

NYU
上海



**UNDERGRADUATE
BULLETIN
2015/16**



**UNDERGRADUATE BULLETIN
2015-2016**

1555 Century Ave
Pudong, Shanghai
China 200122

The policies, requirements, course offerings, schedules, activities, tuition, fees, and calendar of the school and its departments and programs set forth in this Bulletin are subject to change without notice at any time at the sole discretion of the administration. Such changes may be of any nature, including, but not limited to, the elimination of the school or college (including NYU Shanghai), programs, classes, or activities; the relocation of or modification of the content of any of the foregoing; and the cancellation of scheduled classes or other academic activities.

Payment of tuition or attendance at any classes shall constitute a student's acceptance of policies in this Bulletin and the administration's rights as set forth in the above paragraph.

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{ Part I }

Introduction and Overview

This is NYU Shanghai 这就是上海纽约大学

NYU Shanghai is the third degree-granting campus in NYU's global network, joining NYU in New York and NYU Abu Dhabi. It is a world-class, comprehensive liberal arts and sciences research university in the heart of Shanghai, and unlike any other university in the world.



Since 1831, NYU has proudly been in and of the city of New York, unencumbered by gates, intimately woven into the identity and landscape of one of the great idea capitals of the world. In the heart of Greenwich Village, the NYU community has flourished, gaining as much from the city as it has contributed.

Just as NYU is proudly in and of the city of New York, NYU is also proudly in and of the city of Shanghai, another great idea capital and a magnet for the best of intellect, culture, and inquiry from all over the world. But Shanghai is like no other place: a city of the future, it also has its own history and traditions, which are a vital part of its fabric. With its diverse resources—the educational foundation of NYU and the vibrancy and relevance of Shanghai—NYU Shanghai is where your classroom education intersects with a life's education.



The NYU Shanghai Vision

NYU Shanghai exemplifies the highest ideals of contemporary higher education by uniting the intellectual resources of New York University's global network with the multidimensional greatness of China. It guides students toward academic and moral excellence, preparing them for leadership in all walks of life, and it contributes to the endless quest for new insights into the human condition and the natural world.

Values

NYU Shanghai operates in accord with the values of curiosity, rigor, integrity, respect, harmony, responsibility, and deep engagement with all humanity.

Mission

In teaching, NYU Shanghai aspires to prepare its students for lives of discovery, satisfaction and contribution. They will study with superb teachers who nurture their capacity for original, rigorous, and critical thinking, and with diverse and intellectually gifted classmates. They will pursue a liberal education in the humanities, social sciences, natural sciences, and mathematics. They will immerse themselves in English, the language of international communication. They will master the skills of cross-cultural effectiveness in a community where half are from China and half are from other lands. They will reflect upon the role that great cities play in human progress, and upon the interdependent relationship between China and the rest of the world.

In research, NYU Shanghai aspires to produce original, rigorous, and important insights across a broad set of academic domains. Such insights do more than extend existing knowledge in predictable ways; they provide fresh understanding that is fully consistent with our observations and at the same time promise to have a significant influence on the thinking of others.

In public service, NYU Shanghai aspires to promote healthy development within the many communities it inhabits. It strives to be a responsible actor in the individual lives of students, teachers, and staff; in the local neighborhoods that surround its campus; in the district of Pudong, the city of Shanghai, and the nation of China; in East China Normal University; in New York University; in the interdependent society of humankind; and in a fully global ecosystem.

Research at NYU Shanghai

NYU Shanghai will continue in the great tradition of universities that combine world-class research with exceptional teaching. Research Institutes are focused on Mathematics, Computational Chemistry, Neuroscience, Physics, and Social Development with a Center for Big Data for Society and Business and a Center for Global Asia opening this year. Both graduate and undergraduate students at NYU Shanghai will have the opportunity to participate in research opportunities.

OVERVIEW

The NYU Shanghai academic experience is characterized by rigor, a global perspective, and a strong foundation in the liberal arts and sciences. Three distinct features define the NYU Shanghai approach and make it unique:

A Truly Innovative Core Curriculum

As our world evolves, education needs to evolve to meet the needs of 21st century students. The NYU Shanghai core curriculum is defined by integration. Students explore our social and cultural foundations through courses that are global in scope, with writing instruction woven in throughout, rather than delivered in discrete, unrelated courses. Mathematics and science are a part of every student's education, and those who specialize in the sciences will begin their studies with an innovative foundational course that brings together the basic sciences.

Playing to Our Strengths

NYU Shanghai has carefully developed a set of majors and specializations that capitalize not just on the world-class strength of NYU faculty, departments, and programs, but also on the limitless possibilities that Shanghai provides.

Global in Nature

As a member of NYU's global network, you literally have the world at your fingertips; why not reach out and incorporate it into your coursework? The study-away opportunities available to you as an NYU Shanghai student are unparalleled in higher education and are easily integrated into your program of study.

PARTNERS

East China Normal University

ECNU is a high level normal university founded in October 1951. The university is made up of 19 full-time schools and colleges, two unconventional (nontraditional distance learning and continuing education) colleges and five advanced research institutes, with 58 departments offering 70 undergraduate programs. It has over 4,000 faculty and staff and more than 28,000 students.

Shanghai Municipal Education Commission

The Shanghai Municipal Education Commission (SMEC) is responsible for determining the local policies and direction of the educational system in Shanghai.

Pudong New Area Government

Since the beginning of its development in 1990 when plans were first announced, Pudong has become a major economic development zone and has emerged as China's financial and commercial hub. The NYU Shanghai academic building is located along Century Avenue in Pudong, a location as central to Shanghai as Fifth Ave is to Manhattan.



WHERE WE ARE

Academic Building

The NYU Shanghai academic building located on Century Avenue in Pudong, it is surrounded by bustling activity, a lively community, and some of the most iconic buildings in the world—all right in the heart of a thriving economy and Shanghai's commercial center.

Fifteen stories tall, with two additional levels underground, the academic building contains 55,000 square meters (550,000 square feet) of usable space. It includes an expansive library, which will house an extensive physical and electronic collection with access to NYU's global library resources; a 300-seat auditorium; a 150-person colloquium space; a theater, music, and arts hall; and kitchen and dining facilities. Also generously equipped with classrooms capable of accommodating varying class sizes, dedicated floors for teaching and practical laboratories for various sciences, intimate study spaces, and faculty and administrative offices, the building functions as a campus unto itself and as the center of a thriving academic community. Wireless IT services and a robust IT infrastructure ensure that the

building, and by extension, the students and faculty, remain fully connected to the NYU global network.

Residence Hall

In fall 2015, NYU Shanghai students will move into residence halls that will be as wired, integrated, and diverse as the classrooms and as the city itself. By living alongside fellow students and Residential Advisors, students will form intimate communities and the walls of the classroom will be broken down, allowing for education and an exchange of ideas to continue and flourish, unfettered by class schedules.

Location

At NYU Shanghai, students receive the support, engage in the activities, and participate in the community that they would expect from any other university in the world—except they'll have China as their canvas.

Just minutes away from the Century Avenue academic building, students will find a fully equipped athletics center that all NYU Shanghai students can use.

Beyond the walls of the residence hall are neighborhoods begging to be explored: the dazzling lights of the Bund, the winding labyrinthine passages of Taikang Lu, and the picturesque solitude of the Lujiazui Boardwalk are just some of the places where students can while away an afternoon, eat xiaolongbao, and take in the sights and sounds.

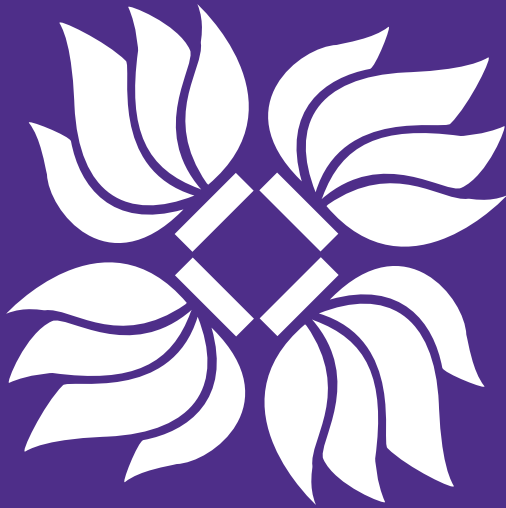
And beyond the city limits of Shanghai, the country of China is available: the Great Wall, the Lingyin Temple, the Forbidden City, the Chengdu Panda Reserve, and more. China is, after all, a country with a vast, varying geography and demography, and a history no longer confined to just the pages of a book, but completely within reach of all NYU Shanghai students.

{Part II}

Enrollment

Everything you need to know about:

- Admission
- Tuition, Fees, and Financial Aid
- Registration, Advisement, and Counseling
- Degree Requirements



Admission

Admission to NYU Shanghai is highly selective. Students are admitted based on the overall strength of their application, including academic excellence, extracurricular activities, teacher and counselor evaluations, and a demonstrated interest in global citizenship, service, and leadership.

NYU Shanghai Office of Admissions in Shanghai
(9am – 5pm China Standard Time)
Tel: +86 21-6223-5037

NYU Office of Admissions in New York
(9am – 5pm Eastern Standard Time)
Tel: +1 212-998-4500

shanghai.admissions@nyu.edu

Recommended High School Preparation

All applicants should pursue the most challenging curriculum available to them, as the rigor of a student's coursework will weigh heavily in the admissions process. NYU Shanghai considers a record of Honors, Advanced Placement (AP), International Baccalaureate (IB), A-Level or other high-level coursework to be an essential component of a successful application. In addition to advanced level courses, most successful applicants include many of the following areas of study in their high school programs:

- *English*—four years of English with a heavy emphasis on writing
- *Math*—three to four years
- *History/Social Studies*—three to four years
- *Science*—three to four years
- *Foreign Language*—two to three years

Please note that NYU Shanghai's language of instruction is English; therefore, it is required that all applicants have a high level of fluency in both written and spoken English.

Applying to NYU Shanghai and Other NYU Campuses

Students can indicate their interest in being considered for admission to NYU Shanghai in addition to programs at NYU's campuses in New York City and Abu Dhabi on the NYU Supplement to the Common Application.

Financial Support

NYU Shanghai is committed to providing educational opportunities to all talented students. It is NYU Shanghai's principle and core value to ensure that students' educations are not limited by financial hardship. As such, we invite all applicants, regardless of citizenship, to apply for financial aid through NYU Shanghai.

Transfer Applicants

NYU Shanghai is not currently accepting transfer applications from students external to NYU.

Transfer Applicants Within the University

Students do not need to fill out an application to switch majors within NYU Shanghai. If a student wishes to explore the option of permanently transferring to another NYU campus, they must discuss their options with their academic advisor and the Dean of Students, who will counsel the student on when and if they may switch campuses.

Study Away Students

NYU students from the New York and Abu Dhabi campuses may attend NYU Shanghai as full time students for one or more semesters through the Study Away program run through NYU's Office of Global Programs.

Special (Visiting Students)

NYU Shanghai is not currently accepting visiting students.

Readmission of Former Students

Any former student who has been out of attendance for more than two consecutive terms and who wishes to return to NYU Shanghai must apply for readmission. Applications for readmission are available online (See next page for admission application deadlines). Requests for readmission should be received by the following dates: April 1 for the Summer and Fall terms, and November 1 for the Spring term.

Students who have attended another college or university since their last attendance at NYU must submit an official transcript from all schools attended though they will not receive credit for the courses.

Special (Postgraduate) Students

NYU Shanghai is not currently accepting special students.

NYU January Term

NYU's January Term allows students more flexibility and new scheduling options. NYU Shanghai students have the opportunity to earn course credit or explore a new interest. During this time, students can take advantage of intensive study at one of the other degree-granting campuses or global study away sites and enjoy being in a major metropolitan area during a bustling and exciting time of year.

Oftentimes, the fall and spring semesters can be overly hectic for students, considering a full-time course load, student club responsibilities, work, internship commitments, and social obligations. This busy time forces students to focus mainly on their academic progress, which doesn't always allow the freedom to explore a new interest or take advantage of the many cultural resources that originally drew them to Shanghai. Further information is available at www.nyu.edu/winter.

Students should be aware that there are additional tuition fees for January term outside of the fall and spring semesters. Typically financial aid is not available for the January term.

Advanced Standing

NYU Shanghai does not award credit for work completed at another college or university.

Credit by Examination

NYU Shanghai does not assign credit for the Advanced Placement (AP) Program (College Entrance Examination Board), the International Baccalaureate (IB) Program, or the results of foreign maturity certificate examinations. In some cases students may

be able to substitute a higher level course for an introductory course based on their performance on one of these tests.

How to Apply

USA/International

US/International students applying to NYU Shanghai may follow the same procedures for applying to any of NYU's degree-granting campuses:

- Apply to NYU Shanghai via the [Common App](#)
- You must complete the *NYU Supplement* to the Common App
- Submit test scores per our testing requirements (NYU Shanghai's US and International Standardized Testing Policy is the same as that of all of NYU's degree-granting campuses)
- Submit requested academic records and school reports
- Submit requested teacher and counselor recommendation letters
- Apply for Financial Assistance

Please apply in accordance with the following deadlines:

Milestone	Date
<i>Early Decision I</i>	
Application Deadline	Nov 1, 2015
Notification Deadline	Dec 15, 2015
Response to an offer of admission	Jan 15, 2016
<i>Early Decision II</i>	
Application Deadline	Jan 1, 2016
Notification Deadline	Feb 15, 2016
Response to an offer of admission	Mar 15, 2016
<i>Regular Decision</i>	
Application Deadline	Jan 1, 2016
Notification Deadline	Apr 1, 2016
Response to an offer of admission	May 1, 2016

How to Apply for Financial Aid

All applicants (regardless of citizenship) will need to submit the CSS/Financial Aid PROFILE application (and Noncustodial PROFILE, if applicable) for NYU Shanghai need-based grant consideration by:

- Early Decision I: November 15 (to receive a financial aid estimate in mid-December)
- Early Decision II: January 15th (to receive a financial aid estimate in mid-February)
- Regular Decision: February 15th (to receive a financial aid award in April)

All U.S. Citizens and/or permanent residents must complete the Free Application for Federal Student Aid to be considered for U.S. federal financial aid by:

- All Freshman Applicants: February 15 (to receive a final financial aid award in April)

Chinese Applicants Admissions Regulations

上海纽约大学2015年招生方案（中国大陆学生）

融合中美两国教育精华的上海纽约大学，将为优秀学生提供在全球化背景下全新的、全英语的高等教育模式。上海纽约大学实行博雅通识教育，学生进校前两年学习通识核心课程，然后自由选择专业并学习专业课程。

根据教育部有关规定，借鉴纽约大学招生特色和经历，上海纽约大学在全面审视每位申请学生的综合素质基础上，通过“校园日活动”选拔一批具备强烈的求知欲以及开拓创新精神、热爱尝试新事物、拥有“世界公民”素质的优秀学生，而非采用仅仅基于高考成绩的高考录取模式。

一、招生对象

能适应国际大都市竞争环境、向往走向世界、渴求新知识、勇于挑战新事物、学习成绩优异的高中毕业生。

符合[2015]年高考报名条件并参加[2015]年高考的学生均可申请报考上海纽约大学。港澳台地区学生招生方案另行公布。

上海纽约大学对申请材料进行审核后，将邀请其中部分优秀的申请学生参加“校园日活动”，并在“校园日活动”基础上，结合高考、高中学业水平考试、综合素质评价等，通过高校招生综合评价体系录取学生。

二、招生计划

上海纽约大学[2015]年继续面向全国招收151名学生，招生计划不做分省安排，各省招生名额不设上限和下限，在所有申请学生中择优录取。

三、申请方式

1. 提交通用申请（Common Application）

所有申请报考上海纽约大学的学生，都必须通过美国高校本科入学在线申请系统Common Application (www.commonapp.org)，于[2016年1月1日][?]前填写并提交通用申请。

注：通用申请填写比较复杂，且截止日期临近时系统繁忙，建议学生至少提前一周提交。

2. 填写《上海纽约大学校园日活动申请表》

通用申请提交完成后，学生须下载、填写并打印《上海纽约大学2015年校园日活动申请表》（请见附件下载），并用通用申请的注册邮箱，于2016年1月1日前将申请表以电子邮件附件形式发送至上海纽约大学招生办公室：shanghai.admissions@nyu.edu，邮件名称为：省份 + 姓名 + Common App ID。

3. 寄送书面申请材料

完成以上申请步骤后，学生还须向上海纽约大学招生办提交以下书面申请材料。每页材料须在右上角空白处注明申请学生的Common App ID，用标准A4纸打印或复印，并按以下次序排放（申请材料请勿装订，不要加装各类订书针、封面、封底、装订夹等，以免剔除时误损申请材料）：

（1）《上海纽约大学[2015]年校园日活动申请表》（请见附件下载）

（2）高一、高二每学期期中期末成绩和高三期中成绩（须注明单科满分）、年级排名（按文理排名，如中学不提供排名请出具证明）、高中学业水平考试（会考）成绩复印件。以上材料均须加盖中学公章。

如发现成绩不实，经查实后一律取消学生的申请和录取资格，并将所在中学纳入非诚信学校，取消下年度推荐资格。

（3）主要获奖证书复印件及其他证明自己特长和优势的材料（非必须）。

（4）《校长推荐表》（非必须，由上海纽约大学寄送至部分中学）。

申请材料须于[2015]年1月1日前以快递方式邮寄至上海纽约大学招生办公室（以当地寄出邮戳为准）。

邮寄地址：上海市世纪大道1555号上海纽约大学招生办公室 邮编：200122

联系人：赵老师 联系电话：021-20595599

4. 在线填写个人信息

所有申请学生还须在[2015年1月10日至1月20日间], 进入校园日活动登录页面(点此进入), 用本人出生日期及Common App ID登录, 按要求在线填写个人中文信息。

注: 学生申请信息从通用申请系统导入纽约大学学生信息系统后, 学生方可登录该页面。学生填写完成后在线提交即可, 无需打印。

四、选拔程序

1. 审核

上海纽约大学招生委员会将对学生的申请材料进行初审, 并于[2015年1月30日]前以电子邮件形式通知学生初审结果。

2. “校园日活动”

初审合格的学生参加上海纽约大学“校园日活动”, 学校将通过模拟课堂、英文写作、团队活动、面谈等方式考察考生的求知欲、亲和力、学习能力、适应能力、交流能力、心理素质、团队精神、表达能力、行为道德等。

“校园日活动”的具体时间和地点将另行通知。

特别提醒: 校园日活动全程用英语进行。

五、录取政策

上海纽约大学招生委员会将根据学生“校园日活动”表现, 对每位学生进行严格的评价和讨论, 并给予符合上海纽约大学要求的学生相应录取政策:

A. 预录取: 学生须参加[2015]年普通高考, 高考成绩达到生源所在省本科第一批录取控制线, 上海纽约大学即予以录取。

B. 待录取: 学生须参加[2015]年普通高考, 高考成绩达到生源所在省本科第一批录取控制线, 上海纽约大学将结合高考、“校园日活动”表现、高中学业水平考试、综合素质评价等, 通过本校招生综合评价体系择优录取。

如考生所在省级招生办公室另有规定, 则按省招办规定办理。

六、奖助学金

被上海纽约大学录取的学生, 如高考成绩优异, 学校将提供新生奖学金。

被上海纽约大学录取的学生, 如家庭经济条件困难, 学校将根据学生的实际情况提供助学金, 确保被本校录取的学生不因家庭经济困难而辍学。

七、颁发证书

上海纽约大学学生修学期满, 符合毕业要求, 将获得以下全日制本科证书:

1. 上海纽约大学学士学位证书(中华人民共和国教育部监制)
2. 上海纽约大学毕业证书(中华人民共和国教育部监制)
3. 美国纽约大学学士学位证书(美国纽约大学颁发)

八、监督机制

上海纽约大学的招生过程坚持公平、公开、公正的原则, 保证不同经济背景、种族、性别、宗教信仰的学生都有机会申请入学, 接受考生及家长与社会各界的监督。

监督电话: 021-20595587

监督邮箱: shanghai.jiandu@nyu.edu

九、咨询方式

学校网址: www.shanghai.nyu.edu

咨询热线: 021-20595599

咨询邮箱: shanghai.admissions@nyu.edu

官方微博: <http://weibo.com/nyushadmissions>

官方微信: NYUShanghai

官方QQ群: [2015]上海纽约大学招生(111393813)

咨询现场: 上海市浦东新区世纪大道1555号上海纽约大学咨询中心

Tuition, Fees, and Financial Aid

When estimating the net cost to the family of a university education, a student should consider two factors: (1) the total cost of tuition, fees, and materials related to a particular program, plus costs directly related to the choice of living style (dormitory, apartment, and commuting costs) and (2) financial aid that may be available from a variety of sources. This section provides information on both of these distinct but related topics.

The following is the schedule of fees established by NYU Shanghai for the year 2015-2016. NYU Shanghai reserves the right to alter this schedule without notice. Tuition, fees, and expenses can be expected to increase in subsequent years and will be listed in online updates to this Bulletin.

Registration and school based fees cover additional expenses related to student course activities. Service fees also cover health services (separate from health insurance), emergency and accident coverage as well as basic fees necessary to support curriculum related technology.

Note: Separate course fees may be required for some courses. Students should consult the respective departments for information.

All fees are payable at the time of registration. The Office of the Bursar is located in room 1062. Online payment and wire transfer are to be paid to NYU Shanghai for the exact amount of the tuition and fees required. In the case of overpayment, the balance is refunded in the 2nd month after each semester starts by the Office of the Bursar.

A fee will be charged if payment is not made by the term due date indicated on the student's statement.

Cost of Attendance

The preliminary cost of attendance budget represents the estimated annual cost of education for full-time undergraduate students at NYU Shanghai in US dollars for the 2015-2016 academic year. It includes tuition, room and board (which may vary based on a student's room selection), health insurance, personal expenses, books and course materials, and many student life activities. The costs listed below are *estimated* for the 2015-2016 academic year only. Annual adjustments to the costs and fees at NYU Shanghai may be necessary and should be expected. The yearly tuition and residence costs include only full-time fall and spring enrollment; course overloads incur additional tuition, registration and service fee. Students that take summer session or January term courses will incur additional direct and indirect expenses. Direct expenses will be billed accordingly. Financial assistance may not be available for those sessions.

Indirect costs—such as estimated board, travel, supplies, and personal expenses—are costs that you may incur during the academic year, which will vary for each student. These indirect costs are not charged through NYU Shanghai.

NYU Shanghai *Estimated* Cost of Attendance in US dollars for 2015-2016

Direct Costs: Costs that you will be charged by NYU Shanghai	Cost
Tuition, Registration and Services Fees*	\$47,750*
Health Insurance**	\$3,496**
Room	\$3,548
Estimated Books and Materials	\$904
Indirect Costs: Other educational costs incurred	
Board (Meals)	\$2,400
Estimated Supplies	\$300
Estimated Personal Expenses	\$1,000
Estimated Travel	\$3,750
Total Cost of Attendance (Estimated)	\$63,148

*Tuition, Registration and Services Fees, per unit (19 or more units) \$1,400. This charge will be assessed to students who take over 18 units.

**Health insurance charges vary. The estimated maximum is \$3,496 for 2015-2016. Your direct charges may vary.

Special Programs including Study Away

The Tuition paid to NYU Shanghai would be the cost of tuition for a semester abroad in the Global Network (for standard full time course load). For other expenses (i.e. room, board, travel) for study in the NYU Study Away programs and in NYU International Exchange Programs contact:

NYU Office of Global Programs
110 East 14th Street, Lower Level
New York, NY 10003-4170
212-998-4433
www.nyu.edu/global.html

Deferred Payment Plan (For U.S. students only)

The Deferred Payment Plan allows students to pay 50 percent of their net balance due for the current term on the payment due date and defer the remaining 50 percent until later in the semester. This plan is available to students who meet the following eligibility requirements:

- Matriculated and registered for 6 or more points
- Without a previously unsatisfactory NYU Shanghai credit record
- Not in arrears (past due) for any NYU Shanghai charge or loan

The plan includes a nonrefundable application fee of \$50, which is to be included with the initial payment on the payment due date.

A separate deferred payment plan application and agreement is required for each semester this plan is used. The Deferred Payment Plan will be available at www.nyu.edu/bursar/forms in July for the fall semester and in December for the spring semester.

For additional information, please visit the website of the Office of the Bursar at <http://shanghai.nyu.edu/academics/tuition/us> or call +86 21 20596666.

Arrears Policy

NYU Shanghai reserves the right to deny registration and withhold all information regarding the record of any student who

is in arrears in the payment of tuition, fees, loans, or other charges (including charges for housing, dining, or other activities or services) for as long as any arrears remain.

Diploma Arrears Policy

Diplomas of students in arrears will be held until their financial obligations to NYU Shanghai are fulfilled and they have been cleared by the Bursar. Graduates with a diploma hold may contact the Office of the Bursar at shanghai.studentaccounts@nyu.edu or call +86 21 20596666 to clear arrears or to discuss their financial status.

Withdrawal and Refund of Tuition

A student who, for any reason, finds it impossible to complete one or more courses for which he or she has registered should consult with an academic advisor. An official withdrawal must be filed either on Albert (through the first three weeks of the term only) or in writing on a completed Request for Withdrawal form with the Office of the NYU Shanghai Registrar. (Note: An official withdrawal must be filed if a course has been canceled, and, in this case, the student is entitled to a refund of tuition and registration fees paid.) Withdrawal does not necessarily entitle the student to a refund of tuition paid or a cancellation of tuition still due. A refund of tuition will be made provided such withdrawal is filed within the scheduled refund period for the term. (See next page for the schedules.)

Merely ceasing to attend a class does not constitute official withdrawal, nor does notification to the instructor. A stop payment of a check presented for tuition does not constitute withdrawal, nor does it reduce the indebtedness to NYU Shanghai.

The date on which the Request for Withdrawal form is filed, not the last date of attendance in class, is considered the official date of the student's withdrawal. It is this date that serves as the basis for computing any refund granted the student. The processing of refunds takes approximately two weeks.

For U.S. Students (must have a U.S. passport)
There are two distinct refund schedules (see below):

1. For students withdrawing from some courses, but not all;
2. For students withdrawing from all courses.

Undergraduate Refund Schedule

Withdrawing from SOME Courses (Fall and Spring Only)

Courses dropped during the first two weeks of the term: 100% (100% of tuition and fees)*

Courses dropped after the first two weeks of the term: NONE

Note: All fees (including school-related fees) are nonreturnable after the second calendar week of the semester.

Note: A student may not withdraw from a class after the ninth week of the fall or spring semester or in the last two weeks of each six-week summer session.

Withdrawing From ALL Courses (Fall and Spring Only)

This schedule is based on the total applicable charge for tuition, excluding nonreturnable fees and deposits.

Withdrawal on or before the official opening date of the term: 100% (100% of tuition and fees)

Withdrawal on the second day after the official opening date of the term through the end of the first calendar week: 100% (100% of tuition only)

Note: The first calendar week consists of the first seven (7) calendar days beginning with the official opening date of the term (not the first day of the class meeting).

Withdrawal within the second calendar week of the term: 70% (tuition only)

Withdrawal within the third calendar week of the term: 55% (tuition only)

Withdrawal within the fourth calendar week of the term: 25% (tuition only)

Withdrawal after completion of the fourth calendar week of the term: NONE

Note: All fees (including school-related fees) are nonreturnable after the official first day of the semester.

The previous sections pertaining to the refund schedule is not applicable to Chinese and Non-U.S. students. These students should refer to the "Refunds" page on the Office of the Bursar's website located at <http://shanghai.nyu.edu/academics/tuition>.

For summer and January terms the above schedules apply but is accelerated with summer using two day increments and January term one day increments—example the end of the two week refund deadline for partial withdrawal from a full semester course translates to four days in summer and two days in a January Term.

Note: A student may not withdraw from a class after the ninth week of the fall or spring semester or in the last two weeks of each six-week summer session.

Exceptions to the published refund schedule may be appealed in writing to the Assistant Provost for Academic Affairs and should be supported by appropriate documentation regarding the circumstances that warrant consideration of an exception. Exceptions are rarely granted. Students who withdraw should review the "Refunds" page on the Office of the Bursar's website, <http://shanghai.nyu.edu/academics/tuition>.

U.S. federal regulations require adjustments reducing financial aid if a student withdraws even after the NYU refund period. Financial aid amounts will be adjusted for students who withdraw through the ninth week of the semester and have received any federal grants or loans. This adjustment may result in the student's bill not being fully paid. NYU will bill the student for this difference. The student will be responsible for payment of this bill before returning to NYU and will remain responsible for payment even if he or she does not return to NYU.

For any semester a student receives any aid, that semester will be counted in the satisfactory academic progress standard. This may require the student to make up credits before receiving any further aid. Please review the "satisfactory academic progress" standard so you do not jeopardize future semesters of aid.

Eligibility for Financial Aid

Financial aid may take the form of university scholarships, federal aid (for US citizens/official permanent residents of the United States), or outside scholarships.

NYU Shanghai reviews all students for scholarship eligibility regardless of citizenship.

For most undergraduates, eligibility for merit-based and/or need-based scholarships is determined based on a student's prior academic strengths and upon demonstrated financial need, based on results of the financial aid form submitted.

To be considered for financial aid, students must be officially admitted to NYU Shanghai or matriculated in a degree program and making satisfactory academic progress toward degree requirements.

Financial aid awards are not automatically renewed each year. NYU Shanghai scholarship and grant awards are renewed yearly at the same amount as long as: you apply for financial aid each year by the required returning student deadline; continue to demonstrate financial need; make satisfactory progress toward degree requirements; and enroll full time (12 credits or more) each semester.

Please consult <http://shanghai.nyu.edu/admissions/returning> for current details.

Non-Chinese nationals applying to NYU Shanghai must follow the instructions below if they wish to be considered for financial aid.

Chinese nationals applying to NYU Shanghai will need to contact the NYU Shanghai Office of Admissions in the Shanghai Office (9:00 a.m.-5:00 p.m. China Standard Time): +86 21-6223-5037 for additional information regarding individual scholarship requirements.

The College Scholarship Service/Financial Aid PROFILE

The CSS PROFILE is required of all applicants, regardless of citizenship, who would like to be considered for financial aid, including any scholarships/grants from NYU Shanghai. Note: students with divorced, separated, or unmarried biological parents will also need to submit the CSS Noncustodial parent PROFILE (or the CSS Noncustodial parent PROFILE waiver request with supporting documentation) by the deadlines specified below to be considered for institutional scholarships/grants. Chinese nationals applying to NYU Shanghai (using the Gaokao to qualify for admission) should not complete the CSS PROFILE.

- Click here to begin and submit the CSS/Financial Aid PROFILE
- Click here to begin and submit the CSS Noncustodial Parent PROFILE (if applicable)
- Students needing a Noncustodial parent PROFILE Waiver Request should contact shanghai.financial.support@nyu.edu.
- The New York University CSS school code number is **2785**.

Freshman Applicants CSS/PROFILE Deadlines

	Early Decision I	Early Decision II	Regular Decision
CSS PROFILE	November 15	January 15	February 15
Noncustodial PROFILE (if applicable)	November 20	January 20	February 20
Estimated Award Notification	mid-December	mid-February	April

The Free Application for Federal Student Aid (FAFSA)

NYU Shanghai is approved by the U.S. Department of Education to provide federal financial aid to eligible students who are U.S. citizens or official permanent residents of the U.S. Therefore, all U.S. citizens or official permanent resident applicants who would like to be considered for financial aid must submit the FAFSA in addition to the CSS/Profile Form.

- Click here to begin and submit the FAFSA.
- You must list “New York University” as a recipient and include our federal school code number (**002785**) when completing your FAFSA.
- Do not complete the FAFSA until after January 1st if you are applying for Fall admission.

Freshman Applicants FAFSA Deadline:

	Early Decision I	Early Decision II	Regular Decision
FAFSA	February 15	February 15	February 15
Award Notification	April (to receive a final financial aid award)	April (to receive a final financial aid award)	April

Student Responsibilities

- You must apply for financial aid each year to be considered for need-based financial aid awarded at NYU.
- Consult www.nyu.edu/financial.aid for all financial aid application deadlines. Failure to meet the NYU Shanghai deadline may result in a reduction of your aid eligibility.
- Use NYU Albert at albert.nyu.edu to view/accept your financial aid awards.
- If you submit documents to the Office of Financial Support, please put your NYU University I.D. number on each page and keep a copy for yourself. Please avoid submitting originals as the documents will not be returned to you.
- It is important that you understand the conditions of the awards you accept. Contact the Office of Financial Support if you have any questions.
- You must adhere to satisfactory academic progress standards to remain eligible for financial aid. The Office of Financial Support will send reminders, but it is the student’s responsibility to know and heed the requirements.
- You must notify the Office of Financial Support immediately if you receive an award or financial aid from any additional source. A change in your resources may affect your eligibility for student aid.
- You must respond immediately to all requests from the Office of Financial Support. Failure to comply may result in the cancellation of your aid.
- Consult with the Office of Financial Support immediately if you reduce your academic program to fewer points, or if you are enrolled full-time (at least 12 points) but intend to begin part-time (less than 12 points). Also contact the Office of Financial Support if there is a change in your housing status. A change in enrollment or housing status may affect the financial aid you receive.
- Be sure to notify the Office of the NYU University Registrar if you move by updating your contact information via NYU Albert at albert.nyu.edu. We use the records of the Office of the NYU University Registrar to administer financial aid.

Registration, Advisement, and Counseling

The NYU Shanghai Registrar's office provides academic services and information on registration throughout the year. Any student with a question or problem is invited to come to the Registrar's office at Room 1049 for assistance. Office hours are weekdays from 9 a.m. to 5 p.m.

Students can complete their initial registration through Albert, NYU's on line registration system, at *home.nyu.edu*. Students can also use Albert to make later adjustments to their schedule.

Continuing Students

Students currently enrolled in NYU Shanghai register early for the following semester—in November for the spring term and in mid-April for the fall term. Students who are currently enrolled or on an official leave of absence receive notification of the date and time when they can register. Before registering, students plan a provisional schedule and put it in the “shopping cart” function of Albert. They also discuss their program and courses with their advisor, who then clears them for registration. At the appointed time or thereafter, students access Albert to finalize the course enrollment process. Students should complete registration by paying their tuition and fees. Online tuition statements and payment options are available through the Office of the Bursar.

New Students

Newly admitted students receive detailed registration information a few weeks prior to orientation. New students meet with an academic advisor during orientation to discuss their class schedule and other academic questions.

Health Insurance and Immunization Policy

All full-time students must be in compliance with NYU Shanghai’s health insurance and immunization requirements. For preregistration immunization requirements, please see: <http://shanghai.nyu.edu/campus-life/health-wellness/immunization>. If a student fails to comply, the student will not be allowed to register for classes until he or she is in full compliance. If the student does not receive clearance to register before the registration deadline for the semester, he or she will not be able to register and take classes until the next semester that they are in compliance. This policy includes first semester freshmen entering NYU Shanghai.

The health insurance and immunization requirements of some study away sites and portal campuses may vary from

those at NYU Shanghai. Students must be in compliance with those requirements during their semester abroad in order to be eligible for studying away at that site or campus.

Advising

Academic advising is the process through which NYU Shanghai provides the necessary resources for students to make good choices in their academic studies. The primary purpose of academic advising is to assist students as they develop meaningful educational plans compatible with their life goals. Although the NYU Shanghai curriculum is well-defined, there will be opportunities, both within and beyond curricular constraints, for students to participate in courses and activities that support their academic and personal development.

While the ultimate responsibility for making decisions about life and educational plans rest with each individual student, an academic advisor assists them by suggesting options and by discussing possible outcomes of the choices they make. Students can expect that their academic advisor will help them:

- define academic, career and life goals;
- evaluate progress toward goals;
- understand curricular requirements, provide guidance during course selection, and provide help with identifying other meaningful educational experiences;
- refer them to institutional and community support services for assistance with study skills if necessary.
- monitor their progress as they move through the undergraduate program.

Students are required to meet with their advisor at least once each semester to review their registration plan for the following semester and ensure that they are making normal progress towards their degree. Students will not be able to register until after this meeting. It is the individual student’s responsibility to make certain

that he or she fulfills the requirements for graduation.

Advisors offer a wide range of services and programs designed to meet the needs of a diverse student body. The advisors serve as a basic source of information about the degree requirements, policies, and procedures of the University. Students are able to get advice as well as secure tutorial support. Academic workshops are sponsored to assist students in planning academic programs, choosing a major, and negotiating registration.

A freshman advising program provides individual advising for new students entering in August. Each student is assigned an advisor who can provide information and support during the transition to college and with whom the student meets throughout his or her four years to discuss academic as well as career and other issues. Students needing additional assistance may, throughout the year, make an individual appointment with the Assistant Dean for Academic Affairs. Advisors also meet individually with students who want to discuss concerns or questions they may be having about the University. The advisors serve as a liaison with other offices and can make referrals when appropriate. The advisor then is the best source for students to visit when they are unsure of where to go for help.

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Major Advisement

Students who have declared a major have a major advisor who can be consulted throughout the academic year about discipline-specific issues, graduate study, and career opportunities.

The Academic Resource Center

The mission of the Academic Resource Center (ARC) is to assist students in developing the skills, strategies, and behaviors needed to perform as confident, independent, and active learners. The ARC offers a wide variety of free services including academic counseling in study skills as well as tutoring for select courses.

ARC services are designed to help both students who are having academic difficulties and those who just want to improve their performance. Services offered by the Center include the following:

- Individual and group tutoring sessions for math, writing, and reading
- Examination review sessions
- Study skills assessment
- Workshops on academic effectiveness and time management

Internships

One defining characteristic of the NYU educational experience is the opportunity students have to apply their classroom learning to real-life experiences in a variety of professional and community-service settings. Shanghai provides such opportunities in abundance, and NYU Shanghai takes full advantage of our location in one of the financial, cultural, scientific, and media capital of the world.

Many different types of opportunities are available to students; some are paid, some involve volunteerism on the part of a student, and some carry academic credit—and all of these can be valuable. For the purpose of securing and making the most of such opportunities, students should consider the following criteria as a guide.

Paid Internships

The visa requirements of the People's Republic of China do not allow international students to hold off-campus part-time jobs or paid internships.

Voluntary or Community Service

Certain organizations encourage students to work on a volunteer basis to gain experience and to provide needed assistance to the organization. This type of arrangement is common, for example, in government and not-for-profit organizations. Such internships are valued, sometimes even required, for admission to some professional schools, but NYU Shanghai awards no credit for them.

Credit-Bearing Internships

A few majors offer academic internships that directly advance a student's knowledge in the academic discipline and thus earn course credit. Such academic internships must be sponsored by an appropriate faculty member through an academic major and normally require close faculty supervision, significant research in addition to the practical work experience, a reporting of findings, and a formal assessment of the student's work. All such internships require permission of the department or program, and registration for them must be within the regular deadlines. Majors offering credit-bearing internships may restrict them to declared majors, since those students have the requisite background. Internship courses can be counted toward some majors but not toward others. Students should check with their advisor to see if they have this option.

