Gerald L. Curtis
- 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 (Chair)
- Timothy Frye
- Ester Fuchs (also School of International and Public Affairs)
- Andrew Gelman (also Statistics)
- Donald P. Green
- Fredrick Harris
- Jeffrey Henig (also Teachers College)
- John Huber
- Macartan Humphreys
- Robert Jervis
- David C. Johnston
- Ira Katznelson (also History)
- Sudipta Kaviraj (also Middle Eastern, South Asian, and African Studies)
- Mahmood Mamdani (also Anthropology)
- Isabela Mares
- Massimo Morelli (also Economics)
- 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 (also School of International and Public Affairs)
- Robert Y. Shapiro
- Jack Snyder
- Michael Ting (also School of International and Public Affairs)
- Nadia Urbinati
- Gregory Wawro

ASSOCIATE PROFESSORS

- Christopher Blattman (also School of International and Public Affairs)
- Shigeo Hirano
- Jeffrey Lax

- Justin Phillips
- Tonya Putnam
- Johannes Urpelainen

ASSISTANT PROFESSORS

- Allison Carnegie
- Daniel Corstange (also School of International and Public Affairs)
- Turkuler Isiksel
- Kimuli Kasara
- Joshua Simon

LECTURERS

- Andreas Avgousti
- Kevin Elliott
- Jessica Kimpell Johnson
- Luke MacInnis

ON LEAVE

- Profs. Carnegie, Doyle, Elster, Frye, Morelli (*2015-2016*)
- Profs. Isiksel and Johnston (*Fall 2015*)
- Profs. Cohen, Corstange, Erikson, Murillo, Shapiro, Simon, Snyder and Urbinati (*Spring 2016*)

REQUIREMENTS 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>.

Courses

Courses in Barnard College or other divisions of the university not listed on the department website course listing cannot be used to meet the requirement of a major or concentration in political science without the approval of an undergraduate adviser, which should be secured in advance of registration.

Transfer Credits

Political science courses taken at other institutions cannot be credited toward the major without the written approval of an undergraduate adviser or the director of undergraduate studies. Students planning to transfer credits should meet with an undergraduate adviser during advising hours or the director of undergraduate studies during office hours as soon as they start taking courses toward the major, since the number of credits transferred (if any) are critical for subsequent planning. Students need the syllabi and transcript for courses submitted for

transfer credit. Normally no more than 15 transfer credits may be counted toward the major.

AP Credits

AP Credits will be granted, based on successful completion of an AP exam with a score of 4 or higher, only after the completion of an upper-level (3000-level or higher) course in the subfield in which the AP exam was taken with a grade of C or higher. Students may be given an exemption, based on AP scores, from only one undergraduate course. Students may not be exempted from more than one introductory course on the basis of AP scores.

Grading

A grade of Pass is acceptable only for the first course taken toward the major or concentration. Courses with a grade of D may not be applied toward the major or concentration.

MAJOR IN POLITICAL SCIENCE

Please read *Guidelines for all Political Science Majors, Concentrators, and Interdepartmental Majors* above.

The major in political science requires a total of 29 points, distributed as follows:

Introductory Courses

Select two of the following four introductory courses:

POLS V1013	Political Theory
POLS W1201	Introduction to American Government Politics
POLS V1501	Introduction to Comparative Politics
POLS V1601	Introduction to International Politics

Major Subfield

Six points in one of the subfields in which an introductory course was taken:

American politics
Comparative politics
Political theory
International relations

Minor Subfield

Three points in a second subfield in which an introductory course was taken

Additional Courses

Six additional points in political science, including three points in research methods. Courses that satisfy the research methods requirement include: *

POLS W3220	Logic of Collective Choice
POLS W3704	Data Analysis and Statistics for Political Science Research
POLS W3708	Empirical Research Methods
POLS W3720	Scope and Methods
POLS W4209	Game Theory and Political Theory

POLS W4210	Research Topics in Game Theory
POLS W4291	Advanced Topics in Quantitative Research
POLS W4292	Advanced Topics in Quantitative Research: Models for Panel and Time-Series Cross-Section Data
POLS W4365	Design and Analysis of Sample Surveys
POLS W4368	Experimental Research: Design, Analysis and Interpretation
POLS W4910	Principles of Quantitative Political Research
POLS W4911	Analysis of Political Data
POLS W4912	Multivariate Political Analysis

Seminars

Eight points of seminars (one four-point seminar in major subfield; one four-point seminar in any subfield) **

* The research methods requirement applies only to students who declared their major in or after February 2012. Students who declared their major prior to February 2012 are not required to take a course in research methods. If a student takes another course inside or outside the department that provides relevant training in research methods, the student can petition the director of undergraduate studies to have this course satisfy the research methods requirement. 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.

** See seminar section below.

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 major 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

Please read *Guidelines for all Economics Majors, Concentrators, and Interdepartmental Majors* in the *Economics* section of this Bulletin.

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.

Students who declared prior to Spring 2014:

The economics-political science major requires a total of 54 points: 19 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 W1105	Principles of Economics
ECON W3211	Intermediate Microeconomics
ECON W3213	Intermediate Macroeconomics
ECON W4370	Political Economy

Mathematics Sequence

Select a mathematics sequence.

Statistical Methods

Select one of the following courses:

ECON W3412	Introduction To Econometrics (and one of the statistics courses listed under Guidelines for all Economics Majors, Concentrators, and Interdepartmental Major)
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POLS W4911	Analysis of Political Data (and one of the statistics course listed under Guidelines for all Economics Majors, Concentrators, and Interdepartmental Majors)
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POLS W4911 - POLS W4910	Analysis of Political Data and Principles of Quantitative Political Research
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Economics Electives

Select two electives (6 points) at the 3000-level or above.

Political Science Courses

Major subfield (9 points) - including the introductory course, all in one of the three subfields (American politics, comparative politics, or international relations) coordinated with the economics electives and approved in advance by the adviser.

Minor subfield (6 points) - including the introductory course in another subfield, coordinated with the economics electives and approved by the adviser.

Seminars

Select a Political Science Department seminar, to be approved in advance by the adviser, in the major subfield.

ECPS W4921	Seminar In Political Economy
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Students who fulfill their statistical methods requirement with POLS W4910 Principles of Quantitative Political Research cannot take ECON W3412 Introduction To Econometrics.

Students who declare in Spring 2014 and beyond:

In addition to the above requirements, students are required to take MATH V1101 Calculus I, MATH V1201 Calculus III, and STAT W1211 Introduction to Statistics (with calculus) to satisfy the statistics requirement. POLS W4910 Principles of Quantitative Political Research will no longer be an accepted alternative course for the statistics requirement.

Students will still have the option to take ECON W3412 Introduction To Econometrics or POLS W4911 Analysis of Political Data to complete the statistical methods requirement.

MAJOR IN POLITICAL SCIENCE–STATISTICS

Please read *Guidelines for all Political Science Majors, Concentrators, and Interdepartmental Majors* above.

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 major requires a minimum of 40 credits, distributed as follows:

Political Science

Select one of the following introductory courses in one of the major subfields:

American Politics:

POLS W1201	Introduction to American Government Politics
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Comparative Politics:

POLS V1501	Introduction to Comparative Politics
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International Relations:

POLS V1601	Introduction to International Politics
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Political Theory:

POLS V1013	Political Theory
POLS W4133	Political Thought - Classical and Medieval

POLS W4134	Modern Political Thought
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Six points in the same subfield as the introductory course

A four point seminar in the same subfield

POLS W4910 - POLS W4911	Principles of Quantitative Political Research and Analysis of Political Data
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12 or 15 credits

An introductory course:

STAT W1001	Introduction to Statistical Reasoning (An introductory course:)
STAT W1111	Introduction to Statistics (without calculus)
STAT W1211	Introduction to Statistics (with calculus)

Select one of the following sequences:

A sequence in mathematics and probability and statistical theory,

STAT W3103 - STAT W3105 - STAT W3107 - STAT W3315	Mathematical Methods for Statistics and Introduction to Probability and Introduction to Statistical Inference and Linear Regression Models
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or a sequence in applied statistics,

STAT W2024 - STAT W2025 - STAT W2026 - STAT W3026	Applied Linear Regression Analysis and Applied Statistical Methods and Statistical Applications and Case Studies and Applied Data Mining
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An approved elective in a statistics or a quantitatively oriented course in a social science

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

Students may substitute *STAT W4105 Introduction to Probability* for *STAT W3105 Introduction to Probability*, *STAT W4107 Introduction to Statistical Inference* for *STAT W3107 Introduction to Statistical Inference*, and *STAT W4315 Linear Regression Models* for *STAT W3315 Linear Regression Models*.