Independent Study

In some majors, independent study that draws on the activity or environment of the internship may be a possibility. Like a credit-bearing internship, independent study requires a proposal by the student, careful guidance from a faculty member, a body of work which can be evaluated for course credit, and major approval.

Preprofessional Programs

Pre-Medical and Health Studies Program

It is important to understand that pre-professional training does not require students to major in science or math. Students may elect to major in any discipline and complete the courses needed to apply for health-related professional schools in parallel. They should choose a disciplinary major that they will enjoy and in which they will excel. If they enjoy the sciences, choosing a major in those areas may be the right decision for them. If, however, they have other interests or talents, they will demonstrate their versatility and increase their chances of excelling by pursuing a major in the humanities or social sciences along with the prehealth curriculum.

NYU Shanghai, like many American colleges and universities, does not offer a premedical, pre dental, or prehealth major. In fact, the best professional schools want, above all, students with a broad education who can think clearly, read critically, and write well.

The student's advisor will help them to explore their options, advise them about programs and appropriate course selection, and help them to present the best possible application to professional schools. Students should be aware that it is extremely difficult for applicants who are not U.S. citizens or permanent U.S. residents to gain admission to medical school in the U.S. Other health professional schools in the U.S. have more hospitable admissions policies, such as schools of dentistry and M.D./Ph.D. programs.

The following are the basic set requirements most medical schools in the U.S. request; however, specific medical schools might have additional requirements or modifications to those listed here. Students should consult with the premedical advisor for more information.

SUGGESTED COURSES FOR APPLICATION TO MEDICAL SCHOOL

Foundations of Science I-III

(Note: This covers the pre-med requirements of one year of general biology, one year of general chemistry, one year of general physics, and one year of lab work in each of those areas.)

Organic Chemistry 1 and 2

Calculus and Multivariate Calculus and Differential Equations

In addition:

- Intro to Psychology
- A sociology course that surveys individual and social patterns of behavior and determinants of health
- Statistics
- 2 semesters of an upper level Expository Writing courses are recommended. These courses cannot be Creative Writing but need to focus on writing or interpreting advanced texts.
- 1 semester of Biochemistry

PRE-LAW PROGRAM

Prospective law students are free to choose from the wide variety of courses offered at NYU Shanghai. NYU endorses the position of the Association of American Law Schools that a single “best” preparation for law school cannot be recommended. As a result, there is no prescribed prelaw curriculum.

Purpose of Prelaw Study

While NYU Shanghai considers the prescription of particular courses unwise, it does advise taking courses that require extensive reading, research, and writing. The Core Curriculum is an excellent beginning for prelaw students as it offers a rigorous and multidisciplinary foundation for advanced study in the humanities, social sciences, and natural sciences. No matter what one majors in, law schools value a well-rounded liberal arts education, so students should choose their electives wisely. For example, the precision of methodology and thought required of students in mathematics, computer science, logic, and the natural sciences will aid in the development of analytic skills, while a background in the behavioral sciences and the humanities (such as politics, economics, history, literature, philosophy, anthropology, and sociology) will offer a deeper understanding of human institutions and values, as well as opportunities for critical thinking and writing.

Health and Wellness Center

Health and Wellness services are available for all students and no appointment is necessary. Counseling services are free on a voluntary basis for any full- or part-time student enrolled in NYU Shanghai. When necessary, medication and outside referrals are available. All conversations are kept strictly confidential. H&W counseling staff members provide assistance in workshops, as well as in group and individual psychotherapy.

The social and emotional conflicts that occur in a person's life occasionally prevent him or her from functioning optimally. Concerns about interpersonal relationships, poor grades or other academic problems, feelings of inadequacy, anxiety, loneliness, sexual problems, eating disorders, substance abuse, and family and/or marriage conflicts are difficulties any individual might encounter. H&W counselors provide an atmosphere where personal concerns can be examined and discussed freely and confidentially.

Learning Disorders and Physical Disabilities

NYU is committed to providing equal educational opportunity and participation for students with disabilities. It is NYU Shanghai's policy that no qualified student with a disability be excluded from participating in any NYU Shanghai program or activity, denied the benefits of any NYU Shanghai program or activity, or otherwise subjected to discrimination with regard to any NYU Shanghai program or activity.

The Henry and Lucy Moses Center for Students with Disabilities (CSD) in New York determines qualified disability status and assists students in obtaining appropriate accommodations and services. CSD operates according to an *Independent Living Philosophy* and strives in its policies and practices to empower each student to become as independent as possible. Their services are designed to encourage independence, backed by a strong system of supports.

Any student who needs a reasonable accommodation based on a qualified disability is required to register with the CSD for assistance. They should contact the Director of the Academic Resource Center for assistance in registering.

Degree Requirements

NYU Shanghai confers the following degrees on candidates recommended by the faculty of the majors and approved by the trustees of New York University:

Bachelor of Arts (B.A.)

- Global China Studies
- Economics
- Humanities

Bachelor of Science (B.S.)

- Biology
- Business and Finance
- Business and Marketing
- Chemistry
- Computer Engineering
- Computer Science
- Electrical Engineering
- Interactive Media Arts
- Honors Mathematics
- Mathematics
- Neural Science
- Physics

The general degree requirements are the same for the B.A. and the B.S.

To be eligible for the bachelor's degree, students must complete 128 points with a cumulative grade point average of at least 2.0. Within these points, students must fulfill the requirements of both a major and the core curriculum.

The degree requirements to be fulfilled are those in effect during the term of the student's first registration in NYU Shanghai. Registration in another division of NYU does not constitute a registration in NYU Shanghai.

Readmitted students must fulfill the requirements as listed in the Bulletin published during the year of their readmission, unless their readmission letter states otherwise.

In very exceptional cases, a student may petition the Committee on Undergraduate Academic Standards for approval of a change in the requirements as stated in the Bulletin.

Conferring of Degrees

Degrees are conferred in September, January, and May. The NYU Shanghai graduation ceremony occurs in May and the formal conferring of degrees by the President of NYU takes place annually at Commencement in May.

Students receive three confirmations of their graduation: an New York University diploma (issued by New York University.), a NYU Shanghai diploma (from the Ministry of Education of the PRC), and an NYU Shanghai graduation certificate (from the Ministry of Education of the PRC).

The Major

Major requirements, varying from subject to subject, are specified in the sections devoted to the course listings of individual majors. Generally, one-third to one half of the total points are earned in the major concentration.

Every student must complete a major with a cumulative grade point average in the major of at least 2.0. At least one-half of the courses as well as one-half of the points used to complete the major must be taken in the disciplinary area. A student may not register for courses in the major outside of NYU. The student must be approved as a major and must review his or her program with an academic advisor each term.

Declaration

Students may declare a major prior to registration for the next semester if they are registered for enough credits in the current semester so that at the end of it they will have completed at least 32 credits (typically when registering for fall of their second year). They must have a final grade of C, or current semester midterm grade of B, or higher in a designated prerequisite course for that major.

Students must declare a major prior to registration for the next semester if they are registered for enough credits in the current semester so that at the end of it they will have completed 64 credits (typically registering for fall of their third year). They must have a final grade of C, or current semester midterm grade of B, or higher in a designated prerequisite course for that major. (*See next page*)

Final grade of C, or current semester midterm grade of B, or higher in:

Humanities Global Perspectives on Society II

Global China Studies a required GCS course

Biology
Neural Science
Chemistry
Physics } Foundations of Science II

Honors Mathematics Analysis I

Mathematics Multivariate Calculus

Computer Science
Computer Engineering
Electrical Engineering } Introduction to Computer Science

Interactive Media Arts Interaction Lab or Communications Lab

Business and Finance
Business and Marketing } Statistics for Business and Economics

Economics Microeconomics

Double Major

Students may attempt a double (second) major. The same requirements, including the maintenance of a minimum grade point average of 2.0 in the major, apply to the second major as to the first. In some cases, courses may be applicable to both majors. Students must then obtain the written approval for the shared course(s) from the Assistant Dean for Academic Affairs. No more than two major courses may be approved for double counting. The second major is declared in the same way as the first (see above) but not until fall of senior year.

Students should consult with their advisor before attempting a double major as the requirements of the first major and the second limit the options for students to pursue varied intellectual interests. It is also difficult completing two majors in the standard 128 credits. In addition, in some cases the Chinese language requirement, which consists of the equivalent of four semesters through the intermediate II level (the “Chinese Language Requirement”), further limits the ability to complete two majors. Requirements for completing a major as a double major are the same as detailed for the major requirements.

The ability to satisfy the requirements for an additional major cannot be guaranteed for any student and will be based upon course availability and the time the student is willing to invest to satisfy all of the requirements of the additional major. In some cases pursuing a double major will require a delay in graduation and in many cases limit study away opportunities.

Regulations Pertaining to both Major and Minor

The major and minor requirements to be followed are those stated in the major sections of the Bulletin in effect during the semester of the student’s first registration in NYU Shanghai. No credit toward the major or minor is granted for grades of C- or lower, although such grades will be computed into the grade point average of

the major or the minor, as well as into the overall grade point average.

No course to be counted toward the major or minor may be taken on a pass/fail basis. (See “Pass/Fail Option” under Academic Policies in this Bulletin.)

A student may petition through their advisor to follow major graduation requirements as set out in a Bulletin from a subsequent year after their first semester of registration. If approved, they must meet those requirements as outlined in that edition of the Bulletin. Any courses they may have completed, or complete, which were required under the old major requirements but not under the new will be counted as general elective rather than major credit.

Time Limit

All requirements for a degree at NYU Shanghai must be met within a period of eight years from the date of matriculation. For students who are re-admitted to NYU Shanghai, the length of time is proportionately reduced.

Residence Requirement

All coursework used to satisfy the 128-credit degree requirement must be completed at NYU. The courses used to complete the major or the minor must be taken in that disciplinary area.

{ Part III }

Standards and Policies

Everything you need to know about:

- Academic Policies
- Placement Examinations, Degree Progress, and Transcripts
- Academic Standards and Discipline
- University Policies and Campus Safety
- Honors and Awards

Academic Policies

The programs and courses offered at NYU Shanghai are designed for students who attend classes offered on a full-time basis. A full-time schedule normally consists of 16 points per term, or 32 points per year, which enables a student to complete the entire program of 128 points in four years. Minimal full-time status entails completing at least 12 points per term, or 24 points per year. Students who wish to attend part-time should obtain permission from the Office of the Assistant Provost for Academic Affairs prior to the start of the semester. Such status will be granted only when there is good and sufficient reason for part-time study. Failure to complete a minimum of 24 points per year jeopardizes a student's full-time status and his or her eligibility to receive financial aid.

Students in good academic standing may register for more than 18 points per term after their freshman year with the clearance of their academic advisor and approval of the Assistant Dean for Academic Affairs. Students on academic probation, however, who wish to register for more than 18 points per term must obtain the prior approval of the NYU Shanghai Committee on Academic Standards, as must any student wishing to register for more than 20 points.

There are additional per credit costs for each point above 18 as well as an additional registration fee and added costs for textbooks and materials in a given semester.

Availability of Courses

In order to ensure that students do not have to compete for access to their required courses, registration priority is given to students who are registering for courses in their primary major. Excess demand will not lead to creation of additional space in major elective courses or for students seeking to take a required major course earlier than the semester it is listed in the recommended course sequence.

Although the University encourages the exploration of other disciplines, access to courses outside a student's primary major (including those courses that fulfill requirements for an additional major, minor, etc.) is on a space-available basis and is not guaranteed.

Change of Program

To make any changes in their program, including dropping or adding courses given in other divisions of NYU, students must access Albert via NYUHome at *home.nyu.edu* or file a Change Course Enrollment form in the Registrar's Office.

Adding Courses

The deadline for the adding of a course or a section is the end of the second week of the semester. The deadline applies to any course added by an NYU Shanghai student and to any NYU Shanghai course added by students from other divisions. The adding of any course or section after the end of the second week is generally allowed only when the student is changing levels within a discipline—for example, from a Chinese or mathematics course to a higher- or lower-level course in the same discipline. The changing of levels is permitted only with the written approval of both the instructor and the student's advisor.

Dropping or Withdrawing From Courses

Students are expected to maintain a full-time program as described above and are unable to reduce their program to part-time status if enrolled fulltime at the beginning of the semester. Occasionally, they may drop or withdraw from a course if, because of reasons beyond their control, they cannot continue. Withdrawing from a course during the first two weeks of the term is treated as a drop and will not appear on the transcript. Those courses withdrawn from during the fourth week through the ninth week of the term will be recorded with a grade of W. After the ninth week, no one may withdraw from a course. Students who are ill or have a serious personal problem should contact their advisor.

Complete Withdrawals

Students who wish to withdraw from all their courses must meet and discuss their plans with their advisor, complete the required form, and get the approval of the Assistant Provost for Academic Affairs.

A student who withdraws officially from all courses in a term may register for the following term, if four calendar months will have passed since the start of the withdrawal, and subject to any limitations attached to their withdrawal approval. If the student is unable to attend NYU Shanghai during the term following the withdrawal, he or she should request a leave of absence from their advisor. For more information, see next page under "Attendance."

Auditing

Matriculated students in NYU Shanghai may audit (i.e., attend lectures without intending to receive credit) any course in NYU Shanghai with the consent of, and under the conditions established by, the instructor and the major. Auditors count against the enrollment cap for a course and may not preempt space required for students registering for a letter grade.

Courses cannot be audited as a means of satisfying requirements for an incomplete grade or as a means of changing a previous grade. Language classes may not be audited. Students may not audit classes during their first year of enrollment at NYU Shanghai.

Students seeking to audit a course must register as an auditor by the end of the add drop period and audited courses will appear on the student's official transcript. Special (nondegree) students may not audit courses. Once a course is declared as an audited course it may not be changed to letter grade or pass fail course. If the credit value of the audited course causes the total number of credits to exceed 18, an overload petition is required and overload charges apply.

Attendance

Although the administration of NYU Shanghai does not supervise attendance of classes, it supports the standards imposed by instructors.

When students are ill, they are expected to notify professors in advance of class, if at all possible. If the instructor determines that it is an excused absence then the student should negotiate with the professor the time and place for make-up of assignments, tests and/or examinations missed. Students who are seriously ill, should contact the Office of Health and Wellness for assistance and the Assistant Dean for Academic Affairs so that the student's professors may be contacted.

Students may present, and faculty may choose to ask for, verification of an illness but providing verification of illness does not supersede a course policy that does not allow excused absences for illness or overrule an instructor's judgment that the illness does not meet the standards for an excused absence.

Students who, in the judgment of the instructor, have not substantially met

the requirements of the course or who have been excessively absent may be considered to have withdrawn unofficially and may be given the final grade of F. See "Withdrawing From Courses," above.

Religious Holidays and Attendance

NYU, as a nonsectarian institution, and NYU Shanghai, as a degree granting campus of NYU, adhere to the general policy of including in its official calendar only certain legal holidays. However, it has also long been NYU policy that members of any religious group may, without penalty, absent themselves from classes when compliance with their religious obligations requires it. In 1988, the NYU University Senate affirmed this policy and passed a resolution that elaborated on it as follows:

1. Students who anticipate being absent because of any religious observance should, whenever possible, notify faculty in advance of such anticipated absence.
2. Whenever feasible, examinations and assignment deadlines should not be scheduled on religious holidays. Any student absent from class because of religious beliefs shall not be penalized for any class, examination, or assignment deadline missed on that day or days.
3. If examinations or assignment deadlines are scheduled, any student who is unable to attend class because of religious beliefs shall be given the opportunity to make up that day or days.
4. No adverse or prejudicial effects shall result to any student who avails himself or herself of the above provisions.

Policy on Class Conduct

Students are expected to attend all scheduled classes unless the instructor explicitly informs the class that other ways of doing the work are acceptable. The action to be taken in regard to tardiness, absence from class or making up late work is the responsibility of the individual instructor; the instructor should consult with the students' Academic Advisor and the Assistant Dean for Academic Affairs if major action, such as dropping the student from the course, is being considered.

All classes will be held at their scheduled hour on days immediately before and after all holidays and recesses. Both faculty and students are expected to be present.

Students are permitted to be absent from classes to participate in authorized contests, conferences, and presentations, either at home or out of town, provided the following conditions are met:

- All work missed must be made up to the satisfaction of the instructor(s) concerned;
- No trip shall involve an absence of more than two days, excluding days when classes are not scheduled;
- The total number of days of absence shall not exceed six per sport or per organization annually;
- Each student will obtain an absence authorization signed by the Assistant Dean for Academic Affairs. The student will present this authorization to the instructor. This is not an excuse for work missed.
- Students who, because of religious beliefs, cannot attend class may arrange in advance on an individual basis to be absent, provided the work missed is made up in a manner satisfactory to the instructor(s) of the class(es) missed.

Technology affords many students access to portable devices including cell phones, PDAs, and laptops. It is expected that students will respect the wishes of faculty with regard to the use of electronic devices within the academic environment.

No student shall leave a scheduled exercise because of the absence of the instructor until a reasonable time has passed. By tradition and as a matter of courtesy, a student should wait 10 minutes before leaving.

Authorized Contests, Conferences, and Presentations

Authorized contests, conferences, and presentations are those approved by the Assistant Provost for Academic Affairs. Authorized contests are limited to athletic games and matches involving official NYU Shanghai sports teams and to students on the active team roster; and academic competitions sponsored by an NYU Shanghai Academic Dean and to students selected to represent NYU Shanghai at the competition. Authorized conferences are limited to conferences sponsored by an NYU Shanghai Academic Dean and to students selected by NYU Shanghai to attend the conference (this is in addition to any selection process that the conference might have). In some cases limited funding may be available to students selected to attend a conference. Funding is not available to attend conferences to which all qualified NYU Shanghai students did not have an opportunity to apply for selection. Academic Affairs only provides funding for academic conferences; non-academic conferences, including those focusing on leadership, are sponsored through Student Life and do not allow students approved absences from classes. Authorized presentations are limited to those at forums sponsored by an NYU Shanghai Academic Dean and presenters to those approved by NYU Shanghai. In some cases limited funding will be available to students selected for a presentation.

CREDIT

Credit for Advanced Placement Examinations

NYU Shanghai does not assign credit for the Advanced Placement (AP) Program (College Entrance Examination Board), the International Baccalaureate (IB) Program, or the results of foreign maturity certificate examinations. In some cases students may be able to substitute a higher level course for an introductory course based on their performance on one of these tests.

Credit for Courses at NYU Shanghai

To receive credit for a course, the student must register before attending, meet the requirements for attendance, and creditably complete all examinations and assignments prescribed by the instructor. For exceptional students, some majors also offer independent study.

Students receive credit for any course passed with at least a D or a P grade. Courses may not be used to meet major or minor requirements or as prerequisites for more advanced classes unless a grade of C or higher is earned. This means that grades of P or C- and lower may not be used to meet major or minor requirements or as a prerequisite for more advanced courses.

Restrictions on Receiving Credit (Including Course Repeat Policy)

A student who has taken a course for credit or who has obtained a W in a course is permitted to repeat that course once. Students may not repeat more than two courses during their undergraduate careers. Students may not repeat courses in a designated sequence after taking more advanced courses. The majors determine the sequencing of courses. Students with questions regarding the repetition of courses or course sequences must consult with the particular major offering the course. When a student repeats a course, no additional credit is awarded. Both grades appear on the transcript and are averaged to be computed in the grade point average.

Credit for Courses at Other Schools and Divisions of New York University

NYU 1000-level graduate courses may be taken with approval of the graduate program and NYU Shanghai undergraduate major and following the practices of that bulletin, and 2000-level graduate courses may be taken with written approval of the instructor. If graduate courses are applied toward the completion of requirements for the baccalaureate degree, no advanced credit is allowed for them in the Graduate School.

It is also possible for students to take courses in other undergraduate divisions of NYU and to have credits for these courses applied to the degree in NYU Shanghai.

Students may take a total of 32 points in other divisions, including any courses for particular minors approved by NYU Shanghai. Students seeking additional non-Core credits beyond the 32 point limit must file a petition with the NYU Shanghai Academic Standards Committee in the Office of Academic Affairs. This requirement applies to students seeking a third semester away within the global network. In this case the student would submit a plan for their semester(s) abroad for approval.

Please note that restrictions apply. For details, students must check with their advisor before registering for any courses in other divisions. If a course is not approved in advance, students will not receive credit for it. Independent study or internship courses taken in other divisions of NYU do not count toward the NYU Shanghai degree. If such courses are taken at schools outside NYU, the credit will not transfer to NYU Shanghai.

Also excluded from credit toward the degree are any courses taken in NYU's School of Professional Studies.

Credit for Internet and online courses [from other divisions or schools of NYU] will not be counted toward the baccalaureate degree.

Credit for Transfer Students

NYU Shanghai does not presently accept transfer applicants.

Credit for Non-NYU Study Abroad

Students may not be registered at another university at the same time that they are registered in NYU Shanghai. Once admitted to NYU Shanghai, students must take all courses on campus or during an approved study abroad semester at one of NYU's Global Academic Centers or exchange partners, including those they need or wish to take during the summer. Exceptions are granted only rarely and only for good academic reasons. Requests for a waiver should be made by submitting a petition to the NYU Shanghai Committee on Academic Standards.

Summer Session

Students who elect to take summer courses for credits must take them on campus or at one of NYU's Global Academic Centers, including NYU New York, NYU Abu Dhabi, or one of NYU's study away sites. Exceptions are granted only rarely and only for good academic reasons. Requests for a waiver should be made by submitting a petition to the NYU Shanghai Committee on Academic Standards.

EXAMINATIONS AND GRADES

Policies on Examinations

Preamble

The following policies represent an understanding between faculty and student concerning an important but often stressful period, especially at the conclusion of each academic semester and at mid-semester. There should be no expectation that the following points will cover every conceivable situation. The student should anticipate the demands of the exam schedule, plan accordingly and early, and be prepared. The faculty should recognize that the student is encumbered with many tightly orchestrated and intensive obligations during this period over which he or she has no control: expectations should be reasonably consistent with the number of course units and, of course, should be made known to the student well in advance of the final examination period, preferably as part of the course syllabus.

In order to help students plan their time and study optimally for examinations, this document lays out in some detail the policies regarding final and in-term examinations. Instructors are requested to provide notification of the major in-term examinations in the course syllabus. The final examination date is posted early in the semester. It is the responsibility of the student to give his or her instructor sufficient notice and to work with the instructor to reschedule examinations if this is needed.

Definitions

- NYU Shanghai's official final examination period begins on the reading day immediately following the last day of classes and continues through the last day of scheduled final examinations, with the exception of reading day(s).
- Scheduled final examinations are those scheduled by the Registrar. An instructor may choose not to fix a schedule for final examination, but instead allow each student to choose the examination time; such exams are called self-scheduled examinations.
- Final examinations can either be comprehensive, covering all course materials, or non-comprehensive, covering only a part of the course.
- Major examinations during the semester are referred to here as in-term examinations.

In-term Examinations

In-term exams may only occur during regularly scheduled class hours. This means that exams may not run longer than the regular class period for the course and that instructors may not schedule alternative exam times. It is possible to administer an exam that takes longer than scheduled class times if the instructor divides the test into two parts and students take them over different class dates.

The only exception to the in-term testing policy is for students with identified learning disabilities that cause them to need additional time for tests.

Student may not be required to take more than two full-period in-class or out-of-class examinations on the same day. It is the responsibility of the student to notify the instructors in a timely manner of his/her circumstance so that appropriate accommodations can be made.

Final Examinations

1. All scheduled final examinations are held at the end of the semester during NYU Shanghai's official final examination period. The last day of a class is not normally used for a final examination. Comprehensive final examinations are not required for each course, but are given at the option of the instructor. The reading day and weekend preceding the examination days are not used for examination purposes of any kind, unless a student chooses (and the instructor agrees) to take a self-scheduled examination during this time. Non-comprehensive final examinations or final projects (but not both) are allowed during this final examination period only in courses that do not give a final comprehensive examination.
2. Instructors return all work assigned no later than the last regular day of classes in courses for which there is a final examination. In cases when this is not possible, an answer key, solution sets or equivalent feedback should be provided unless the final examination will not cover material in work that has not been returned.
3. No other coursework, including laboratory or studio work, will be due during the final examination period unless it is assigned in advance and in lieu of the course's final examination. Regardless of whether there is a final examination in the course, no classes other than review sessions are held during the final examination period. Review sessions are scheduled for optimal attendance, and a serious effort should be made to accommodate students who cannot attend. In appreciation of the time required to prepare for final examinations, no other examinations, portfolio reviews, critiques or juries shall be scheduled for the last class day of a course with a final examination.
4. Instructors do not exert or submit to pressures to move an examination so that people can leave earlier nor pressure students to take an examination on a reading day or weekend preceding examinations.
5. No student is required to take more than two scheduled final examinations that start within a 25-hour period. A student who has more than two final examinations scheduled within a 25-hour period or has two final examinations scheduled at the same time should first contact the instructors of the courses for assistance in resolving conflicts. If the problem cannot be resolved by that means, the student should contact the Assistant Dean for Academic Affairs.
6. Take-home final examinations shall be given for any 24-hour period of the student's choosing during the final examination period.
7. Students are expected to present themselves at the place assigned at the start of the examination; late arrival will reduce the total time a student has to complete the examination, unless the instructor's course policy indicates otherwise. Instructors reserve the right to require attendance within a specific time period. Students who miss an examination with a reasonable excuse and wish to petition for a make-up final examination should check with the instructor.
8. Any student may review his or her corrected, graded final examination in the presence of an instructor or a teaching assistant. Any controversy arising from this review is dealt with in accordance with NYU Shanghai procedure for the appeal of grades and academic actions. A final examination that is not returned to a student will be kept available until the end of the next semester for review. In the event that the instructor or teaching assistant is not available for the review, the responsibility shall rest with the major leader of the instructor offering the course or his or her designee. Since instructors return all work assigned before the final examinations, they are not responsible for retaining unclaimed coursework.
9. Concerns related to final examination, complaints about violations of the final examination policy or alterations of the final examination schedule should be directed to the students' Academic Advisor or to the Assistant Dean for Academic Affairs.

NYU Shanghai Student Guidelines for Taking Exams

NYU Shanghai has developed the guidelines below for in-class tests worth 10% or more of the final grade in a class so that students will share a uniform test taking experience that creates a quiet, less stressful, and fair test site.

1. Tests that are worth more than 10% of the final grade will be held in a room or rooms that provide at least twice as many seats as students enrolled in the class.
2. Students follow an assigned seating chart for the test that randomizes the classroom and seating assignments for students. Students are seated in *every other seat* so they are not in close proximity to others taking the same exam.
3. The tests are pre-marked with each student's name and assigned seat.
4. Students should arrive at the classroom *at least 5 minutes* before the exam starts.
5. Students must leave their backpacks/purses/bags/laptops at the front of the room – taking with them to their seat only something to write with (no pencil cases are allowed). *(If other materials are permitted, the instructor will inform the proctors of specifically what is allowed.)*
6. Students must leave all hats, coats, and jackets at the front of the room as well. Students who normally wear scarfs for faith or cultural reasons may do so but must alter to expose ears.
7. An unlabeled bottle of water is permissible; food/gum/candy is not.
8. Any student who is NOT taking the exam should not be in the test room.
9. Proctors are not responsible for supplying any test-taking materials (pencils, calculators, etc.) to students who have arrived unprepared for the exam.
10. All mobile phones should be switched off and left at the front of the room, so that students do not have access to them during the exam. *If a student is found with their mobile phone with them during the exam, this will be considered a violation of the exam guidelines.*
11. A quiet test environment must be maintained. Students are not allowed to speak to each other (even to request to borrow a pencil from another student). If students need to speak, they should raise their hand and wait for the proctor to come over to them and help them with whatever question or problem they have.

12. The start time and finish time will be written on the board at the front of the room. Updating the time remaining (in 15 minutes intervals) throughout the exam on the board, so that students may gauge their progress and manage their time during the exam.
13. Any student arriving late will be permitted to take the exam, but they will finish at the pre-arranged time and will not be given any extra time.
14. Students must sit in their assigned seat with their named test. They have to show a proctor their NYU Shanghai University ID if asked.
15. Students in the wrong test room must go to the correct test room even if that means they start the test late.
16. Students cannot move their seat. There needs to be enough space between seats so that the purpose of the *every other seat* protocol is met.
17. Bathroom breaks are permitted only in what the proctor deems is an emergency. When permitted, the back-up/relief proctor will escort the student to and from the bathroom. When this is not possible, the proctor will note the time that the student left the exam room, and when they returned.
18. If a student finishes an exam early, they may leave the room once they have turned in their exam papers. They will not be readmitted once this occurs.
19. In the last 15 minutes of the exam, the remaining time left will be updated in 5 minute intervals.
20. Once time is up, the exam is finished and students must stop working. *The proctor will make a note of individuals who did not stop working when told to and report this to the instructor.*
21. All exam materials (answer sheets, scratch paper, test question paper) are to be collected by the proctor. Students should not leave the room with any test materials.

Penalties for Students Violating the Protocols

- The penalty for the first violation of test protocols (sitting in wrong seat, in possession of non-approved test taking materials, talking, failure to show their NYU Shanghai University ID when requested, etc.) is a letter grade reduction on exam.
- Additional violations or refusal to comply with protocols will lead to additional penalties.
- Test protocol penalties are independent of, and in addition to, penalties for academic integrity violations. Both types of penalties are applied in as confidential a manner as circumstances permit.

Makeup Examinations

When final examinations are missed because of illness, a doctor's note must be presented to the instructor, who decides if a request for a grade of Incomplete is warranted. See below for an outline of procedures for taking makeup examinations.

As noted under "Grades" (next page) a student who cannot take the final examination in a course at the regularly scheduled time may be given the grade of Incomplete. The student must discuss the reasons for missing the examination with the instructor and, in the case of illness, must submit a doctor's note to the instructor. The student must ask the instructor to give a grade of Incomplete. Incompletes are not awarded automatically. The time and place of any makeup examinations are set by the instructor or the major leader.

Incomplete grades received because of a missed final examination must be removed within the semester following the one in which the Incomplete was received. In the case of students who are out of attendance, such grades must be removed within one year after the end of the course concerned. An Incomplete is a temporary grade, if it is not replaced within the time limit by a grade submitted by the course instructor it becomes an F or the default grade indicated by the instructor and is computed in the grade point average. (Regarding the removal of Incompletes received for missed work other than final examinations, see next page under "Grades" and "Incompletes.")

Grades

Students may obtain their final grades for each semester on Albert via NYUHome at home.nyu.edu. The parents or guardian of a student who is a minor (under 18 years of age) may, on a written request to the Office of the NYU University Registrar, obtain the student's grades at any time.

The following symbols indicating grades are used: A, B, C, D, P, F, and W. The following symbol indicates incomplete work: I. Only grades of A, B, C, D, or F earned in any NYU course while matriculated in NYU Shanghai, or earned in any of NYU Shanghai's courses (courses suffixed by "-SH") while matriculated in another division of NYU, are computed in the average. The following grades may be awarded: A, A-, B+, B, B-, C+, C, C-, D+, D, F. In general, A indicates excellent work, B indicates good work, C indicates satisfactory work, and D indicates passable work and is the lowest passing grade. F indicates failure. The weights assigned in computing the grade point average are as follows:

A	4.0
A-	3.7
B+	3.3
B	3.0
B-	2.7
C+	2.3
C	2.0
C-	1.7
D+	1.3
D	1.0
F	0.0

Computing the Grade Point Average

The grade point average can be obtained by determining the total of all grade points earned (quality points) and dividing that figure by the total number of credit hours completed (quality hours). For example: A student who has completed 8 points of A (4.0), 4 points of B (3.0), and 4 points of C (2.0) has a grade point average of 3.25. This is obtained by adding 8 (points of A) x 4.0 (point value of A), 4 (points of B) x 3.0 (point value of B), and 4 (points of C) x 2.0 (point value of C), which totals 52

(the total of all grade points earned), and then by dividing 52 by 16 (the total number of credit hours completed). This gives the grade point average of 3.25.

Policies on Assigned Grades

Once a final grade has been submitted by the instructor and recorded on the transcript, the final grade cannot be changed by turning in additional course work.

To appeal an assigned grade (only final semester grades are assigned grades, mid-term and individual assignment and paper grades are not appealable) the student should first consult with the instructor who assigned the grade to discuss the grading requirements for the course and how the grade was determined. If the student is not satisfied with the outcome of the discussion and wishes to appeal the grade further, a formal written appeal should be submitted to the Assistant Dean for Academic Affairs within one month of the date the grade was posted. An independent review of the grade will be undertaken. All of the student's work will be reviewed to clarify how the grade was determined and to ensure the grade is consistent with academic guidelines and policies. The result of the appeal may be that the grade is lowered, raised, or stays the same. The decision of the Assistant Provost for Academic Affairs in matters related to a course grade is final.

In the case of a course that has been repeated, both grades are recorded on the transcript and averaged together to be computed in the grade point average.

The grades for courses taken abroad in one of NYU's programs or at one of the exchange sites are recorded on the transcript and are also included in the grade point average. The grades for graduate and professional courses taken at other divisions in the University are included in the grade point average, provided that permission to enroll is obtained prior to registration for the courses.

Not included in the undergraduate grade point average are grades for work done at institutions outside NYU's global network.

Grade of P

The grade of P (Pass) indicates a passing grade (A, B, C, or D) in a course taken under the pass/fail option. It is also used to indicate non-graded courses. The grade of P is not computed in the average. The grade of F under the pass/fail option is computed in the average. For more information and procedures to obtain the pass/fail option, see end of this section under "Pass/Fail Option."

Grade of W

The grade of W indicates an official withdrawal of the student from a course in good academic standing. Please see "Change of Program" and "Withdrawing from Courses," above, for information on the regulations and procedures for withdrawing officially from courses.

Grade of I

The grade of I (Incomplete) is a temporary grade that indicates that the student has, for good reason, completed all but a single requirement or a small amount of the course work, and that there is the possibility that the student will eventually pass the course when all of the requirements have been completed. A student must ask the instructor for a grade of I, present documented evidence of illness or the equivalent, clarify the remaining course requirements with the instructor, and receive approval from the Assistant Dean for Academic Affairs.

The Incomplete grade is not awarded automatically. It is not used when there is no possibility that the student will eventually pass the course. If the course work is not completed and a grade submitted by the course instructor before the statutory time for making up incompletes has elapsed, the temporary

grade of I becomes an F or the default grade indicated by the instructor and is computed in the student's grade point average.

Incompletes

All work missed in the fall term or in a January term session must be made up by the end of the following spring term. All work missed in the spring term or in a summer session must be made up by the end of the following fall term. Students who are on a leave of absence in the semester following the one in which the course was taken have one year to complete the work. Students should contact their advisor for an Extension of Incomplete Form, which must be approved by the instructor. Extensions of these time limits are rarely granted.

Independent Study

Some majors offer independent study courses for students with exceptional qualifications. In these courses, the work is planned specifically for each student. Independent studies should build on previous course work, not replace existing courses, and may not substitute for major core requirements. With prior approval they may count for general elective, minor, or major elective requirements.

Independent study courses allow the student to work independently with faculty supervision and counsel. The courses typically carry variable credit of 2 or 4 points each term. They are normally limited to upper-class majors but may be open to other well-qualified upper-class students. To register for independent study, a student must have written approval of the Assistant Dean for Academic Affairs.

The result of the independent study course should be a paper or other objective, tangible evidence of completion of the work. In general, students are not permitted to take more than 12 points of independent study and/or internship during their four years, and no more than 8 points may be

taken in any one major. Internships and/or independent study courses taken in other divisions of the University or at other universities do not count toward the College degree. More specific information can be found under the individual major descriptions.

LEAVE OF ABSENCE

General Leave

If a student and their advisor agree that a leave of absence is the best way to proceed given the student's situation, the advisor will assist in the withdrawal from the semester and processing a leave of absence. A student needs to make an appointment with their advisor to discuss his or her particular situation and review the terms of the leave of absence.

A student may request a leave of absence for the fall/spring semester, and must make his or her request prior to the end of the third week of the semester he or she wishes to be on leave. A student who requests a leave after that deadline or who has been out of attendance without first being granted a leave must apply for readmission. Also note that leaves are not granted retroactively for past semesters.

There are no leaves of absence for the summer and January terms, as enrollment during these terms is not required to maintain matriculation in NYU Shanghai.

A student granted a leave within the deadline does not have to make a formal application for readmission as long as he or she returns to the College within the agreed-upon time (a maximum of two semesters during a student's academic career). Students who attend another college during the leave may not transfer the credit to NYU Shanghai.

Students are advised to inquire how the leave of absence may affect their scholarship and financial aid award and should contact the Financial Aid Office. If students are on probation when the leave

is granted, they will return on probation. Students out of attendance who did not apply for a leave and who wish to return to NYU Shanghai must apply for readmission. (See the Admission section of this Bulletin.)

Students on leave are expected to absent themselves from campus during their leave of absence. They may not audit classes, hold a campus job, participate with a student club or organization, attend University events, and may visit campus only for scheduled appointments with University faculty or staff.

Psychological and Medical Leave

If a student and a counselor or a physician agree that a psychological or medical leave of absence is the best way to proceed given the situation, the counselor or physician should make a recommendation to the Assistant Provost for Academic Affairs. A student needs to complete the Leave of Absence Petition form, which can be obtained at the Office of Academic Advising. Leave of absence petitions are accepted and reviewed on a rolling basis throughout the academic year.

A Certification of Readiness to Return to School from a Leave of Absence form should be completed by the counselor/therapist or physician, who needs to state clearly that the student is ready to return and that NYU Shanghai is a suitable environment in which to continue his or her academic work. The student must also schedule an appointment with a counselor/therapist or physician at the NYU Shanghai Health & Wellness Center prior to receiving approval to return. A student granted a leave does not have to make a formal application for readmission as long as he or she returns to NYU Shanghai within the agreed-upon time (a maximum of two semesters during a student's academic career). Students who attend another college during the leave may not transfer the credit to NYU Shanghai.

Students are advised to inquire how the leave of absence may affect their

scholarship and financial aid award and should contact the Office of Financial Aid. If students are on probation when the leave is granted, they will return on probation. Students out of attendance who did not apply for a leave and who wish to return to the College must apply for readmission. (See the Admission section of this Bulletin.)

Students on leave are expected to absent themselves from campus during their leave of absence. They may not audit classes, hold a campus job, participate with a student club or organization, attend NYU Shanghai events, and may only visit campus for scheduled appointments with NYU Shanghai faculty or staff.

Pass/Fail Option

Students may elect one pass/fail option each term, including the summer sessions, for a total of not more than 32 points during their college career. The choice must be made before the completion of the 9th week of the term (fourth week of a six-week summer session); after that time, the decision cannot be initiated or changed. No grade other than P or F will be recorded for those students choosing this option. P includes the grades of A, B, C, and D and is not counted in the average. F is counted in the average.

The pass/fail option is not acceptable in the major, the minor, or any of the courses taken in fulfillment of the Core Curriculum requirements. Students considering the pass/fail option in their area of study or in required preprofessional courses should consult with their advisor about the effect of such grades on admission to graduate and professional schools. Students who change their majors may not be able to use courses taken under the pass/fail option to satisfy the requirements of their new majors. The form for declaring the pass/fail option may be obtained from the student's advisor.

Petitions

The NYU Shanghai Academic Standards Committee will consider petitions of students to waive requirements or modify policies and regulations of NYU Shanghai. Students should be aware that only very exceptional cases, supported by valid and documented reasons, will be considered. After deliberation, the Committee's decisions on such matters are final. Petition forms may be obtained in the Advising Office.

*Placement
Examinations,
Degree Progress and
Transcripts*

Placement Examination for Chinese Language

Testing and Placement

Entering students who are not native speakers of Mandarin take a written proficiency/placement survey or exam prior to their first registration in NYU Shanghai. Tests can result either in an exemption from the Chinese-language requirement or in placement into the appropriate-level course. Placement into a lower-level course means that the student must continue his or her studies of Chinese until successful completion of the intermediate two level of Chinese or achievement of equivalent competency. In some cases, adjustments in placement may be made during the first weeks of class. Information on placement testing can be obtained from the Office of Academic Advising.

Placement Examination for English Language

Testing and Placement

Entering students who did not attend a high school where English was the primary language of instruction are placed in an English for Academic Purposes (EAP) and Writing Workshop. In some cases, adjustments in placement may be made during the first weeks of class. Information on placement testing is communicated to matriculating students prior to freshmen orientation.

Quantitative Reasoning

All students will take a math course based on placement from evaluating their quantitative background. A student who wishes to place into a higher level math class will have the opportunity to take a math placement examination during freshmen orientation.

Degree Progress

All students have access to their Degree Progress Report, as generated by the Office of the NYU University Registrar, on Albert via NYUHome at home.nyu.edu. The Degree

Progress Report is a Student Information System (SIS) accounting of completed and remaining degree requirements.

Transcripts of Record (subject to change based on new electronic transcript)

Unofficial transcripts are available on Albert, NYU's online registration and information system. Albert can be accessed via NYUHome.

Students requiring a stamped and sealed copy of their New York University records should request an official copy of their NYU transcript from the Office of the NYU University Registrar. Requests for official transcripts require the signature of the student/alumnus requesting the transcript, unless the student/alumnus has a valid NetID.

Current students and graduates with a valid NYU NetID (able to access NYUHome/Albert) who attended NYU in or after 1990 can request an official transcript from the Albert Student Center. The Official Transcript form can be found under the My Academics section of the Student Center.

Before completing their transcript request, current students should check to ensure that all their grades have been posted. Recent graduates should check to ensure that their degree has been recorded.

Any transcript request that requires any special handling must go through the Secure Online Transcript Request Form (see above) and cannot be requested on Albert. Special handling includes: (1) sending transcripts by express mail; (2) transcripts sent to the student or alumnus in separate sealed envelopes addressed to admissions offices of other universities; (3) including additional documents to be sent along with the NYU transcript.

There is never any charge for academic transcripts. Transcripts cannot be produced for anyone whose record has been put on hold for an outstanding NYU Shanghai obligation.

Rank in Class

NYU Shanghai neither records nor reports students' class, college, or department rank. In an institution where students' educational experiences are so varied, class rank is not a meaningful way to measure achievement. An explanatory note to that effect is attached to the transcript.

Requesting Enrollment Verification

Students can view/print their own enrollment certification directly from Albert using the integrated National Student Clearinghouse student portal. This feature can be accessed from the "request enrollment verification" link in the My Academics section of the Student Center. Eligible students are also able to view/print a Good Student Discount Certificate, which can be mailed to an auto insurer or any other company that requests proof of status as a good student (based on the cumulative GPA).

Verification of enrollment or graduation may also be requested by submitting a signed letter with the following information:

- NYU Shanghai University ID number
- Current name and any name under which the student or graduate attended NYU
- Current address
- Date of birth
- School of NYU attended (i.e., NYU Shanghai)
- Dates attended
- Date of graduation
- The full name and address of the person or institution to which the verification is to be sent

The Registrar accepts requests for certification by e-mail from the student's NYU account at *shanghai.registrar@nyu.edu*.

Arrears Policy

NYU Shanghai reserves the right to deny registration and withhold all information regarding the record of any student who is in arrears in the payment of tuition, fees,

loans, or other charges (including charges for housing, dining, or other activities or services) for as long as any arrears remain.

Diploma Arrears Policy

Diplomas of students in arrears will be held until their financial obligations to NYU Shanghai are fulfilled and they have been cleared by the Bursar. Graduates with a diploma hold may contact the Office of the Bursar to clear arrears or to discuss their financial status at NYU Shanghai.

Diploma Application

Students may officially graduate in September, January, or May. The all-NYU University Commencement ceremony is held in May. NYU Shanghai holds a baccalaureate ceremony in May. Students must apply for graduation on Albert, and they must be enrolled for either course work, leave of absence, or maintenance of matriculation during their final semester.

To graduate in a specific semester, students must apply for graduation within the application deadline period indicated on the calendar available at the [Office of the NYU University Registrar's Web page](#). It is recommended that students apply for graduation no later than the beginning of the semester in which they plan to complete all program requirements. Students who do not successfully complete all academic requirements by the end of that semester must reapply for graduation for the following cycle.

Academic Standards and Discipline

The Academic Standards & Discipline policies of NYU Shanghai are summarized here. Unless otherwise noted, students should direct all questions or concerns regarding these policies to their Academic Advisor, who will liaise with the appropriate members of the university administration as needed.

Academic Standards

The NYU Shanghai Academic Standards Committee reviews student records throughout the academic year. All of its actions are based on the grades to date at the end of the term.

Academic Warning

Students with cumulative grade point averages of 2.0 to 2.25 will receive an academic warning letter reflecting the committee's specific recommendations for achieving an appropriate standard for academic performance. Students who are on academic warning are invited and encouraged to participate in the Academic Support Program to support them in improving their GPA.

Academic Probation

Any student whose record is deemed unsatisfactory will be placed on academic probation and will be so informed by letter. A record will be deemed unsatisfactory if, in any semester, the cumulative or semester grade point average falls below 2.0 or if it fails to show steady and substantial progress toward the degree. Steady and substantial progress toward the degree entails the completion, with satisfactory grades, of more than half of the courses (and points) for which a student registers in any semester. In addition, it entails satisfactory progress in the student's major.

Failure to satisfy the conditions of probation will result in further academic sanctions and possibly dismissal from NYU Shanghai. The conditions usually require that the student (a) achieve a grade point average of at least 2.0 during the term he or she is on probation, (b) not receive any grade below a C or any grade of I, and (c) not withdraw from any course without securing the permission of the NYU Shanghai Academic Standards Committee prior to the withdrawal. Students on academic probation are also required to have a special probation interview with their advisor to receive registration

clearance for the next semester. More specific requirements may be imposed.

Students on academic probation may engage in co-curricular activities but may not hold office in these clubs or organizations without the approval of the NYU Shanghai Academic Standards Committee.

Students on academic probation should be aware that they are usually ineligible for financial aid.

Students who are on academic probation are required to participate in the Academic Support Program.

Suspension

If a student fails to meet the minimal standards stated above at the end of the probation semester, the school will suspend them. Suspension is for a minimum of two semesters (Fall/Spring or Spring/Fall) and the student is required to follow NYU Shanghai procedures for departing from campus.

Suspended students may not:

- register for courses
- attend classes
- live in residence halls
- use campus facilities, including athletic facilities, library and computer clusters (this includes all NYU facilities in other cities as well)
- participate in student activities
- be members of student organizations
- have student jobs

(Note: students on academic suspension may appeal to complete a summer course or hold a summer campus job if they started the class or job before they were suspended.)

At the end of the two semesters, the student may petition to return to NYU Shanghai by completing the following steps:

1. Ask the Assistant Provost for Academic Affairs in writing for permission to resume their studies.
2. Submit a completed Return from Leave of Absence Form to the registrar.
3. Provide transcripts for any courses taken at other colleges or universities during the suspension even though academic credits earned during a suspension do not transfer back to NYU Shanghai.

To get approval to resume their studies the student must demonstrate that they are better prepared to perform above the minimum standards for graduation than before they were suspended. Students return from suspension on probation. They may only resume studies during a fall or spring semester.

Academic Dismissal

A student who fails to meet minimum standards at any point after returning from a suspension is subject to a dismissal action. A dismissal action is a permanent severance; the student is required to follow NYU Shanghai procedures for departing from campus and may not enroll again in the future.

The typical progression of academic actions is Probation, Suspension, then Dismissal but the intent of the academic actions are to take measures that are in the student's best interest and therefore the school may bypass one or more of these steps in an unusual case.

Students suspended or dismissed from NYU Shanghai for failing to meet academic performance standards will be informed via e-mail two to three weeks after their most recent grades are posted for the enrolled semester. Students who have paid tuition for the next term at the time of dismissal will receive a full refund of tuition and fees.

ACADEMIC INTEGRITY

This policy sets forth core principles and standards with respect to academic integrity for students at NYU Shanghai.

NYU [Shanghai] is a “community of the mind.” Its students, faculty, and staff all share the goal of pursuing truth through free and open inquiry, and we support one another’s endeavors in this regard. As in any community, membership comes with certain rights and responsibilities. Foremost among these is academic integrity. Cheating on an exam, falsifying data, or having someone else write a paper undermines others who are “doing it on their own”; it makes it difficult or impossible to assess fairly a student’s interest, aptitude, and achievement; and it diminishes the cheater, depriving him or her of an education. Most important, academic dishonesty is a violation of the very principles upon which the academy is founded. For this reason, violations of these principles are treated with the utmost seriousness.

At NYU [Shanghai], a commitment to excellence, fairness, honesty, and respect within and outside the classroom is essential to maintaining the integrity of our community. By accepting membership in this community, students take responsibility for demonstrating these values in their own conduct and for recognizing and supporting these values in others. In turn, these values will create a campus climate that encourages the free exchange of ideas, promotes scholarly excellence through active and creative thought, and allows community members to achieve and be recognized for achieving their highest potential.

In pursuing these goals, NYU [Shanghai] expects and requires its students to adhere to the highest standards of scholarship, research and academic conduct. Essential to the process of teaching and learning is the periodic assessment of students’ academic progress through measures such as papers, examinations, presentations, and other projects. Academic dishonesty compromises the validity of these assessments as well as the relationship of trust within the community. Students who engage in such behavior will be subject to review and the possible imposition of penalties in accordance with the standards, practices, and procedures of NYU [Shanghai] and its colleges and schools. Violations may result in failure on a particular assignment, failure in a course, suspension or expulsion from NYU Shanghai, or other penalties.

Faculty are expected to guide students in understanding other people’s ideas, in developing and clarifying their own thinking, and in using and conscientiously acknowledging resources - an increasingly complex endeavor given the current environment of widely available and continually emerging electronic resources. In addition, students come to NYU [Shanghai] from diverse educational contexts and may have understandings regarding academic expectations that differ from those at NYU [Shanghai]. NYU values and respects all academic traditions; however, while at NYU [Shanghai], students are expected to adhere to the norms and standards of academic integrity espoused by the NYU [Shanghai] community and will be assessed in accordance with these standards. Students should ask their professors for guidance regarding these standards as well as style guide preferences for citation of sources for assignments in their courses.

Following are examples of behaviors that compromise the academic and intellectual community of NYU [Shanghai] and are unacceptable.

1. Plagiarism: presenting others' work without adequate acknowledgement of its source, as though it were one's own. Plagiarism is a form of fraud. We all stand on the shoulders of others, and we must give credit to the creators of the works that we incorporate into products that we call our own. Some examples of plagiarism:
 - a sequence of words incorporated without quotation marks
 - an unacknowledged passage paraphrased from another's work
 - the use of ideas, sound recordings, computer data or images created by others as though it were one's own

2. Cheating: deceiving a faculty member or other individual who assess student performance into believing that one's mastery of a subject or discipline is greater than it is by a range of dishonest methods, including but not limited to:
 - bringing or accessing unauthorized materials during an examination (e.g., notes, books, or other information accessed via cell phones, computers, other technology or any other means)
 - providing assistance to acts of academic misconduct/dishonesty (e.g., sharing copies of exams via cell phones, computers, other technology or any other means, allowing others to copy answers on an exam)
 - submitting the same or substantially similar work in multiple courses, either in the same semester or in a different semester, without the express approval of all instructors
 - submitting work (papers, homework assignments, computer programs, experimental results, artwork, etc.) that was created by another, substantially or in whole, as one's own
 - submitting answers on an exam that were obtained from the work of another person or providing answers or assistance to others during an exam when not explicitly permitted by the instructor
 - submitting evaluations of group members' work for an assigned group project which misrepresent the work that was performed by another group member
 - altering or forging academic documents, including but not limited to admissions materials, academic records, grade reports, add/drop forms, course registration forms, etc.

3. Any behavior that violates the academic policies set forth by NYU Shanghai.

New York University Shanghai Honor Code (adopted from the CAS Honor Code)

As a student in NYU Shanghai, you belong to a community of scholars who value free and open inquiry. Honest assessment of ideas and their sources is the foundation of what we do.

NYU Shanghai is a community of mutual trust and respect in which personal prejudice has no part in the critical evaluation of ideas. It is a place where differences of opinion can be subjected to deliberate and reasonable examination without animus.

As scholars, it is therefore as a matter of honor and good repute that we each commit ourselves to assuring the integrity of our academic community and of the educational pursuits we undertake together.

As a student in NYU Shanghai, I pledge that:

- I will perform honestly all my academic obligations. I will not represent the words, works, or ideas of others as my own; will not cheat; and will not seek to mislead faculty or other academic officers in their evaluation of my course work or in any other academic affairs.
- I will behave with decorum and civility, and with respectful regard for all members of the University—faculty, staff, and fellow students—our guests, and members of our wider communities.
- I will abide by NYU Shanghai and by NYU rules of conduct and policies on academic integrity and by the special requirements of any individual course of study or other academic activity.
- I will endeavor earnestly to uphold the values, standards, and ideals on which our university community depends and call on others to do so.

Procedures and Sanctions

The penalty for academic dishonesty is severe. The following are the procedures followed at NYU Shanghai:

1. If a student cheats on an examination or in laboratory work or engages in plagiarism, appropriate disciplinary action should be taken. The following actions may be taken:
 - a. The faculty member, with the approval of the Assistant Dean for Academic Affairs, may reduce the student's grade or give the student an F in the course.
 - b. If after lowering the grade or assigning an "F", the faculty member or the Assistant Dean for Academic Affairs believes a more severe penalty (i.e., probation, suspension, or expulsion) is warranted, they can refer the case to the Assistant Dean for Academic Affairs for further action.

2. In all cases of either (a) or (b), the Assistant Dean for Academic Affairs will inform the student of any action in writing and send a copy of this letter to the Assistant Provost for Academic Affairs. The letter will include the nature of the offense, the penalty, and the right of the student to appeal such penalty. A copy of the letter will be kept in a confidential file and not in the student's major file. The Assistant Provost for Academic Affairs' office copy will also be kept in a confidential file. (The professor and/or the Assistant Dean for Academic Affairs will meet with the student and discuss the nature of the offense and the action taken.)
3. For cases involving a first offense at NYU Shanghai, the Assistant Dean for Academic Affairs will send the student by e-mail a notice that a second offense will result in a one-semester suspension or a more severe penalty. (The student is also called in to discuss the offense and review the consequences of the disciplinary action.)
4. For cases involving a second offense, the Assistant Provost for Academic Affairs will proceed as follows:
 - a. Upon receiving a second Assistant Dean for Academic Affairs letter concerning a given student, the Assistant Provost will convene a five-member ad hoc committee, of three faculty members, one staff member, and one student to examine the evidence. This ad hoc committee will consider if there are reasonable grounds to believe that cheating/plagiarism has occurred and if so, will affirm the suspension penalty. It will report its conclusion to the Assistant Provost within three business days.
 - b. If the committee affirms the suspension, the Assistant Provost will send the student by e-mail a suspension letter within two business days of receiving the report. The letter will advise the student of his or her right to appeal. The student will have two business days from the letter's delivery to request an appeal of the suspension as provided in Section 5 (below). The suspension will ordinarily be stayed during the pendency of appeal.
 - c. If the committee does not affirm the suspension, the report will be kept on file for a one-year period.
5. The student in all cases has the right to appeal to the Assistant Provost for Academic Affairs. In the event of an appeal, the Assistant Provost will elicit a written complaint from the faculty member and proceed as described above.

Discipline

Students are expected to familiarize themselves and to comply with the rules of conduct, academic regulations, and established practices of NYU, NYU Shanghai, and any study away site or portal campus as stated in the Discipline Procedures available [online](#).

If, pursuant to such rules, regulations, or practices, the withdrawal of a student is required before the end of the term for which tuition has been paid, a refund will be made according to the standard schedule for refunds. Below is a summary of the offenses for which students may be subject to disciplinary charges by the NYU Shanghai Committee on Student Discipline:

1. False representation or forgery of academic documents
2. Deliberate destruction, theft, or unauthorized use of laboratory data, research materials, computer resources, or university property
3. Disruption of an academic event
4. Actual or threatened violence or harassment

Depending on the seriousness of the offense, the following penalties may be imposed after a hearing by the NYU Shanghai Committee on Student Discipline:

Censure

Written reprimand for violation of a specified regulation, including the possibility of more severe disciplinary sanction in the event of a subsequent violation of any NYU Shanghai regulation within a period of time stated in the letter of reprimand.

Disciplinary Probation

Suspension of privileges or exclusion from participating in extra-curricular NYU Shanghai activities as set forth by the NYU Shanghai Committee on Student Discipline for a specified period of time.

Suspension

Exclusion from classes, as well as suspension of privileges and exclusion from other activities, as set forth in the notice of suspension for a definite period of time. A student who has been suspended and who is found “not guilty” shall be allowed full opportunity to make up whatever work was missed because of the suspension.

Dismissal

Termination of student status for an indefinite period. The conditions for readmission, if any are permitted, shall be stated by the committee in the order of dismissal.

If, as a result of disciplinary action, the withdrawal of a student is required before the end of the term for which tuition has been paid, a refund will be made according to the standard schedule for refunds.

Student Grievance

Students in NYU Shanghai are referred to the “Student Grievance Procedure” applicable to all the schools of NYU as found in the NYU Student’s Guide. NYU Shanghai adheres to all articles of the Student Grievance Procedure.

University Policies

A. Privacy of Student Records

NYU Shanghai is fully committed to the protection of the privacy of student records. To assist with the guarding of this privacy, NYU Shanghai complies with the U. S. Family Educational Rights and Privacy Act (FERPA). This specifically means that any education records maintained by NYU and NYU Shanghai and directly related to students — such as grades, transcripts, and test scores — will not be released to others, including parents or guardians, without the student’s consent, except as provided by U. S. federal regulations.

Education records refers to any record or document containing information directly related to a student (including computerized and electronic files, audio and video tape, photographic images, film, email, etc.) and is not limited to hard-copy documents or to a file with a student’s name on it.

Family Educational Rights and Privacy Act (FERPA)

FERPA was enacted by the U. S. Congress to protect the privacy of students’ education records, to establish the rights of students to inspect and review their education records, and to provide students with an opportunity to have information in their records corrected which is inaccurate, misleading, or otherwise in violation of their rights of privacy. FERPA also permits the disclosure by an institution without a student’s prior consent of so-called “directory information” (see definition below), and of other personally identifiable information under certain limited conditions. Students have the right to file complaints with the U. S. Department of Education’s Family Policy Compliance Office concerning alleged failures by an institution to comply with FERPA.

NYU Shanghai and NYU have designated the following student information as “directory information:”

Name, dates of attendance, NYU school or college (i.e., NYU Shanghai), class, previous institution(s) attended, major field of study, full- or part-time status, degree(s) conferred (including dates), honors and awards (including dean’s list), past and present participation in officially recognized activities (including positions held and official statistics related to such participation and performance), email address, and NetID. Important: See notes (1) and (2) below.

1. Email address and NetID are directory information for internal purposes only and will not be made available to the general public except in specified directories from which students may opt out.
2. Under U. S. federal law, address information, telephone listings, and age are also considered directory information for military recruitment purposes. Address refers to “physical mailing address” but not email address.

FERPA governs the release of personally identifiable information to both external and internal parties, including other University employees, parents, and government agents. The NYU Shanghai and NYU FERPA Guidelines (accessible as indicated below) describe the circumstances and procedures governing the release of information from a student's education records to such parties.

Disclosure of Personally Identifiable Information

Among other exceptions authorized by FERPA, prior consent of the student is not needed for disclosure of directory information or for disclosure to school officials with a legitimate educational interest in access to the student's educational record. School officials having a legitimate educational interest include any NYU Shanghai or NYU employee acting within the scope of her or his employment, and any duly appointed agent or representative of the NYU Shanghai or NYU acting within the scope of her or his appointment. In addition, NYU or NYU Shanghai may, at its sole discretion, forward education records to the officials of another institution (a) in which a student seeks or intends to enroll if that institution requests such records, or (b) if the student is enrolled in or receiving services from that institution while she or he is attending NYU Shanghai or NYU. Other exceptions are listed in the NYU Shanghai and NYU Guidelines for Compliance with FERPA.

Additional Information for Students about Records Access

Students may obtain additional information about access to their records from the NYU Shanghai and NYU Guidelines for Compliance with FERPA. The Guidelines may be viewed online, or you can contact the NYU Shanghai registrar. Students should also read the FERPA Annual Notice to Students.

B. Computing and Information Resources Code of Ethics

The ethical principles which apply to everyday community life also apply to computing. Every member of NYU Shanghai has two basic rights: privacy and a fair share of resources. It is unethical for any other person to violate these rights.

Privacy

- * On shared computer systems every user is assigned an ID. Nobody else should use an ID without explicit permission from the owner.
- * All files belong to somebody. They should be assumed to be private and confidential unless the owner has explicitly made them available to others.
- * Messages sent to other users should always identify the sender.
- * Network traffic should be considered private.
- * Obscenities should not be sent by computer.
- * Records relating to the use of computing and information resources are confidential.
- * Nobody should deliberately attempt to degrade or disrupt system performance or to interfere with the work of others.
- * Loopholes in computer systems or knowledge of a special password should not be used to alter computer systems, obtain extra resources, or take resources from another person.
- * Computing equipment owned by departments or individuals should be used only with the owner's permission.
- * NYU Shanghai resources are provided for university purposes. Any use of computing for commercial purposes or personal financial gain must be authorized in advance. Many of the agreements that the university has specifically forbid this activity.
- * Computing and information resources are community resources. Theft, mutilation, and abuse of these resources violate the nature and spirit of community and intellectual inquiry.

System Administration

- * On rare occasions, computing staff may access others' files, but only when strictly necessary for the maintenance of a system.
- * If a loophole is found in the security of any computer system, it should be reported to the system administrator and not used for personal gain or to disrupt the work of others.
- * The distribution of programs and databases is controlled by the laws of copyright, licensing agreements, and trade secret laws. These must be observed.

This code of ethics lays down general guidelines for the use of computing and information resources. Failure to observe the code may lead to disciplinary action. Offenses that involve academic dishonesty will be considered particularly serious.

C. Emergency Temporary Closing of the University

NYU Shanghai has an important commitment to students, parents, sponsors, benefactors and the community. Accordingly, the university will make every attempt to operate normally during severe weather or other emergencies. This includes holding classes, conducting research programs, and operating facilities and services. The university will attempt to operate normally unless such operation represents a clear danger to students, staff or faculty.

There may be occasions when the university community is served best by suspending normal operations. In that event, only the Vice-Chancellor (or the Provost if the Vice-Chancellor is away) has the authority to close NYU Shanghai and to specify those persons or group of persons who are free to leave or refrain from coming to campus.

Standard Operations

Unless the Vice Chancellor announces that NYU Shanghai is closed, everyone is expected to be at work as usual. When the university is in session, faculty members are expected to meet their scheduled classes and other obligations. If a faculty member is unable to meet a scheduled class, he or she should notify the department office and arrange either for a qualified substitute or for a future make-up session.

D. Freedom of Expression

NYU [Shanghai and NYU] value the freedoms of speech, thought, expression and assembly - in themselves and as part of our core educational and intellectual mission. If individuals are to cherish freedom, they must experience it. The very concept of freedom assumes that people usually choose wisely from a range of available ideas and that the range and implications of ideas cannot be fully understood unless we hold vital our rights to know, to express, and to choose. [NYU Shanghai] must be a place where all ideas may be expressed freely and where no alternative is withheld from consideration. The only limits on these freedoms are those dictated by law and those necessary to protect the rights of other members of the university community and to ensure the normal functioning of NYU Shanghai.

Rights

On NYU Shanghai's campus, any member of the NYU Shanghai community may distribute printed material, offer petitions for signature, make speeches, and hold protests or demonstrations outside NYU Shanghai buildings. All such activities must be lawful and peaceful, avoiding acts or credible threats of violence and preserving the normal operation of NYU Shanghai. No event will infringe upon the rights or privileges of anyone not in sympathy with it, and no one will be permitted to harm others, damage or deface property, block access to NYU Shanghai buildings or disrupt classes. The enforcement of these conditions will not depend in any way on the message or sponsorship of the act or event. When guests are invited by a recognized campus organization, they may express their ideas not because they have a right to do so, but because members of the campus community have a right to hear, see, and experience diverse intellectual and creative inquiry. Defending that right is a fundamental obligation of NYU Shanghai. Controversy cannot be permitted to abridge the freedoms of speech, thought, expression or assembly. They are not matters of convenience, but of necessity.

Responsibilities

Freedom of expression must be at once fiercely guarded and genuinely embraced. Those who exercise it serve the NYU Shanghai community by accepting the responsibilities attendant to free expression. NYU Shanghai and NYU organizations that sponsor invited guests to campus are expected to uphold NYU Shanghai's educational mission by planning carefully to create safe and thoughtful experiences for those involved. Hosts are responsible for the behavior of their guests and should exercise due care to ensure that all participants abide by relevant laws and NYU Shanghai policies.

F. Human Subjects in Research at NYU Shanghai

NYU Shanghai is committed to the protection of the rights and welfare of human subjects in research investigations conducted under the jurisdiction of the university. The university believes that review independent of the investigator is necessary to safeguard the rights and welfare of human subjects of research investigations. All research involving human subjects is conducted in accordance with federal regulations, including Title 45 of the U.S. Code of Federal Regulations, Part 46 (45 CFR 46). Under federal regulations, human subjects are defined as: living individual(s) about whom an investigator conducting research obtains:

- (1) data through intervention or interaction with the individual, or
- (2) identifiable private information.

An Institutional Review Board (IRB) is established under the provost to ensure adequate safeguards. The Provost is responsible for the composition of the IRB with respect to: (1) the qualifications of IRB members in terms of educational background and research or other relevant experience, and (2) broad representation of relevant university interests.

This IRB is responsible for reviewing investigational procedures involving human subjects prior to the initiation of the research procedure in reference to (1) the rights and welfare of the individuals involved, (2) the appropriateness of the methods used to obtain informed consent, and (3) the risks and potential benefits of the investigations. The IRB is responsible for determining when additional expertise is required for adequate review and for obtaining that additional expertise. The IRB is further responsible for maintaining records of its review activities and decisions and for ensuring that records of informed consent are developed and kept by investigators where appropriate.

It is the responsibility of investigators who plan to use human subjects in research to obtain written consent from the IRB prior to conducting an investigation involving human subjects. It is the investigator's further responsibility to take whatever steps are determined necessary for the protection of the subjects, and to meet the reporting requirements established by the IRB.

Honors and Awards

Matriculated students with superior academic records are honored in various ways, such as by placement on the Dean's Honors List, election to honor societies, and admission to major honors programs.

Additional information may be obtained from a student's adviser and from the Academic Affairs Office.

Honors

Dean's Honors List

A Dean's Honors List is compiled at the end of each academic year, in June. This is an honors roll of matriculated students who have achieved an average of 3.65 or higher for that academic year (September to May) in at least 28 graded points. To be listed, a student must not have any grades of Incomplete or N at the time when the list is compiled. Note that grade point averages are carried to two decimal places (but are not rounded off).

Eligibility for Graduation With Latin Honors

All graded courses taken while enrolled either in NYU Shanghai [or in another school of NYU] will be used in computing the grade point average on which Latin honors are based. Pass grades are not counted; grades received in courses taken at other institutions are also not counted. The student must also have a clean record of conduct.

The GPA cutoffs for each category are determined by the combined GPA distribution from the preceding academic year, all graduation moments included. The cutoff for summa cum laude is the GPA included within the top 5 percent of the previous year's graduating class. The cutoff for magna cum laude is the GPA included within the next 10 percent of the previous year's class. The cutoff for cum laude is the GPA included within the next 15 percent of the previous year's class. For example, the necessary GPA level for summa cum laude for students graduating in September 2017 will be based on the GPA cutoff for the top 5 percent of the combined graduates from September 2016, January 2017, and May 2017.

Major Honors

Students who have completed at least 64 points of graded work in their major may be awarded degrees with major honors if they complete the designated honors sequence in the major and maintain the requisite grade point average. There are three levels: honors, high honors, and highest honors.

Students seeking admission to and graduation with major honors are expected to have a minimum grade point average of 3.65, both overall and in the major. Majors may exercise some flexibility in admissions, as follows. In rare cases where a candidate for admission to a major honors program falls short of the expected minimum GPA, the major leader may petition the Assistant Provost for Academic Affairs for an exception. In all cases, once admitted, students are expected to maintain the GPA at the stipulated level in order to graduate with departmental honors. Should there be an exceptional circumstance in which the stipulated GPA is not maintained, the Assistant Provost for Academic Affairs may be petitioned for an exception. If the case is compelling, the latter will inform the registrar's office of the waiver.

Honors programs must, minimally, be a two-term (8-point) experience that includes a capstone research project. The capstone project, which typically culminates in a thesis, should reflect sustained original research over two semesters. The scope and length of a thesis will vary by discipline, but the thesis is typically 40 to 60 pages in length.

All students completing departmental honors must make public presentations of their work, preferably at the NYU Shanghai Undergraduate Research Conference (URC) held at the end of the academic year, or in a major forum (e.g., oral defenses or presentations) held in conjunction with the URC.

Students with double majors in discrete, unrelated disciplines must complete honors programs in each major for which they seek honors. Students with double majors in interdisciplinary or related fields may, if the two majors concur, convene a joint honors committee to establish an interdisciplinary research program of course work that culminates in a single thesis. Similarly, in the case of joint majors, the relevant majors must work out an agreement on the requirements for honors and on the supervision and evaluation of students' theses or projects.

Provost's Award for Scholarship and/or Service

Presented by the Provost of NYU Shanghai to a graduating senior for outstanding accomplishment in either or both of these areas.

Diploma Recipient

While all students walk across the stage to receive their diploma at the NYU Shanghai Diploma Ceremony, a plaque is presented to the senior selected by the Provost of NYU Shanghai to receive a ceremonial diploma on behalf of all the members of the graduating class at Commencement in New York. Selection is made on the basis of scholarship and/or contribution and service to the graduating class and to NYU Shanghai.

Standard Bearer

A plaque is presented to the senior selected by the Provost of NYU Shanghai to carry the NYU Shanghai banner at Commencement [in New York]. Awarded on the basis of contribution and service to the graduating class and to NYU Shanghai.

Senior Award in Humanities

Awarded to the graduating senior who has excelled in humanities and who has contributed in a noteworthy way to the life of the campus during four years.

Senior Award in Biological and Behavioral Sciences

Awarded to the graduating senior who has excelled in biological and behavioral sciences and who has contributed in a noteworthy way to the life of the campus during four years.

Senior Award in Physical Sciences

Awarded to the graduating senior who has excelled in physical sciences and who has contributed in a noteworthy way to the life of the campus during four years.

Senior Award in Mathematical and Engineering Sciences

Awarded to the graduating senior who has excelled in mathematical and engineering sciences and who has contributed in a noteworthy way to the life of the campus during four years.

Senior Award in Social Sciences

Awarded to the graduating senior who has excelled in social sciences and who has contributed in a noteworthy way to the life of the campus during four years.

Junior Scholarship Award

Presented by the Provost of NYU Shanghai to a member of the junior class who, in terms of academic excellence, student leadership, personality, and character, embodies the goals and ideals of NYU Shanghai and the hopes, dreams, and personal spirit of its students.

{Part IV}

Academic Overview

Liberal Arts

Ever since Cicero, the Roman statesman, invented the phrase “artes liberales,” the liberal arts and sciences have been the touchstone of excellence in education for all individuals, regardless of their professional aspirations. This is because these studies liberate an individual from narrowly vocational concerns and have been shown to free the mind to be creative. Today, this educational approach focuses on direct and critical engagement with the great ideas of the past and the present, on the development of the essential skills of analysis and communication, and on in-depth knowledge of one or more disciplines. A shared background in the liberal arts and sciences also has the power to transform a diverse group of students into a real community organized around the life of the mind.

Our aim is to give NYU Shanghai students a strong, globally-oriented foundation in the liberal arts and sciences. This curriculum will help students develop the ability to think analytically, read critically, and write effectively. It will also cultivate their creativity in solving problems, their tolerance for ambiguity, and their respect for diversity of opinion and the exchange of ideas. Finally, through the core curriculum, the majors, and international experiences in the NYU global network, students will learn to recognize themselves as part of a global community. The crucial role that China plays in that global community will be emphasized throughout the curriculum.

Academic Program

Three unique features define the NYU Shanghai approach and set it apart from most other undergraduate programs:

- » A core (or general education) curriculum for the 21st century, one that is truly innovative—since its social and cultural courses are global in their scope, since writing is fully integrated into the curriculum rather than delivered in separate courses unrelated to students' other studies, and since mathematics and science are taught in a creative way that integrates these disciplines;
- » A carefully selected set of majors (or specializations) that capitalize on the world-class strengths of NYU's research faculty, departments, and programs, as well as on the limitless opportunities that Shanghai presents;
- » Access to the NYU global network through an unparalleled array of study-abroad opportunities, which are available at NYU sites around the world and which are easily integrated into students' programs of study.

Program of Study

NYU Shanghai students will take 128 points of coursework to graduate; these courses will be distributed among core curriculum requirements, major requirements, and general electives. Students will typically complete the core curriculum during their first two years and the bulk of their major requirements during their second two years. Students considering some of the STEM majors (Science, Technology, Engineering, and Mathematics), however, may take longer to complete the core courses since they must begin taking required courses in their intended major as early as the first semester.

Orientation

Orientation will be held in Shanghai in August prior to the start of the fall semester. The primary goals of this program will be to introduce students to the inquiry-based approach to learning of NYU Shanghai's liberal arts and sciences curriculum, to make students feel more at home both within the classroom and within the larger Shanghai community, and to foster a sense of community among students from diverse places and backgrounds. In addition to informal, non-credit instruction in language and writing, students will benefit from a robust program of complementary activities.

Study Away

Students are required to spend one semester studying at one of the other campuses in the NYU global network and most will do so for two semesters. Many of the courses they need for their major are also offered at these other campuses, so that while away from Shanghai students can continue to fulfill many of their major requirements and make normal progress toward graduation. Students may petition the Academic Standards Committee with a study plan for a third semester. The earliest a student may study away is fall of their junior year and they must be in attendance in Shanghai in their final semester (typically spring of senior year). NYU's global network requires students to have a 3.00 cumulative grade point average to study away, students with a GPA below 3.00 should discuss their options with their advisor.

While they are not required, three-week January Term intensive courses will be available to students, as will summer session courses at NYU Shanghai or elsewhere within the global network. J-Term, Summer, and course overloads classes incur additional tuition costs for the students that take those classes. Cost of attendance varies between the Global Academic Centers.

Majors and minors/concentrations

NYU Shanghai will offer its students an array of majors and minors/concentrations, which will be phased in over time. Those that will be offered initially are in subject areas where we anticipate the greatest demand, and also in which NYU has world-class faculty, major research strength, and international distinction. These include:

Majors

Humanities

- Humanities
- Global China Studies
- Interactive Media Arts

Science

- Biology
- Chemistry
- Neural Science
- Physics

Mathematics

- Honors Mathematics
- Mathematics

Computer Science and Engineering

- Computer Science
- Computer Engineering
- Electrical Engineering

Social Sciences

- Business and Finance
- Business and Marketing
- Economics

Self-Designed Honors Major

Minors

- Molecular and Cell Biology
- Genomics and Bioinformatics
- Business
- Chemistry
- Chinese
- Computer Science
- Creative Writing
- Economics
- Global China Studies
- Humanities
- History
- Literature
- Philosophy
- Interactive Media Arts
- Mathematics
- Natural Science
- Neural Science
- Physics
- Global Network University Minors
- Portal Campus Minor

{ Part V }

Core Curriculum Overview

There are five components to the NYU Shanghai core curriculum: Social and Cultural Foundations, Mathematics, Science, Writing, and Language. In each of these areas, the needs of each student will be carefully assessed upon arrival and a program of study will be developed to address them.

1 Social and Cultural Foundations

Social and Cultural Foundations: Courses in the Social Foundations and Cultural Foundations sequences will provide students with a thematic framework within which to study influential works of diverse cultures, from the beginnings of history to the present, and from global and interdisciplinary perspectives. Students will reflect on fundamental and enduring

questions about what it means to be human and how we as individuals live in society. In conjunction with the writing program (see #4 below), Social and Cultural Foundations courses will teach students to ask critical questions, find unstated assumptions, assess arguments, and offer creative interpretations of the great works and ideas of the past, especially as they live on in the present.

Required courses: Social Foundations and Cultural Foundations each have two components: a) a one or two-semester survey course, and b) a disciplinary course on China.

Social Foundation: In the two-semester survey course *Global Perspectives on Society*, students will engage in the comparative study of primary works of social thought from across the globe. The course addresses ways that writers in different times and cultures have sought to situate humans within the universe, and to promote ideal standards for human behavior. Each week, students will be expected to engage one or more central texts by an important thinker on the topic. The expectation is that *Global Perspectives on Society* will be taken in the first year.

Students will complete the Social Foundations requirement with a disciplinary course of their choice from the category “Social Science Perspectives on China,” (which may include courses on Chinese political economy, philosophy and society). This course can be taken at any point in a student’s undergraduate career.

Cultural Foundations: *Perspectives on Humanities* is a one-semester core curriculum requirement. *Perspectives on Humanities* classes are offered as writing intensive topical seminars. Each seminar will explore interdisciplinary questions related to a topic in the humanities and extend expository writing skills introduced in GPS Writing Workshop. In addition, students will attend up to six evening events, including spotlight lectures, panel discussions, and film screenings. *Global Perspectives on Society II* is a prerequisite for this course. The expectation is that *Perspectives on Humanities* will be taken in fall or spring of the second year.