Students preparing for advanced study in statistics should take the *STAT W3105 Introduction to Probability-STAT W3107 Introduction to Statistical Inference-STAT W3315 Linear Regression Models* sequence. They should also consider substituting *MATH V1101 Calculus I*, *MATH V1102 Calculus II*, and *MATH V2010 Linear Algebra* for *STAT W3103 Mathematical Methods for Statistics*.

Students preparing to apply statistical methods should take the *STAT W2024 Applied Linear Regression Analysis -STAT W2025 Applied Statistical Methods -STAT W2026 Statistical Applications and Case Studies -STAT W3026 Applied Data Mining* sequence.

Students may replace the *POLS V1013 Political Theory*, *POLS W4133 Political Thought - Classical and Medieval*, or *POLS W4134 Modern Political Thought* requirement with *COCI C1101 Introduction To Contemporary Civilization* and *COCI C1102 Introduction To Contemporary Civilization* (CC students) or *COCI F1101 Contemporary Civilization* and *COCI F1102 Contemporary Civilization* (GS students).

CONCENTRATION IN POLITICAL SCIENCE

Please read *Guidelines for all Political Science Majors, Concentrators, and Interdepartmental Majors* above.

The concentration in political science requires a minimum of 21 points, distributed as follows:

Introductory Courses

Select two of the following four introductory courses:

POLS V1013	Political Theory
POLS W1201	Introduction to American Government Politics
POLS V1501	Introduction to Comparative Politics

POLS V1601	Introduction to International Politics
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Subfield Courses

Three points in one of the subfields in which an introductory course was taken

Three points in a second subfield in which an introductory course was taken

Additional Courses

Six additional points in political science in any subfield

Select one of the following research methods courses:

POLS W3220	Logic of Collective Choice
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POLS W3704	Data Analysis and Statistics for Political Science Research
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POLS W3708	Empirical Research Methods
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POLS W3720	Scope and Methods
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POLS W4209	Game Theory and Political Theory
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POLS W4210	Research Topics in Game Theory
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POLS W4291	Advanced Topics in Quantitative Research
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POLS W4292	Advanced Topics in Quantitative Research: Models for Panel and Time-Series Cross-Section Data
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POLS W4365	Design and Analysis of Sample Surveys
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POLS W4368	Experimental Research: Design, Analysis and Interpretation
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POLS W4910	Principles of Quantitative Political Research
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POLS W4911	Analysis of Political Data
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POLS W4912	Multivariate Political Analysis
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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
<http://www.columbia.edu/cu/psychology>

Directors of Undergraduate Studies:

Psychology Major and Concentration:

Prof. Patricia Lindemann, 358E Schermerhorn Extension;
 212-854-8285; pgl2@columbia.edu

Prof. Katherine Fox-Glassman, 314 Schermerhorn;
 212-854-4550; kjt2111@columbia.edu

Prof. Nim Tottenham, 355D Schermerhorn Extension;
 212-854-1925; nlt7@columbia.edu

Neuroscience and Behavior Major:

Psychology: Prof. Frances Champagne, 315 Schermerhorn;
 212-854-2589; fchampag@psych.columbia.edu

Psychology: Prof. James Curley, 317 Schermerhorn;
 212-854-7033; jc3181@columbia.edu

Psychology: Prof. Donald Hood, 415 Schermerhorn;
 212-854-4587; dch3@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. Lois Putnam, 314 Schermerhorn;
 212-854-4550; putnam@psych.columbia.edu

Directors of Psychology Honors Program:

Prof. Kevin Ochsner, 369 Schermerhorn Extension;
 212-851-9348; ochsner@psych.columbia.edu

Prof. Nim Tottenham, 355D 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: Paulo Ribeiro, 406 Schermerhorn; 212-854-8859; uca@psych.columbia.edu

Undergraduate InfoPack: <http://www.columbia.edu/cu/psychology/dept/ugrad/infopack.html>

The mission of the undergraduate programs in the Department of Psychology (<http://www.columbia.edu/cu/psychology>) is to offer students a balanced curriculum in psychological science, including research methods; perception; cognition; neuroscience; and developmental, social, personality, 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 or in neuroscience and behavior.

PROGRAM GOALS

The department's program goals (<http://www.columbia.edu/cu/psychology/dept/ugrad/goals.html>) 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 (<http://www.columbia.edu/cu/psychology/dept/ugrad/goals.html>) are introduced in PSYC W1001 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 (PSYC W1610 Introductory Statistics for Behavioral Scientists) 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 W1001 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. 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 within the Department of Psychology. Students may volunteer to work in a lab, register for supervised individual research (PSYC W3950 Supervised Individual Research), or participate in the department's two-year honors program. Information on faculty research (<http://www.columbia.edu/cu/psychology/lists/core.html>) is available on the departmental website. Students are advised to read about research laboratories on faculty lab sites (<http://www.columbia.edu/cu/psychology/research/facultyresearch/researchlabs.html>) and visit the professor's office hours (<http://www.columbia.edu/cu/psychology/lists/office-hours.html>) to discuss opportunities. At the beginning of the fall term, the department also hosts a lab-preview 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 the Undergraduate InfoPack (<http://www.columbia.edu/cu/psychology/dept/ugrad/infopack.html>). Students wishing to declare a psychology major must first complete a Major Declaration Checklist (<http://www.columbia.edu/cu/psychology/dept/ugrad/PSYC.html>) and obtain departmental approval. All majors and concentrators in psychology and majors in neuroscience and behavior should complete a Major Requirement Checklist (<http://www.columbia.edu/cu/psychology/dept/ugrad/checklists/checklistsample.html>) before consulting a program adviser to discuss program plans and before beginning their final semester.

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 (<http://www.columbia.edu/cu/psychology/dept/ugrad/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 or the Undergraduate Curriculum Assistant in the departmental office. Program Adviser assignments (<http://www.columbia.edu/cu/psychology/dept/ugrad/curriculum.html#advisors>) and contact information are provided on the departmental website. For additional information about program, faculty, peer, and pre-clinical advising, please see the Psychology Undergraduate Advising Resources website (<http://www.columbia.edu/cu/psychology/dept/ugrad/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 contains introductions to psychology, introductory laboratory courses, and statistics. PSYC W1001 The Science of Psychology and PSYC W1010 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 W1001 The Science of Psychology first.
- The *2000*-level contains lecture courses that are introductions to areas within psychology; most require PSYC W1001 The Science of Psychology or PSYC W1010 Mind, Brain and Behavior as a prerequisite.
- The *3000*-level contains more advanced and specialized undergraduate courses; most are given in a seminar format and require instructor permission.
- The *3900*s are the courses providing research opportunities for undergraduates.
- The *4000*-level contains 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 (*2200*s, *3200*s, and *4200*s),
2. psychobiology and neuroscience (*2400*s, *3400*s, and *4400*s), and
3. social, personality, and abnormal (*2600*s, *3600*s, and *4600*s).

Note that Barnard psychology courses do not follow the same numbering scheme.

HONORS PROGRAM

The department offers a two-year Honors Program (<http://www.columbia.edu/cu/psychology/dept/ugrad/honors.html>), 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 W3910 Honors Seminar and simultaneously participate in an honors research course (PSYC W3920 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 research courses. Interested students should apply at the end of their sophomore year. Instructions and an application form are available on the departmental website (<http://www.columbia.edu/cu/psychology/dept/ugrad/honors.html>). Normally 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 W1001	The Science of Psychology
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A course in statistics such as one of the following:

PSYC W1610	Introductory Statistics for Behavioral Scientists
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STAT W1001	Introduction to Statistical Reasoning
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STAT W1111	Introduction to Statistics (without calculus)
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STAT W1211	Introduction to Statistics (with calculus)
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A laboratory course in experimental psychology such as one of the following:

PSYC W1420	Experimental Psychology: Human Behavior
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PSYC W1450	Experimental Psychology: Social Cognition and Emotion
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PSYC W1455	Experimental Psychology: Social and Personality
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Students should also take a variety of more advanced undergraduate courses and seminars and participate in PSYC W3950 Supervised Individual Research.