Students will complete the Cultural Foundations requirement with a disciplinary course of their choice from the category “Chinese Arts,” which may include courses in Chinese art and architecture, drama, film, literature, and music. As with the courses in “Social Science Perspectives on China,” students may take their “Chinese Arts” course at any point in their undergraduate career.

Considered by many to be the “universal language,” mathematics provides logical and analytical tools necessary for tackling many of the important problems of our time. Quantitative skills are essential for work in the sciences and the social sciences, and they also have applications in the humanities. They are also critical to one’s ability to function and to thrive in today’s increasingly complex world.

Mathematics 2

Required courses or proficiencies: Students who place out of a lower level core math class (see below) meet the requirement by taking a more advanced course according to placement exam results. Students in a major which does not require Calculus may meet the requirement by taking a Quantitative Reasoning course.

3

Science

Scientific knowledge and inquiry are central to human society, and science and technology play an increasingly important role in our lives. At the heart of the natural sciences is a quest to understand the universe and who we humans are.

The special feature of science is that its hypotheses can be tested under controlled conditions by appealing to evidence external to the inquirer. Thus, science provides a consistent framework for proposing ideas and testing potential answers to these questions. NYU Shanghai students will become conversant with the intellectual methods and analytical techniques that define modern science.

Required courses: The science requirement varies depending on the background and interests of the student, as follows:

- **Students who are pursuing degrees in science disciplines—** or who are taking the pre-health curriculum—will be required to take Foundations of Science, a rigorous, three-semester sequence of courses covering the fundamentals of basic science. Students in other majors may take the sequence to meet their science requirements if they meet the prerequisites. These courses present foundational concepts from the various science disciplines in an integrated way. Emphasis is placed on science as a process, from hypothesis development to testing and experimentation, on data collection, and on drawing conclusions. All of the courses in this sequence have a project-based laboratory component. In its totality, this sequence is the equivalent of full-year introductory courses in physics, chemistry, and biology. In order to accommodate the requirements of schools of the health professions, NYU Shanghai distinctly reports grades in physics, chemistry, and biology, under *Foundations of Science* on a student's transcript.
- Students who are not pursuing science as a major but have a strong interest and advanced abilities in science may take the first semester of the *Foundations of Science* sequence or two courses from the Physics I & II, Chemistry I & II, or Biology I & II sequences (these classes are not open to science majors).
- Other students will fulfill the science requirement by taking two courses from three categories that will provide a basic understanding of scientific analytical techniques, the role of science and technology in society, or programming and computational thinking. The first option is a laboratory-based course from the category "Experimental Discovery in the Natural World." The second option is a non-laboratory-based course from the category "Science, Technology and Society." The third option is a computational methods course from the category "Programming and Computational Thinking."

Writing

NYU Shanghai students will attain a high level of sophistication in their writing and will be able to communicate effectively in a wide range of contexts. Students will develop proficiency in rhetorical and analytical modes of writing (comparison/contrast, exposition, cause/effect, description, analysis, argumentation and definition). These skills will be fostered not through a separate writing course (e.g. the typical “freshman comp” course) but rather through a “writing in the disciplines” approach that integrates writing instruction into required core courses. In addition, this intensive and integrative approach to writing is not relegated only to the outset of a student’s college career but extends across the entire first two years (four semesters).

Required courses: NYU Shanghai students will have three semesters of writing instruction through participating in writing workshops offered in conjunction with the survey courses *Global Perspectives on Society* and *Perspectives on Humanities* (see No. 1), and taught by experts in expository writing. Students in these workshops will develop fundamental writing skills through frequent assignments in which they will reflect on the materials that they study in the survey courses. Students’ readiness to participate in the regular writing workshop sequence will be assessed prior to Orientation, and their developing proficiency will be tested throughout their undergraduate career.

5

Language

Language study is central to the educational mission of NYU's global network. NYU Shanghai's location and cosmopolitan student population make it all the more important for students to have access to innovative, flexible, and effective means for learning a language. Our goal is for all NYU Shanghai students to be *fluent*

in English, the language of *instruction*, and for non-native Chinese speakers to develop as much *proficiency* in Chinese, the language of *community*, as their major course of study allows; with a minimum requirement of successful completion of the intermediate two level of Chinese or achievement of equivalent competency

Required courses or proficiencies for Chinese: In the summer before their first year, non-native Chinese speaking students' Chinese language level will be assessed and they will receive some language instruction as part of their Orientation program. Students will have room in their schedules for formal Chinese-language courses, and will benefit from a full set of courses, from the elementary level to the most advanced level. Students who are unable to take 4 credit courses in Chinese in their first two years because of heavy requirements in their major (e.g., STEM students), will be able to take 2 credit version of the Chinese classes. There will also be multiple modalities of instruction that take advantage of the latest pedagogical and technological developments. These will include formal intensive coursework during the Summer Session, language labs, online study, and co-curricular language coaching with immersion experiences. To graduate students must successfully complete the intermediate two level of Chinese or achievement of equivalent competency.

Required courses or proficiencies for English: In the summer before their first year, non-native English speaking students' English language level will be assessed and they will receive some language instruction as part of their Orientation program. This will be an opportunity for Chinese and other international students to perfect their spoken and written English skills. Depending on placement students will be required to take none, one, or two English language courses. Students who are unable to take 4 credit courses in English in their first year because of heavy requirements in their major (e.g., STEM students), will be able to take 2 credit version of the English classes. The Academic Resource Center also provides some ESL support to students.

I. Social Foundations - Three Classes:

A. *Global Perspectives on Society* (Two Classes) Fall I and Spring II

B. "Social Science Perspectives on China" (One Class) Sample courses:

Not every course listed is taught every semester, and in any given semester other courses may be offered that fulfill this requirement. Some courses are listed in SSPC and in the Chinese Arts requirement below but courses may only meet requirements for one category for any particular student.

20th Century East-Asia-US Relations
 Chinese Cyberculture
 China Encounters the World
 China's Development in a Comparative Perspective.
 Chinese Maritime History
 Concept of China, The.
 Contemporary Chinese Political Thought (China's Political Thought in the Post-Maoist Era).
 Global Connections: Shanghai
 Global Cultural Heritage
 Governing the Local
 Growing Shanghai, Shrinking Detroit
 History of Modern China since 1840
 International Politics and US-China Relations.
 Introduction to Comparative Politics
 Introduction to International Politics
 Modern Chinese Governance
 Mongol Conquest in World History, The
 New Cold War History, The
 Political Economy of East Asia, The
 Public Policy Perspectives on China: An Introduction to Policy Analysis II
 Religion and Society in China
 Rise of Modern China, The (Modern China and the World Economy).
 Shanghai Stories
 Social and Cultural Debates
 Special Topics in Digital Humanities: Street Food and Urban Farming.
 Topics in Environmental Values and Society Chinese Environmental Governance
 Topics in Law and Society: Law, Culture, & Politics in China
 Traditional Chinese Wisdom and Its Transformation in Modern Times.
 United States Constitution, The

II. Cultural Foundations - Two Classes:

A. *Perspectives on Humanities* (One Class) Fall or Spring of sophomore year

B. "Chinese Arts" (One Class) Sample Courses:

Not every course listed is taught every semester, and in any given semester other courses may be offered that fulfill this requirement. Some courses are listed in Chinese Arts and in the SSPC requirement above but courses may only meet requirements for one category for any particular student.

20th Century Chinese Writers in Global Context
 Chinese Cyberculture
 Chinese Film and Society
 Chinese Migrant and Diasporic Networks
 Contemporary Art and New Media
 Contemporary Chinese Literature
 Global Connections: Shanghai
 Global Media Seminar: China
 History of Chinese Cinema I
 History of Chinese Cinema II
 Introduction to Photography I
 Introduction to Studio Art
 Masters of Asian Cinema
 Media and Participation
 Modern Chinese Writers
 Paper Arts: History and Practice
 Projects in Photography: China
 Projects in Studio Art: China
 Religion and Society in China: Gods, Ghosts, Buddhas, and Ancestors
 Representing Ethnicity in Mainland China and Beyond A Comparative Study
 Screening Childhood
 Social and Cultural Debates
 Shanghai Stories.
 Voices from the Margins
 World Wide Chinese Diaspora

III. Mathematics - Varies by Major and Placement
(see “Mathematics” Section 2)

Core Math classes:

Quantitative Reasoning (category)
Precalculus
Calculus
Honors Calculus
Multivariable Calculus and Differential Equations
Networks and Dynamics
Linear Algebra

IV. Science - Varies by Major (see “Science” Section 3):

Core Science Courses:

Foundations of Science Courses
Foundations of Science I (1+2)
Foundations of Science II (3+4)
Foundations of Science III (5+6)

Experimental Discovery in the Natural World Courses:

Brain and Behavior
FOS I
Mutations and Disease
Physics I
The Domain of Crystals
The Legacy of Tradition I: The Growth of Science in the West
The Molecules of Life
Where the City Meets the Sea

Science, Technology and Society Courses:

Animals, Nature, and Environment
FOS I
Information Societies
Interconnected: The History and Theory of Networks
Life in the Universe
Physics II
Serendipity
Social Issues in the New Biosciences
State and Fate of the Earth
The Atom and Energy
The Rise of Modern Science

Programming and Computational Thinking Courses:

Data Structures
Interaction Lab
Introduction to Programming
Introduction to Computer Science

V. Writing

Writing instruction at NYU Shanghai will be delivered in twice-weekly writing workshops, taught by experts in expository writing and linked to the first-year course *Global Perspectives on Society* and the second-year course *Perspective on Humanities*. The works studied in these survey courses will be the primary focus of the essays that students will be asked to write in the workshops.

VI. Chinese Language

Varies by Student's Language Level and Major. To graduate students must successfully complete the intermediate two level of Chinese or achievement of equivalent competency.

Chinese language courses:

- Elementary Chinese I
- Elementary Chinese II
- Intermediate Chinese I
- Intermediate Chinese II
- Advanced Chinese I
- Advanced Chinese II
- Elementary Chinese for Advanced Beginners
- Intermediate Chinese for Advanced Beginners
- Classical Chinese I
- Classical Chinese II
- Introduction to Contemporary China I
- Introduction to Contemporary China II
- Readings in Chinese Culture I
- Readings in Chinese Culture II
- Introduction to Business Chinese
- Advanced High Business Chinese

English Language Courses:

- English for Academic Purposes I
- English for Academic Purposes II

For Core Curriculum requirements students receive credit for any course passed with at least a D or a P grade. Courses may not be used to meet major or minor requirements or as prerequisites for more advanced classes unless a grade of C or higher is earned. This means that grades of P or C- and lower may not be used to meet major or minor requirements or as a prerequisite for more advanced courses.

NYU Shanghai

General Education Core Requirements

KEY:

Actual Course

Category

Social Foundation

Global Perspectives
on Society I (GPS I)
taken in Fall, Year 1



Global Perspectives
on Society II (GPS II)
taken in Spring, Year 1

Social Science
Perspectives on
China (one course)

Cultural Foundation

Perspectives on
Humanities (POH)*
taken in Fall or Spring, Year 2

Chinese Arts
(one course)

Mathematics**

Calculus

OR

Honors Calculus

OR

Pre-Calculus

OR

Quantitative
Reasoning

Science***

Experimental
Discovery in the
Natural World (ED)

Science Technology,
and Society (STS)

Programming or
Computational
Methods

Language

International Students:

must reach the Intermediate Chinese II level.

Chinese Students:

must take one to two semesters of English for Academic Purposes (EAP) courses.

*This one-semester writing intensive topical seminar replaces the two-semester Global Perspectives on Culture course sequence for sophomores.

Students are placed into a math course of their level at the fall semester of their freshman year. Calculus is required for **Bio, Chem, Neural Sci, Physics, Math, Computer Sci, Engineering, Business, and Econ majors. Honors Calculus is required for **Honors Math majors, Humanities, Global China Studies, and Interactive Media Arts majors** who are placed below. Calculus can take Pre-Calculus or Quantitative Reasoning to fulfill the math requirement.

*****Bio, Chem, Neural Sci, Physics majors** must take Foundations of Science I (1 & 2) to fulfill the science requirements. **Engineering majors** must take Foundations of Science I (1 & 2) or Physics I & II to fulfill the science requirements. **Math/Honor Math majors** must take two of the following courses to fulfill the science requirements: FoS 1, FoS2, Physics I, Physics II, Chem I, Chem II, Bio I and Bio II.

{Part VI}

Overview of Majors

HUMANITIES

HUMANITIES

GLOBAL CHINA STUDIES

INTERACTIVE MEDIA ARTS

HUMANITIES

The intellectual vigor of the humanities pivots on a rigorous inquiry into the enduring traditions and the uncharted frontiers of what we call the human condition. At NYU Shanghai, our students learn to describe, analyze, critique, and theorize this condition in a mode that builds on both the curriculum's interdisciplinary, cross cultural foundation and the intellectual strength of our global faculty in fields ranging from history, philosophy, literary and cultural studies, to area studies, cinema, digital humanities, arts, among others. The integrated nature of our Humanities Major provides broad exposure to those sounds, texts, experiences, ideas, and images that mark the changing dynamics between Chinese, Asian, European, and other civilizations across lands and oceans. Poised to challenge common assumptions about the “what” and “how” of knowledge, our students also learn to pursue in-depth, comparative inquiries into the making and transformation of human thoughts. Through our two innovative core courses, Critical Concepts and Digital Approaches, students of our Humanities Major simultaneously enter the centuries-long traditions of humanistic inquiry and forge new ground in the areas of digital and information technologies. As they progress, students have the opportunity to design their own Focus, consisting of three courses on one topic or discipline of their interest within the Humanities, such as history, cinema studies, and so on. This exploration, in our students' senior-year Capstone course, will culminate into a thesis that reflects the student's chosen Focus.

REQUIREMENTS FOR THE MAJOR

1. General Education Core Requirements: 10-12 courses

Global Perspectives on Society I

Global Perspectives on Society II

Social Science Perspectives on China

Perspectives on Humanities

Chinese Arts

2 classes from: Experimental Discovery in the Natural World; Science, Technology, and Society; Programming and Computational Thinking
Mathematics

2 semesters of English if native Chinese speaker (*based on placement*)

4 semesters of Chinese through Intermediate II level (*based on placement*)

2. Major Requirements: 11 courses, as follows:

Not every course listed is taught every semester, and in any given semester other courses may be offered that fulfill this requirement. Requirements may be met through equivalent courses in the Global Network with prior approval.

2 Core Courses (200 level) *prereq: GPS I

The core courses are multidisciplinary courses that will create unexpected connections and cross-fertilization between various disciplines, including literary and cultural studies, philosophy and history.

- **Critical Concepts**

Moments of Europe

Listening to the Past Philosophy of Science

Introduction to the Use of Scientific Data in Historical Research

- **Digital Approaches**

Media and Participation

China Cyberculture

Exploring Net Literature

Street Food and Urban farming

2 Survey Courses (100 level)

An introduction to the rudimentary knowledge of a range of humanities areas; overview of a broad topic and a field of knowledge; typical coursework: a mixture of lectures, discussions, assignments, shorter essays, quizzes and/or exams.

Concept of China

History of Modern China since 1840

Traditional Chinese Wisdom

Logic

World History Part I

History of Chinese Cinema

The Mongol Conquest

Central Problems in Philosophy

Taboo and Pollution

Introduction to Creative Writing

3 Topic Courses (200~400 levels) - two of them must be 300 level

An in-depth look at one specific topic in the fields of literature, history, philosophy, visual culture, among others; regionally and/or temporally focused; typical coursework (depending on level): a mixture of lectures, discussions, research papers; may be taken at all global sites.

The New Cold War History

China Encounters the World

Gender Sexuality and Culture

Religion and Society in China

Shanghai Stories

Global Space Age

Law, Crime, and Society in Early Modern European History

Hispanic Cities in Translation

Maritime History

Screening Childhood
Voices from the Margin
The Soviet Empire
History of Water
Shakespeare (both classes)
Chinese Migrant and Diasporic Networks

3 Focus Courses (200-400 levels)

- can be taken in all global sites;
- three courses on one specific topic or discipline within the Humanities, including literature, history, philosophy, visual culture, and creative writing;
- in consultation with their thesis advisor, students choose the Focus courses with the plan of developing their senior-year thesis on the basis of the chosen focus;
- in the second semester of the sophomore year, students have to present the proposal of their Focus to the Humanities Committees for approval.

1 Capstone Course (400 level)

- a senior-year, semester-long culminating course where students build and synthesize the knowledge and intellectual training they have acquired into a work of thesis;
- the senior thesis is required for graduation in this major and has to be written under the directorship of an NYU-Shanghai faculty member in the Humanities; in the case that no Shanghai faculty are specialized in the subject of their choice, they can take a faculty member outside of Shanghai as a co-director, the thesis director has to be approved by the Humanities thesis committee; the proposal of the thesis and its final product should be evaluated and approved by the thesis advisor; the work should demonstrate a substantial amount of original research and should center on the Focus of the student's choice.

3. General Electives: 9-11 courses (Must bring credit total to 128 combined in all categories)

HUMANITIES

SAMPLE SCHEDULE 1

This is just one example of how a student could organize their courses if pursuing a Humanities major. It assumes a student begins taking Humanities major courses in their freshmen year, see Sample Schedule 2 for a sample plan which begins in sophomore year. Students may propose alternative course sequences to their advisors as well.

Year 1

Fall Semester

Global Perspectives on Society I (with Writing Workshop)	Core Class	Core Class	English, Chinese, Core or GE
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Spring Semester

Global Perspectives on Society II (with Writing Workshop)	Digital Approaches	Core Class or GE	English, Chinese, Core or GE
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Year 2

Fall Semester

Perspectives on Humanities or Core class	Humanities Survey	Critical Concepts	Core class, GE, or Chinese
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Spring Semester

Perspectives on Humanities or Core class	Humanities Topic	Humanities Survey	Core class, GE, or Chinese
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Year 3

Fall Semester

General Elective	Humanities Topic	Humanities Focus	Core Class or GE
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Spring Semester

General Elective	Humanities Topic	Humanities Focus	General Elective
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Year 4

Fall Semester

General Elective	Humanities Topic	General Elective	General Elective
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Spring Semester

General Elective	Humanities Capstone	General Elective	General Elective
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HUMANITIES

SAMPLE SCHEDULE 2

Year 1

Fall Semester

<i>Global Perspectives on Society I (with Writing Workshop)</i>	Core Class	Core Class	English, Chinese, Core or GE
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Spring Semester

<i>Global Perspectives on Society II (with Writing Workshop)</i>	Core Class	Core Class or GE	English, Chinese, Core or GE
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Year 2

Fall Semester

<i>Perspectives on Humanities or Core class</i>	Humanities Survey	<i>Critical Concepts</i>	Core class, GE, or Chinese
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Spring Semester

<i>Perspectives on Humanities or Core class</i>	<i>Digital Approaches</i>	Humanities Survey	Core class, GE, or Chinese
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Year 3

Fall Semester

General Elective	Humanities Topic	Humanities Focus	Core Class or GE
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Spring Semester

General Elective	Humanities Topic	Humanities Focus	General Elective
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Year 4

Fall Semester

General Elective	Humanities Topic	Humanities Focus	General Elective
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Spring Semester

General Elective	Humanities Capstone	General Elective	General Elective
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What do people think they are talking about when they refer to “China”? Does the term refer to a geographical, cultural, political, hybrid, or other type of entity? How and why has that changed both within China and outside China? This course is about reality and representation; it will address both the shifting geographical, political, cultural, and human reality of “China” and what “China” meant to both inhabitants and outsiders in different periods and in different contexts. The goals of the course are (1) to deepen understanding of the history of China and the role of the past in the present, (2) to introduce different ways of thinking about China in the world and the world in China, (3) to learn to distinguish between opinion, hypothesis and fact in historical inquiry, (4) to reinstate a concept of China as dynamic, varied and interactive.

REQUIREMENTS FOR THE MAJOR

1. General Education Core Requirements: 10-12 courses

Global Perspectives on Society I
Global Perspectives on Society II
Social Science Perspectives on China
Perspectives on Humanities
Chinese Arts
2 classes from: Experimental Discovery in the Natural World; Science, Technology, and Society; Programming and Computational Thinking
Mathematics
2 semesters of English if native Chinese speaker (*based on placement*)
4 semesters of Chinese through Intermediate II level (*based on placement*)

2. Major Requirements: 9 courses, as follows:

Not every course listed is taught every semester, and in any given semester other courses may be offered that fulfill this requirement. Requirements may be met through equivalent courses in the Global Network with prior approval.

Required Courses (all Six)

The Concept of China
Chinese Geographies
Digital Chinese Humanities (one of):
Media and Participation
China Cyberculture
Exploring Net Literature
Street Food and Urban Farming
Worldwide Chinese Diaspora (one of):
Representing Ethnicity in Mainland China and Beyond: A Comparative Study
Chinese Migrant and Diasporic Networks
Advanced Chinese I AND II OR *Classical Chinese I AND II*

Global China Studies Electives (Choose Three)

20th Century East-Asia – US relations
China Encounters the World
China's Political Thought in the Post-Maoist Era
Chinese Environmental Governance
Chinese Maritime History
Contemporary Art and New Media
Contemporary Chinese Political Thought
Governing the Local
Growing Shanghai, Shrinking Detroit
History of Chinese Cinema
History of Modern China since 1840
Introduction to International Politics
Masters of Asian Cinema
Modern Chinese Governance
Political Economy of East Asia
Religion and Society in China
The Mongol Conquest
Traditional Chinese Wisdom
Voices from the Margin
World Wide Chinese Diaspora

3. General Electives (including language courses): 11-13 courses

(Must bring credit total to 128 combined in all categories)

GLOBAL CHINA STUDIES

SAMPLE SCHEDULE 1

This is just one example of how a student could organize their courses if pursuing a GCS major. It assumes a student begins taking GCS major courses in their freshmen year, see Sample Schedule 2 for a sample plan which begins in sophomore year. Students may propose alternative course sequences to their advisors as well.

Year 1

Fall Semester

Global Perspectives on Society I (with Writing Workshop)	Core Class	Core Class	English, Chinese, Core or GE
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Spring Semester

Global Perspectives on Society II (with Writing Workshop)	GCS Required Course	Core Class	English, Chinese, Core or GE
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Year 2

Fall Semester

Perspectives on Humanities or Core class	GCS Required Course	Core class or GE	Core class or Chinese
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Spring Semester

Perspectives on Humanities or Core class	GCS Required Course	Core class or GE	Core class or Chinese
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Year 3

Fall Semester

General Elective	GCS Required Course	GCS Required Course	General Elective
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Spring Semester

General Elective	GCS Elective	GCS Required Course	General Elective
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Year 4

Fall Semester

General Elective	GCS Elective	General Elective	General Elective
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Spring Semester

General Elective	GCS Elective	General Elective	General Elective
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GLOBAL CHINA STUDIES

SAMPLE SCHEDULE 2

Year 1

Fall Semester	<i>Global Perspectives on Society I (with Writing Workshop)</i>	Core Class	Core Class	English, Chinese, Core or GE
Spring Semester	<i>Global Perspectives on Society II (with Writing Workshop)</i>	Core Class	Core Class or GE	English, Chinese, Core or GE

Year 2

Fall Semester	<i>Perspectives on Humanities or Core class</i>	GCS Required Course	Core class or GE	Core class or Chinese
Spring Semester	<i>Perspectives on Humanities or Core class</i>	GCS Required Course	GCS Required Course	Core class or Chinese

Year 3

Fall Semester	General Elective	GCS Required Course	GCS Required Course	General Elective
Spring Semester	General Elective	GCS Elective	GCS Required Course	General Elective

Year 4

Fall Semester	General Elective	GCS Elective	General Elective	General Elective
Spring Semester	General Elective	GCS Elective	General Elective	General Elective

Interactive Media Arts (IMA) is focused on exploring the expressive possibilities brought about by emerging forms of technology, media, and communication. In concert with the liberal arts core, student interests drive an ever-evolving project-based curriculum that is designed to facilitate the acquisition of both the conceptual insights and practical skills needed to build the innovative human-centered design projects imagined by our students. IMA students are challenged to create interactive systems that connect people, facilitate participation, convey information, communicate stories, enhance experiences, and otherwise augment, improve, and bring both meaning and delight to people's lives. This may involve the development of software, the manipulation of digital media, the fabrication of material objects, the production of electronic devices, the construction of virtual and physical spaces, or the investigation of as yet unrealized forms.

Experimentation and risk taking are encouraged as we seek to harness the synergistic potentials of both scientific and artistic methods to first understand and then redefine how humans interact with their tools, environments, and one another. Graduates will be prepared to more fully participate in a world in which change is elemental, and the fields of business, the humanities, and the sciences increasingly require essential fluency in interactive media.

REQUIREMENTS FOR THE MAJOR

1. General Education Core Requirements: 10-12 courses

Global Perspectives on Society I

Global Perspectives on Society II

Social Science Perspectives on China

Perspectives on Humanities

Chinese Arts

2 classes from: Experimental Discovery in the Natural World; Science, Technology, and Society; Programming and Computational Thinking Mathematics

2 semesters of English if native Chinese speaker (*based on placement*)

4 semesters of Chinese through Intermediate II level (*based on placement*)

2. Major Requirements: 33-36 credits, as follows:

Not every course listed is taught every semester, and in any given semester other courses may be offered that fulfill this requirement. Requirements may be met through equivalent courses in the Global Network with prior approval.

Foundations: 8 points (2 courses)

Interaction Lab

Communications Lab

Distribution Electives: 21-24 points (was previously listed as 6 courses)

- **Seminar**

Students are required to complete at least one seminar course. This requirement can be satisfied with either a 3 or 4 point course (as there is variation across the Global Network).

Example Courses:

Exploring Net Literature

Intro to Digital Media: Chinese Cyberculture

Special Topics in Digital Humanities: Street Food & Urban Farming Media & Participation

Remaining elective requirements must satisfy three of the following categories (These distribution requirements can be satisfied with 2, 3, or 4-point classes):

- **Art & Design**

Example Courses:

Paper Art: History & Practice

Design Expo

Rapid Prototyping

- **New Media & Entertainment**

Example Courses:

Animation and Dynamic Surfaces

Sound & Vision

Collective Methods

Interactive Performance

- **Computation & Data**

Example Courses:

Neighborhood, Map, Phone

Developing Web

Expressing Data

- **Experimental Interfaces & Physical Computing**

Example Courses:

Talking Fabrics

Solar Solutions: Considering The Sun in our Digital Future

Senior Thesis Project: 4 points

3. General Electives: 11-13 courses (Must bring credit total to 128 combined in all categories)

INTERACTIVE MEDIA ARTS SAMPLE SCHEDULE 1

This is just one example of how a student could organize their courses if pursuing a IMA major. It assumes a student begins taking IMA major courses in their freshmen year, see Sample Schedule 2 for a sample plan which begins in sophomore year. Students may propose alternative course sequences to their advisors as well.

Year 1

Fall Semester

Global Perspectives on Society I (with Writing Workshop)	Core Class	Core Class	English, Chinese, Core or GE
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Spring Semester

Global Perspectives on Society II (with Writing Workshop)	Interaction Lab or Communications Lab	Core Class	English, Chinese, Core or GE
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Year 2

Fall Semester

Perspectives on Humanities or Core class	Interaction Lab or Communications Lab	Interactive Media Elective	Core class, GE, or Chinese
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Spring Semester

Perspectives on Humanities or Core class	Interactive Media Elective	Interactive Media Elective	Core class, GE, or Chinese
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Year 3

Fall Semester

General Elective	Interactive Media Elective	General Elective	Core class or GE
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Spring Semester

General Elective	Interactive Media Elective	General Elective	General Elective
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Year 4

Fall Semester

General Elective	Interactive Media Elective	General Elective	General Elective
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Spring Semester

General Elective	Senior Thesis Project	General Elective	General Elective
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INTERACTIVE MEDIA ARTS

SAMPLE SCHEDULE 2

Year 1

Fall Semester

<i>Global Perspectives on Society I (with Writing Workshop)</i>	Core Class	Core Class	English, Chinese, Core or GE
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Spring Semester

<i>Global Perspectives on Society II (with Writing Workshop)</i>	Core Class or GE	Core Class	English, Chinese, Core or GE
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Year 2

Fall Semester

<i>Perspectives on Humanities or Core class</i>	Interaction Lab or Communications Lab	Interactive Media Elective	Core class, GE, or Chinese
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Spring Semester

<i>Perspectives on Humanities or Core class</i>	Interaction Lab or Communications Lab	Interactive Media Elective	Core class, GE, or Chinese
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Year 3

Fall Semester

Core class or GE	Interactive Media Elective	Interactive Media Elective	General Elective
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Spring Semester

General Elective	Interactive Media Elective	General Elective	General Elective
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Year 4

Fall Semester

General Elective	Interactive Media Elective	General Elective	General Elective
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Spring Semester

General Elective	Senior Thesis Project	General Elective	General Elective
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SCIENCE AND MATHEMATICS

BIOLOGY

CHEMISTRY

NEURAL SCIENCE

PHYSICS

MATHEMATICS

HONORS MATHEMATICS

COMPUTER SCIENCE

COMPUTER ENGINEERING

ELECTRICAL ENGINEERING

BIOLOGY

Biology is concerned with the workings of life in all its varied forms. Over the past few decades, the life sciences have been revolutionized by the development of molecular, cellular, genomic, and bioinformatics techniques that are now being applied to study fundamental processes in organisms. As a result, there has been a transformation in the understanding of life, from the genetic networks that guide how embryos develop to uncovering—at unprecedented resolution—natural genetic variation and how life adapts to diverse environments. These and other discoveries in biology have shaped society by improving human health, enhancing rational management of our environment, developing forensic science, and augmenting the production of renewable energy with the concomitant sequestering of pollutants. In addition, the rapid growth of the life sciences has fueled new ethical and legal issues that impinge on biological discoveries and their applications.

Building on the foundational integrated science courses, students in the Biology track of the Biological and Behavioral Sciences major learn to use the contemporary tools and approaches that are available to solve problems in areas of the current life sciences. Intermediate and advanced courses provide a broad and intensive background in modern biology for those interested in careers in research, health-related fields, biotechnology, and education, among others. The advanced courses emphasize the fundamental concepts and principles mastered in the Foundations of Science sequence, continuing the emphasis on using interdisciplinary approaches to understand the natural world.

The Biology track of the Biological and Behavioral Sciences major is taught by faculty who carry out research in state-of-the-art laboratories in various areas in the life sciences. The Biology program at NYU Shanghai has strong interactive ties with the Department of Biology and the Center for Genomics and Systems Biology at NYU in New York, and the Biology program at NYU Abu Dhabi, as well as with other laboratories across the NYU Global Network.

REQUIREMENTS FOR THE MAJOR

1. General Education Core Requirements: 10-12 courses

Global Perspectives on Society I

Global Perspectives on Society II

Social Science Perspectives on China

Perspectives on Humanities

Chinese Arts

Foundations of Science I (satisfies the science core requirements *Experimental Discovery in the Natural World and Science, Technology, and Society*); see Major Requirements—Prerequisite courses below

Mathematics (Calculus I or based on placement)

2 semesters of English if native Chinese speaker (*based on placement*)

4 semesters of Chinese through Intermediate II level (*based on placement*)

(Students need to take 2 credit versions of language classes during first two semesters of FOS sequence)

2. Major Requirements: 12 courses, as follows:

Not every course listed is taught every semester, and in any given semester other courses may be offered that fulfill this requirement. Requirements may be met through equivalent courses in the Global Network with prior approval.

Prerequisite courses

All courses in the Foundations of Science (FoS) series (or the equivalent):

FoS I includes FoS Physics Honors I, FoS Chemistry I, and FoS Physics Lab (= Physics I Lab);

FoS II includes FoS Physics Honors II, FoS Chemistry II, FoS Biology I and FoS Chemistry Lab;

FoS III includes FoS Physics III, FoS Biology II and FoS Biology Lab.

Note that Physics I-II may be substituted for FoS Physics Honors I-II. Also, note that, although all science majors are encouraged to take the complete FoS sequence in their first 3 semesters, students may alternatively register for any of the individual components in different years, as long as all prerequisites are met.

Major Courses (All Three)

Biostatistics

Organismal Biology

Organic Chemistry I

Biology Electives (Choose Five, at least one from each category)

Sample courses listed within the 4 categories may not be offered every year or every term. Note that some courses may be applicable to multiple categories, but all categories must be represented in a student's electives selection. The fifth elective course may be any upper-level Biology course, any category, or even an available graduate course.

Quantitative Skill Electives

Networks and Dynamics

Genomics and Bioinformatics

Foundational Concepts Electives

Genetics

Developmental Biology

Evolution

Ecosystems

Introduction to Neuroscience

Microbiology and Microbial Genomics

Comparative Physiology

Biochemistry I

Critical Reasoning Electives

Genetics

Developmental Biology

Evolution

Advanced Cell Biology

Systems Biology

(N.B. prereq: Networks & Dynamics)

Laboratory Skills Electives

Developmental Genetics Laboratory

Where the City Meets the Sea

Independent Research / Research Internship

3. General Electives: 8-10 Courses (Must bring credit total to 128 combined in all categories)

Students are strongly encouraged (but not required) to take *Organic Chemistry II* as a general elective. Additionally, prehealth students may wish to take Introduction to Psychology or another relevant social sciences course, as required or recommended by some medical schools. Students interested in pursuing careers in the health sciences should meet with preprofessional advising staff early on to ensure adequate course planning.

BIOLOGY

SAMPLE SCHEDULE 1

This is just one example of how a student could organize their courses if pursuing a Biology major. It assumes a student begins taking Biology major courses in their freshmen year, see Sample Schedule 2 for a sample plan which begins in sophomore year. Students may propose alternative course sequences to their advisors as well.

Year 1

Fall Semester

<i>Global Perspectives on Society I (with Writing Workshop)</i>	Core Class (Calculus)	8 credits: Core class (Foundations of Science I)	2 credits: English or Chinese
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Spring Semester

<i>Global Perspectives on Society II (with Writing Workshop)</i>	Core class	10 credits: Foundations of Science II	2 credits: English or Chinese
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Year 2

Fall Semester

<i>Perspectives on Humanities or Core class</i>	Organic Chemistry I	8 credits: Foundations of Science III	No Class
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Spring Semester

<i>Perspectives on Humanities or Core class</i>	General Elective (could be Organic Chemistry II for pre-med students)	Organismal Biology	Biostatistics
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Year 3

Fall Semester

General Elective	Biology Elective	Biology Elective	Chinese or General Elective
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Spring Semester

General Elective	Biology Elective	General Elective	Chinese or General Elective
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Year 4

Fall Semester

General Elective	Biology Elective	General Elective	Chinese or General Elective
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Spring Semester

General Elective	Biology Elective	General Elective	General Elective
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BIOLOGY

SAMPLE SCHEDULE 2

Year 1

Fall Semester

<i>Global Perspectives on Society I (with Writing Workshop)</i>	Core Class (Calculus)	Core class	English, Chinese, Core or GE
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Spring Semester

<i>Global Perspectives on Society II (with Writing Workshop)</i>	Core class	Core class or GE	English, Chinese, Core or GE
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Year 2

Fall Semester

<i>Perspectives on Humanities or Core class</i>	Core class, GE, or Chinese	8 credits: Core class (Foundations of Science I)	No Class
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Spring Semester

<i>Perspectives on Humanities or Core class</i>	Core class, GE, or Chinese	10 credits: Foundations of Science II	No Class
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Year 3

Fall Semester

<i>Organic Chemistry I</i>	8 credits: Foundations of Science III	<i>Biostatistics</i>	No Class
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Spring Semester

<i>Organismal Biology</i>	General Elective (could be <i>Organic Chemistry II</i> for pre-med students)	General Elective	General Elective
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Year 4

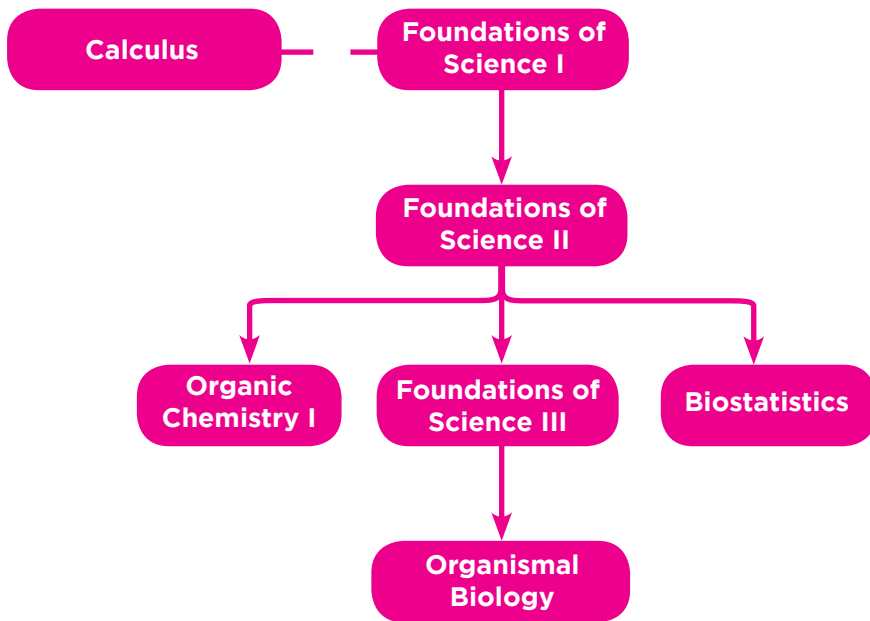
Fall Semester

General Elective	Biology Elective	Biology Elective	Biology Elective
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Spring Semester

General Elective	Biology Elective	Biology Elective	General Elective
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Prerequisite Chart for the BIOLOGY MAJOR



--- Corequisite
→ Prerequisite

Required Course

The focus of the Chemistry program is the study of the world of molecules, how they are created from atoms, how their structures affect their chemical and physical properties, and how they unite or assemble to form the matter that makes up the physical world. Knowledge of chemistry is fundamental to an in-depth understanding of the structural properties and biochemical reactions that define all living systems. In fact, chemistry interfaces with the life sciences and with physics and mathematics.

The range of applications of modern chemistry is broad, spanning many aspects of human activities such as the improvement of agriculture, the discovery of new drugs, and the creation of new materials by learning how molecules are assembled and how they recognize one another. Chemistry drives the exciting field of nanotechnology that generates new materials for devising ever smaller electronic devices with enhanced computing or information storage characteristics; that invents novel materials for innovative applications in industry and everyday life; and that constructs novel photosensitive materials for solar energy conversion to electricity, to cite just a few examples.

Majoring in Chemistry provides strong preparation for graduate study in chemistry and biochemistry; professional education in medicine, dentistry, or patent law; and careers in industrial or pharmaceutical chemistry and biotechnology. Chemistry majors are encouraged to complete Linear Algebra if they hope to pursue graduate or professional studies in science.

REQUIREMENTS FOR THE MAJOR

1. General Education Core Requirements: 10-12 courses

Global Perspectives on Society I

Global Perspectives on Society II

Social Science Perspectives on China

Perspectives on Humanities

Chinese Arts

Foundations of Science I (satisfies the science core requirements *Experimental Discovery in the Natural World and Science, Technology, and Society*); see Major Requirements—Prerequisite courses below

Mathematics (*Calculus I* or based on placement)

2 semesters of English if native Chinese speaker (*based on placement*)

4 semesters of Chinese through Intermediate II level (*based on placement*)

(Students need to take 2 credit versions of language classes during first two semesters of FoS sequence)

2. Major Requirements: 15 courses, as follows:

Not every course listed is taught every semester, and in any given semester other courses may be offered that fulfill this requirement. Requirements may be met through equivalent courses in the Global Network with prior approval.

Prerequisite courses

All courses in the Foundations of Science (FoS) series (or the equivalent):

FoS I includes FoS Physics Honors I, FoS Chemistry I, and FoS Physics Lab (= Physics I Lab);

FoS II includes FoS Physics Honors II, FoS Chemistry II, FoS Biology I and FoS Chemistry Lab;

FoS III includes FoS Physics III, FoS Biology II and FoS Biology Lab.

Note that Physics I-II may be substituted for FoS Physics Honors I-II. Also, note that, although all science majors are encouraged to take the complete FoS sequence in their first 3 semesters, students may alternatively register for any of the individual components in different years, as long as all prerequisites are met.

Major Courses (All Nine)

Multivariable Calculus and Differential Equations

Linear Algebra for applications

Probability and Statistics

Inorganic Chemistry

Organic Chemistry I

Organic Chemistry II

Physical Chemistry: Quantum Mechanics and Spectroscopy

Physical Chemistry: Thermodynamics and Kinetics

Physical Chemistry Laboratory

Chemistry Electives (Choose Two)

Organic Analysis

Biochemistry I

Biochemistry II

Experimental Biochemistry

Biophysical Chemistry

3. General Electives: 5-7 Courses (Must bring credit total to 128 combined in all categories)

CHEMISTRY

SAMPLE SCHEDULE 1

This is just one example of how a student could organize their courses if pursuing a Chemistry major. It assumes a student begins taking Chemistry major courses in their freshmen year, see Sample Schedule 2 for a sample plan which begins in sophomore year. Students may propose alternative course sequences to their advisors as well.

Year 1

Fall Semester

Global Perspectives on Society I (with Writing Workshop)	Core Class (Calculus)	8 credits: Core class (Foundations of Science I)	2 credits: English or Chinese
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Spring Semester

Global Perspectives on Society II (with Writing Workshop)	Multivariate Calculus and Differential Equations	10 credits: Foundations of Science II	2 credits: English or Chinese
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Year 2

Fall Semester

Perspectives on Humanities or Core class	Organic Chemistry I	8 credits: Foundations of Science III	No Class
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Spring Semester

Perspectives on Humanities or Core class	Organic Chemistry II	Linear Algebra for Applications	Core class
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Year 3

Fall Semester

General Elective	Physical Chemistry: Quantum Mechanics and Spectroscopy	Physical Chemistry Laboratory	Language Class or General Elective
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Spring Semester

General Elective	Physical Chemistry: Thermodynamics and Kinetics	Probability and Statistics	Language Class or General Elective
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Year 4

Fall Semester

General Elective	Inorganic Chemistry	Chemistry Elective	Language Class or General Elective
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Spring Semester

General Elective	Chemistry Elective	General Elective	Language Class or General Elective
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CHEMISTRY

SAMPLE SCHEDULE 2

Year 1

Fall Semester

Global Perspectives on Society I (with Writing Workshop)

Core Class (Calculus)

Core class

English, Chinese, Core or GE

Spring Semester

Global Perspectives on Society II (with Writing Workshop)

Core class

Core class or GE

English, Chinese, Core or GE

Year 2

Fall Semester

Perspectives on Humanities

Core class, GE, or Chinese

8 credits: Core class (Foundations of Science I)

No Class

Spring Semester

Core class, GE, or Chinese

Multivariate Calculus and Differential Equations

10 credits: Foundations of Science II

No Class

Year 3

Fall Semester

Organic Chemistry I

Linear Algebra

8 credits: Foundations of Science III

No Class

Spring Semester

Organic Chemistry II

Physical Chemistry: Quantum Mechanics and Spectroscopy

Physical Chemistry Laboratory

Physical Chemistry: Thermodynamics and Kinetics

Year 4

Fall Semester

General Elective

Inorganic Chemistry

Chemistry Elective

Probability and Statistics

Spring Semester

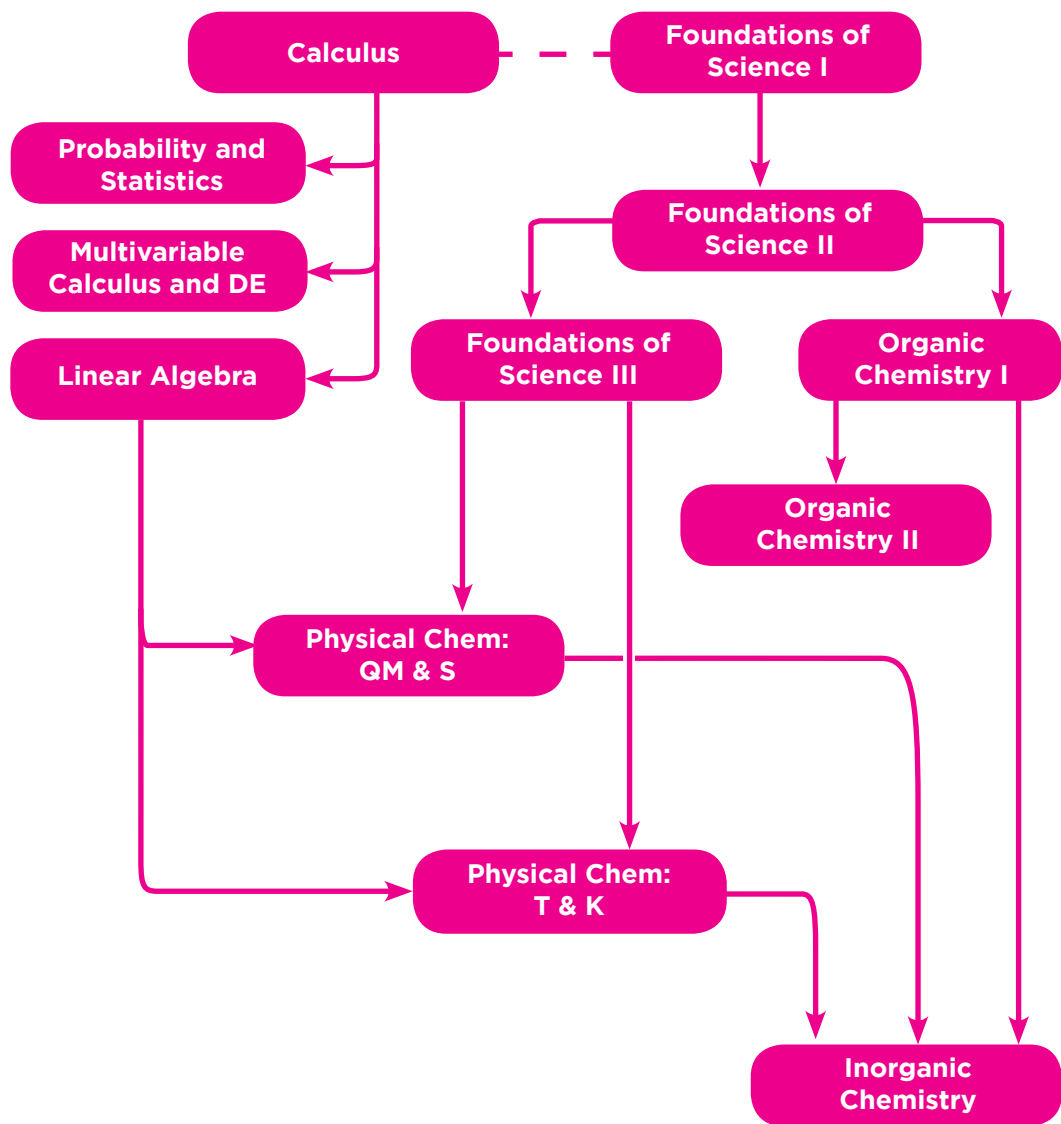
General Elective

Chemistry Elective

General Elective

General Elective or Language Class

Prerequisite Chart for the CHEMISTRY MAJOR



--- Corequisite
 → Prerequisite

Required Course

Neural science is a collection of disciplines unified by a concern for the function of the brain. Experimental approaches in neural science vary from analyses of molecular and cellular mechanisms in nerve cells and groups of nerve cells to behavioral and psychological studies of whole organisms. Theoretical tools include mathematical and computational modeling approaches that have proved useful in other areas of science. Experimental questions include issues related to biophysical and neurochemical mechanisms within single nerve cells, functional neural circuits consisting of small numbers of neurons, the behavior of large systems of neurons, and the relationship between the activity of elements of the nervous system and the behavior of organisms. The Neural Science program at NYU Shanghai has strong interactions with the Center for Neural Science at NYU in New York as well as with other laboratories across the NYU Global Network.

The undergraduate Neural Science curriculum blends courses from many of the basic sciences as a foundation for higher level work in Neural Science.

REQUIREMENTS FOR THE MAJOR

1. General Education Core Requirements: 10-12 courses

Global Perspectives on Society I
Global Perspectives on Society II
Social Science Perspectives on China
Perspectives on Humanities
Chinese Arts
Foundations of Science I (satisfies the science core requirements *Experimental Discovery in the Natural World and Science, Technology, and Society*); see Major Requirements—Prerequisite courses below
Mathematics (*Calculus I* or based on placement)
2 semesters of English if native Chinese speaker (*based on placement*)
4 semesters of Chinese through Intermediate II level (*based on placement*)
(Students need to take 2 credit versions of language classes while completing FOS sequence)

2. Major Requirements: 14 courses, as follows:

Not every course listed is taught every semester, and in any given semester other courses may be offered that fulfill this requirement. Requirements may be met through equivalent courses in the Global Network with prior approval.

Prerequisite courses

All courses in the Foundations of Science (FoS) series (or the equivalent):
FoS I includes FoS Physics Honors I, FoS Chemistry I, and FoS Physics Lab (= Physics I Lab);
FoS II includes FoS Physics Honors II, FoS Chemistry II, FoS Biology I and FoS Chemistry Lab;
FoS III includes FoS Physics III, FoS Biology II and FoS Biology Lab.

Note that Physics I-II may be substituted for FoS Physics Honors I-II. Also, note that, although all science majors are encouraged to take the complete FoS sequence in their first 3 semesters, students may alternatively register for any of the individual components in different years, as long as all prerequisites are met.

Major Courses (All Four)

Biostatistics
Introduction to Neural Science
Cellular and Molecular Neuroscience
Behavioral and Integrative Neuroscience

Neural Science Electives (Choose 4 from Neural Science electives, and 2 courses from Biology, Mathematics or Computer Science)

Neural Science electives include:

Development and Dysfunction of the Nervous System
Neural Bases of Speed and Language
Networks and Dynamics
Free Will and the Brain
Foraging Theory of Behavior (pending confirmation)
Perception (pending confirmation)
Special Topics in Neural Science

Computer Science electives include:

Circuits
Control Systems
Robotic Systems
Signals and Systems
Introduction to Computer Science
Algorithms
Theory of Computation
Machine Learning and Data Mining
Artificial Intelligence
Advanced Algorithms

Mathematics electives include:

Probability and Statistics
Theory of Probability
Linear Algebra
Multivariable Calculus and Differential Equations
Partial Differential Equations

Biology electives include:

Evolution
Developmental Biology
Systems Biology
Applied Cell Biology
Organismal Biology
Genomics and Bioinformatics
Genetics
Biochemistry I
Biochemistry II
Experimental Biochemistry
Biophysical Chemistry

3. General Electives: 6-8 Courses (Must bring credit total to 128 combined in all categories)

Students are strongly encouraged (but not required) to take Organic Chemistry I and II and Introduction to Programming as general electives.

NEURAL SCIENCE

SAMPLE SCHEDULE 1

This is just one example of how a student could organize their courses if pursuing a Neural Science major. It assumes a student begins taking Neural Science major courses in their freshmen year, see Sample Schedule 2 for a sample plan which begins in sophomore year. Students may propose alternative course sequences to their advisors as well.

Year 1

Fall Semester

Global Perspectives on Society I (with Writing Workshop)

Core Class
(Calculus)

**8 credits: Core class
(Foundations of Science I)**

2 credits: English or Chinese

Spring Semester

Global Perspectives on Society II (with Writing Workshop)

Neural Science Elective
(NS, Bio, Math, or CS)

10 credits: Foundations of Science II

2 credits: English or Chinese

Year 2

Fall Semester

Perspectives on Humanities

Introduction to Neural Science

8 credits: Foundations of Science III

No Class

Spring Semester

Core class, GE, or Chinese

Behavioral and Integrative Neuroscience

Biostatistics

Core class

Year 3

Fall Semester

General Elective

Cellular and Molecular Neuroscience

General Elective

Language Class or General Elective

Spring Semester

General Elective

Neural Science Elective
(NS, Bio, Math, or CS)

General Elective

Language Class or General Elective

Year 4

Fall Semester

General Elective

Neural Science Elective
(NS, Bio, Math, or CS)

Neural Science Elective
(NS, Bio, Math, or CS)

Language Class or General Elective

Spring Semester

General Elective

Neural Science Elective
(NS, Bio, Math, or CS)

Neural Science Elective
(NS, Bio, Math, or CS)

Language Class or General Elective

NEURAL SCIENCE

SAMPLE SCHEDULE 2

Year 1

Fall Semester

<i>Global Perspectives on Society I (with Writing Workshop)</i>	Core Class (Calculus)	Core class	English, Chinese, Core, or GE
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Spring Semester

<i>Global Perspectives on Society II (with Writing Workshop)</i>	Core class	Core class or GE	English, Chinese, Core, or GE
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Year 2

Fall Semester

<i>Perspectives on Humanities</i>	Core class, GE, or Chinese	8 credits: Core class (Foundations of Science I)	No Class
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Spring Semester

Core class, GE, or Chinese	Neural Science Elective (NS, Bio, Math, or CS)	10 credits: Foundations of Science II	No Class
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Year 3

Fall Semester

Introduction to Neural Science	Biostatistics	8 credits: Foundations of Science III	No Class
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Spring Semester

Behavioral and Integrative Neuroscience	General Elective	General Elective	General Elective or Language Class
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Year 4

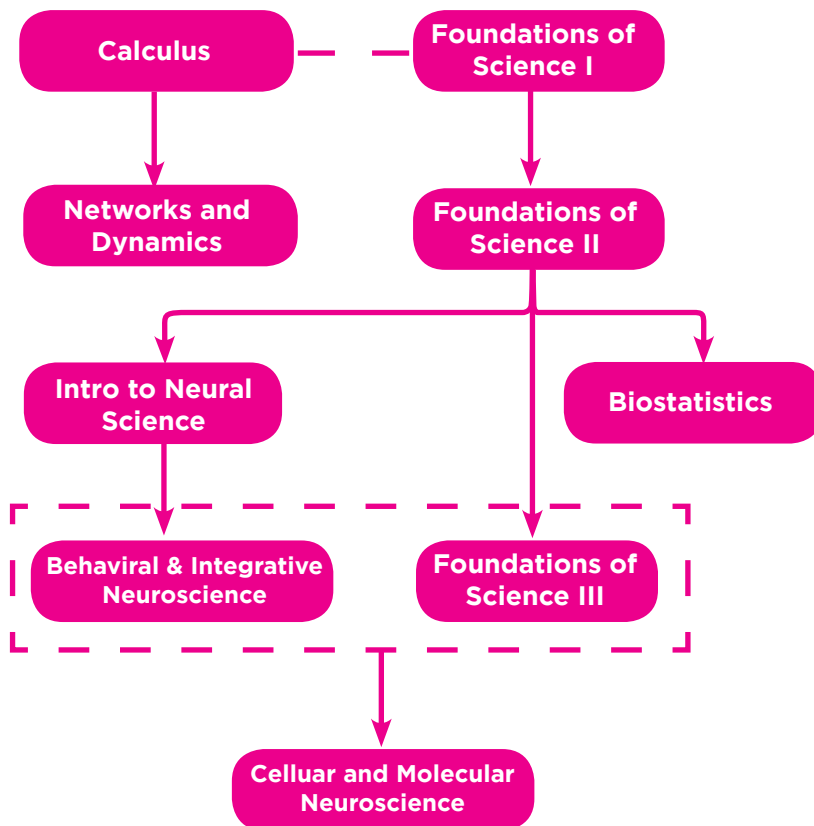
Fall Semester

Cellular and Molecular Neuroscience	Neural Science Elective (NS, Bio, Math, or CS)	Neural Science Elective (NS, Bio, Math, or CS)	General Elective
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Spring Semester

Neural Science Elective (NS, Bio, Math, or CS)	Neural Science Elective (NS, Bio, Math, or CS)	Neural Science Elective (NS, Bio, Math, or CS)	General Elective
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Prerequisite Chart for the NEURAL SCIENCE MAJOR



--- Corequisite
 → Prerequisite

Required Course

Physics is a broad discipline, ranging from fundamental scientific questions to sophisticated technological applications. At its most basic, it is the study of matter and energy and their manifold interactions. Physicists study topics as wide-ranging as the underlying nature of space and time; the origins, large-scale structure, and future evolution of the universe; the behavior of stars and galaxies; the fundamental constituents of matter; the many different patterns in which matter is organized, including superconductivity, liquid crystals, or the various forms of magnetism in solids; the workings of biological matter, whether in molecules such as DNA, or cellular structures, or the transport of matter and energy in and across cells; and many others. Basic physics research has led to myriad technological advances, which have transformed society in the 20th century through the present day; a small list includes: radio and television; computers; lasers; X-rays; magnetic resonance imaging and CAT scans; and the World Wide Web.

Physics is a hands-on discipline, and our students gain expertise not only in the classroom but also in the laboratory. They participate in activities ranging from the writing of realistic computer games to the modeling of financial activities, as well as the more traditional activities of physicists. Those trained in physics are found in many occupations, such as various fields of engineering, computer technology, health, environmental and earth sciences, communications, and science writing. A higher degree opens the possibility of creative research in industry, or teaching and research in colleges and universities. Outstanding and highly motivated students are offered special opportunities for honors work, independent study, summer laboratory research, internships, and other enhancements.

REQUIREMENTS FOR THE MAJOR

1. General Education Core Requirements: 10-12 courses

Global Perspectives on Society I

Global Perspectives on Society II

Social Science Perspectives on China

Perspectives on Humanities

Chinese Arts

Foundations of Science I (satisfies the science core requirements *Experimental Discovery in the Natural World and Science, Technology, and Society*); see Major Requirements—Prerequisite courses below

Mathematics (*Calculus I* or based on placement)

2 semesters of English if native Chinese speaker (*based on placement*)

4 semesters of Chinese through Intermediate II level (*based on placement*)

(Students need to take 2 credit versions of language classes during first two semesters of FOS sequence)

2. Major Requirements: 13 courses, as follows:

Not every course listed is taught every semester, and in any given semester other courses may be offered that fulfill this requirement. Requirements may be met through equivalent courses in the Global Network with prior approval.

Prerequisite courses

All courses in the Foundations of Science (FoS) series (or the equivalent):

FoS I includes FoS Physics Honors I, FoS Chemistry I, and FoS Physics Lab (= Physics I Lab);

FoS II includes FoS Physics Honors II, FoS Chemistry II, FoS Biology I and FoS Chemistry Lab;

FoS III includes FoS Physics III, FoS Biology II and FoS Biology Lab.

Note that Physics I-II may be substituted for FoS Physics Honors I-II. Also, note that, although all science majors are encouraged to take the complete FoS sequence in their first 3 semesters, students may alternatively register for any of the individual components in different years, as long as all prerequisites are met.

Additional Required Courses (All Eight)

Multivariable Calculus and Differential Equations

Linear Algebra

Probability and Statistics

Mechanics

Electricity and Magnetism

Quantum Mechanics

Statistical Mechanics and Thermodynamics

Advanced Physics Laboratory

Physics Electives (Choose One)

Astrophysics

Biophysics

Computational Physics

Nuclear and Particle Physics

Solid State Physics

3. General Electives: 7-9 Courses (Must bring credit total to 128 combined in all categories)

PHYSICS

SAMPLE SCHEDULE 1

This is just one example of how a student could organize their courses if pursuing a Physics major. It assumes a student begins taking Physics major courses in their freshmen year, see Sample Schedule 2 for a sample plan which begins in sophomore year. Students may propose alternative course sequences to their advisors as well.

Year 1

Fall Semester

Global Perspectives on Society I (with Writing Workshop)	Core Class (Calculus)	8 credits: Core class (Foundations of Science I)	2 credits: English or Chinese
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Spring Semester

Global Perspectives on Society II (with Writing Workshop)	Multivariate Calculus and Differential Equations	10 credits: Foundations of Science II	2 credits: English or Chinese
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Year 2

Fall Semester

Perspectives on Humanities or Core class	Linear Algebra for Applications	8 credits: Foundations of Science III	No Class
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Spring Semester

Perspectives on Humanities or Core class	Mechanics	Electricity and Magnetism	Core class
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Year 3

Fall Semester

General Elective	Probability and Statistics	Statistical Mechanics and Thermodynamics	Language Class or General Elective
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Spring Semester

General Elective	Quantum Mechanics	Advanced Physics Lab	Language Class or General Elective
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Year 4

Fall Semester

General Elective	Physics Elective	General Elective	Language Class or General Elective
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Spring Semester

General Elective	General Elective	Core class	Language Class or General Elective
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PHYSICS

SAMPLE SCHEDULE 2

Year 1

Fall Semester

<i>Global Perspectives on Society I</i> (with Writing Workshop)	Core Class (Calculus)	Core class	English, Chinese, Core or GE
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Spring Semester

<i>Global Perspectives on Society II</i> (with Writing Workshop)	Core class	Core class or GE	English, Chinese, Core or GE
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Year 2

Fall Semester

<i>Perspectives on Humanities</i> or Core class	Linear Algebra	8 credits: Core class (Foundations of Science I)	No Class
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Spring Semester

<i>Perspectives on Humanities</i> or Core class	Multivariate Calculus and Differential Equations	10 credits: Foundations of Science II	No Class
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Year 3

Fall Semester

General Elective or Chinese	Probability and Statistics	8 credits: Foundations of Science III	No Class
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Spring Semester

General Elective or Chinese	Mechanics	Electricity and Magnetism	Quantum Mechanics
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Year 4

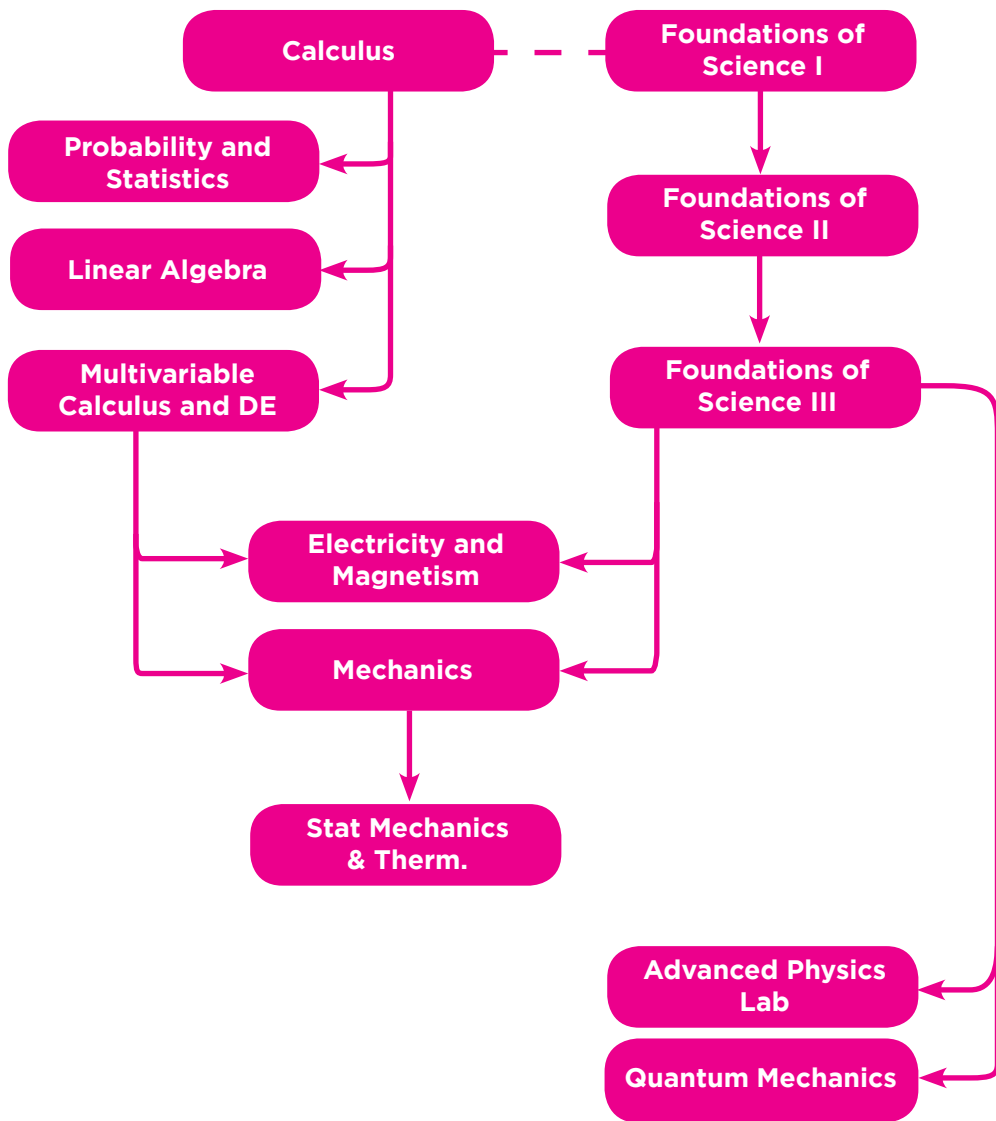
Fall Semester

General Elective	Statistical Mechanics and Thermodynamics	Physics Elective	General Elective
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Spring Semester

General Elective	Advanced Physics Lab	General Elective	General Elective
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Prerequisite Chart for the PHYSICS MAJOR



--- Corequisite
 → Prerequisite

Required Course

MATHEMATICS

Mathematics forms the cornerstone of the sciences, playing a powerful dual role as both a pure science and a tool for solving problems and modeling phenomena in other disciplines. For example, mathematics allows us to build efficient algorithms in computing, understand rare events in financial markets, model the physical universe, develop predictions for climate science, map and study the human genome, and understand the structure of the human brain. Mathematics draws vitality from questions arising in the natural world, as well as applications to industry and technology, and yet it is grounded in rigor and abstraction.

The Mathematics major is designed to give comprehensive training in both mathematics and its applications to prepare you for a career or more advanced degree programs. Courses required for the Mathematics major provide essential training and experience in analysis, algebra, differential equations, and probability theory. Mathematics elective courses emphasize numerous topics of pure and applied mathematics, including dynamical systems, statistics, numerical analysis, partial differential equations, topology, differential geometry, scientific computing, abstract algebra, number theory, and functional analysis. For further information on Mathematics courses, please consult the Course Descriptions section of this Bulletin.

NYU Shanghai offers two degree tracks in Mathematics: (a) Mathematics and (b) Honors Mathematics. Students who are interested in pursuing graduate study in Mathematics or related disciplines are encouraged to consider the Honors Mathematics degree.

REQUIREMENTS FOR THE MAJOR

1. General Education Core Requirements: 10-12 courses

Global Perspectives on Society I

Global Perspectives on Society II

Social Science Perspectives on China

Perspectives on Humanities

Chinese Arts

Experimental Discovery in the Natural World (must be *Foundations of Science I* [1] or *Physics I*; *Chemistry I*; or *Biology I*)

Science, Technology, and Society (must be *Foundations of Science I* [2] or *Physics I* or *II*; *Chemistry I* or *II*; or *Biology I* or *II*)

Mathematics (Calculus or Honors Calculus) N.B. If *Honors Calculus* is used for the Core requirement, it may not be used as a "Constrained Math Elective" for the major as listed below)

2 semesters of English if native Chinese speaker (*based on placement*)

4 semesters of Chinese through Intermediate II level (*based on placement*)

2. Major Requirements: 13 courses, as follows:

Not every course listed is taught every semester, and in any given semester other courses may be offered that fulfill this requirement. Requirements may be met through equivalent courses in the Global Network with prior approval.

Required Mathematics Courses (All Five)

Multivariable Calculus

Linear Algebra

Ordinary Differential Equations I

Probability and Statistics

Complex Variables

Constrained Math Elective (Choose Two)

Honors Calculus

Analysis I

Analysis II

Honors Algebra I

Honors Algebra II

Dynamical Systems

Differential Geometry

Theory of Probability

Mathematics Electives (Choose Six, includes classes in choose two section)—this

list is not inclusive, other courses may be added if approved.

Real Variables

Ordinary Differential Equations II

Topology

Number Theory

Mathematical Statistics

Combinatorics

Scientific Computations

Fluid Dynamics

Discrete Mathematics

Partial Differential Equations

Numerical Analysis

Functional Analysis

Networks and Dynamics

3. General Electives: 7-9 Courses (Must bring credit total to 128 combined in all categories)

MATHEMATICS

SAMPLE SCHEDULE 1

This is just one example of how a student could organize their courses if pursuing a Math major. It assumes a student begins taking Math major courses in their freshmen year, see Sample Schedule 2 for a sample plan which begins in sophomore year. Students may propose alternative course sequences to their advisors as well.

Year 1

Fall Semester

<i>Global Perspectives on Society I (with Writing Workshop)</i>	Core Class (Calculus)	Core class	English, Chinese, Core or GE
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Spring Semester

<i>Global Perspectives on Society II (with Writing Workshop)</i>	Multivariate Calculus	Core class	English, Chinese, Core or GE
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Year 2

Fall Semester

<i>Perspectives on Humanities or Core class</i>	Linear Algebra	Probability and Statistics	Core class, GE, or Chinese
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Spring Semester

<i>Perspectives on Humanities or Core class</i>	Ordinary Differential Equations	Constrained Math Elective	Core class, GE, or Chinese
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Year 3

Fall Semester

Core class or GE	Complex Variables	Constrained Math Elective	General Elective
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Spring Semester

General Elective	Mathematics Elective	Mathematics Elective	General Elective
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Year 4

Fall Semester

General Elective	Mathematics Elective	Mathematics Elective	General Elective
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Spring Semester

General Elective	Mathematics Elective	Mathematics Elective	General Elective
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MATHEMATICS

SAMPLE SCHEDULE 2

Year 1

Fall Semester

<i>Global Perspectives on Society I (with Writing Workshop)</i>	Core Class (Calculus)	Core class	English, Chinese, Core or GE
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Spring Semester

<i>Global Perspectives on Society II (with Writing Workshop)</i>	Core class	Core class or GE	English, Chinese, Core or GE
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Year 2

Fall Semester

<i>Perspectives on Humanities or Core class</i>	Linear Algebra	Probability and Statistics	Core class, GE, or Chinese
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Spring Semester

<i>Perspectives on Humanities or Core class</i>	Multivariate Calculus	Constrained Math Elective	Core class, GE, or Chinese
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Year 3

Fall Semester

Core class or GE	Ordinary Differential Equations	Constrained Math Elective	Mathematics Elective
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Spring Semester

General Elective	Complex Variables	Mathematics Elective	Mathematics Elective
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Year 4

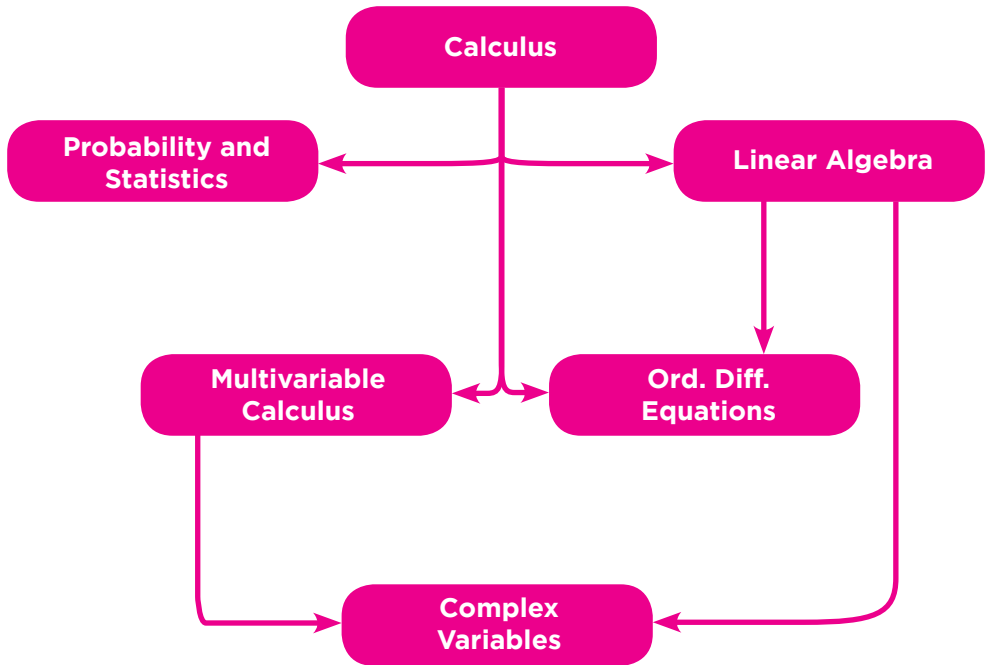
Fall Semester

General Elective	Mathematics Elective	Mathematics Elective	General Elective
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Spring Semester

General Elective	Mathematics Elective	General Elective	General Elective
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Prerequisite Chart for the MATHEMATICS MAJOR



--- Corequisite
→ Prerequisite

Required Course

REQUIREMENTS FOR THE MAJOR

1. General Education Core Requirements: 10-12 courses

Global Perspectives on Society I
Global Perspectives on Society II
Social Science Perspectives on China
Perspectives on Humanities
Chinese Arts
Experimental Discovery in the Natural World (must be Foundations of Science I [1])
or *Physics I*; *Chemistry I*; or *Biology I*
Science, Technology, and Society (must be Foundations of Science I [2]) or *Physics I* or *II*; *Chemistry I* or *II*; or *Biology I* or *II*)
Mathematics (*Honors Calculus*)
2 semesters of English if native Chinese speaker (*based on placement*)
4 semesters of Chinese through Intermediate II level (*based on placement*)

2. Major Requirements: 14 courses, as follows:

Not every course listed is taught every semester, and in any given semester other courses may be offered that fulfill this requirement. Requirements may be met through equivalent courses in the Global Network with prior approval.

Required Mathematics Courses (All Eight)

Analysis I
Analysis II
Honors Linear Algebra I
Honors Linear Algebra II
Honors Algebra I or *Differential Geometry*
Theory of Probability
Complex Variables
Ordinary Differential Equations I

Mathematics Electives (Choose Five)

Honors Algebra II
Real Variables
Functional Analysis
Ordinary Differential Equations II
Topology
Number Theory
Mathematical Statistics
Combinatorics
Numerical Analysis
Scientific Computations
Fluid Dynamics
Dynamical Systems
Discrete Mathematics
Partial Differential Equations

Senior Thesis (by approval) or 1 additional Mathematics elective course

3. General Electives: 5-7 Courses (Must bring credit total to 128 combined in all categories)

HONORS MATHEMATICS

SAMPLE SCHEDULE 1

This is just one example of how a student could organize their courses if pursuing the HM major. It assumes a student begins taking HM major courses in their freshmen year, see Sample Schedule 2 for a sample plan which begins in sophomore year. Students may propose alternative course sequences to their advisors as well.

Year 1

Fall Semester

<i>Global Perspectives on Society I (with Writing Workshop)</i>	Core Class (Honors Calculus)	Honors Advanced Linear Algebra I	English, Chinese, Core or GE
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Spring Semester

<i>Global Perspectives on Society II (with Writing Workshop)</i>	Analysis I	Honors Advanced Linear Algebra II	English, Chinese, Core or GE
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Year 2

Fall Semester

<i>Perspectives on Humanities or Core class</i>	Analysis II	Ordinary Differential Equations	Core class, GE, or Chinese
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Spring Semester

<i>Perspectives on Humanities or Core class</i>	Complex Variables	Theory of Probability	Core class, GE, or Chinese
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Year 3

Fall Semester

Core class	Honors Algebra I or Differential Geometry	Mathematics Elective	Core class or GE
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Spring Semester

Core class	Mathematics Elective	Mathematics Elective	General Elective
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Year 4

Fall Semester

General Elective	Mathematics Elective	Mathematics Elective	General Elective
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Spring Semester

General Elective	Mathematics Elective	General Elective	General Elective
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HONORS MATHEMATICS

SAMPLE SCHEDULE 2

Year 1

Fall Semester

<i>Global Perspectives on Society I (with Writing Workshop)</i>	Core Class (Calculus)	Core class	English, Chinese, Core or GE
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Spring Semester

<i>Global Perspectives on Society II (with Writing Workshop)</i>	Core class	Core class or GE	English, Chinese, Core or GE
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Year 2

Fall Semester

<i>Perspectives on Humanities or Core class</i>	Honors Calculus	Honors Advanced Linear Algebra I	Core class, GE, or Chinese
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Spring Semester

<i>Perspectives on Humanities or Core class</i>	Analysis I	Honors Advanced Linear Algebra II	Core class, GE, or Chinese
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Year 3

Fall Semester

Core class or GE	Analysis II	Theory of Probability	Honors Ordinary Differential Equations
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Spring Semester

General Elective	Partial Differential Equations	Honors Algebra I or Differential Geometry	Complex Variables
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Year 4

Fall Semester

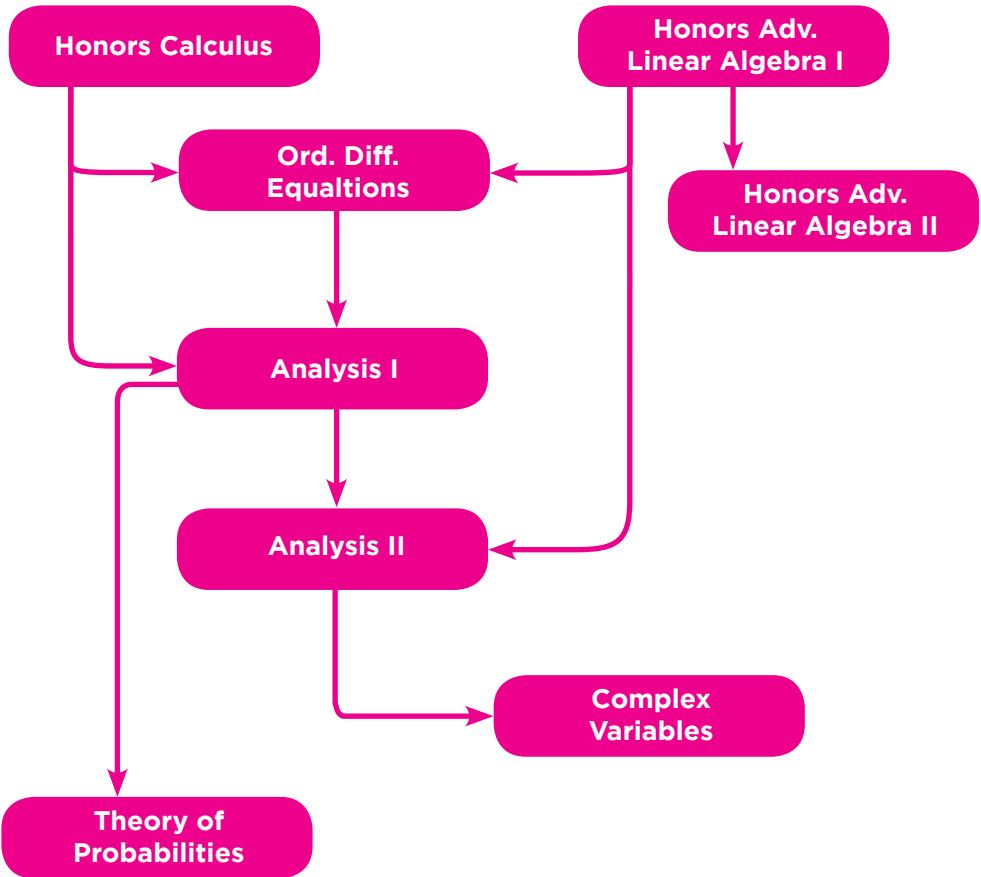
General Elective	Mathematics Elective	Mathematics Elective	Mathematics Elective
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Spring Semester

General Elective	Mathematics Elective	Mathematics Elective	General Elective
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Prerequisite Chart

for the HONORS MATHEMATICS MAJOR



Corequisite
 Prerequisite

Required Course

Computer science has led to revolutionary innovations in entertainment, the humanities, health care, business, the news media, communications, education, scientific research, and the arts. Although it is a relatively young field, computer science has produced many of the advances of modern life that we now take for granted. It has given medical researchers tools to understand and cure diseases, helped biologists decipher the human genome, has created new paradigms for how people interact with social networks and smartphones, and has created automatic language translation systems and self-driving cars. In the near future, artificial intelligence, robotics, and the Internet of Things will likely further transform our society beyond our imagination.