Students interested in clinical psychology should obtain experience working in a community service program and supervised individual research experience. Students should consult the department's pre-clinical adviser, Prof. E'mett McCaskill (<http://www.columbia.edu/cu/psychology/fac-bios/McCaskillE/faculty.html>), 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 (<http://www.columbia.edu/cu/psychology/dept/ugrad/curriculum.html#grad>).

ON-LINE INFORMATION

The Department of Psychology maintains an active website (<http://www.columbia.edu/cu/psychology>), in which the Undergraduate InfoPack for Current Students (<http://www.columbia.edu/cu/psychology/dept/ugrad/infopack.html>) 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 W1001 The Science of Psychology, PSYC W1010 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.

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 W1420 Experimental Psychology: Human Behavior and PSYC W1450 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 "S" course offered by the Psychology Department during the Summer Session is applicable toward the same major requirement(s) as the corresponding "W" 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 W1001 The Science of Psychology.

See *Academic Regulations—Study Outside Columbia College* in this Bulletin for additional information.

FACULTY PROFESSORS

- Niall Bolger
- Geraldine Downey
- William Fifer (Psychiatry, Pediatrics)
- David Friedman (Psychiatry)
- Norma Graham
- Carl Hart
- Tory Higgins
- Donald C. Hood
- Sheena S. Iyengar (Business School)
- Leonard Matin
- Janet Metcalfe
- Walter Mischel
- Michael Morris (Business School)
- Kevin Ochsner

- Lois Putnam
- Ann Senghas (Barnard)
- Rae Silver (Barnard)
- Ursula M. Staudinger (Mailman School of Public Health)
- Yaakov Stern (Neurology and Psychiatry)
- Herbert Terrace
- Elke Weber

ASSOCIATE PROFESSORS

- Frances Champagne
- Valerie Purdie-Vaughns
- Daphna Shohamy
- Lisa Son (Barnard)
- Nim Tottenham
- Sarah M.N. Woolley (Chair)

ASSISTANT PROFESSORS

- James Curley
- Yian Gu (Neurology)
- Dean Mobbs
- Hwamee Oh (Neurology)

ADJUNCT FACULTY

- Helen Brew
- Greg Jensen
- Karen Kelly
- Svetlana Komissarouk
- Caroline Marvin
- E'mett McCaskill
- Svetlana Rosis
- Julie Spicer
- Kathleen Taylor

LECTURERS IN DISCIPLINE

- Katherine Fox-Glassman
- Patricia Lindemann

ON LEAVE

- Profs. Hart, Higgins, Metcalfe, Mischel, Mobbs, Shohamy (*Fall 2015*)
- Prof. Graham (*Spring 2016*)

REQUIREMENTS

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 field. A single course may not be counted twice. Students should consult with one of the directors of undergraduate studies (<http://www.columbia.edu/cu/psychology/dept/ugrad/curriculum.html#advisors>) or departmental advisers if they have questions. Note that students attempting to complete two majors with a statistics requirement are generally able to use one course—e.g., STAT W1211 Introduction to Statistics (with calculus)—to satisfy the requirement for both majors (i.e., the student does not need to take two different statistics courses); however, the points for the course may only be applied to one of the majors.

Overlapping Courses

Students cannot receive credit for two courses—one at Columbia and one at Barnard—whose content largely overlaps (e.g., PSYC BC1001 Introduction to Psychology **and** PSYC W1001 The Science of Psychology **or** PSYC BC1138 Social Psychology **and** PSYC W2630 Social Psychology). Please refer to the table of Overlapping Courses (http://www.columbia.edu/cu/psychology/dept/ugrad/exceptions/bc_overlapping.pdf) for a partial list of courses 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 the psychology major, psychology concentration, or neuroscience and behavior major credit. 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. Courses taken only on a Pass/Fail basis may not be used to satisfy the major or concentration requirements under any circumstances.

MAJOR IN PSYCHOLOGY

Please read *Guidelines for all Psychology Majors, Concentrators, and Interdepartmental Majors* (p. 302) above.

Thirty or more points are needed to complete the major (<http://www.columbia.edu/cu/psychology/dept/ugrad/curriculum.html#psych>) and must include:

The Introductory Psychology Course

- PSYC W1001 The Science of Psychology

A Statistics Course

Select one of the following:

- PSYC W1610 Introductory Statistics for Behavioral Scientists
- STAT W1001 Introduction to Statistical Reasoning
- STAT W1111 Introduction to Statistics (without calculus)
- STAT W1211 Introduction to Statistics (with calculus)

A Laboratory Course

Select one of the following:

- PSYC W1420 Experimental Psychology: Human Behavior
- PSYC W1450 Experimental Psychology: Social Cognition and Emotion
- PSYC W1455 Experimental Psychology: Social and Personality

Majors are strongly advised to complete the statistics and laboratory requirements, in that order, by the fall term of their junior year. Students are advised to verify the specific prerequisites for laboratory 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 laboratory courses described above):

- Group I—Perception and cognition: courses numbered in the *2200s*, *3200s*, or *4200s*. Also PSYC W1420 Experimental Psychology: Human Behavior.
- Group II—Psychobiology and neuroscience: courses numbered in the *2400s*, *3400s*, or *4400s*. Also PSYC W1010 Mind, Brain and Behavior.
- Group III—Social, personality, and abnormal: courses numbered in the *2600s*, *3600s*, or *4600s*. Also PSYC W1450 Experimental Psychology: Social Cognition and Emotion and PSYC W1455 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. Seminar courses require the instructor's permission; students are advised to contact instructors one month prior to registration to obtain permission to register. Note that honors and supervised individual research courses (PSYC W3920 Honors Research and PSYC W3950 Supervised Individual Research) are not seminar courses and 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 W3950 Supervised Individual Research may be taken in any one term, and no more than 8 points total of research and field work courses (PSYC W3950 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 from Barnard psychology courses may be applied as credit toward the major. The table of approved Barnard psychology courses (http://www.columbia.edu/cu/psychology/dept/ugrad/exceptions/bc_approved.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 (including Barnard credits) are 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. Approval of transfer credits to fulfill psychology requirements **must** be obtained in writing from a psychology program adviser on the Major Requirement Substitution Form (<http://www.columbia.edu/cu/psychology/dept/ugrad/exceptions/exceptionsNB.html>). 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. With the exception of approved Barnard courses, students should consult with one of the directors of undergraduate studies (<http://www.columbia.edu/cu/psychology/dept/ugrad/curriculum.html#advisors>) before registering for psychology courses 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 (<http://www.columbia.edu/cu/psychology/dept/ugrad/curriculum.html#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 W1001 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 W1001 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. 302) 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 (<http://www.columbia.edu/cu/psychology/dept/ugrad/planning.html>) and use the appropriate major requirement checklist (<http://www.columbia.edu/cu/psychology/dept/ugrad/checklists/checklistsample.html>).

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://www.columbia.edu/cu/biology/pages/undergrad/cur/majors/neuro.html>).

Required Biology Courses

1. BIOL C2005 Introductory Biology I: Biochemistry, Genetics & Molecular Biology
2. BIOL C2006 Introductory Biology II: Cell Biology, Development & Physiology
3. BIOL W3004 Neurobiology I: Cellular and Molecular Neurobiology
4. BIOL W3005 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 W1001 The Science of Psychology
2. PSYC W1010 Mind, Brain and Behavior or PSYC W2450 Behavioral Neuroscience
3. Select a statistics or lab course from the following:

- PSYC W1420 Experimental Psychology: Human Behavior
- PSYC W1450 Experimental Psychology: Social Cognition and Emotion
- PSYC W1610 Introductory Statistics for Behavioral Scientists
- STAT W1111 Introduction to Statistics (without calculus)
- STAT W1211 Introduction to Statistics (with calculus)

4. One additional 2000- or 3000-level psychology lecture course from a list approved by the psychology adviser (<http://www.columbia.edu/cu/psychology/dept/ugrad/curriculum.html#p4>) to the program.
5. One advanced psychology seminar from a list approved by the psychology adviser (<http://www.columbia.edu/cu/psychology/dept/ugrad/curriculum.html#p5>) to the program.

Transfer Credit for Psychology Courses Taken Elsewhere

Students should consult with a psychology adviser 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 (<http://www.columbia.edu/cu/psychology/dept/ugrad/exceptions/exceptionsNB.html>). **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 W1001 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. 302) above.