COMPUTER SCIENCE

REQUIREMENTS FOR THE MAJOR

1. General Education Core Requirements: 10-12 courses

Global Perspectives on Society I
Global Perspectives on Society II
Social Science Perspectives on China
Perspectives on Humanities
Chinese Arts
1 class from: Experimental Discovery in the Natural World; or Science, Technology, and Society
1 class from Programming and Computational Thinking
Mathematics (*Calculus*)
2 semesters of English if native Chinese speaker (*based on placement*)
4 semesters of Chinese through Intermediate II level (*based on placement*)

2. Major Requirements: 13 courses, as follows:

Not every course listed is taught every semester, and in any given semester other courses may be offered that fulfill this requirement. Requirements may be met through equivalent courses in the Global Network with prior approval.

Required Major Courses (All Eight)

Intro to CS (prereq Intro to Programming)
Data Structures (prereq Intro to Programming or ICS)
Probability and Statistics or *Theory of Probability or Statistics for Business and Economics*
Discrete Mathematics (no prereq)
Computer Architecture (prereq Intro to Programming or ICS)
Algorithms (prereq Data Structures)
Operating Systems (prereq Data Structures and Computer Architecture)
Senior Project

Computer Science Electives (Choose Four)

Advanced Algorithms
Computer Networking
Computer Security
Network Security
Introduction to Game Programming
Computer Graphics
Digital Logic
UNIX System Programming
Computer Vision
Introduction to Databases
Theory of Computation
Machine Learning and Data Mining
Artificial Intelligence
Introduction to Cryptography
Parallel and Distributed Computing
Developing Web
Natural Language Processing
Software Engineering

3. General Electives: 8-10 Courses (Must bring credit total to 128 combined in all categories)

COMPUTER SCIENCE

SAMPLE SCHEDULE 1

This is just one example of how a student could organize their courses if pursuing a CS major. It assumes a student begins taking CS major courses in their freshmen year, see Sample Schedule 2 for a sample plan which begins in sophomore year. Students may propose alternative course sequences to their advisors as well.

Year 1

Fall Semester

Global Perspectives on Society I (with Writing Workshop)	Core Class (Calculus)	Core class (Intro to Programming/ Computer Science)	English, Chinese, Core, or GE
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Spring Semester

Global Perspectives on Society II (with Writing Workshop)	Core class	Introduction to Computer Science or Data Structures	English, Chinese, Core, or GE
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Year 2

Fall Semester

Perspectives on Humanities or Core class	Data Structures or Computer Science Elective	Discrete Mathematics	Core class, GE, or Chinese
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Spring Semester

Perspectives on Humanities or Core class	Computer Science Elective	Computer Architecture	Core class, GE, or Chinese
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Year 3

Fall Semester

Core class or GE	Computer Science Elective	Algorithms	General Elective
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Spring Semester

Core class or GE	Computer Science Elective	Probability and Statistics or alternate courses, see pg. 128	General Elective
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Year 4

Fall Semester

General Elective	Computer Science Elective or General Elective	Operating Systems	General Elective
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Spring Semester

General Elective	Senior Project	General Elective	General Elective
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COMPUTER SCIENCE

SAMPLE SCHEDULE 2

Year 1

Fall Semester

<i>Global Perspectives on Society I (with Writing Workshop)</i>	Core Class (Calculus)	Core class	English, Chinese, Core, or GE
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Spring Semester

<i>Global Perspectives on Society II (with Writing Workshop)</i>	Core class	Core class or GE	English, Chinese, Core, or GE
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Year 2

Fall Semester

<i>Perspectives on Humanities or Core class</i>	Core class (Intro to Programming/Computer Science)	Discrete Mathematics	Core class, GE, or Chinese
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Spring Semester

<i>Perspectives on Humanities or Core class</i>	Introduction to Computer Science or Data Structures	Probability and Statistics or alternate courses, see pg. 128	Core class, GE, or Chinese
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Year 3

Fall Semester

Computer Science Elective	Data Structures or Computer Science Elective	Computer Architecture	General Elective
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Spring Semester

Computer Science Elective	Computer Science Elective	Algorithms	General Elective
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Year 4

Fall Semester

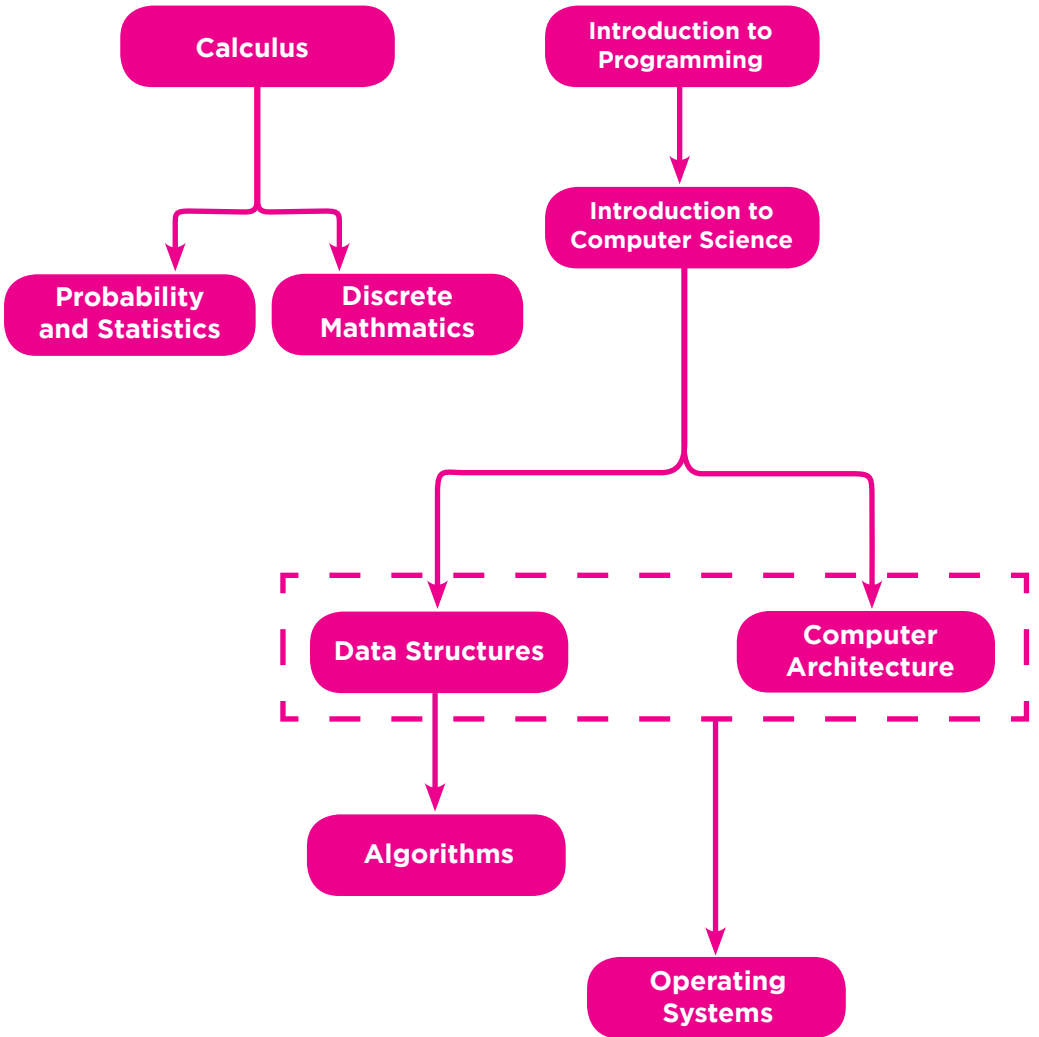
General Elective	Computer Science Elective or General Elective	Operating Systems	General Elective
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Spring Semester

General Elective	Senior Project	General Elective	General Elective
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Prerequisite Chart

for the COMPUTER SCIENCE MAJOR



--- Corequisite
 → Prerequisite

Required Course

COMPUTER ENGINEERING

Engineering challenges of the 21st century are varied, complex, and cross-disciplinary. Ranging from the nano-scale to mega-projects, they are characterized by sustainability concerns, environmental and energy constraints, global sourcing, and humanitarian goals. In the face of global competition, dwindling natural resources and the complexity of societal needs, the leaders of technological enterprises will be those who can innovate, are inventive and entrepreneurial, and understand how technology is integrated within society. Computer Engineering at NYU Shanghai is designed to create technological leaders with a global perspective, a broad education, and the capacity to think creatively. Students enjoy a learning environment conducive to creativity which is at the heart of tomorrow's technological innovations and enterprises. Today the products of computer engineering touch nearly every part of our lives. They let us chat with friends via web cams, send emails from cell phones, and withdraw cash from ATMs. But laptops and information networks aren't the only products computer engineers develop; they reconstruct genomes, design robots, and develop software to make businesses more efficient.

The Computer Engineering program draws upon courses across an array of disciplines. The liberal arts core provides the intellectual breadth, a "license to learn," preparing students to thrive in a multicultural globalized world and learn and adapt quickly in areas that evolve with ever-increasing swiftness. Students not only gain a firm grounding across various science and engineering fields that underscore the technical component of an engineering education, but also draw upon courses across the curriculum to develop an understanding of cultural, political, economic, environmental, and public safety considerations. In their courses, Computer Engineering students are involved in the design process and the progression of technological inventions from concept through product development and market introduction.

REQUIREMENTS FOR THE MAJOR

1. General Education Core Requirements: 10-12 courses

Global Perspectives on Society I
Global Perspectives on Society II
Social Science Perspectives on China
Perspectives on Humanities
Chinese Arts
Experimental Discovery in the Natural World (must be *Physics I & Lab* or
Foundations of Science I [1&2])
Science, Technology, and Society (must be *Physics II & Lab* or Foundations of
Science II [3&4])
Mathematics (*Calculus*)
2 semesters of English if native Chinese speaker (*based on placement*)
4 semesters of Chinese through Intermediate II level (*based on placement*)

2. Major Requirements: 15 courses, as follows:

Not every course listed is taught every semester, and in any given semester other courses may be offered that fulfill this requirement. Requirements may be met through equivalent courses in the Global Network with prior approval.

Additional Required Courses (All Fourteen)

Multivariable Calculus and Differential Equations
Discrete Mathematics
Introduction to Systems and Dynamics
Probability and Statistics or *Theory of Probability* or *Statistics for
Business and Economics*
Introduction to Computer Science
Data Structures
Circuits
Digital Logic
Computer Architecture
Operating Systems
Embedded Systems
Electronics
Senior Capstone Design Project (8 pts spanning two senior-year semesters -
counted as two courses)

Computer Science Electives (Choose One)

Computer Networking
Very Large Scale Integration Circuit Design
Compilers
Parallel and Distributed Computing
Introduction to Databases
Computer Security
Network Security
UNIX System Programming
Robotic Systems

The Science and Mathematics courses included in the requirements of the Computer Science major also fulfill the requirements of the core curriculum.

3. General Electives: 8-10 Courses (Must bring credit total to 128 combined in all categories)

Rapid Prototyping or similar IMA course is highly recommended as a general elective.

COMPUTER ENGINEERING

SAMPLE SCHEDULE 1

This is just one example of how a student could organize their courses if pursuing a CE major. It assumes a student begins taking CE major courses in their freshmen year; see Sample Schedule 2 for a sample plan which begins in sophomore year. Students may propose alternative course sequences to their advisors as well.

Year 1

Fall Semester

Global Perspectives on Society I (with Writing Workshop)	Core Class (Calculus)	Intro to Programming/Computer Science	English, Chinese, Core, or GE
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Spring Semester

Global Perspectives on Society II (with Writing Workshop)	Introduction to Computer Science or Rapid Prototyping (or similar IMA course)	Multivariable Calculus and Differential Equations	English, Chinese, Core, or GE
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Year 2

Fall Semester

Perspectives on Humanities	Digital Logic	Physics I & Lab	Core class, GE, or Chinese
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Spring Semester

Intro to Computer Science or Data Structures	Circuits	Physics II & Lab	Core class, GE, or Chinese
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Year 3

Fall Semester

Data Structures or Core class	Operating Systems	Probability and Statistics or alternate courses, see pg. 133	Computer Architecture
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Spring Semester

Core class or GE	Introduction to Systems and Dynamics	Embedded Systems	Discrete Math
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Year 4

Fall Semester

Core class or GE	Senior Design Project	Electronics	Computer Engineering Elective
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Spring Semester

Core class or GE	Senior Design Project	General Elective	General Elective
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COMPUTER ENGINEERING

SAMPLE SCHEDULE 2

Year 1

Fall Semester

<i>Global Perspectives on Society I (with Writing Workshop)</i>	Core Class (Calculus)	Core class	English, Chinese, Core, or GE
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Spring Semester

<i>Global Perspectives on Society II (with Writing Workshop)</i>	Core class or GE	Core class or GE	English, Chinese, Core, or GE
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Year 2

Fall Semester

<i>Perspectives on Humanities or Core class</i>	Intro to Programming/Computer Science	Multivariable Calculus and Differential Equations	Physics I & Lab
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Spring Semester

<i>Perspectives on Humanities or Core class</i>	Introduction to Computer Science or Rapid Prototyping (or similar IMA course)	Probability and Statistics or alternate courses, see pg. 133	Physics II & Lab
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Year 3

Fall Semester

Circuits	Intro to Computer Science or Data Structures	Operating Systems	Embedded Systems
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Spring Semester

Digital Logic	Data Structures or Core class	Networks and Dynamics	Discrete Math
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Year 4

Fall Semester

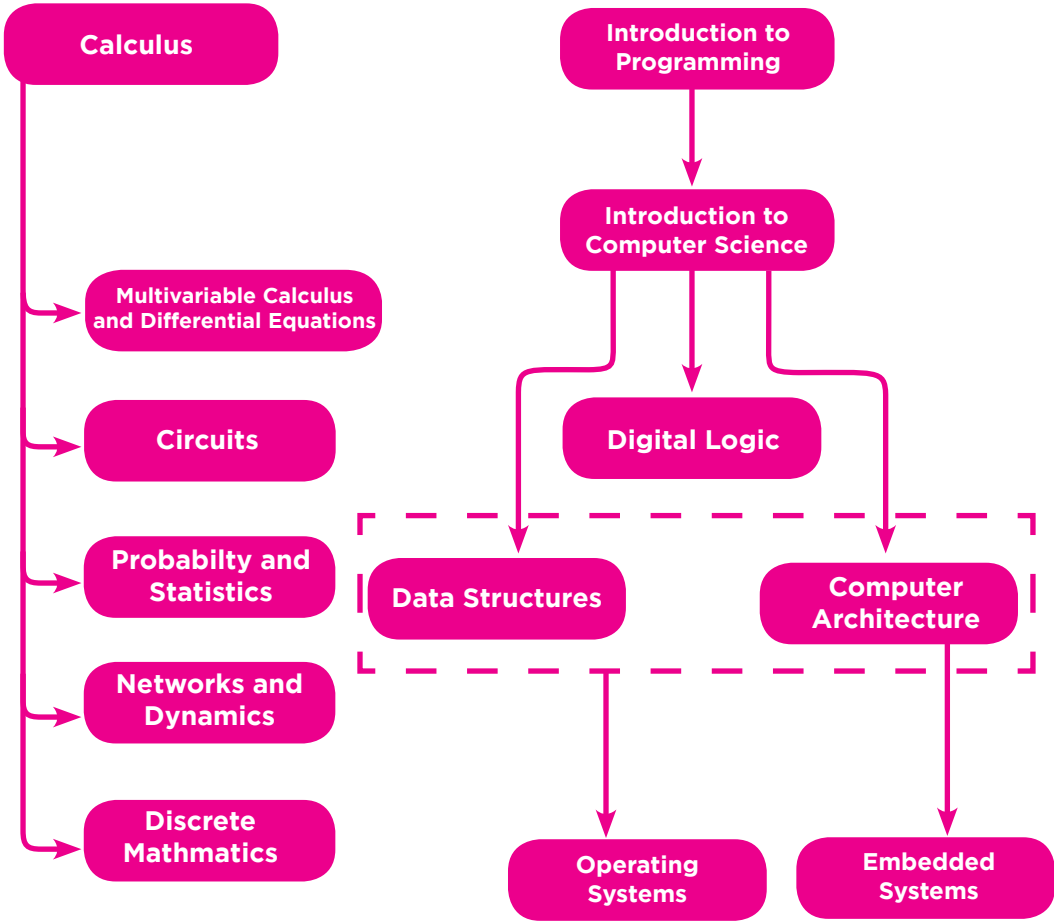
Senior Design Project	Electronics	General Elective or Chinese	Computer Architecture
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Spring Semester

Senior Design Project	General Elective	General Elective or Chinese	Computer Engineering Elective
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Prerequisite Chart

for the COMPUTER ENGINEERING MAJOR



Corequisite
 Prerequisite

Required Course

Electrical Engineering at NYU Shanghai is designed to create technological leaders with a global perspective, a broad education, and the capacity to think creatively. Innovations by electrical engineers touch every aspect of modern life, from the subway systems beneath our cities to the HD televisions on our walls to the smart phones in our pockets. But this process of innovation is never complete, and new challenges await tomorrow's electrical engineers. The Electrical Engineering program draws upon courses across an array of disciplines. The liberal arts core provides the intellectual breadth, a "license to learn," preparing students to thrive in a multicultural globalized world and to learn and adapt quickly in areas that evolve with ever-increasing swiftness. Students not only gain a firm grounding across various science and engineering fields that underscore the technical component of an engineering education, but also draw upon courses to develop an understanding of cultural, political, economic, environmental, and public safety considerations.. These studies often include hands-on coursework in our state-of-the-art laboratories. In addition, the variety of specialized subjects you can investigate through elective coursework — from wireless communication to smart grid power systems — ensures a highly flexible education suited to your particular interests.

ELECTRICAL ENGINEERING

REQUIREMENTS FOR THE MAJOR

1. General Education Core Requirements: 10-12 courses

Global Perspectives on Society I
Global Perspectives on Society II
Social Science Perspectives on China
Perspectives on Humanities
Chinese Arts
Experimental Discovery in the Natural World (must be *Physics I & Lab* or
Foundations of Science I [1&2])
Science, Technology, and Society (must be *Physics II & Lab* or Foundations of
Science II [3&4])
Mathematics (*Calculus*)
2 semesters of English if native Chinese speaker (*based on placement*)
4 semesters of Chinese through Intermediate II level (*based on placement*)

2. Major Requirements: 15 courses, as follows:

Not every course listed is taught every semester, and in any given semester other courses may be offered that fulfill this requirement. Requirements may be met through equivalent courses in the Global Network with prior approval.

Additional Required Courses (All Eleven)

Multivariate Calculus & Differential Equations
Linear Algebra
Probability and Statistics or *Theory of Probability* or *Statistics for Business and Economics*
Introduction to Computer Science
Circuits
Digital Logic
Signals and Systems
Electronics
Electromagnetic Fields and Waves
Senior Capstone Design Project (8 pts spanning two senior-year semesters - counted as two courses)

Electronic Engineering Electives (Choose Four)

2 electrical engineering courses from the following list of three courses:
Control Systems, *Communication Systems*, *Energy and Power Systems*
Control Systems
Communication Systems
Electrical Energy and Power Systems
Instrumentation, Sensors and Actuators
Robotic Systems
Very Large Scale Integrated (VLSI) Circuit Design
Advanced Circuits
Digital Signal Processing
Computer Networks
Embedded Systems

The Science and Mathematics courses included in the requirements of the Computer Science major also fulfill the requirements of the core curriculum.

3. General Electives: 8-10 Courses (Must bring credit total to 128 combined in all categories)

Rapid Prototyping or similar IMA course is highly recommended as a general elective.

ELECTRICAL ENGINEERING

SAMPLE SCHEDULE 1

This is just one example of how a student could organize their courses if pursuing a EE major. It assumes a student begins taking EE major courses in their freshmen year, see Sample Schedule 2 for a sample plan which begins in sophomore year. Students may propose alternative course sequences to their advisors as well.

Year 1

Fall Semester

<i>Global Perspectives on Society I (with Writing Workshop)</i>	Core Class (Calculus)	Intro to Programming/Computer Science	English, Chinese, Core, or GE
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Spring Semester

<i>Global Perspectives on Society II (with Writing Workshop)</i>	Introduction to Computer Science or Rapid Prototyping (or similar IMA course)	Multivariable Calculus and Differential Equations	English, Chinese, Core, or GE
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Year 2

Fall Semester

<i>Perspectives on Humanities</i>	<i>Physics II & Lab</i>	Digital Logic	Core class, GE, or Chinese
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Spring Semester

Probability and Statistics or alternate courses, see pg. 138	<i>Physics II & Lab</i>	Circuits	Core class, GE, or Chinese
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Year 3

Fall Semester

Core class	Electronics	Electromagnetic Fields and Waves	Signals and Systems
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Spring Semester

Core class or GE	Electrical Engineering Elective	Electrical Engineering Elective	Linear Algebra
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Year 4

Fall Semester

General Elective	Senior Design Project	Electrical Engineering Elective	General Elective
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Spring Semester

General Elective	Senior Design Project	Electrical Engineering Elective	General Elective
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ELECTRICAL ENGINEERING

SAMPLE SCHEDULE 2

Year 1

Fall Semester

<i>Global Perspectives on Society I (with Writing Workshop)</i>	Core Class (Calculus)	Core class	English, Chinese, Core, or GE
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Spring Semester

<i>Global Perspectives on Society II (with Writing Workshop)</i>	Core class	Core class or GE	English, Chinese, Core, or GE
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Year 2

Fall Semester

<i>Perspectives on Humanities or Core class</i>	Intro to Programming/Computer Science	<i>Physics II & Lab</i>	Linear Algebra
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Spring Semester

<i>Perspectives on Humanities or Core class</i>	Introduction to Computer Science or Rapid Prototyping (or similar IMA course)	<i>Physics II & Lab</i>	Multivariable Calculus and Differential Equations
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Year 3

Fall Semester

General Elective or Chinese	Digital Logic	Signals and Systems	General Elective
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Spring Semester

General Elective or Chinese	Circuits	Electrical Engineering Elective	Probability and Statistics or alternate courses, see pg. 138
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Year 4

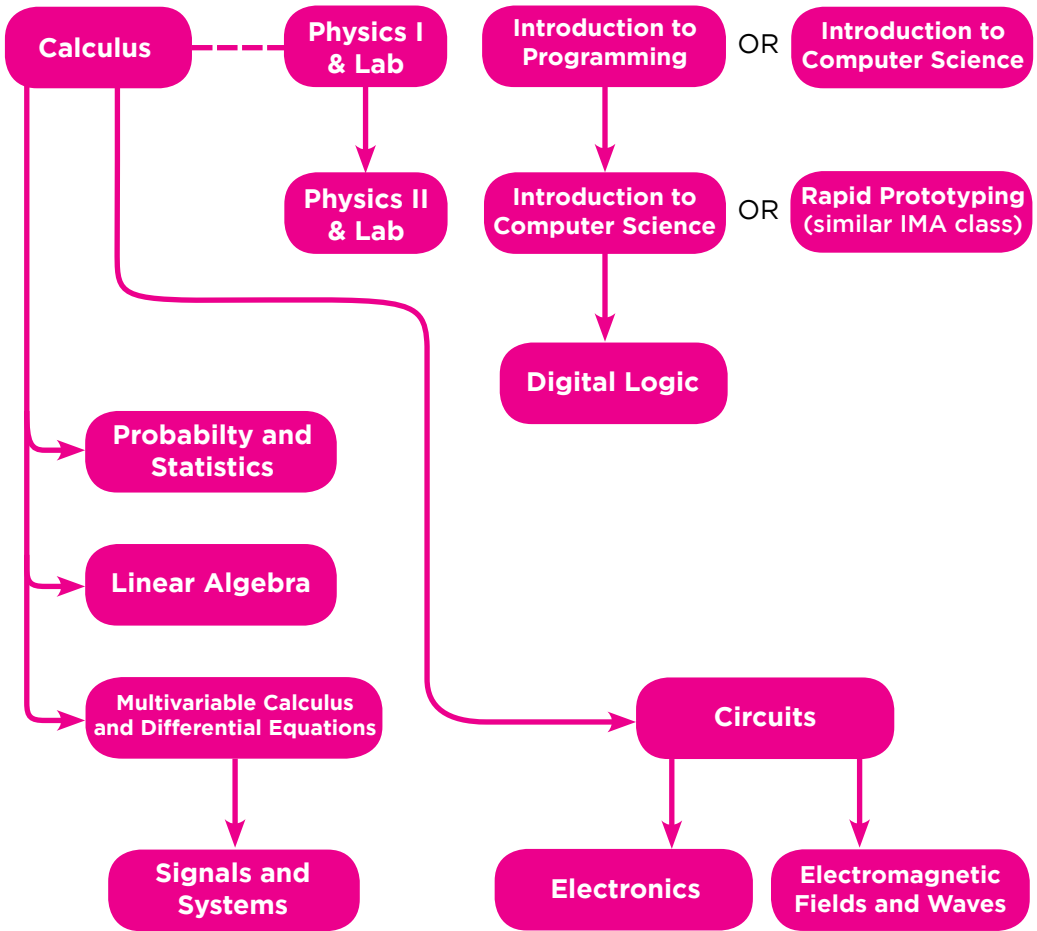
Fall Semester

Senior Design Project	Electronics	Electromagnetic Fields and Waves	Electrical Engineering Elective
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Spring Semester

Senior Design Project	General Elective	Electrical Engineering Elective	Electrical Engineering Elective
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Prerequisite Chart for the ELECTRICAL ENGINEERING MAJOR



--- Corequisite
 → Prerequisite

Required Course

SOCIAL SCIENCES

BUSINESS AND FINANCE

BUSINESS AND MARKETING

ECONOMICS

To advance in today's global business environment, one must develop an exceptionally broad array of intellectual skills. The modern business environment demands the ability to analyze problems rigorously, to develop innovative and creative solutions, and to work effectively within the context of an organization. That in turn demands an understanding of the customers, the cultural and scientific contexts in which businesses operate, alongside an understanding of the techniques by which firms succeed in a competitive economy.

A successful business combines labor and capital to produce a good or service at a price and quality that customers want to purchase. In a complex business, different individuals often take responsibility for different aspects of that endeavor, such as operations management, marketing and sales, information systems management, and financial management. An effective business education should provide students with an overview of all these fields, together with an opportunity to explore some areas in greater depth.

The business and finance major at NYU Shanghai is designed to provide students with a comprehensive preparation for the modern globalized business world. It builds upon the liberal education designed into the NYU Shanghai core curriculum: before entering the major, students will have developed an essential set of skills in mathematics, critical thinking, and oral and written communication. They will also have acquired a familiarity with the general cultural and scientific contexts in which businesses operate. Within the major, students obtain (a) a deeper understanding of the modern global business environment and its economic structure; (b) disciplinary skills in economics, statistics, and accounting; (c) a focused introduction to finance, marketing, operations, and organizational management.

The business and finance major at NYU Shanghai offers two tracks: Finance and Marketing. The Finance track helps students develop knowledge and skills in: corporate finance, investments management, securities trading, financial markets, etc. The Marketing track helps students develop knowledge and skills in marketing management, customer insights, brand management, pricing etc.

FINANCE MAJOR REQUIREMENTS

1. General Education Core Requirements: 10-12 courses

Global Perspectives on Society I

Global Perspectives on Society II

Social Science Perspectives on China

Perspectives on Humanities

Chinese Arts

2 classes from: Experimental Discovery in the Natural World; Science, Technology, and Society; Programming and Computational Thinking Mathematics (*Calculus*)

2 semesters of English if native Chinese speaker (*based on placement*)

4 semesters of Chinese through Intermediate II level (*based on placement*)

2. Major Requirements: 13 courses, as follows:

Not every course listed is taught every semester, and in any given semester other courses may be offered that fulfill this requirement. Requirements may be met through equivalent courses in the Global Network with prior approval.

Prerequisite Courses (Both)

Microeconomics

Statistics for Business and Economics

Required Business Core Courses (Choose Three)

Economics of Global Business

Principles of Financial Accounting

Foundations of Finance

Required Finance Core class:

Corporate Finance

Business Core Electives (Choose Two)

Management and Organizations

Competitive Advantage from Operations

Introduction to Marketing

Information Technology in Business and Society

Business Analytics

Additional Finance Electives (Choose Two)

Futures and Options

Debt Instruments and Markets

International Financial Management

The Chinese Financial System

Mergers & Acquisitions

A Non-Finance elective in areas such as (Choose Two):

Accounting

Management

Marketing

Operations

Information System

A China Business Studies course, such as (Choose One):

The Political Economy of East Asia

Contemporary Chinese Economic Issues

Doing Business in China

3. General Electives: 7-9 Courses (Must bring credit total to 128 combined in all categories)

Calculus, required for the Business and Finance major, also fulfills the Mathematics requirement of the core curriculum.

BUSINESS AND FINANCE

SAMPLE SCHEDULE 1

This is just one example of how a student could organize their courses if pursuing a B&F major. It assumes a student begins taking B&F major courses in their freshmen year, see Sample Schedule 2 for a sample plan which begins in sophomore year. Students may propose alternative course sequences to their advisors as well.

Year 1

Fall Semester

<i>Global Perspectives on Society I (with Writing Workshop)</i>	Core Class (Calculus)	Core class	English, Chinese, Core, or GE
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Spring Semester

<i>Global Perspectives on Society II (with Writing Workshop)</i>	Microeconomics	Statistics for Business and Economics	English, Chinese, Core, or GE
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Year 2

Fall Semester

<i>Perspectives on Humanities or Core class</i>	Principles of Financial Accounting	Foundations of Finance	Core class, GE, or Chinese
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Spring Semester

<i>Perspectives on Humanities or Core class</i>	Economics of Global Business	Corporate Finance	Core class, GE, or Chinese
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Year 3

Fall Semester

Core class or GE	Business Core Elective	Finance Elective or Non-Finance Elective	Core class or GE
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Spring Semester

General Elective	Business Core Elective	Finance Elective or Non-Finance Elective	Core class or GE
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Year 4

Fall Semester

General Elective	Non-Finance Elective or Finance Elective	Finance Elective or Non-Finance Elective	General Elective
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Spring Semester

General Elective	China Business Studies	General Elective	General Elective
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BUSINESS AND FINANCE

SAMPLE SCHEDULE 2

Year 1

Fall Semester

<i>Global Perspectives on Society I (with Writing Workshop)</i>	Core Class (Calculus)	Core class	English, Chinese, Core, or GE
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Spring Semester

<i>Global Perspectives on Society II (with Writing Workshop)</i>	Core class or GE	Core class or GE	English, Chinese, Core, or GE
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Year 2

Fall Semester

<i>Perspectives on Humanities or Core class</i>	Principles of Financial Accounting	Business Core Elective	Core class, GE, or Chinese
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Spring Semester

<i>Perspectives on Humanities or Core class</i>	Microeconomics	Statistics for Business and Economics	Core class, GE, or Chinese
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Year 3

Fall Semester

General Elective	Business Core Elective	Foundations of Finance	General Elective
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Spring Semester

Non-Finance Elective or Finance Elective	Economics of Global Business	Corporate Finance	General Elective
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Year 4

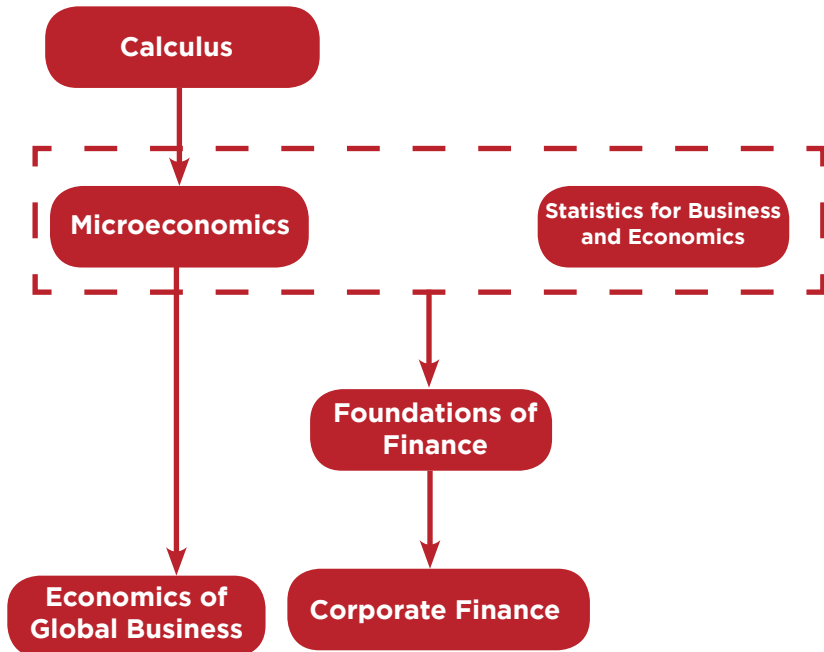
Fall Semester

General Elective	Non-Finance Elective or Finance Elective	Finance Elective or Non-Finance Elective	General Elective
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Spring Semester

General Elective	China Business Studies	Finance Elective or Non-Finance Elective	General Elective
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Prerequisite Chart for the BUSINESS AND FINANCE MAJOR



--- Corequisite
→ Prerequisite

Required Course

MARKETING MAJOR REQUIREMENTS

1. General Education Core Requirements: 10-12 courses

Global Perspectives on Society I

Global Perspectives on Society II

Social Science Perspectives on China

Perspectives on Humanities

Chinese Arts

2 classes from: Experimental Discovery in the Natural World; Science, Technology, and Society; Programming and Computational Thinking
Mathematics (*Calculus*)

2 semesters of English if native Chinese speaker (*based on placement*)

4 semesters of Chinese through Intermediate II level (*based on placement*)

2. Major Requirements: 13 courses, as follows:

Not every course listed is taught every semester, and in any given semester other courses may be offered that fulfill this requirement. Requirements may be met through equivalent courses in the Global Network with prior approval.

Prerequisite Courses (Both)

Microeconomics

Statistics for Business and Economics

Required Business Core Courses (Choose Three)

Economics of Global Business

Principles of Financial Accounting

Foundations of Finance

Required Marketing Core class:

Introduction to Marketing

Business Core Electives (Choose Two)

Management and Organizations

Competitive Advantage from Operations

Corporate Finance

Information Technology in Business and Society

Business Analytics

Additional Marketing Electives (Choose Two)

TBA

A Non-Marketing elective in areas such as (Choose Two):

Accounting

Management

Finance

Operations

Information System

A China Business Studies course, such as (Choose One):

The Political Economy of East Asia

Contemporary Chinese Economic Issues

Doing Business in China

3. General Electives: 10 Courses (Must bring credit total to 128 combined in all categories)

Calculus, required for the Business and Finance major, also fulfills the Mathematics requirement of the core curriculum.

BUSINESS AND MARKETING

SAMPLE SCHEDULE 1

This is just one example of how a student could organize their courses if pursuing a B&M major. It assumes a student begins taking B&M major courses in their freshmen year, see Sample Schedule 2 for a sample plan which begins in sophomore year. Students may propose alternative course sequences to their advisors as well.

Year 1

Fall Semester

<i>Global Perspectives on Society I (with Writing Workshop)</i>	Core Class (Calculus)	Core class	English, Chinese, Core, or GE
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Spring Semester

<i>Global Perspectives on Society II (with Writing Workshop)</i>	Microeconomics	Statistics for Business and Economics	English, Chinese, Core, or GE
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Year 2

Fall Semester

<i>Perspectives on Humanities or Core class</i>	Principles of Financial Accounting	Foundations of Finance	Core class, GE, or Chinese
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Spring Semester

<i>Perspectives on Humanities or Core class</i>	Economics of Global Business	Introduction to Marketing	Core class, GE, or Chinese
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Year 3

Fall Semester

Core class or GE	Business Core Elective	Marketing Elective or Non-Marketing Elective	Core class or GE
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Spring Semester

General Elective	Business Core Elective	Marketing Elective or Non-Marketing Elective	General Elective
------------------	------------------------	--	------------------

Year 4

Fall Semester

General Elective	Non-Marketing Elective or Marketing Elective	Non-Marketing Elective or Marketing Elective	General Elective
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Spring Semester

General Elective	China Business Studies	General Elective	General Elective
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BUSINESS AND MARKETING

SAMPLE SCHEDULE 2

Year 1

Fall Semester

<i>Global Perspectives on Society I (with Writing Workshop)</i>	Core Class (Calculus)	Core class	English, Chinese, Core, or GE
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Spring Semester

<i>Global Perspectives on Society II (with Writing Workshop)</i>	Core class or GE	Core class or GE	English, Chinese, Core, or GE
--	------------------	------------------	-------------------------------

Year 2

Fall Semester

<i>Perspectives on Humanities or Core class</i>	<i>Principles of Financial Accounting</i>	<i>Introduction to Marketing</i>	Core class, GE, or Chinese
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Spring Semester

<i>Perspectives on Humanities or Core class</i>	<i>Microeconomics</i>	<i>Statistics for Business and Economics</i>	Core class, GE, or Chinese
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Year 3

Fall Semester

Core class or GE	Business Core Elective	<i>Foundations of Finance</i>	Marketing Elective or Non-Marketing Elective
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Spring Semester

General Elective	Business Core Elective	<i>Economics of Global Business</i>	Marketing Elective or Non-Marketing Elective
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Year 4

Fall Semester

General Elective	Non-Marketing Elective or Marketing Elective	Non-Marketing Elective or Marketing Elective	General Elective
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Spring Semester

General Elective	<i>China Business Studies</i>	General Elective	General Elective
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Perhaps the best way to understand the world you live in is to understand the economics that drive it. The world is constantly and increasingly confronted with public policy issues that are essentially economic in character. Economic analysis provides a coherent and logical ordered framework for examining these issues and understanding the tradeoffs involved in attempting to solve social and business problems.