A concentration in psychology (<http://www.columbia.edu/cu/psychology/dept/ugrad/curriculum.html#conc>) requires a minimum of 18 points, including PSYC W1001 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 from PSYC W3950 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;
2. Only 5 points from Barnard (including PSYC BC1001 Introduction to Psychology);
3. Only 5 points total (including any Barnard points) from 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.

REQUIREMENTS

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. Gil Anidjar, Room 207, 80 Claremont; 212-851-4130; ga152@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.

Majors and concentrators in religion gain both a foundation in the study of religious traditions in historical contexts and also grounding 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 both 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.

COURSE NUMBERING

Courses are numbered by level and type:

1. *2000-level*: Introductory and “traditions” lectures
2. *3000-level*: Intermediate lecture
3. *4000-level*: Undergraduate seminar

and field:

1. *x000-099*: Buddhism
2. *x100-199*: Christianity
3. *x200-299*: Hinduism
4. *x300-399*: Islam
5. *x400-499*: East Asian religious traditions
6. *x500-599*: Judaism
7. *x600-699*: North American religions
8. *x700-799*: Philosophy of religion
9. *x800-899*: Comparative
10. *x900-999*: Methodological, theoretical, research

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.

FACULTY PROFESSORS

- Gil Anidjar
- Peter Awn
- Courtney Bender (Chair)
- Beth Berkowitz (Barnard)
- Elizabeth Castelli (Barnard)
- Katherine Pratt Ewing
- Bernard Faure
- John Hawley (Barnard)
- Rachel McDermott (Barnard)
- Wayne Proudfoot
- Robert Somerville
- Mark Taylor

- Robert Thurman

ASSOCIATE PROFESSORS

- Michael Como
- David (Max) Moerman (Barnard)

ASSISTANT PROFESSORS

- Clémence Boulouque
- Najam Haider (Barnard)
- Katharina Ivanyi
- Gale Kenny (Barnard)
- Josef Sorett
- Zhaohua Yang

VISITING SCHOLAR

- Obery Hendricks

ADJUNCT FACULTY

- David Kittay
- George Rupp
- Thomas Yarnall

ON LEAVE

- Prof. Como (*2015-2016*)
- Prof. Ivanyi (*Fall 2015*)
- Prof. Taylor (*Spring 2016*)

REQUIREMENTS

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 both Western and Asian religious traditions. Students who write a senior thesis may include a term of individually supervised research as one of the courses for their major.

A minimum of 36 points is required as follows:

Introductory Courses

Select two introductory courses to religious traditions (2000-level).

Intermediate Courses

Select four intermediate religion courses (3000-level).

Seminars

Select two seminars (4000-level).

Related Courses

Select two related courses in other departments (must be approved by the director of undergraduate studies).

Theory Course

RELI V3799	Theory
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CONCENTRATION IN RELIGION

The program of study should 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 both Western and Asian religious traditions.

A minimum of 23 points is required as follows:

Introductory Courses

Select two introductory courses to religious traditions (2000-level; one may be a Barnard 2000-level course).

Intermediate Courses

Select two intermediate religion courses (3000-level).

Seminars

Select two advanced seminars (4000-level).

Related Courses

Select one related course in another department (must be approved by the director of undergraduate studies).

Theory Course

RELI V3799	Theory
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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; 212-854-5696;
ir2@columbia.edu

Language Coordinator:

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.

FACULTY PROFESSORS

- Boris Gasparov
- Cathy Popkin
- Irina Reyfman
- Alan Timberlake

ASSOCIATE PROFESSORS

- Valentina Izmirlieva (Chair)
- Liza Knapp

VISITING ASSISTANT PROFESSORS

- Edward Tyerman (Barnard)

SENIOR LECTURERS

- Anna Frajlich-Zajac
- Alla Smyslova

LECTURERS

- Aleksandar Boskovic
- Anna Dvigubski (Barnard)
- Christopher Harwood
- Nataliya Kun
Yuri Shevchuk

ON LEAVE

- Prof. Timberlake (2015-2016)
- Prof. Gasparov (Spring 2016)
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REQUIREMENTS

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 V3595 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 W3998 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 culture survey (RUSS V3223, RUSS V3228, or SLCL W3001):

RUSS V3220	Literature and Empire: The Reign of the Novel in Russia (19th Century) [In English]
RUSS V3221	Literature & Revolution [In English]
RUSS V3223	Magical Mystery Tour: The Legacy of Old Rus'
RUSS V3228	
SLCL W3001	Slavic Cultures
CLRS W4022	Russia and Asia: Orientalism, Eurasianism, Internationalism
CLRS W4431	Theatricality and Spectacle in the History of Russian Culture

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:

RUSS V3220	Literature and Empire: The Reign of the Novel in Russia (19th Century) [In English]
RUSS V3221	Literature & Revolution [In English]
RUSS V3223	Magical Mystery Tour: The Legacy of Old Rus'
RUSS V3228	
SLCL W3001	Slavic Cultures
CLRS W4022	Russia and Asia: Orientalism, Eurasianism, Internationalism

CLRS W4431 Theatricality and Spectacle in the
History of Russian Culture

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:

RUSS V3223	Magical Mystery Tour: The Legacy of Old Rus'
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RUSS V3228	
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SLCL W3001	Slavic Cultures
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CLRS W4022	Russia and Asia: Orientalism, Eurasianism, Internationalism
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CLRS W4431	Theatricality and Spectacle in the History of Russian Culture
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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.

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:

RUSS V3220	Literature and Empire: The Reign of the Novel in Russia (19th Century) [In English]
RUSS V3221	Literature & Revolution [In English]
RUSS V3223	Magical Mystery Tour: The Legacy of Old Rus'
RUSS V3228	
SLCL W3001	Slavic Cultures
CLRS W4022	Russia and Asia: Orientalism, Eurasianism, Internationalism
CLRS W4431	Theatricality and Spectacle in the History of Russian Culture

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 V3220	Literature and Empire: The Reign of the Novel in Russia (19th Century) [In English]
RUSS V3221	Literature & Revolution [In English]
RUSS V3228	

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: Prof. Josh Whitford, 618 Knox; 212-854-3593; jw2212@columbia.edu

Academic Department Administrator: 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 W3995-SOCI W3996 (<http://bulletin.columbia.edu/search/?P=SOCI%20W3996>)).

In order to register for the *Senior Seminar*, students must have completed SOCI W3010 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.

FACULTY PROFESSORS

- Karen Barkey
- Peter Bearman
- Courtney Bender (Religion)
- Yinon Cohen
- Jonathan R. Cole
- Thomas A. DiPrete
- Gil Eyal (Chair)
- Priscilla Ferguson (*emerita*)
- Todd Gitlin (Journalism)
- Bruce Kogut (Business)
- 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)
- Andreas Wimmer

ASSOCIATE PROFESSORS

- Elizabeth Bernstein (Barnard)
- Shamus Khan (Director of Graduate Studies)
- Jennifer Lena (Teachers College)
- Emmanuelle Saada (French and Romance Philology)
- Josh Whitford

ASSISTANT PROFESSORS

- 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 (2015-2016)
- Prof. DiPrete (Fall 2015)
- Profs. Cohen, Spilerman, Stark (Spring 2016)

REQUIREMENTS

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 W1000	The Social World
SOCI W3000	Social Theory
SOCI W3010	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 W3296	Paris: The Making of a Modern City
SOCI W3324	Global Urbanism
SOCI V3235	Social Movements: Collective Action
SOCI W3490	Mistake, Misconduct, Disaster
SOCI W3671	Media, Culture, & Society in the Age of the Internet
SOCI W3675	Organizing Innovation
SOCI W3900	Societal Adaptations to Terrorism
SOCI W3930	Immigration and Ethnicity in Israel
SOCI W3980	Immigrant New York: The Changing American City
SOCI W3995 - SOCI W3996	Senior Seminar and Senior Seminar
SOCI G4138	Ethno-Religious Identity and Politics in the Middle East and South Asia

* These may include the two-semester *Senior Seminar* (SOCI W3995-SOCI W3996).

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 W1000	The Social World
SOCI W3000	Social Theory
SOCI W3010	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 W3296	Paris: The Making of a Modern City
SOCI W3324	Global Urbanism
SOCI V3235	Social Movements: Collective Action
SOCI W3490	Mistake, Misconduct, Disaster
SOCI W3671	Media, Culture, & Society in the Age of the Internet
SOCI W3675	Organizing Innovation
SOCI W3900	Societal Adaptations to Terrorism
SOCI W3930	Immigration and Ethnicity in Israel
SOCI W3980	Immigrant New York: The Changing American City
SOCI W3995	Senior Seminar
SOCI G4138	Ethno-Religious Identity and Politics in the Middle East and South Asia

STATISTICS

Statistics Department Office:

1005 School of Social Work (1255 Amsterdam Avenue);
212-851-2132
<http://www.stat.columbia.edu>

Statistics Major and Concentration Advising:

Daniel Rabinowitz, 1014 School of Social Work; 212-851-2141;
dan@stat.columbia.edu

Economics-Statistics Major Advising:

Economics: Susan Elmes, 1006 International Affairs Building;
212-854-9124; se5@columbia.edu
Statistics: Daniel Rabinowitz, 1014 School of Social Work;
212-851-2141; dan@stat.columbia.edu

Mathematics-Statistics Major Advising:

Mathematics: Ioannis Karatzas, 619 Mathematics; 212-854-3177;
ik@math.columbia.edu
Statistics: Daniel Rabinowitz, 1014 School of Social Work;
212-851-2141; dan@stat.columbia.edu

Political Science—Statistics Major Advising:

Political Science: Robert Shapiro, 726 International Affairs
Building; 212-854-3944; rys2@columbia.edu
Statistics: Daniel Rabinowitz, 1014 School of Social Work;
212-851-2141; dan@stat.columbia.edu

Department Administrator:

Dood Kalicharan, 1003 School of Social Work; 212-851-2130;
dk@stat.columbia.edu

The department offers introductory survey courses, a concentration in applied statistical methods, a major in statistics, and interdepartmental majors with the Departments of Computer Science, Economics, Mathematics, and Political Science.

The three survey courses serve as an introduction for consumers of statistics, as prerequisites in other departments, and for students considering going on to the concentration or the major. They vary in their mathematical sophistication: *STAT W1001 Introduction to Statistical Reasoning* is designed for students who have taken a pre-calculus course—and the emphasis is on general principles; *STAT W1111 Introduction to Statistics* (without calculus) is designed for students with some mathematical maturity but who would prefer not to exercise their calculus—and the emphasis is on practical issues; and *STAT W1211 Introduction to Statistics* (with calculus) is designed for students who have taken some calculus—and the emphasis is on theory.

Four courses, *STAT W2024 Applied Linear Regression Analysis*, *STAT W2025 Applied Statistical Methods*, *STAT W2026 Statistical Applications and Case Studies*, and *STAT W3026 Applied Data Mining*, together with any one of the introductory survey courses and one semester of research experience form a concentration in applied statistics appropriate for students

preparing for a career or future study where skills in data analysis are valued.

The statistics major augments the practical training of the concentration with a comprehensive introduction to the mathematical and theoretical foundations of probability theory and statistical inference. The foundation courses include prerequisites in mathematics, *STAT W3105 Introduction to Probability*, *STAT W3107 Introduction to Statistical Inference*, and *STAT W3315 Linear Regression Models*.

Students interested in careers as statisticians or careers in finance or in actuarial science choose to major in statistics.

ADVANCED PLACEMENT

The department grants 3 credits 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 adviser to determine if this credit provides exemption from their requirement.

DEPARTMENTAL HONORS

Students are considered for departmental honors on the basis of GPA and the comprehensiveness and difficulty of the study program. For departmental honors in an interdisciplinary major, students must also meet the standard in the other department. Normally no more than 10% of graduating majors receive departmental honors in a given academic year.

SUMMER INTERNSHIP IN APPLIED STATISTICS

Columbia College, Barnard College, SEAS, and General Studies students may apply to the department's summer internship program. The internship provides summer housing and a stipend. Students work with Statistics Department faculty mentors on applications of statistics. Applicants should send statement of interest and a transcript to Ms. Dood Kalicharan in the Statistics Department office by the first of April.

FACULTY PROFESSORS

- David Blei (Computer Science)
- Mark Brown
- Richard R. Davis
- Victor H. de la Peña
- Andrew Gelman (Political Science)
- Shaw-Hwa Lo
- David Madigan
- Ioannis Karatzas (Mathematics)
- Liam Paninski
- Philip Protter
- Michael Sobel
- Daniel Rabinowitz

- Zhiliang Ying

ASSOCIATE PROFESSORS

- Jose Blanchet (Industrial Engineering and Operations Research)
- Jingchen Liu
- Bodhisattva Sen
- Tian Zheng

ASSISTANT PROFESSORS

- John Cunningham
- Yang Feng
- Lauren Hannah
- Arian Maleki
- Rahul Mazumder
- Sumit Mukherjee
- Marcel Nutz
- Peter Orbanz

TERM ASSISTANT PROFESSORS

- Emanuel Ben-David
- Giovanni Motta
- Hongzhong Zhang

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
-

REQUIREMENTS

MAJOR IN STATISTICS

The requirements for this program were modified in February 2015. 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 should be planned with the director of undergraduate studies as early as possible. Courses in which the grade of D has

been received do not count toward the major. The requirements for the major are as follows:

Introductory Courses

Select one of the following courses:

STAT W1001	Introduction to Statistical Reasoning
STAT W1111	Introduction to Statistics (without calculus)
STAT W1211	Introduction to Statistics (with calculus)

Required Courses

MATH V1101	Calculus I
STAT W3103	Mathematical Methods for Statistics
STAT W3105	Introduction to Probability
STAT W3107	Introduction to Statistical Inference
STAT W3315	Linear Regression Models

And 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

Five Electives (chosen from the Statistics Department offerings)

Electives Example 1: For students preparing for a career in actuarial science:

STAT W4440	Linear Regression and Time Series Methods
STAT W4543	Survival Analysis
ACTU K4821	Actuarial Methods
ACTU K4830	Stochastic Processes for Actuarial Science
STAT W4840	Theory of Interest

Electives Example 2: For students preparing for a career in finance:

STAT W4290	Statistical Methods in Finance
STAT W4437	Time Series Analysis
STAT W4635	Stochastic Processes for Finance
STAT G6505	Stochastic Methods In Finance
STAT G6503	Statistical Inference and Time-Series Modelling

Electives Example 3: For students preparing for a career in the health sciences, five of:

STAT W4240	Data Mining
STAT W4325	Generalized Linear Models
STAT W4330	Multilevel Models
STAT W4335	Sample Surveys
STAT W4413	Nonparametric Statistics
STAT W4543	Survival Analysis

Electives Example 4: For students preparing for quantitative research in the social sciences, five of:

STAT W2025	Applied Statistical Methods
STAT W3026	Applied Data Mining
STAT W4325	Generalized Linear Models
STAT W4330	Multilevel Models
STAT W4335	Sample Surveys
STAT W4413	Nonparametric Statistics

Electives Example 5: For students preparing for quantitative research in the biological sciences, five of:

STAT W2024	Applied Linear Regression Analysis
STAT W2025	Applied Statistical Methods
STAT W2026	Statistical Applications and Case Studies
STAT W3026	Applied Data Mining
STAT W4325	Generalized Linear Models
STAT W4330	Multilevel Models
STAT W4543	Survival Analysis
STAT W4606	Elementary Stochastic Processes

Electives Example 6: For students preparing for graduate study in statistics:

MATH W4061 - MATH W4062	Introduction To Modern Analysis I and Introduction To Modern Analysis II
STAT W4606	Elementary Stochastic Processes
And select two or more of the following courses:	
STAT W4240	Data Mining
STAT W4330	Multilevel Models
STAT W4335	Sample Surveys
STAT W4437	Time Series Analysis
STAT W4543	Survival Analysis
STAT W4413	Nonparametric Statistics

Electives Example 7: For students seeking training in applied statistics and data mining

STAT W2024	Applied Linear Regression Analysis
STAT W2025	Applied Statistical Methods
STAT W2026	Statistical Applications and Case Studies
STAT W4240	Data Mining
And select one of the following courses:	
STAT W4325	Generalized Linear Models
STAT W4330	Multilevel Models
STAT W4335	Sample Surveys
STAT W4413	Nonparametric Statistics
STAT W4437	Time Series Analysis
STAT W4543	Survival Analysis

Approved variations of the major requirements include the following:

- Students may replace STAT W1001 Introduction to Statistical Reasoning, STAT W1111 Introduction to Statistics (without calculus), or STAT W1211 Introduction to Statistics (with calculus) with *PSYC W1610* (<http://bulletin.columbia.edu/search/?P=PSYC%20W1610>) *Introductory Statistics for Behavioral Scientists*.

bulletin.columbia.edu/search/?P=PSYC%20W1610) *Introductory Statistics for Behavioral Scientists*.