The study of economics will enhance your fundamental analytic and quantitative skills. The curriculum strives to not simply just provide a very good undergraduate education for people interested in studying economics but also provides skills to pursue a wide variety of careers in both the public and private sector. It leads naturally to careers in business, law, and in economics research and consulting, as well as provides a solid foundation for students who will pursue an MBA degree. Students who wish to attend graduate school in economics should take courses in mathematics beyond the requirements of the economics program.

The economics faculty at NYU Shanghai offers a rare combination of excellence in research and teaching. Many of the economics courses offer the advantage of a liberal arts college setting, including small class sizes and significant interaction between faculty and students. The economics curriculum at NYU Shanghai is designed to introduce students to these fundamental dynamics of human life and, in doing so, is grounded in three basic pedagogical principles:

- Undergraduate students must be exposed to the “big ideas” and pressing social issues of our world and given economic frameworks for thinking about them.
- Meaningful study of economics requires being able to think about problems from local, regional, and global perspectives. Understanding how individuals make decisions also requires incorporating insights from neuroscience and psychology.
- Effective economic analysis increasingly involves both conducting and effectively communicating the results from quantitative analyses of data using econometric methods.

REQUIREMENTS FOR THE MAJOR

1. General Education Core Requirements: 10-12 courses

Global Perspectives on Society I

Global Perspectives on Society II

Social Science Perspectives on China

Perspectives on Humanities

Chinese Arts

2 classes from: Experimental Discovery in the Natural World; Science, Technology, and Society; Programming and Computational Thinking
Mathematics (*Calculus*)

2 semesters of English if native Chinese speaker (*based on placement*)

4 semesters of Chinese through Intermediate II level (*based on placement*)

2. Major Requirements: 12 courses, as follows:

Not every course listed is taught every semester, and in any given semester other courses may be offered that fulfill this requirement. Requirements may be met through equivalent courses in the Global Network with prior approval.

Prerequisite Courses (Three)

Microeconomics

Principles of Macroeconomics

Statistics for Business and Economics

Required Economics Courses (All Three)

Intermediate Microeconomics

Intermediate Macroeconomics

Econometrics

Advanced Economics Courses (Choose Two):

Advanced Topics in Microeconomic theory

Game Theory and Strategy

Mathematics for Economists

Econometrics for High Dimensional and Financial Data

Advanced Topics in Macroeconomics

Economics Electives (Choose Four)

Labor Economics

Monetary Economics

Public Economics

Industrial Organization

Experimental Economics

Behavioral Economics

International Economics

Development Economics

Financial Economics

Environmental Economics

Health Economics

Economics of Education

Law and Economics

Political Economy

Urban and Real Estate Economics

3. General Electives: 8-10 Courses (Must bring credit total to 128 combined in all categories)

ECONOMICS

SAMPLE SCHEDULE 1

This is just one example of how a student could organize their courses if pursuing a Economics major. It assumes a student begins taking Economics major courses in their freshmen year, see Sample Schedule 2 for a sample plan which begins in sophomore year. Students may propose alternative course sequences to their advisors as well.

Year 1

Fall Semester

Global Perspectives on Society I (with Writing Workshop)	Core Class (Calculus)	Core class	English, Chinese, Core, or GE
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Spring Semester

Global Perspectives on Society II (with Writing Workshop)	Principles of Macroeconomics	Microeconomics	English, Chinese, Core, or GE
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Year 2

Fall Semester

Perspectives on Humanities or Core class	Intermediate Microeconomics	Introduction to Statistics for Economics	Core class, GE, or Chinese
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Spring Semester

Perspectives on Humanities or Core class	Intermediate Macroeconomics	Econometrics	Core class, GE, or Chinese
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Year 3

Fall Semester

Core class or GE	General Elective	Economics Elective	General Elective
------------------	------------------	---------------------------	------------------

Spring Semester

Core class or GE	General Elective	Economics Elective	General Elective
------------------	------------------	---------------------------	------------------

Year 4

Fall Semester

General Elective	Economics Elective	Advanced Economics course	General Elective
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Spring Semester

General Elective	Economics Elective	Advanced Economics course	General Elective
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ECONOMICS

SAMPLE SCHEDULE 2

Year 1

Fall Semester

Global Perspectives on Society I (with Writing Workshop)

Core Class
(Calculus)

Core class

English, Chinese,
Core, or GE

Spring Semester

Global Perspectives on Society II (with Writing Workshop)

Core class or GE

Core class or GE

English, Chinese,
Core, or GE

Year 2

Fall Semester

Perspectives on Humanities or Core class

Principles of Macroeconomics

Microeconomics

Core class, GE, or Chinese

Spring Semester

Perspectives on Humanities or Core class

Intermediate Macroeconomics

Core class or GE

Core class, GE, or Chinese

Year 3

Fall Semester

General Elective

Introduction to Statistics for Economics

Intermediate Microeconomics

Economics Elective

Spring Semester

General Elective

Econometrics

Economics Elective

General Elective

Year 4

Fall Semester

General Elective

Economics Elective

Advanced Economics course

General Elective

Spring Semester

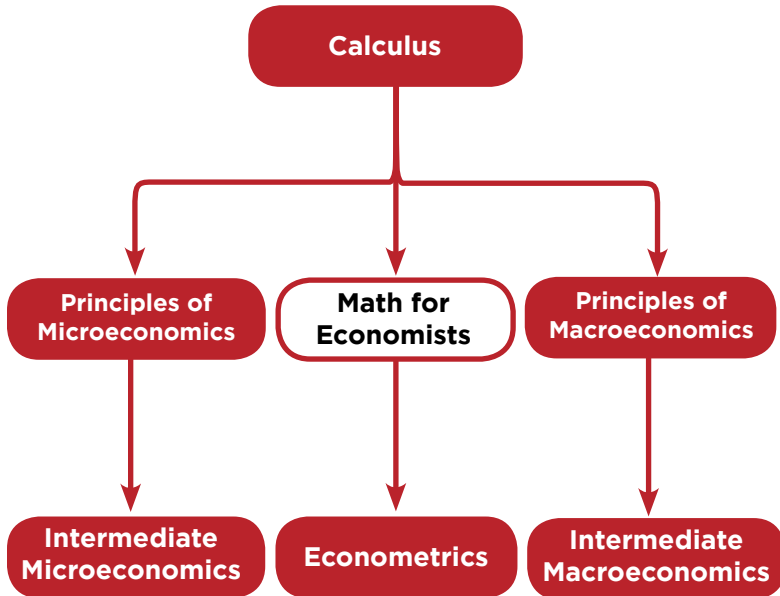
General Elective

Economics Elective

Advanced Economics course

General Elective

Prerequisite Chart for the ECONOMICS MAJOR



--- Corequisite
→ Prerequisite

Required Course
Elective

SELF-DESIGNED HONORS MAJOR

Students at NYU Shanghai can apply to craft and complete a Self-Designed Honors major, rather than one of the existing majors at the campus. This major enables a small number of very capable and highly motivated students to pursue a plan of study that brings together courses from more than one NYU department or program. During their sophomore year, students compose their academic plan for the major in consultation with their two faculty advisers for their self-designed program of study as well as with the Assistant Provost for Academic Affairs. Their two faculty advisers have to be from different majors and one has to be from a relevant department in New York if more than three of the required classes are from a major that exists in New York but not in Shanghai. By spring of the sophomore year, the plan of study must be submitted to and approved by the Academic Standards Committee.

This NYU Shanghai major serves students who can realize their interdisciplinary goals within the Global Network University drawing on courses from any of the study away sites and portal campuses within the existing NYU Shanghai study away limitations. It is an honors major, which has prerequisites for entry (3.75 GPA; students must maintain a 3.65 GPA to remain in the major) and entails a heavy commitment to honors-level work, including independent research under faculty supervision.

Additional Majors and Minors at New York University Shanghai

Requirements for an Additional or Double Major

Successful completion of an additional major requires completing all the courses listed under the major or track requirements for that major. This can be as many as twenty or as few as nine depending on the major.

The same requirements, including the maintenance of a minimum grade point average of 2.0, apply to the second major as to the first. In some cases, courses may be applicable to both majors. Normally no more than two courses may be approved for double counting. Courses listed as prerequisites for the major do not count toward this limit. Students must obtain written approval for the shared course(s) from the Assistant Provost for Academic Affairs. The second major is declared in the same way as the first but not before the fall of the student's senior year.

Students should consult with their advisor before attempting a double major as the requirements of the first major and the second limit the options for students to complete two majors in the standard 128 credits. In addition, in some cases the Chinese language requirement, which consists of the equivalent of four semesters (the "Chinese Language Requirement"), further limits the ability to complete two majors.

The ability to satisfy the requirements for an additional major cannot be guaranteed for any student and will be based upon course availability and the time the student is willing to invest to satisfy all of the requirements of the additional major. In some cases this might require more than 8 semesters of undergraduate study.

Regulations Pertaining to both Major and Minor

The major and minor requirements to be followed are those stated in the major sections of the Bulletin in effect during the semester of the student's first registration in the College. No credit toward the major or minor is granted for grades of C- or lower, although such grades will be computed into the grade point average of the major or the minor, as well as into the overall grade point average. Only courses passed with a grade of C or higher may serve as a prerequisite for a higher level course.

No course to be counted toward the major or minor or used as a prerequisite may be taken on a pass/fail basis. (See "Pass/Fail Option" under Academic Policies in this Bulletin.)

In order to ensure that students do not have to compete for access to their required courses, registration priority is given to students who are registering for courses in their primary major. Although the university encourages the exploration of other disciplines, access to courses outside a student's primary major (including those courses that fulfill requirements for an additional major, minor, etc.) is on a space-available basis and is not guaranteed.

REQUIREMENTS FOR MINORS

Students may minor in subjects outside their major or disciplinary area. A minor in a secondary subject enables a student to acquire a useful understanding of concepts and analysis without the same degree of coverage as would be obtained in a major. A grade of C or better is required for a course to be counted toward a minor. If a student fails a course required for the minor, the course must be retaken at NYU Shanghai; a course taken outside the University will not normally be allowed to substitute for a minor requirement. No course for the minor may be taken as pass/fail. Student may use Core Curriculum classes to fill minor requirements and may double count one course used for minor requirements for their major or an additional minor requirement. No single course may be used to meet more than two requirements.

Students should discuss their minor plans with their advisors. It is best to concentrate on completing breadth and general education requirements in the first two years as interest in minors may change as students take classes in different disciplines and changing minors after taking some of the courses may delay graduation for some students.

Students should request approval for a minor in the spring of their sophomore year by completing the minor declaration form available in the Registrars (Office). Students who have approval for pursuing a minor receive preference in registering for classes that meet that minor's requirements over those who do not (and who do not need to take it for their major). Students may declare more than one minor but may only receive preferred enrolment for one. Students may declare a minor up to the last semester before graduation but should do it earlier to receive the benefits described above.

Course offerings are subject to the availability of faculty. Therefore, it is not possible to guarantee that any particular course listed will be offered in a particular academic year. If failure to offer a course in a student's approved minor will delay their graduation they should consult with their advisor to consider available options.

The courses required for NYU Shanghai Minors are:

Biology Minor

Students choose from two concentration areas for the Biology Minor:

A. Molecular and Cell Biology Minor

Requirements:

Foundation of Science I (1+2)
Foundation of Science II (3+4)
Foundation of Science III (5+6)
Applied Cell Biology

B. Genomics and Bioinformatics Minor

Requirements:

Foundation of Science I (1+2)
Foundation of Science II (3+4)
Foundation of Science III (5+6)
Introduction to Genomics and Bioinformatics
Microbiology and Microbial Genomics, or Genomics and Bioinformatics, or Systems Biology

Business Minor

Requirements:

Microeconomics
Economics of Global Business
Calculus
Statistics for Business and Economics
Principles of Financial Accounting

ONE of the following courses:

Management and Organizations or
Introduction to Marketing or
Information Technology in Business and Society
Competitive Advantage from Operations

Economics majors must complete two of the additional courses listed below to complete the minor within the double counting limits.

Foundations of Finance
Information Technology in Business and Society
Management and Organizations
Introduction to Marketing
Competitive Advantage from Operations

Chemistry Minor

Requirements:

Foundation of Science I (1+2)
Foundation of Science II (3+4)
Foundation of Science III (5+6)
Organic Chemistry I
Organic Chemistry II

Chinese Minor

Requirements:

Chinese language course points through at least the Advanced II level. *Elementary I* and *II* do not count toward fulfilling the requirements. Typical plan of study: *Intermediate I*, *Intermediate II*, *Advanced I*, and *Advanced II*.

Computer Science Minor

Requirements:

Intro to Computer Programming
Data Structures
Computer Organization and Architecture

And ONE course selected from the following:

Operating Systems
Introduction to Game Programming
Digital Logic
Computer Networks
Parallel and Distributed Computing

Creative Writing Minor

Requirements:

Introduction to Creative Writing (a prerequisite for the intermediate and advanced craft courses).

Two intermediate/advanced craft courses

An additional intermediate/advanced craft course or a designated elective

Economics Minor

Requirements:

Microeconomics

Economics of Global Business

Statistics for Business and Economics

Intermediate Macroeconomics

Two additional 4-point courses from the Economics elective list.

Global China Studies minor

Requirements:

Four classes from the required and elective list of Global China Studies courses, of which at least one must be from the required list. Students may take up to two advanced or post-advanced language courses in fulfillment of this minor.

History Minor

Requirements:

Four classes from the required and elective list of Humanities major History courses.

Humanities Minor

Requirements:

Four classes from the required and elective list of Humanities major courses.

Interactive Media Arts Minor

Requirements:

Interaction Lab

Communications Lab

Classes from the Interactive Media Arts Elective List (7-8 credits)

Literature Minor

Requirements:

Four classes from the required and elective list of Humanities major Literature courses.

Mathematics minor

Requirements:

Four 4-credit mathematics courses at the introductory calculus level or higher. Of current math offerings, Mathematics for Economists and Mathematical Functions would NOT count for the minor.

Natural Science Minor

Requirements:

Foundation of Science I (1+2)

Foundation of Science II (3+4)

Neural Science Minor

Requirements:

Foundation of Science I (1+2)

Foundation of Science II (3+4)

Foundation of Science III (5+6)

Introduction to Neural Science

Behavioral and Integrative Neuroscience or Cellular and Integrative Neuroscience

Philosophy minor

Requirements:

Four classes from the required and elective list of Humanities major Philosophy courses.

Neural Science Minor

Requirements:

Foundation of Science I (1+2)
Foundation of Science II (3+4)
Foundation of Science III (5+6)
Two Physics elective courses

Global University Minor

Students can apply to craft and complete a Global Network Minor, using classes from one or more of the eleven Study Away Sites in the Global Network. This option enables capable and highly motivated students to pursue a plan of study that brings together courses from more than one NYU department or program taught at a study away site. During their sophomore year, students compose their academic plan for the minor in consultation with the Assistant Dean for Global Programs. By spring of the sophomore year, the plan of study must be submitted to the ADGP and approved by the Associate Dean for Academic Affairs. Approval of the plan does not guarantee acceptance to study at the Study Away Site, that required courses will be available or open, or the ability to study for an additional semester at the site to complete the minor.

These minors serve students who can realize their interdisciplinary goals within the Global Network University drawing on courses from any of the study away sites within the existing NYU Shanghai study away limitations. Even if all of the classes are from a single department in one of the other portal campuses or is identical to a minor offered on one of those campuses, the GNU minor is an NYU Shanghai minor and will be identified as such on the student's transcript. The other requirements and limitations for these minors are identical with the standard ones identified above for all minors.

GNU minors may be completed using courses taking at the associated Study Away Site. Courses and therefore minor availability may vary by semester, students should see each sites website for specific classes, and plan with their academic advisor how to complete the minor.

Portal Campus Minor

Students can apply to attempt a Portal Campus Minor, using classes from one of the two Portal Campuses in the Global Network. These minors must meet the requirements set out in the relevant college bulletin by the offering department at the Portal Campus. During their sophomore year, students compose their academic plan for the minor in consultation with the Assistant Dean for Global Programs. By spring of the sophomore year, the plan of study must be submitted to and approved by the Associate Dean for Academic Affairs. Approval of the plan does not guarantee acceptance to study at the Portal Campus, that required courses will be available or open, or the ability to study for an additional semester at the Portal Campus to complete the minor.

Even though the courses used and requirements met for the Portal minor are those of the Portal Campus the minor is an NYU Shanghai minor and will be identified as such on the student's transcript. The other requirements and limitations for these minors are identical with the standard ones identified above for all minors.

Cross School Minor

Cross school minors offered by NYU Schools are available to NYU Shanghai students as listed on the NYU Cross-School Minors website. Students who successfully complete any of those Minors will have them identified by name as a Cross-School Minor on the student transcript.

{Part VII}

Course Descriptions

ART-SHU 210

Introduction to Studio Art - Chinese Traditional Methods in Contemporary Art

This course will be an introduction to studio art for students who want to learn traditional Chinese art forms with contemporary expression, to traverse both cultural and temporal barriers of visual arts. These include calligraphy and ink painting as seen from a modern perspective. Students will examine the content of artwork, including ideas in contemporary and traditional art, both Chinese and international, and build various skills to translate ideas into reality. The course includes a study of ancient Chinese paintings, drawings of still-lives, as well as visits to local artists, galleries, and museums. Class time will be devoted to individual projects and critiques, lectures, and group discussions. This course is open to all students with or without an art background.

Prerequisite: None

ART-SHU 301

Introduction to Photography I

This course will be an introduction to the use of photography as a medium of documentation and art expression. The student will use photography to witness and create images to begin to understand their experience in Shanghai, and understand photography as an art medium. Basic digital photography techniques will be taught, including use of a digital camera and Photoshop. Lectures, technical demonstrations, and group critiques, as well as presentations by guest photographers will be included. Assignments on individual photographers and artists will be required. This course is for beginning photography students with minor or no experience with photography.

Prerequisite: None

ART-SHU 380

Projects in Photography

In 1836, Talbot, the English inventor, thought of photography as a “drawing which makes itself.” In contemporary times, photography is not only a recording of the real world; it transforms the concepts of the artist into reality. This class provides an introduction to photography and ink impression as dual lenses to study contemporary Chinese society. Shanghai’s sprawling metropolis and interspersing antiquity offer a unique opportunity to document and create personal reflections of a foreign and fast-changing society. As a modern tool, photography has been the traditional medium that captures moment-to-moment insights, and will be heavily studied as an art form. Less known as a documentary tool, but no less powerful than photography, is the technique of ink impression. This traditional Chinese art form provides a new way of capturing the city by using Chinese ink to create impressions of solid objects. In the studio, students are required to critique the works of peers, works of their own, and images sourced from current exhibitions of contemporary photography. Outside the studio, the group will examine major historical movements in contemporary photography. The works of iconic photographers who explored the city as reality and idea are selected to provide framework and vocabulary to articulate students’ own photographic investigations. Students will take on personal projects using photography, ink impression, or a combination of both media. This course leads students to use photography as an art tool to explore cultures and individual expression, emphasizing concepts of art while touching on some technical aspects of photography. This unit is subject to adjustments depending on the availability of guest speakers and other factors.

Prerequisite: Instructor Consent Required

ART-SHU 1910

Projects in Studio Art - Chinese Traditional Methods in Contemporary Art

This course is designed for studio artists who want to create a succinct body of artwork while studying in Shanghai. Students will create contemporary artworks using traditional Chinese art forms to traverse both cultural and temporal barriers of expression, creating a unique integrated style of work. Students of traditional Western methods of art making, including drawing, painting, sculpture, and printmaking, are going to be asked to work out of traditional Chinese art methods, including calligraphy and ink painting. Also, students will have the opportunity to combine Western and Chinese methods of art making. Students will examine the content of artwork, including ideas in contemporary and traditional art, both Chinese and international, and build various skills to translate ideas into reality. The course includes a study of ancient Chinese paintings, drawings of still-lives and live models, as well as visits to local artists, galleries, and museums. Class time will be devoted to individual projects and critiques, lectures, and group discussions. As a final project, students will integrate their living experiences in Shanghai with personal experience and/or the societal landscape, to create a substantial body of artwork for a group exhibition. This course is open to students who have an art background and upon the approval of the professors.

Prerequisite: Instructor Consent Required

MUS-SHU 1351

Music Theatre History I

This course traces the evolution of musical theatre from the Antiquities through the early-20th Century through the study of distinctive forms of early musical entertainment (i.e. operetta, melodrama, pantomime, minstrelsy, burlesque, extravaganza, revue) and exploring the writers, artists and entrepreneurs as well as the social, political and technological developments that directly influenced and shaped the craft into the Book Musical of the mid 20th century.

MUS-SHU 1510 or 1511

Vocal Training: Group

This course introduces singing - in theory and in practice - by means of lectures, listening, individual and group instruction. Topics to be covered are: the history of the voice as a musical instrument; the act of singing as artistic expression and communication of the human condition; and the scientific principles related to healthy vocal technique. Students will receive one-on-one and group instruction as well as participate in discussions and class performances.

MUS-SHU 1512

Private Voice Instruction

Students will receive individual singing instruction in a studio setting. Vocal function and its application will be discussed and repertoire assigned accordingly. Students are encouraged to explore singing as a communicative tool in delivering text and story telling.

MUS-SHU 1514

Private Voice Instruction

Students will receive individual singing instruction in a studio setting. Vocal function and its application will be discussed and repertoire assigned accordingly. Students are encouraged to explore singing as a communicative tool in delivering text and story telling.

BIOL-SHU 21

Foundations of Biology I

BIOL-SHU 22

Foundations of Biology II

Prerequisite: CCSC-110 or BIOL-21

BIOL-SHU 26 (formerly 263)

Developmental Biology

Multicellular organisms undergo a series of complex temporal and spatial changes in gene expression following fertilization, which results in the highly organized, coordinated cell divisions needed for growth and development. This course introduces students to the principles and experimental strategies of developmental biology. It covers the cellular and molecular basis for patterning in the embryo; the determination of cell fate; cell differentiation; the genes controlling these events; how the genes are identified and studied; and the cellular proteins that effect shape, movement, and signaling among cells.

Prerequisite: BIOL-250

BIOL-SHU 30 (formerly 264)

Genetics

Why do offspring often exhibit physical features of their parents? Why do combinations of certain features in offspring translate into specific characteristics that either enhance or diminish the organism's fitness? Answers to questions such as these fall partly within the discipline of genetics, which is the study of heredity. Principles from the Foundations of Science curriculum and Organismal Biology provide a framework for learning about classical genetics, chromosome structure and mutation, gene function and regulation, and aspects of molecular and developmental genetics. Recent studies in human genetics and their applications, particularly to health-related issues, are also investigated.

Prerequisite: BIOL-250

BIOL-SHU 37 (formerly 210)

Applied Cell Biology

Understanding the fundamental methods for growing and studying cells—the smallest units of life—is basic to biology. This course introduces students to the methods used to study cell structure and function. In the laboratory, students study the fundamentals of cell biology and the experimental approaches used to examine the cell. Topics cover cellular, subcellular, and macromolecule localization; biochemical analysis of the cell; and cell culture techniques. Accurate record-keeping, reports, and presentations are emphasized.

Prerequisite: CCSC-113 or BIOL-22

BIOL-SHU 42 (formerly 251)

Biostatistics

The ability to organize and analyze biological and behavioral science data is an essential research tool. This course provides an introduction to the use of statistical methods for analyzing this data. It introduces methods for describing and displaying data, the role and use of probability in describing and understanding living systems, hypotheses testing, and how to design experiments. Biological and behavioral science data and R—a free, open-source statistical software package—are used to gain proficiency with these tools.

Prerequisite: BIOL-250

BIOL-SHU 44 (formerly 265)

Microbiology and Microbial Genomics

A comprehensive description of microbes, the most abundant and diverse organisms on the planet. Organized into four modules: the microbial cell, microbial genomics, microbial development and adaptation, and microbial interactions with the host and the environment. Through lectures and critical analysis of primary literature, students are led to realize how the advent of genomics has revolutionized microbiology, a scientific discipline that is more than a century old.

Prerequisite: BIOL-250

BIOL-SHU 50 (formerly 252)

Immunology

Introduction to immunology, with attention to the genetics, molecular, and cell biology of antibody production; T-cell mediated immune responses; and innate immunity. Topics include the nature of antigens, hypersensitivities, transplantation, cytokines, autoimmunity, cancer, response to infection, and vaccines. *Prerequisite: BIOL-250*

BIOL-SHU 58 (formerly 258)

Evolution

Evolution encompasses the patterns and mechanisms that explain the diversity of organisms we observe today and during the millions of years of the geological record. Evidence is reviewed that demonstrates the common ancestry of all living things, including humans, and the mechanisms, such as natural selection, that are required and sufficient to explain this pattern of ancestry, diversification, adaptation, speciation, and biogeographic distribution. The course also uses computer and mathematical modeling to explore the fundamentals of population genetics, molecular evolution, phylogenetic systematics, and the evolution of developmental systems.

Prerequisite: CCSC-109

BIOL-SHU 123

Fos Biology Laboratory

The course will teach students the skills needed in molecular biology research such as the hand-on techniques of microscopy, transformation, gene expression, PCR, gel electrophoresis, SDS-PAGE, and chromatography. The students will first learn these basic biological techniques in short experiment sets in FoS 5 lab and then apply them as part of a Genetically-Modified Food project in FoS 6 lab. The lab course will also emphasize literature search, scientific writing, peer reviewing, lab notes taking, poster and power point presentations, data analysis, and best practices in lab safety.

FoS 5&6 labs are regarded as an extension to what the course lectures teach rather than a direct linear relationship whereby a lecture is directly applied in the lab. The pre-labs that are given as lectures before the actual lab begins span a weekly 30-45 min and explain the principles behind the techniques that the students will apply that lab. Students are required to study the lab procedure in advance and be prepared for a quiz and discussion of the material.

Learning Outcomes:

This course aims at teaching students how to think like a true researcher as well as apply the key molecular biology techniques. During this course, students will be expected to: gain an understanding of the basics of molecular biology techniques and be able to apply these techniques in the lab; acquire the habits of a good scientist including accuracy, cleanliness, orderliness, safety, honesty, teamwork, curiosity, good time management, and self-reliance develop the ability to convey scientific information; this includes keeping good records with in a lab notebook, writing a satisfactory report, and oral communication; draw conclusions from observed facts and support these conclusions with peer-reviewed literature.

BIOL-SHU 250

Organismal Biology

The array of organisms that populates the globe is astounding in its diversity and adaptability. This course uses fundamental concepts from the Foundations of Science curriculum to examine essential elements of animal physiology, including adaptations to environments such as deserts. This course develops an understanding of the relationship between structure and function of the organism; how structure develops through evolutionary and developmental processes; and how structure is related to the environment surrounding the organism.

Prerequisite: CCSC-SHU 114

BIOL-SHU 261

Genomics and Bioinformatics

Fueled by recent advances in technical approaches to data collection and analysis, the biological sciences have entered a new era in which vast amounts of genome-scale sequence and functional data are becoming available for a large number of species. These data are allowing scientists to explore biological function on an unprecedented scale. Familiarity with the fields of genomics and bioinformatics, which impact society on all levels, is vital for the next generation of scientists. This survey course introduces students to a broad range of topics in the fields of genomics and bioinformatics through lectures and hands-on exercises that use fundamental principles of chemistry, computer science, mathematics, and physics to understand organismal diversity through analyses of genomes. *Prerequisite: BIOL-250*

BIOL-SHU 266

Molecular and Cellular Biology

BIOL-SHU 1128 (formerly 262)

Systems Biology

This course focuses on methods to integrate the diverse data of complex networks and pathways developed from genomics, proteomics, and metabolomics and to understand how they work together forming a system with definable phenotypes. Global approaches as well as mathematical and statistical modeling to data collection and analyses are performed.

Prerequisites: BIOL-250 and 261

BUSF-SHU 1
Calculus Workshop for Business and Economics

BUSF-SHU 10J
Creativity and Innovation

To compete today in a fast-changing world, organizations and individuals need a steady stream of innovative strategies and unexpected solutions to stay ahead of the game—solutions that revive stagnant markets or completely reinvent the competitive dynamics of an industry. This course is about fostering a culture of creative thinking that provides the framework and motivation to generate those strategies and execute those solutions. It is an essential skill for any student with the desire to transform organizational processes and behaviors, and a willingness to challenge the status quo. The course provides many opportunities to apply these new ways of thinking through class exercises and a course project, where you will develop innovative solutions for a chosen topic. Teams will submit two assignment deliverables. This course is a Non-finance elective course.
Prerequisite: None

BUSF-SHU 101
Statistics for Business and Economics

This course introduces students to the use of statistical methods. Topics include: descriptive statistics; introduction to probability; sampling; statistical inference concerning means, standard deviations, and proportions; correlation; analysis of variance; linear regression, including multiple regression analysis. Applications to empirical situations are an integral part of the course.
Prerequisite: None

BUSF-SHU 188
Advanced High Business Chinese - Cases from Real World

This is the second part of a two-semester sequence for those who have studied Mandarin to the advanced level, although part 1 is NOT the prerequisite for taking part 2 or vice versa. The course is aimed to enhance students' Chinese skills in the business context and promote their understanding about the macro and micro business environment and culture in China. An approach placing more emphasis on case study is adopted along with task-based language teaching. The course is based on real-life cases from the business world. One is a multinational company which entered the Chinese market as a pioneer in the late 1970s and developed even closer ties to China in the 1990s by acquiring or partnering with the Chinese companies; five are Chinese companies that have endeavored in different ways to reach larger domestic and global markets. These cases center upon the issues of Business Globalization, M & A (Mergers and Acquisition), OEM (Original Equipment Manufacturer) and Antidumping etc. Through reading and discussing these cases and performing form-focused and communicative tasks related to these cases, students will learn how to use Chinese as a "carrier of culture" in a more dynamic way, thus acquiring a better understanding about China in economic and, broadly defined, cultural terms. In addition, the case study will also inspire students to explore the Chinese consumers' interest and mentality, so that they will occupy a more qualified position to explore a successful road toward "doing business in/with China." In addition to the business case analysis, supplementary reading, writing and listening exercises as well as media materials from different sources will also be provided in class or on-line. Highlights of these exercises are: Listening comprehension of business news reports on current issues as well as video recordings of television interviews and talk shows that cast successful international business leaders; analysis of the international financial markets (incl. analysis of origin, functions and conflict of interest of the investment banks); translation of business terminologies and documents, and commercial language and word processing. For students who are interested in pursuing career opportunities in Mainland China and Hong Kong, the course will teach the proper ways to compose a Chinese resume while, at the same time, introducing related job interview skills. By the end of the semester, students are expected to: (1) be equipped with the language skills to function more comfortably and confidently in the real business settings such as job interviews that require the Chinese language proficiency; (2) enhance the cultural awareness about the Chinese business world; (3) improve listening comprehension of Chinese business related media materials; (4) improve reading and translation skills of business terminologies/documents; (5) be able to use Chinese language software for certain business purposes. Class will be conducted in Chinese.
Instructor Consent Required

BUSF-SHU 201
Global Perspectives on Enterprise Systems

This course compares the development of rich and "emerging market" societies over time. Through both macro- and micro-economic perspectives, students examine political, cultural, and economic similarities and differences of national enterprise systems, paying special attention to impacts of government, financial institutions, entrepreneurship and management.
Prerequisite: None

BUSF-SHU 202

Foundations of Finance

Microeconomics and Statistics for the Social and Behavioral Sciences. A rigorous course that develops the basic concepts and tools of modern finance. It explores in detail basic concepts of return and risk with a view to understanding how financial markets work and how different kinds of financial instruments are valued. These instruments, including equities, fixed income securities, options, and other derivative securities, become vehicles for exploring various financial markets and the utilization of these markets by managers in different kinds of financial institutions to enhance return and manage risk.

Co-requisite: BUSF-250; Prerequisite: BUSF-101 and ECON-150.

BUSF-SHU 203

Industrial and Organizational Psychology

Personal, social, and environmental factors related to people's attitudes and performance in industry and other organizations. Topics include personnel selection and evaluation, training and development, attitudes and motivation, leadership, group dynamics, organizational structure and climate, and job design and working conditions.

Prerequisite: None

BUSF-SHU 204

Innovation and Design

Creativity and innovation are the key drivers of success for many of today's leading companies. This course will focus on developing breakthrough design thinking, an essential element of such companies' creative culture. The course provides many opportunities to apply these new ways of thinking through class exercises and a course project, where students develop creative concepts for an assigned topic.

Prerequisite: None

BUSF-SHU 205

Information Technology in Business and Society

Students in this course learn the essential tools used by today's knowledge workers, including spreadsheet modeling and analysis and database querying. They learn to recognize the large-scale systems that run modern organizations, and how to evaluate IT investments in products, services, and systems. They learn about the economics of information pricing, technological lock-in, and network effects. And they discuss a set of special topics, which may include digital music, information privacy, data mining and digital piracy.

BUSF-SHU 206

Investing and Financing in and with China (formerly Doing Business in China)

What does it take to be successful in China? How do domestic and foreign businesses do in the world's most dynamic economy? How do Chinese entrepreneurs work in a dynamic country? How do investors think about cross border investing into and out of China? How do investors think about cross border investing into and out of China? What are the leading opportunities in Chinese markets today? How are Chinese firms reshaping global business?

Course overview: This course is designed to prepare students for a good overview of investments, financing as well as conducting business in and with China. The class format will include lectures, case studies, discussions, guest speakers and student presentations to explore the opportunities and risks of international and domestic investments in China as well as the outward expansion of Chinese firms. The course will be require the student's active participation and parts will involve group work. Leading industry guest speakers and a site tour may be arranged for further learning enhancement, schedules permitting. The course materials will draw heavily on the lecturer's experiences.

Target students / audience: The target students are NYU Shanghai business & finance majors, economics majors and study abroad students from Stern. This course is suitable for any student interested in understanding international business, emerging markets, investments, cross border business and China. No prior knowledge or experience with China's business environment is required.

Prerequisites: Foundations of Finance, Corporate Finance and Economics of Global Business (or Macroeconomics)

BUSF-SHU 210

Business Analytics

This course introduces the basic principles and techniques of applied mathematical modeling for managerial decision making. You will learn to use some important analytic methods (e.g. forecasting, data mining, optimization, Monte Carlo simulation), to recognize their assumptions and limitations, and to employ them in decision making. The course is entirely hands-on. The emphasis will be on model formulation and interpretation of results, not on mathematical theory. The emphasis is on models that are widely used in diverse industries and functional areas, including finance, marketing, and operations.

Prerequisite: A prior Statistics Course

BUSF-SHU 250

Principles of Financial Accounting

Develops students' abilities to understand business transactions and financial statements and to determine the most appropriate financial measures for these events. Investigates the underlying rationale for accounting practices and assesses their effectiveness in providing useful information for decision making. Emphasis is placed on accounting practices that purport to portray corporate financial position, operating results, cash flows, manager performance, and financial strength.

Corequisite: BUSF-202

BUSF-SHU 303

Corporate Finance

Foundations of Finance. Helps students develop an analytical framework for understanding how organizations make investment and financing decisions. There is an emphasis on understanding the theory and its applications to the real world as well as appreciating the limitations of the tools in practical settings. Specific topics include capital budgeting, investment decision rules, discounted cash flow valuation, real options, cost of capital, capital structure, dividend policy, and valuation methods such as WACC and APV. *Prerequisite: BUSF-202*

BUSF-SHU 304

Futures and Options

This course covers the theoretical and practical aspects of futures, options, and other derivative instruments, which have become some of the most important tools of modern finance. While the primary focus is on financial derivatives, contracts based on commodities, credit risk, and other nonfinancial variables are also covered. Topics include market institutions and trading practices, valuation models, hedging, and other risk management techniques. The course requires relatively extensive use of quantitative methods and theoretical reasoning.

Prerequisite: BUSF-202

BUSF-SHU 305

Debt Instruments and Markets

This course describes important fixed income securities and markets and develops tools for valuing debt instruments and managing interest rate risk. The course covers traditional bond pricing, term structure, and interest rate risk concepts. It also covers the analytical and institutional aspects of fixed income derivatives, such as interest rate swaps, forwards, futures, and options, as well as bonds with embedded options and mortgage-backed securities. Topics also include credit risk, bond portfolio management, financial engineering, and international fixed income. The study of fixed income is quantitative and technical by nature.

Prerequisite: BUSF-202

BUSF-306

The Chinese Financial System

Prerequisite: BUSF-202

BUSF-SHU 350

Principles of Managerial Accounting

Introduces students to the evolving role that managerial accounting has played and is expected to play in servicing the informational needs of managers in the planning, organizing, and controlling functions. Highlights the attention-directing, decision-support, and decision-influencing roles of managerial accounting, while helping students learn to structure business decisions systematically and identify the information relevant to a decision. Trains students to think analytically about improving existing systems to further a firm's competitive advantage.

Prerequisite: None

BUSF-SHU 351

Competitive Advantage from Operations

Designed to give students a better understanding of how firms can gain competitive advantage from their operations function. Typically this requires the firm to achieve, at a minimum, cost, quality, and ecological parity; responsiveness and adaptability to customer needs and desires; rapid time to market; process technology leadership; and sufficient and responsive capacity. A problem-solving framework is developed that enables students to undertake managerial and technical analysis that should result in the desired comparative advantage. Both service and manufacturing case examples are utilized.