- Students may replace STAT W3103 Mathematical Methods for Statistics with MATH V1102 Calculus II and *MATH V2010* (<http://bulletin.columbia.edu/search/?P=MATH%20V2010>) *Linear Algebra*. MATH V1201 Calculus III also is recommended.
- Students may replace STAT W3105 Introduction to Probability with *STAT W4105* (<http://bulletin.columbia.edu/search/?P=STAT%20W4105>) *Introduction to Probability*; *STAT W3107* (<http://bulletin.columbia.edu/search/?P=STAT%20W3107>) *Introduction to Statistical Inference* with *STAT W4107* (<http://bulletin.columbia.edu/search/?P=STAT%20W4107>) *Introduction to Statistical Inference*; and STAT W3315 Linear Regression Models with STAT W4315 Linear Regression Models. Students may also replace STAT W3105 Introduction to Probability and *STAT W3107 Introduction to Statistical Inference* with the six point course *STAT W4109* (<http://bulletin.columbia.edu/search/?P=STAT%20W4109>) *Introduction to Probability and Statistics*.
- Students preparing for a career in actuarial science may replace *STAT W3315* (<http://bulletin.columbia.edu/search/?P=STAT%20W3315>) *Linear Regression Models* with STAT W4440 Linear Regression and Time Series Methods, and should discuss with the director of undergraduate studies how to include in their study plan additional courses approved for Validation by Educational Experience by the Society of Actuaries.
- Students may replace up to two statistics electives with approved advanced mathematics electives.
- Students preparing for doctoral study in statistics should consider *MATH W4061* (<http://bulletin.columbia.edu/search/?P=MATH%20W4061>) *Introduction To Modern Analysis* and *MATH W4062* (<http://bulletin.columbia.edu/search/?P=MATH%20W4062>) *Introduction To Modern Analysis* and may wish to enroll in doctoral level courses in statistics.

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.

Introductory Courses

Select one of the following courses:

STAT W1001	Introduction to Statistical Reasoning
STAT W1111	Introduction to Statistics (without calculus)
STAT W1211	Introduction to Statistics (with calculus)

Required Courses

STAT W2024	Applied Linear Regression Analysis
STAT W2025	Applied Statistical Methods

STAT W2026	Statistical Applications and Case Studies
STAT W3026	Applied Data Mining
STAT W3997	Independent Research

- Students may replace courses required for the concentration by approved Statistics Department offerings numbered above 4200. *MATH V1101* (<http://bulletin.columbia.edu/search/?P=MATH%20V1101>) *Calculus I* and one of 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, or COMS W1007 Honors Introduction to Computer Science are recommended.

MAJOR IN COMPUTER SCIENCE-STATISTICS

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.

Prerequisites

MATH V1101	Calculus I
MATH V1102	Calculus II
MATH V1201	Calculus III
MATH V2010	Linear Algebra

Statistics

Introductory Courses

Select one of the following courses:

STAT W1001	Introduction to Statistical Reasoning
STAT W1111	Introduction to Statistics (without calculus)
STAT W1211	Introduction to Statistics (with calculus)

Required Courses

STAT W3105 or STAT W4105	Introduction to Probability
STAT W3107 or STAT W4107	Introduction to Statistical Inference
STAT W3315 or STAT W4315	Linear Regression Models
STAT W4400 or COMS W4771	Statistical Machine Learning Machine Learning

Computer Science

Introductory Courses

Select one of the following courses:

COMS W1004	Introduction to Computer Science and Programming in Java
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COMS W1005	Introduction to Computer Science and Programming in MATLAB
------------	--

ENGI E1006	Introduction to Computing for Engineers and Applied Scientists
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COMS W1007	Honors Introduction to Computer Science
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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

Required Courses

COMS W3203	Discrete Mathematics: Introduction to Combinatorics and Graph Theory
COMS W3210	Scientific Computation
CSOR W4231	Analysis of Algorithms I

Electives

Statistics

Select two of the following courses:

STAT W3026	Applied Data Mining
STAT W4240	Data Mining
STAT W4199	Statistical Computing in SAS
STAT W4242	Introduction to Data Science
STAT W4606	Elementary Stochastic Processes
STAT W4249	Applied Data Science

Computer Science

Select one of the following courses:

COMS W3261	Computer Science Theory
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

MAJOR IN ECONOMICS-STATISTICS

Please read *Requirements for all Economics Majors, Concentrators, and Interdepartmental Majors* in the Economics (p. 217) 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 three 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 V1101	Calculus I
- MATH V1102	and Calculus II
- MATH V1201	and Calculus III
- MATH V2010	and Linear Algebra

MATH V1207	Honors Mathematics A
- MATH V1208	and Honors Mathematics B

Statistics

STAT W1211	Introduction to Statistics (with calculus)
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STAT W3105	Introduction to Probability
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STAT W3107	Introduction to Statistical Inference
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STAT W4315	Linear Regression Models
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Select one elective (excluding STAT W1001, STAT W1111, STAT W2110, and SIEO W4150).

Computer Science

Select one of the following courses:

COMS W1004	Introduction to Computer Science and Programming in Java
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COMS W1005	Introduction to Computer Science and Programming in MATLAB
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COMS W1007	Honors Introduction to Computer Science
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Seminar

ECON W4918	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 V1101	Calculus I
- MATH V1102	and Calculus II
- MATH V1201	and Calculus III
- MATH V2010	and Linear Algebra
- MATH V2500	and Analysis and Optimization

MATH V1207	Honors Mathematics A
- MATH V1208	and Honors Mathematics B
- MATH V2500	and Analysis and Optimization

Statistics

Introductory Courses

Select one of the following courses:

STAT W1001	Introduction to Statistical Reasoning
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STAT W1111	Introduction to Statistics (without calculus)
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STAT W1211	Introduction to Statistics (with calculus)
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Required Courses

STAT W3105	Introduction to Probability
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STAT W3107	Introduction to Statistical Inference
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STAT W3315	Linear Regression Models
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And select one of the following courses:

STAT W4606	Elementary Stochastic Processes
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STAT W4635	Stochastic Processes for Finance
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STAT G6505	Stochastic Methods In Finance
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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
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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 V3027* (<http://bulletin.columbia.edu/search/?P=MATH%20V3027>) *Ordinary Differential Equations* and *MATH V3028* (<http://bulletin.columbia.edu/search/?P=MATH%20V3028>) *Partial Differential Equations*.

- Students interested in finance are recommended to take MATH W4071 Introduction to the Mathematics of Finance, STAT W4290 Statistical Methods in Finance, and STAT W4437 Time Series Analysis.
- Students interested in graduate study in mathematics or in statistics are recommended to take MATH W4061 Introduction To Modern Analysis I and MATH W4062 Introduction To Modern Analysis II.
- Students interested in actuarial sciences should discuss with the Statistics Department adviser how to include courses approved for the Society of Actuaries' Validation by Educational Experience requirements, and how to prepare for the Actuaries' exams. Students must obtain approval for their elective selection from both the mathematics and statistics advisers.
- Students may replace *STAT W3105* (<http://bulletin.columbia.edu/search/?P=STAT%20W3105>) *Introduction to Probability* with *STAT W4105* (<http://bulletin.columbia.edu/search/?P=STAT%20W4105>) *Introduction to Probability*, *STAT W3107* Introduction to Statistical Inference with *STAT W4107* (<http://bulletin.columbia.edu/search/?P=STAT%20W4107>) *Introduction to Statistical Inference*, *STAT W3315* (<http://bulletin.columbia.edu/search/?P=STAT%20W3315>) *Linear Regression Models* with *STAT W4315* Linear Regression Models or *STAT W4440* (<http://bulletin.columbia.edu/search/?P=STAT%20W4440>) *Linear Regression and Time Series Methods*, and students may replace *STAT W3105* (<http://bulletin.columbia.edu/search/?P=STAT%20W3105>) *Introduction to Probability* and *STAT W3107* (<http://bulletin.columbia.edu/search/?P=STAT%20W3107>) *Introduction to Statistical Inference* with the combined course *STAT W4109* (<http://bulletin.columbia.edu/search/?P=STAT%20W4109>) *Introduction to Probability and Statistics*.

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

Select one of the following introductory courses in one of the major subfields:

American Politics:

POLS W1201	Introduction to American Government Politics
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Comparative Politics:

POLS V1501	Introduction to Comparative Politics
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International Relations:

POLS V1601	Introduction to International Politics
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Political Theory:

POLS V1013	Political Theory
POLS W4133	Political Thought - Classical and Medieval

POLS W4134	Modern Political Thought
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Select 6 points in the same subfield as the introductory course.

Select a 4-point seminar in the same subfield.

POLS W4910 - POLS W4911	Principles of Quantitative Political Research and Analysis of Political Data
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Statistics

Select one of the following introductory courses:

STAT W1001	Introduction to Statistical Reasoning
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STAT W1111	Introduction to Statistics (without calculus)
------------	---

STAT W1211	Introduction to Statistics (with calculus)
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Select one of the following sequences:

STAT W3103 - STAT W3105 - STAT W3107 - STAT W3315	Mathematical Methods for Statistics and Introduction to Probability and Introduction to Statistical Inference and Linear Regression Models
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STAT W2024 - STAT W2025 - STAT W2026 - STAT W3026	Applied Linear Regression Analysis and Applied Statistical Methods and Statistical Applications and Case Studies and Applied Data Mining
--	---

Select an approved elective in a statistics or a quantitatively oriented course in a social science.

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
------------	---

Students may substitute *STAT W4105* (<http://bulletin.columbia.edu/search/?P=STAT%20W4105>) *Introduction*

to *Probability* for *STAT W3105* (<http://bulletin.columbia.edu/search/?P=STAT%20W3105>) *Introduction to Probability*, *STAT W4107* (<http://bulletin.columbia.edu/search/?P=STAT%20W4107>) *Introduction to Statistical Inference* for *STAT W3107* *Introduction to Statistical Inference*, and *STAT W4315* (<http://bulletin.columbia.edu/search/?P=STAT%20W4315>) *Linear Regression Models* for *STAT W3315* (<http://bulletin.columbia.edu/search/?P=STAT%20W3315>) *Linear Regression Models*.

Students preparing for advanced study in statistics should take the *STAT W3105* *Introduction to Probability*, *STAT W3107* *Introduction to Statistical Inference*, *STAT W3315* (<http://bulletin.columbia.edu/search/?P=STAT%20W3315>) *Linear Regression Models* sequence and should consider substituting *MATH V1101* (<http://bulletin.columbia.edu/search/?P=MATH%20V1101>) *Calculus I*, *MATH V1102* (<http://bulletin.columbia.edu/search/?P=MATH%20V1102>) *Calculus II*, and *MATH V2010* (<http://bulletin.columbia.edu/search/?P=MATH%20V2010>) *Linear Algebra* for *STAT W3103* (<http://bulletin.columbia.edu/search/?P=STAT%20W3103>) *Mathematical Methods for Statistics*.

Students preparing to apply statistical methods should take the *STAT W2024* (<http://bulletin.columbia.edu/search/?P=STAT%20W2024>) *Applied Linear Regression Analysis*, *STAT W2025* (<http://bulletin.columbia.edu/search/?P=STAT%20W2025>) *Applied Statistical Methods*, *STAT W2026* (<http://bulletin.columbia.edu/search/?P=STAT%20W2026>) *Statistical Applications and Case Studies*, *STAT W3026* (<http://bulletin.columbia.edu/search/?P=STAT%20W3026>) *Applied Data Mining* sequence.

Students may replace the *POLS V1013* (<http://bulletin.columbia.edu/search/?P=POLS%20V1013>) *Political Theory*, *POLS W4133* *Political Thought - Classical and Medieval*, or *POLS W4134* (<http://bulletin.columbia.edu/search/?P=POLS%20W4134>) *Modern Political Thought* requirement with *COCI C1101* (<http://bulletin.columbia.edu/search/?P=COCI%20C1101>) *Introduction To Contemporary Civilization* and *COCI C1102* (<http://bulletin.columbia.edu/search/?P=COCI%20C1102>) *Introduction To Contemporary Civilization* (CC students) or *COCI F1101* *Contemporary Civilization* and *COCI F1102* *Contemporary Civilization* (GS students).

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
 Kevin Griffin, 845-365-8371; griff@ldeo.columbia.edu
 Jason Smerdon, 845-365-8493; jsmerdon@ldeo.columbia.edu

Program Administrators:

Natalie Unwin-Kuruner, 212-854-8536;
natalie@ei.columbia.edu
 Jessica Sotomayor, 212-851-9350; jsotomayor@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.

FACULTY COMMITTEE FOR SUSTAINABLE DEVELOPMENT

- Steven Cohen (The Earth Institute and School of International and Public Affairs)
- Peter Coleman (Psychology and Teachers College)
- Patricia Culligan (Civil Engineering and Engineering Mechanics)
- Ruth DeFries (Ecology, Evolution, and Environmental Biology) (Co-Chair)
- Peter deMenocal (Earth and Environmental Sciences)
- Joseph Graziano (Mailman School of Public Health)
- Kevin Griffin (Earth and Environmental Sciences) (Co-Chair)
- Upmanu Lall (Earth and Environmental Engineering)
- Edward Lloyd (Law School)
- Alberto Medina (Latin American and Iberian Cultures)
- Michele Moody-Adams (Philosophy)
- Shahid Naeem (Ecology, Evolution, and Environmental Biology)
- Stephanie Pfirman (Environmental Science, Barnard)
- Robert Pollack (Biological Sciences)
- Victoria Rosner (General Studies)
- Wolfram Schlenker (Economics)
- Elliott Sclar (Graduate School of Architecture, Planning, and Preservation)
- Sam Sia (Biomedical Engineering)
- Sara Tjossem (School of International and Public Affairs)
- Kathryn Yatrakis (Columbia College)

REQUIREMENTS

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 W1900	Introduction to Sustainable Development Seminar
SDEV W2300	Challenges of Sustainable Development
EESC W2330	Science for Sustainable Development

Basic Disciplinary Foundation

Select one of the following science sequences:

PHYS V1202 - PHYS V1202	General Physics II and General Physics II
CHEM W1403 - CHEM W1404	General Chemistry I (Lecture) and General Chemistry II (Lecture)
EEEB W2001 - EEEB W2002	Environmental Biology I: Elements to Organisms and Environmental Biology II: Organisms to the Biosphere
EAEE E2100 - EESC W1600	A better planet by design and Earth Resources and Sustainable Development
EESC V2100 - EESC V2200	Earth's Environmental Systems: Climate and Earth's Environmental Systems: Solid Earth
EESC V2100 - EESC V2300	Earth's Environmental Systems: Climate and Earth's Environmental Systems: Life Systems

Select two of the following social science courses:

SOCI W1000	The Social World
ANTH V1002	The Interpretation of Culture
ECON W1105	Principles of Economics
POLS V1501	Introduction to Comparative Politics
POLS V1601	Introduction to International Politics
SDEV W2000	Introduction to Environmental Law
SDEV W3400	Human Populations and Sustainable Development

Select one of the following quantitative foundations courses:

STAT W1211	Introduction to Statistics (with calculus)
MATH V2010	Linear Algebra

STAT W2024	Applied Linear Regression Analysis
STAT W2025	Applied Statistical Methods
STAT W2026	Statistical Applications and Case Studies
EEEB W3005	Introduction to Statistics for Ecology and Evolutionary Biology
EESC BC3017	Environmental Data Analysis
STAT W3026	Applied Data Mining
STAT W3105	Introduction to Probability
STAT W3107	Introduction to Statistical Inference
STAT W4105	Introduction to Probability
STAT W4107	Introduction to Statistical Inference
STAT W4315	Linear Regression Models
STAT W4606	Elementary Stochastic Processes

Analysis and Solutions to Complex Problems

Select two of the following courses:

EESC BC3032	Agricultural and Urban Land Use: Human-Environment Interactions
EESC BC3045	Responding to Climate Change
PUBH W3100	Fundamentals of Global Health
SDEV W3200	Global Food Systems
CIEE E3260	Engineering for developing communities
SDEV W3330	Ecological and Social Systems for Sustainable Development
SDEV W3355	Climate Change and Law
SDEV W3360	Disasters and Development
SDEV W3366	Energy Law
SDEV W3410	Urbanization and Sustainable Development
URBS V3565	Cities in Developing Countries: Problems and Prospects
ECIA W4100	Management and development of water systems
EAEE W4304	Closing the carbon cycle
PLAN A4579	Introduction to Environmental Planning
EESC W4600	Earth Resources and Sustainable Development
The Summer Ecosystems Experience for Undergraduates (SEE-U) *	

Skills/Actions

Select two of the following courses:

SDEV W2320	Economic and Financial Methods for Sustainable Development
SOCI W3010	Methods for Social Research
SDEV W3390	GIS for Sustainable Development
SDEV W3450	Spatial Analysis and Modeling for Sustainable Development
SDEV W4015	Complexity Science
EESC W4050	Global Assessment and Monitoring Using Remote Sensing
SUMA K4100	Sustainability Management

EAEE E4257 Environmental data analysis and modeling

The Summer Ecosystems Experience for Undergraduates (SEE-U) *

Electives

Select one of the following courses:

SUMA K4310 Practicum in Innovation Sustainability Leadership

INAF U4420 Oil, Rights and Development

SUMA K4734 Earth Institute Practicum

Select two of the following:

Additional courses from analysis and solutions to complex problem

Additional courses from skills/actions

Upper division courses from the list approved by program adviser

EESC W3901 Environmental Science Senior Seminar
- EESC BC3800 and Senior Research Seminar

Capstone Workshop

SDEV W3280 Workshop in Sustainable Development

or SDEV W3550 Bangladesh: Life on a Tectonically Active Delta

* 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.

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 W1900 Introduction to Sustainable Development Seminar

SDEV W2300 Challenges of Sustainable Development

EESC W2330 Science for Sustainable Development

Natural Science Systems

Select one of the following courses:

EEEB W1001 Biodiversity

EESC W1003 Climate and Society: Case Studies

EESC W1011/W1411 Earth: Origin, Evolution, Processes, Future

EESC W1201 Environmental Risks and Disasters

PHYS W1201 General Physics I

CHEM W1403 General Chemistry I (Lecture)

EESC W1600 Earth Resources and Sustainable Development

EEEB W2002 Environmental Biology II: Organisms to the Biosphere

EAEE E2100 A better planet by design

EESC W2100 Earth's Environmental Systems: The Climate System

EESC W2200 Earth's Environmental Systems: The Solid Earth System

Human Science Systems

Select one of the following courses:

SOCI W1000 The Social World

ANTH V1002 The Interpretation of Culture

ECON W1105 Principles of Economics

POLS V1501 Introduction to Comparative Politics

POLS V1601 Introduction to International Politics

SDEV W2000 Introduction to Environmental Law

SDEV W3400 Human Populations and Sustainable Development

Analysis and Solutions to Complex Problems

Select two of the following courses:

EESC BC3032 Agricultural and Urban Land Use: Human-Environment Interactions

EESC BC3045 Responding to Climate Change

PUBH W3100 Fundamentals of Global Health

SDEV W3200 Global Food Systems

CIEE E3260 Engineering for developing communities

SDEV W3330 Ecological and Social Systems for Sustainable Development

SDEV W3355 Climate Change and Law

SDEV W3360 Disasters and Development

SDEV W3366 Energy Law

SDEV W3410 Urbanization and Sustainable Development

URBS V3565 Cities in Developing Countries: Problems and Prospects

ECIA W4100 Management and development of water systems

EAEE W4304 Closing the carbon cycle

PLAN A4579 Introduction to Environmental Planning

EESC W4600 Earth Resources and Sustainable Development

The Summer Ecosystem Experiences for Undergraduates (SEE-U) *

Skills/Actions

Select one of the following courses:

SDEV W2320	Economic and Financial Methods for Sustainable Development
SCNC W3010	Science, technology and society
SOCI W3010	Methods for Social Research
SDEV W3390	GIS for Sustainable Development
SDEV W3450	Spatial Analysis and Modeling for Sustainable Development
SDEV W4015	Complexity Science
EESC W4050	Global Assessment and Monitoring Using Remote Sensing
SUMA K4100	Sustainability Management
EAEE E4257	Environmental data analysis and modeling
The Summer Ecosystem Experiences for Undergraduates (SEE-U) *	

Practicum

Select one of the following courses:

SUMA K4310	Practicum in Innovation Sustainability Leadership
INAF U4420	Oil, Rights and Development
SUMA K4734	Earth Institute Practicum

Capstone Workshop

SDEV W3280	Workshop in Sustainable Development
or SDEV W3550	Bangladesh: Life on a Tectonically Active Delta

- * 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.

URBAN STUDIES

Urban Studies at Columbia (<http://urban.barnard.edu>)

236 Milbank Hall
212-854-4073

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.

FACULTY

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 Yildiz (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)

REQUIREMENTS

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 V3550 Community Building and Economic Development 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 V3200 Spatial Analysis: GIS Methods and Urban Case Studies.

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 V3545	Junior Colloquium: The Shaping of the Modern City	4
URBS V3546	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 V3992 - URBS V3993	Senior Seminar: The Built Environment and Senior Seminar: The Built Environment	8
URBS V3994 - URBS V3995	Senior Seminar: New York Field Research and Senior Seminar: New York Field Research	8
URBS V3996 - 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 Lopez;
 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. Students should complete the appropriate Visual Arts Major Worksheet before meeting with the director of undergraduate studies. See:

- Visual Arts Major Requirements Worksheet (<http://blogs.cuit.columbia.edu/visualarts/files/2014/11/VAMajorWorksheet14.pdf>)
- Visual Arts Concentration Requirements Worksheet (<http://blogs.cuit.columbia.edu/visualarts/files/2014/11/VAConcWorksheet14.pdf>)
- Art History and Visual Arts Interdepartmental Major Requirements Worksheet (<http://blogs.cuit.columbia.edu/visualarts/files/2011/01/VACombinedWorksheet.pdf>)

FACULTY

PROFESSORS

- Gregory Amenoff
- Jon Kessler
- Thomas Roma
- Sarah Sze
- Rirkrit Tiravanija
- Tomas Vu-Daniel

ASSOCIATE PROFESSORS

- Sanford Biggers
- Matthew Buckingham

- Shelly Silver (Chair)

ASSISTANT PROFESSORS

- Nicola López
- Leeza Meksin
- Aliza Nisenbaum

REQUIREMENTS

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 R1001	Basic Drawing
VIAR R3330	Sculpture I
Five additional VIAR R3000-level or above courses (15 points)	
VIAR R4601	Seminar in Contemporary Art Practice (must be taken during the junior year)
Senior project consists of the following four courses:	
VIAR R3901	Senior Thesis I
- VIAR R3902	and Senior Thesis II (4 points)
VIAR R3921	Visiting Critic I
- VIAR R3922	and Visiting Critic II (4 points)

Art History (3-4 points)

Select one of the following courses:

AHIS BC1001	Introduction to Art History I
AHIS BC1002	Introduction to the History of Art II
AHIS W3650	Twentieth-Century Art

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 R3901 Senior Thesis I-VIAR R3902 Senior Thesis II (4 points) and VIAR R3921 Visiting Critic I-VIAR R3922 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

The requirements for the major are as follows:

Majors' Colloquium

AHIS W3895	Majors' Colloquium: the Literature and Methods of Art History
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Art History *

Select one course in three of the following historical periods:

Ancient (up to 400 CE/AD)

400-1400

1400-1700

1700-present

Select two courses from two world regions from the following:

Africa

Asia

Europe, North America, Australia

Latin America

Middle East

Visual Arts

VIAR R1001	Basic Drawing
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VIAR R3330	Sculpture I
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Five additional VIAR R3000-level or above courses

* Up to two of the seven 3-point courses 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, as well as with a faculty adviser 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.

Art History (3-4 points)

Select one of the following courses:

AHIS BC1001	Introduction to Art History I
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AHIS BC1002	Introduction to the History of Art II
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AHIS W3650	Twentieth-Century Art
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CONCENTRATION IN VISUAL ARTS

A total of 21 points are required as follows:

Visual Arts (18 points)

VIAR R1001	Basic Drawing
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VIAR R3330	Sculpture I
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Four additional VIAR R3000-level or above courses (12 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. Katherine Biers, 408b Philosophy Hall; 212-854-2490; k1b2134@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.

REQUIREMENTS

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 V1001	Introduction to Women's and Gender Studies
or WMST V3125	Introduction to Sexuality Studies

WMST V3311	Colloquium in Feminist Theory
WMST V3514	Historical Approaches to Feminist Questions
WMST V3915	Gender and Power in Transnational Perspective
WMST V3521	Senior Seminar I

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 V3521 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 V1001 Introduction to Women's and Gender Studies; plus four additional approved elective courses on gender.

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