Prerequisite: None

BUSF-SHU 352

Mergers and Acquisitions

This course presents the theories and empirical evidence on mergers, acquisitions and restructuring, and analyzes the effects of various policy options on the stock values of acquirer

and target companies. Findings about the reaction of stock prices to information on control transactions are used to analyze the effects of various policy options in such transactions. Topics related to M&A include evaluating acquisition targets, methods of payment in acquisitions, acquisition strategies, the use of leverage in acquisitions and the effects of acquisitions on bond values, major legal issues, case law, and defensive measures against hostile acquisitions. The course combines lecture material, case analysis, quantitative and qualitative analysis, and discussions of relevant news of such transactions. There is an emphasis on fundamental concepts of valuation and other areas of corporate finance related to M&As.

Prerequisite: BUSF-303

BUSF-SHU 353

International Financial Management

This course examines the operation of international currency exchange and capital markets and applies financial management principles to the financial decisions of multinational corporations. It addresses such topics as economic determinants of exchange rates, currency market efficiency, exchange rate forecasting, techniques for measuring and managing exposure to exchange and political risk and financing alternatives and capital budgeting decisions of multinational corporations. Readings and case studies are employed. *Prerequisites: BUSF-303 and ECON-250*

BUSF-SHU 9001 (formerly 301)

Management and Organizations

This course addresses contemporary management challenges stemming from changing organizational structures, complex environmental conditions, new technological developments, and increasingly diverse workforces. It highlights critical management issues involved in planning, organizing, controlling, and leading an organization. Ultimately, it aims to strengthen students' managerial potential by providing general frameworks for analyzing, diagnosing, and responding to both fundamental and complex organizational situations. It also provides opportunities for students to enhance their communication and interpersonal skills, which are essential to effective management. The structure of the course encourages learning at multiple levels: through in-class lectures, exercises, and discussions; in small teams carrying out projects; and in individual reading, study, and analysis.

Prerequisite: None

MKTG-SHU 9001 (formerly BUSF- SHU 302)

Introduction to Marketing

Evaluates, from the management point of view, marketing as a system for the satisfaction of human wants and a catalyst of business activity. Deals with the subject at all levels, from producer to consumer, and emphasizes the planning required for the efficient use of marketing tools in the development and expansion of markets. Concentrates on the principles, functions, and tools of marketing, including quantitative methods. Utilizes cases to develop a problem-solving ability in dealing with specific areas.

Prerequisite: None

SOIM-SHU 9006

Law, Business & Society

Every professional business person must be aware of how legal systems work and effect business decisions. Furthermore, the interaction between Law and Business is multidimensional involving international, ethical, and technological considerations. In this course, students examine how key areas of business law, including contracts, torts, and business organizations, influence the structure of domestic and international business relationships. Students actively participate in legal studies designed to enhance business skills such as analytical thinking, written communication, oral presentation, conflict resolution, and team work problem-solving.

Prerequisite: Upperclass student (Stern Upperclass students have priority).

SOIM-SHU 9065

Organizational Communication and Its Social Context

In this course, students learn how to increase their communication effectiveness for business and professional goals. During the semester, students focus on the strategic implications of communication for modern organizations. A variety of assignments are given to stress the following communication competencies: written, spoken and nonverbal communication basics for business; effective team communication strategies; informative, persuasive and collaborative presentations; communication techniques for required junior and senior year projects. Students regularly receive personal feedback about their writing and their oral presentations from the instructor.

Prerequisite: None

CHEM-SHU 125
Foundations of Chemistry I

CHEM-SHU 126
Foundations of Chemistry II

Prerequisite: CCSC-104 or CHEM-125

CHEM-SHU 127
Fos Chemistry Laboratory

CHEM-SHU 225 (formerly 201)
Organic Chemistry I

This course uses an interactive, problems-based approach to study the structure and bonding of organic materials, conformational analysis, stereochemistry, and spectroscopy, topics that partly trace their roots to the development of quantum theory. The topics covered include basic reaction mechanisms such as substitution and elimination, and the reactions of aliphatic and aromatic hydrocarbons, alcohols, ethers, amines, carbonyl compounds, and carboxylic acids. The course incorporates modern analytical methods that are the cornerstone of contemporary organic chemistry.

Prerequisite: CCSC-SHU 110

CHEM-SHU 226 (formerly 250)
Organic Chemistry II

This is a continuation of the course Organic Chemistry I, directing to the same objectives: An introduction to the world of Organic Chemistry; learning the main classes of compounds, their structure, nomenclature, reactivity and reactions. Students who complete the course should be able to understand the symbolism used in organic chemistry, the three-dimensional structure of organic molecules, and how that influences organic reactions. Students should be able to reproduce reaction mechanisms and relate those to compounds and reactions they have not encountered. Students should be able to predict the major product of simple reactions on organic compounds containing only one functional group and apply those same principles to more complex compounds containing multiple functional groups. Students should be able to design simple organic syntheses. Students should be able to read and comprehend articles from the current literature.

Prerequisite: CHEM-201(225)

CHEM-SHU 285
Experimental Biochemistry

Introduction to molecular analysis of biomolecules. Selected experiments and instruction in analytical techniques used in biochemical research, including chromatography, spectrophotometry, and electrophoresis; isolation and characterization of selected biomolecules; kinetic analysis of enzymatic activity; and analysis of protein-protein and protein-DNA interactions that direct basic biochemical pathways.

Prerequisite: CHEM-SHU 282

CHEM-SHU 310
Biophysical Chemistry

Applications of physical and chemical principles to topics of biochemical and biological interest with an emphasis on the basic principles underlying biophysical techniques that are used to study important macromolecules such as proteins and nucleic acids. Topics include molecular spectroscopic techniques such as light absorption, fluorescence, and circular dichroism, as well as nuclear magnetic resonance and vibrational spectroscopy. Applications of these methods to important biophysical, biochemical, and biological problems of current interest such as protein folding, imaging, and protein-DNA and protein-protein interactions are discussed.

Prerequisites: CHEM- 251, 282(882), and 301(651)

CHEM-SHU 312
Organic Analysis

Emphasizes the application of spectroscopic methods in organic chemistry in determining molecular structure, including proton and carbon NMR, infrared spectroscopy, ultraviolet/visible spectroscopy, modern methods of mass spectroscopy, and chiroptical spectroscopy. This course is particularly suitable for chemists interested in pharmaceutical fields of research and development, and applications to studies of the chemistry, properties and interactions of biologically important molecules.

Prerequisite: CHEM- 251

CHEM-SHU 651 (formerly 301)

Physical Chemistry: Quantum Mechanics and Spectroscopy

An introduction to quantum mechanics—general principles and applications to important model systems. Covers electronic structure of one- and many-electron atoms, theory of chemical bonding in diatomic and polyatomic molecules. Includes principles and applications of molecular spectroscopy: rotational, vibrational, electronic, and nuclear magnetic resonance. Elements of photochemistry are also included.

Prerequisites: CCSC- 114 and MATH- 124

CHEM-SHU 652 (formerly 302)

Physical Chemistry: Thermodynamics and Kinetics

Develops the close connection between the microscopic world of quantum mechanics and the macroscopic world of thermodynamics. Topics include properties of gases, kinetics, elementary statistical thermodynamics, and thermodynamics of single and multicomponent systems.

Prerequisites: (CCSC-114 or PHYS-95) and MATH- 124(112)

CHEM-SHU 661 (formerly 350)

Physical Chemistry Laboratory

Introduction to the principles and practices of experimental methods widely used in analytical and research laboratories. Emphasizes understanding of background physicochemical theory, as well as capabilities and limitations of methods and interpretations of data. Covers instrumental methods, such as UV/visible spectroscopy, FT-IR, NMR, and fluorescence, for the systematic characterization of compounds and the use of interfaced computers for data collection and spreadsheet analysis. Studies also include an introduction to computer modeling of molecular properties. Optional experiments include fluorescence studies of protein denaturation and laser studies of excited state kinetics.

Prerequisites: CHEM- 301(651) and CHEM- 302(652)

CHEM-SHU 711 (formerly 410)

Inorganic Chemistry

Studies of methods in inorganic chemistry that make use of symmetry to describe bonding and spectra of inorganic compounds with an interdisciplinary emphasis whenever feasible. Reactions and kinetics are also discussed for inorganic, organometallic, and bioinorganic compounds. Selected topics in main group chemistry are also included.

Prerequisites: CHEM- 201(225), 301(651) and 302(652)

CHEM-SHU 881 (formerly 281)

Biochemistry I

This course offers deeper and more complete treatments of the chemistry of living cells and biological chemistry than in the Foundations of Science courses. Topics include structure and function of proteins, lipids, carbohydrates, and nucleic acids; enzyme structure, mechanism and regulation of enzyme activity, and membrane structure and transport; mechanisms of cellular processes and cellular physiology, including ion channels and pumps, cell motility, and the immune response.

Prerequisite: CHEM- 201(225)

CHEM-SHU 882 (formerly 282)

Biochemistry II

Building on the lessons of Biochemistry 1, Biochemistry 2 emphasizes analysis of basic metabolic pathways, including glycolysis, electron transport, and oxidative phosphorylation, as well as mechanisms of metabolic regulation and integration.

Prerequisite: CHEM- 281(881)

CHIN-SHU 101

Elementary Chinese I

This course is the first part of a one-year elementary-level Chinese course designed for students who have no or almost no knowledge of Mandarin Chinese. It is designed to develop language skills in listening, speaking, reading, and writing as it relates to everyday life situations. The objectives of the course are: (1) to master the Chinese phonetic system (pinyin and tones) with satisfactory pronunciation; (2) to understand the construction of commonly used Chinese Characters (both simplified and traditional) and learn to write them correctly; (3) to understand and use correctly basic Chinese grammar and sentence structures; (4) to build up essential vocabulary; (5) to read and write level appropriate passages (100-150 characters long); and (6) to become acquainted with aspects of Chinese culture and society related to the course materials.

Prerequisite: None.

CHIN-SHU 101S

Elementary Chinese I - FoS1

This course is a specially-designed 2-credit elementary-level Chinese course for students enrolled in Foundations of Science who have no or almost no knowledge of Mandarin Chinese. It covers the first half of the 4-credit Elementary I course and is designed to develop language skills in listening, speaking, reading, and writing as it relates to everyday life situations.

Prerequisite: None

CHIN-SHU 101S2

Elementary Chinese I - FoS 2

This course is the second half of a specially-designed 2-credit elementary-level Chinese course for students enrolled in Foundations of Science who have no or almost no knowledge of Mandarin Chinese. It covers the latter half of the 4-credit Elementary I course and is designed to develop language skills in listening, speaking, reading, and writing as it relates to everyday life situations

Prerequisite: Successful completion of first half

CHIN-SHU 102

Elementary Chinese II

This course is the second part of a one-year elementary-level Chinese course designed for students who have completed NYU-SH's Elementary Chinese I or equivalent. It is designed to reinforce and further develop language skills in listening, speaking, reading, and writing as it relates to everyday life situations. The objectives of the course are: (1) to continue mastering the Chinese phonetic system (pinyin and tones); (2) to become further familiarized with the construction of commonly used Chinese Characters (both simplified and traditional); (3) to understand and use correctly basic Chinese grammar and sentence structures; (4) to continue building up essential vocabulary; (5) to read and write level appropriate passages (150-200 characters long); and (6) to become acquainted with aspects of Chinese culture and society related to the course materials.

Prerequisite: CHIN-101

CHIN-SHU 102S

Elementary Chinese II FoS

This specially-offered course for students enrolled in Foundations of Science is the first half of the regular Elementary Chinese II course, designed for students who have completed NYU-SH's Elementary Chinese I or equivalent. It is designed to reinforce and further develop language skills in listening, speaking, reading, and writing as it relates to everyday life situations.

Prerequisite: CHIN-101 or 101S2

CHIN-SHU 102S2

Elementary Chinese II FoS 2

This specially-offered course for students enrolled in Foundations of Science is the second half of the regular Elementary Chinese II course, designed for students who have completed the first half of NYU-SH's Elementary Chinese II for students in FoS. It is designed to reinforce and further develop language skills in listening, speaking, reading, and writing as it relates to everyday life situations. *Prerequisite: Successful completion of first half*

CHIN-SHU 111

Elementary Chinese for Advanced Beginners

This course is the first part of a one-year elementary-level Chinese course designed for students who can understand and speak conversational Chinese related to daily-life situations, but have not learned to read/write Chinese characters. This includes students who were raised in a non-Chinese speaking country but in a home where the Mandarin Chinese dialect was spoken, and/or students who have acquired a certain level of Mandarin Chinese language proficiency (primarily speaking and listening) by living or working in a Chinese speaking country/region for an extended time. Though speaking and listening will be an integral part of the course, the

major focus will be on developing students' competence in reading and writing. The objectives of the course are: 1) to master the Chinese phonetic system (pinyin and tones) with satisfactory pronunciation; 2) to understand the construction of commonly used Chinese Characters (both simplified and traditional) and write them correctly; 3) to build up essential vocabulary needed to read and write about topics covered in the textbook; 4) to understand and use correctly basic Chinese grammar and sentence structures; 5) to comprehend level appropriate passages and to be able to perform simple sentence analysis; 6) to write level appropriate essays (250-300 characters long) with grammatical, accuracy as well as cohesion and coherence; 7) to become acquainted with and be able to discuss in speech and writing aspects of Chinese culture and society related to the course materials.

Prerequisite: Based on Placement Test

CHIN-SHU 201 **Intermediate Chinese I**

This course is the first part of a one-year intermediate-level Chinese course designed for students who have completed NYU-SH's Elementary Chinese II or equivalent. It is designed to consolidate and develop overall aural-oral proficiency. Objectives are: (1) to be able to obtain information from more extended conversation; (2) to express and expound on, in relative length, feelings and opinions on common topics; (3) to develop vocabulary needed to discuss common topics and begin learning to decipher meaning of compound words; (4) to develop reading comprehension of more extended narrative and expository passages; (5) to write, in relative length (200-250 characters long), personal narratives, informational narratives, comparison and discussion of viewpoints with level-appropriate vocabulary and grammatical accuracy, as well as basic syntactical cohesion; (6) to continue being acquainted with aspects of Chinese culture and society related to the course materials. *Prerequisite: CHIN-102*

CHIN-SHU 201S1 **Intermediate Chinese I - FoS1**

This course is a specially-designed 2-credit intermediate-level Chinese course for students enrolled in Foundations of Science who have completed Elementary II. It covers the first half of the 4-credit Intermediate I course.

Prerequisite: CHIN-SHU 102

CHIN-SHU 201S2 **Intermediate Chinese I - FoS2**

This course is a specially-designed 2-credit intermediate-level Chinese course for students enrolled in Foundations of Science who have completed Intermediate I FoS1. It covers the second half of the 4-credit Intermediate I course.

Prerequisite: CHIN-SHU 201S1

CHIN-SHU 202 **Intermediate Chinese II**

This course is the second part of a one-year intermediate-level Chinese course designed for students who have completed NYU-SH's Intermediate Chinese I or equivalent. It is designed to continue consolidating and developing overall aural-oral proficiency, gradually focusing more on semi-formal or formal linguistic expressions. Objectives are: (1) to further develop competence in obtaining information from more extended conversation; (2) to express and expound on, in more extended length, feelings and opinions on socio-cultural topics; (3) to develop more specialized vocabulary needed to discuss sociocultural topics; (4) to improve students' ability to decipher meaning of compound words; (5) to further develop reading comprehension of extended narrative, expository and simple argumentative passages; (6) to learn to solve simple syntactical problems independently; (7) to write, in relative length (250-300) characters long) informational narratives, expository and simple argumentative passages with level-appropriate vocabulary and grammatical accuracy, as well as basic syntactical cohesion; and (7) to continue being acquainted with aspects of Chinese culture and society related to the course materials.

Prerequisite: CHIN-201

CHIN-SHU 211 **Intermediate Chinese I for Advanced Beginners**

This course is designed for students who have at least one year of Chinese language learning at NYU and who, before registering for this course, already command above-elementary aural-oral proficiency in Mandarin Chinese. The objectives are: to be able to obtain information from extended written passages; to both express and expound on, in relative length, feelings and opinions on common social and cultural topics; to expand vocabulary and learn to decipher the meaning of compound words; to develop reading comprehension of extended expository and simple argumentative passages; to solve non-complex textual problems with the aid of dictionaries; to write in relative length personal narratives, informational narratives, comparison and discussion of viewpoints with level appropriate vocabulary and grammatical accuracy, as well as syntactical cohesion; to continue to become acquainted with aspects of Chinese culture and society related to the course materials.

Prerequisite: CHIN-111

CHIN-SHU 301
Advanced Chinese I

This course is the first part of a one-year Advanced Chinese course designed for students who have successfully completed Intermediate Chinese II at NYU-SH, or who have at least the equivalent knowledge of Chinese upon registration. It is designed to reinforce and further improve students' overall communicative competence by incorporating semi-formal or formal usages. The objectives of the course are: (1) to learn to apply formal linguistic expressions in speaking and writing; (2) to acquire specialized vocabulary and patterns necessary for conducting formal discussions of socio-cultural topics; (3) to develop reading comprehension of texts with more advanced syntax; (4) to learn to make context-based guess about the meaning of a new word and further enhance students' ability to analyze as well as produce sentences with more complex syntactical features; (5) to learn to write expository and argumentative passages in more extended length; and (6) to learn to employ basic rhetoric devices in writing.
Prerequisite: CHIN-202

CHIN-SHU 302
Advanced Chinese II

This course is the second part of a one-year Advanced Chinese course designed for students who have successfully completed Advanced Chinese I at NYU-SH, or who have the equivalent knowledge of Chinese upon registration. It is designed to reinforce and further improve students' overall communicative competence by incorporating semi-formal or formal usages. The objectives of the course are: (1) to enhance further students' oral and written communicative competence using formal linguistic expressions; (2) to expand further specialized vocabulary and patterns necessary for conducting formal discussions of socio-cultural topics relevant to today's China; (3) to improve further students' reading comprehension of texts with more advanced syntax; (4) to develop further their competence in making context-based guess about the meaning of a new word, and further enhance ability to analyze as well as produce sentences with more complex syntactical features; (5) to improve further their ability to write expository and argumentative passages in more extended length; (6) to improve their ability to effectively employ basic rhetoric devices in writing. *Prerequisite: CHIN-301*

CHIN-SHU 401
Classical Chinese I

This course is designed to give students an introduction to basic syntax, grammar, and vocabulary of Classical Chinese through close readings of authentic texts. Almost all these texts are historically significant canon texts that are extremely rich in classical Chinese cultural connotation. They are selected from a wide variety of genres, such as historical literature, philosophical and political writings, written correspondence, poetry, essay, some of which are unique to Chinese culture. The course aims to develop the students' reading and comprehension skills in this highly stylized form of written Chinese, acquaint students not only with the classic Chinese cultural heritage but also underlying working mechanism that is in many ways relevant to the form and usage of today's Mandarin Chinese.
Prerequisite: CHIN-302

CHIN-SHU 402
Classical Chinese II

This course continues the work begun in Classical Chinese I with the goal that students be able to read with reasonable facility original texts, included unpunctuated ones, from a wide variety of genres, including historical literature, philosophical and political writings, written correspondence, poetry, essays and official documents. *Prerequisite: CHIN-401*

CHIN-SHU 403
Readings in Chinese Culture I

Designed to enhance Chinese proficiency through reading authentic materials rich in cultural connotations. Stresses primarily reading and writing. The objectives are: to develop speaking skills needed for semi-formal or formal presentation on academic topics; to develop specialized vocabulary; to further improve reading speed and develop skills needed to conduct textual analysis on and, on some occasions, translate texts with syntactical sophistication and stylistic nuance; to develop responsiveness to and ability to interpret linguistic features of different genres and writing styles; to advance strategies for autonomous learning of Chinese from an analytical perspective.
Prerequisite CHIN-302

CHIN-SHU 404
Readings in Chinese Culture II

Designed to enhance Chinese proficiency through reading authentic materials rich in cultural connotations. Stresses primarily reading and writing. The objectives are: to develop speaking skills needed for semi-formal or formal presentation on academic topics; to develop specialized vocabulary; to further improve reading speed and develop skills needed to conduct textual analysis on and, on some occasions, translate texts with syntactical sophistication and stylistic nuance; to develop responsiveness to and ability to interpret linguistic features of different

genres and writing styles; to advance strategies for autonomous learning of Chinese from an analytical perspective.

Prerequisite: CHIN-302

CHIN-SHU 411

Introduction to Business Chinese and Culture (I)

This course is designed for those who have studied Mandarin to the intermedia high or advanced level (or equivalent). The main goal of the course is to continuously enhance students' Chinese proficiency while, at the same time, preparing them for working more comfortably and confidently in a Chinese business environment. In recent years, along with the rapid growth of Chinese economy, issues on Chinese business and economy became a hot topic. Following this trend, the course is aimed to enhance students' Chinese skills in the business context and promote their understanding of the macro and micro business environment and culture in China. An approach placing more emphasis on case study is adopted along with task-based language teaching. The course will cover the first five chapters of the textbook which is developed surrounding five real-life business cases. These five companies are all multinational that have successfully operated in China by adapting their strategies to the special needs of the Chinese market. By reading, discussing, and performing communicative tasks related to those cases, students will learn how to use Chinese as a "carrier of culture", thus acquiring a better understanding of China in economic and, broadly defined, cultural terms. The case study will also inspire students to explore the Chinese consumers' interest and mentality, so that they will occupy a more qualified position to explore a successful road toward "doing business within China."

In order to enhance students' understanding of the business cases, clips of the selected television interviews and talk shows will be used to accomplish the following four goals: First, the content of the textbook and the background information offered by the supplementary media materials complement each other. Second, key terms and expressions in the textbook will be repeated in the learning process to help students reinforce the knowledge. Third, in terms of cross-usage between colloquial and written language, students will have the opportunity to supplement their reading of written texts with the experience of watching television shows on the same or similar topics, which may help them understand the distinctions between the two language styles and accurately utilize both language registers to express their own ideas in different settings. Fourth, the authentic visual materials can help close the gap between pedagogy and the real world, most effectively enabling students to become familiar with all varieties of Chinese accents, - including those of Hong Kong, Taiwan and even foreigners speaking Chinese - thereby strengthening students' abilities of practical application in the real world. In order to expand and update students' knowledge on various business-related issues, in addition to the business case 2 analysis, supplementary listening, reading, writing exercises will also be provided in class. Highlights of these exercises are: Listening comprehension of business news reports on current issues; discussion of Chinese business laws, translation of business terms and documents, and commercial language and word processing. For students who are interested in pursuing career opportunities in Mainland China or Hong Kong, the course will teach the proper ways to compose a Chinese resume while, at the same time, introducing related job interview skills. By the end of the semester, students are expected to: (1) expand business vocabulary and strengthen the communication skills in real business settings; (2) enhance the cultural awareness about China and the Chinese business world; (3) improve listening comprehension of authentic Chinese media materials; (4) improve reading, writing and translation skills of business terminologies and documents; (5) be able to use Chinese language software for certain business purposes. Class will be conducted in Chinese.

Prerequisite: CHIN-302

CHIN-SHU 415

Introduction to Contemporary China I

This course is a post advanced Chinese language course and is designed for those students who have completed Advanced Chinese II at NYU-SH or NYU (or the equivalent) and intend to further enhance their language skills and knowledge about different aspects of China. It's designed to help students to know the hot issues taking place in modern China and improve their ability to understand the cultural opponents and thinking modes behind the issues and their ability in expressing their opinions and carrying out discussions and debates on these issues in Chinese language. This course integrates the language learning with the study of social issues of modern China, and covers the authentic materials with topics ranging from China human geography, Chinese political system, Chinese economy, Chinese education, to Chinese science and technology.

Prerequisite: CHIN-302

CHIN-SHU 429

Advanced High Business Chinese - Cases from Real World

This is the second part of a two-semester sequence for those who have studied Mandarin to the advanced level, although part 1 is NOT the prerequisite for taking part 2 or vice versa. The course is aimed to enhance students' Chinese skills in the business context and promote their understanding about the macro and micro business environment and culture in China. An approach placing more emphasis on case study is adopted along with task-based language teaching. The course is based on real-life cases from the business world. One is a multinational company which entered the Chinese market as a pioneer in the late 1970s and developed even

closer ties to China in the 1990s by acquiring or partnering with the Chinese companies; five are Chinese companies that have endeavored in different ways to reach larger domestic and global markets. These cases center upon the issues of Business Globalization, M & A (Mergers and Acquisition), OEM (Original Equipment Manufacturer) and Antidumping etc. Through reading and discussing these cases and performing form-focused and communicative tasks related to these cases, students will learn how to use Chinese as a "carrier of culture" in a more dynamic way, thus acquiring a better understanding about China in economic and, broadly defined, cultural terms. In addition, the case study will also inspire students to explore the Chinese consumers' interest and mentality, so that they will occupy a more qualified position to explore a successful road toward "doing business in/with China." In addition to the business case analysis, supplementary reading, writing and listening exercises as well as media materials from different sources will also be provided in class or on-line. Highlights of these exercises are: Listening comprehension of business news reports on current issues as well as video recordings of television interviews and talk shows that cast successful international business leaders; analysis of the international financial markets (incl. analysis of origin, functions and conflict of interest of the investment banks); translation of business terminologies and documents, and commercial language and word processing. For students who are interested in pursuing career opportunities in Mainland China and Hong Kong, the course will teach the proper ways to compose a Chinese resume while, at the same time, introducing related job interview skills. By the end of the semester, students are expected to: (1) be equipped with the language skills to function more comfortably and confidently in the real business settings such as job interviews that require the Chinese language proficiency; (2) enhance the cultural awareness about the Chinese business world; (3) improve listening comprehension of Chinese business related media materials; (4) improve reading and translation skills of business terminologies/documents; (5) be able to use Chinese language software for certain business purposes.

Class will be conducted in Chinese. Instructor consent required.

CHIN-SHU 9000

Introduction to Conversational Chinese

(This course available only to study away students.)

CHIN-SHU 9001

Practical Chinese and Introduction to China

This course does not cover Elementary Chinese I. It is designed for students who have already completed their language requirement for their major or who will complete their language requirement with another language. Students cannot take this class if they have already completed Elementary Chinese I or equivalent or more advanced course. This course is not intended for native Chinese speakers. Finally, completion of this course does not qualify students to take Elementary Chinese II.

Computer Engineering

CENG-SHU 201

Digital Logic

This module provides a rigorous introduction to topics in digital logic design. Introductory topics include: classification of digital systems, number systems and binary arithmetic, error detection and correction, and switching algebra. Combinational design analysis and synthesis topics include: logic function optimization, arithmetic units such as adders and subtractors, and control units such as decoders and multiplexers. In-depth discussions on memory elements such as various types of latches and flip-flops, finite state machine analysis and design, random access memories, FPGAs, and high-level hardware description language programming such as VHDL or Verilog. Timing hazards, both static and dynamic, programmable logic devices, PLA, PAL and FPGA will also be covered.

Prerequisite: CSCI-101

CENG-SHU 202

Computer Architecture

The course introduces the principles of computer organization and basic architecture concepts. It discusses the basic structure of a digital computer and study in details formal descriptions, machine instruction sets design, formats & data representation, addressing structures, mechanization of Procedure calls, memory management, Arithmetic and Logical unit, virtual and cache memory organization, I/O processing and interrupts, the fundamentals of reliability aspects. The labs emphasize experiential learning of computer organization and architecture concepts, and require students to use learned knowledge to create and build prototypes and evaluate their performance.

Prerequisite: CENG-201

CENG-SHU 213

Database Systems

The course covers modeling an application and logical database design, the relational model and relational data definition and data manipulation languages, design of relational databases and normalization theory, physical database design, query processing and optimization, transaction processing focusing on concurrency and recovery. The labs emphasize experiential learning of database systems and applications and an insight into various database management systems and query languages.

Prerequisite: CSCI-101

CENG-251

Database Systems

Data Structures and Algorithms. The course covers modeling an application and logical database design, the relational model and relational data definition and data manipulation languages, design of relational databases and normalization theory, physical database design, query processing and optimization, transaction processing focusing on concurrency and recovery. The labs emphasize experiential learning of database systems and applications and an insight into various database management systems and query languages.

Prerequisite: CSCI-101

CENG-SHU 302

Compilers

Topics include: structure of one-pass and multiple-pass compilers, symbol table management, lexical analysis; traditional and automated parsing techniques including recursive descent and LR parsing; syntax-directed translation and semantic analysis, run-time storage management, intermediate code generation; and introduction to optimization, code generation; and interpreters. *Prerequisites: CSCI-101 & CSCI-370*

CENG-SHU 303

Parallel and Distributed Computing

This subject aims to help students to get the most out of parallel and distributed computer systems, i.e. to understand the interaction between hardware and software parts of the system, to understand the power and limitations of parallel and distributed systems and to understand the beneficial and challenging aspects of parallelism. Upon completion of this subject the student should be able to understand the fundamental aspects of parallel and distributed processing and the theoretical limitations of parallel computing such as intractability, become familiar with taxonomies of parallel systems and performance measures for parallel systems, and write efficient parallel application program.

Prerequisite: CENG-202

CENG-SHU 304

Computer Security

This course covers cryptographic systems. Topics: Capability and access control mechanisms, authentication models, protection models. Database and operating system security issues, mobile code, security kernels. Malicious code, Trojan horses and computer viruses. Security

policy formation and enforcement, legal aspects and ethical aspects.

Prerequisite: CSCI-215 and CENG-350

CENG-SHU 306

Intelligent Systems

This course gives an introduction to artificial intelligence. The students will learn about intelligent agents that can make near-optimal decisions in a timely manner with incomplete information and limited computational resources. The course will address search with single and multiple agents, Markov decision processes, reinforcement learning, and tracking. The course includes problem solving and search algorithms, reasoning and fuzzy and probabilistic methods, pattern recognition and neural networks, and genetic algorithms and a brief overview of natural language processing and computer vision. The course will provide an engineering context to the mind, psychology, and neuroscience.

Prerequisite: CENG-202

CENG-SHU 350

Embedded Systems

This course presents an overview of Embedded Systems covering a selection of topics including Microcontroller Architecture, Assembler Programming, Interrupts, Peripheral Interfacing, Embedded System Design, Higher-Level Languages on Embedded Systems, as well as a brief introduction to Real-Time Operating Systems. Practical Lab Exercises complement the lectures. The students will further specialize and consolidate their knowledge through semester-long hands-on projects.

Prerequisite: CENG-202

CENG-SHU 351

Computer Networks

The course introduces the basic concepts of computer and communication networks, like flow control, congestion control, end-to-end reliability, routing, framing, error-recovery, multiple access and statistical multiplexing. In-depth presentation of the different networking layers, with emphasis on the Internet reference model. Protocols and architectures such as the TCP, IP, Ethernet, wireless networks etc. are described in order to illustrate important networking concepts. Introduction to quantitative analysis and modeling of networks. The labs cover basic concepts of computer networking and applications, and require students to use existing networking APIs to create and build computer network prototypes and real-life applications.

Prerequisite: CSCI-101

CENG-SHU 400

Senior Capstone Design Project I

Prerequisite: Senior Standing

CENG-SHU 401

Senior Capstone Design Project II

Prerequisite: CENG-400

Computer Science

CSCI-SHU 11

Introduction to Computer Programming

An introduction to the fundamentals of computer programming. Students design, write, and debug computer programs. No prior knowledge of programming is assumed. Students will learn programming using Python, a general purpose, cross-platform programming language with a clear, readable syntax. Most class periods will be part lecture, part lab as you explore ideas and put them into practice. This course is suitable for students not intending in majoring in computer science as well as for students intending to major in computer science but having no programming experience. Students with previous programming experience should instead take Introduction to Computer Science.

Prerequisite: None

CSCI-SHU 101

Introduction to Computer Science

This course has three goals. First, the mastering of a modern object-oriented programming language, enough to allow students to tackle real-world problems of important significance. Second, gaining an appreciation of computational thinking, a process that provides the foundations for solving real-world problems. Finally, providing an overview of the very diverse and exciting field of computer science - a field which, arguably more than any other, impacts how we work, live, and play today.

Prerequisite: CSCI-11 or other previous programming experience.

CSCI-201

Computer Organization and Architecture

CSCI-SHU 210

Data Structures

Use and design of data structures, which organize information in computer memory. Stacks, queues, linked lists, binary trees: how to implement them in a high-level language, how to analyze their effect on algorithm efficiency, and how to modify them. Programming assignments.

Prerequisite: CSCI-101

CSCI-SHU 215

Operating Systems

Covers the principles and design of operating systems. Topics include process scheduling and synchronization, deadlocks, memory management (including virtual memory), input-output, and file systems. Programming assignments.

Prerequisite: CSCI-210 & CENG-202

CSCI-2 SHU 20

Algorithms

Introduction to the study of algorithms. Presents two main themes: designing appropriate data structures and analyzing the efficiency of the algorithms that use them. Algorithms studied include sorting, searching, graph algorithms, and maintaining dynamic data structures. Homework assignments, not necessarily involving programming.

Prerequisites: MATH-251 & CSCI-210

CSCI-SHU 222

Introduction to Game Programming

A programming intensive introduction to the creation of computer games. Using mostly two-dimensional sprite-based programming, we examine and experiment with animation, physics, artificial intelligence and audio. In addition, the course explores the mathematics of transformations (both 2D and 3D) and the ways they may be represented.

Prerequisite: CSCI-101

CSCI-302

Introduction to Database Systems

CSCI-SHU 304

Network Security

This course covers reviews networking. Topics: Basic notations of confidentiality, integrity, availability; cryptographic systems, coding and decoding messages. Cryptographic protocols for privacy, integrity, key exchange and access control. TCP/IP security; Firewalls, IPSec; secure ecommerce. Intrusion detection, prevention, response. Advanced topics are included.

Prerequisite: CSCI-215

CSCI-SHU 308

Computer Networking

This course takes a top-down approach to computer networking. After an overview of computer networks and the Internet, the course covers the application layer, transport layer, network layer and link layers. Topics at the application layer include client-server architectures, P2P architectures, DNS and HTTP and Web applications. Topics at the transport layer include multiplexing, connectionless transport and UDP, principles of reliable data transfer, connection-oriented transport and TCP and TCP congestion control. Topics at the network layer include forwarding, router architecture, the IP protocol and routing protocols including OSPF and BGP. Topics at the link layer include multiple-access protocols, ALOHA, CSMA/CD, Ethernet, CSMA/CA, wireless 802.11 networks and link layer switches. The course includes simple quantitative delay and throughput modeling, socket programming and network application development and Ethereal labs.

Prerequisite: CSCI-215

CSCI-SHU 310

UNIX System Programming

This course covers programming and system administration of UNIX systems. Also covered: Shell programming, special purpose languages, UNIX utilities, UNIX programming tools, systems programming and system administration.

Prerequisite: CSCI-215 and 220

CSCI-SHU 323

Interactive Computer Graphics

This course introduces the fundamentals of computer graphics with hands-on graphics programming experiences. Topics include graphics software and hardware, 2D line segment-scan conversion, 2D and 3D transformations, viewing, clipping, polygon-scan conversion, hidden surface removal, illumination and shading, compositing, texture mapping, ray tracing, radiosity and scientific visualization.

Prerequisites: CSCI-101, MATH-110 & MATH-230

CSCI-SHU 330

Computer Vision and Scene Analysis

An important goal of artificial intelligence is to equip computers with the capability to interpret visual inputs. Computer vision and scene analysis is an AI area that deals with constructing explicit, meaningful descriptions of physical objects from images. It includes many techniques from image processing, pattern recognition, geometric modeling and cognitive processing. This course introduces the many techniques and applications of computer vision and scene analysis.

Prerequisites: CSCI-101; MATH-121

CSCI-331

Computer Architecture

(Cross-listed with CENG-SHU 202)

CSCI-340

Introduction to Databases

Modeling the information structure of an enterprise. Logical design and relational database implementation using a tool such as Visio. Relational algebra and SQL as implemented in representative systems, such as Microsoft Access and Oracle. Normalization and denormalization. Introduction to online analytical processing, physical design, query processing and optimization, recovery, and concurrency.

Prerequisite: CSCI-101

CSCI-SHU 358

Theory of Computation

Takes a mathematical approach to studying topics in computer science, such as regular languages and some of their representations (deterministic finite automata, nondeterministic finite automata, regular expressions) and proof of nonregularity. Context-free languages and pushdown automata; proofs that languages are not context-free. Elements of computability theory. Brief introduction to NP-completeness.

Prerequisite: CSCI-215 and 220 and MATH-228

CSCI-360

Machine Learning and Data Mining

This course introduces the field of machine learning and data mining. It covers standard machine-learning techniques, such as decision trees, nearest neighbor, Bayesian methods, support vector machines and logistic regression. The course also addresses methods for evaluating and comparing machine learning techniques.

Prerequisite: CSCI-210; MATH-121

CSCI-SHU 370

Object-Oriented Programming

Object-oriented programming has emerged as a significant software development methodology. This course introduces the important concepts of object-oriented design and languages, including code reuse, data abstraction, inheritance, and dynamic overloading. Covers in depth those features of Java and C++ that support object-oriented programming and gives an overview of other object-oriented languages of interest. Significant programming assignments stressing object-oriented design.
Prerequisite: CSCI-210

CSCI-SHU 372

Artificial Intelligence

Many cognitive tasks that people can do easily and almost unconsciously have proven extremely difficult to program on a computer. Artificial intelligence tackles the problem of developing computer systems that can carry out these tasks. Focus is on three central areas in AI: representation and reasoning, machine learning, and natural language processing.
Prerequisite: CSCI-215 and 220

CSCI-SHU 378

Introduction to Cryptography

Provides an introduction to the principles and practice of cryptography and its application to network security. Topics include symmetric-key encryption (block ciphers, modes of operations, AES), message authentication (pseudorandom functions, CBC-MAC), public-key encryption (RSA, ElGamal), digital signatures (RSA, Fiat-Shamir), authentication applications (identification, zero-knowledge), and others, time permitting.
Prerequisite: CSCI-220

CSCI-SHU 402

Advanced Algorithms

This course covers techniques in advanced design and analysis of algorithms. Topics: Amortized analysis of algorithms. Advanced data structures, binomial heaps, Fibonacci heaps, data structures for disjoint sets, analysis of union by rank with path compression. Graph algorithms: elementary graph algorithms, maximum flow, matching algorithms. Randomized algorithms. Theory of NP completeness and approach to finding (approximate) solutions to NP complete problems. Selected additional topics that may vary.
Prerequisite: CSCI-220

CSCI-SHU 410

Software Engineering

An intense hands-on study of practical techniques and methods of software engineering. Topics include: advanced object-oriented design, design patterns, refactoring, code optimization, universal modeling language, threading, user interface design, enterprise application development and development tools. All topics are integrated and applied during the semester-long group project. The aim of the project is to prepare students for dynamics in a real workplace. Members of the group will meet on a regular basis to discuss the project and to assign individual tasks. Students will be judged primarily on the final project presentations.
Prerequisites: CSCI-215 and 220

CSCI-420

Senior Project

At the beginning of the semester, each student will propose a senior project plan. Most projects will be software intensive, with possible integration with databases, smart phones, gaming platforms, or other technologies. The instructor will likely suggest revisions to the project plan. Students were present the proposal, progress, and final project to the class.

CSCI-SHU 2314

Discrete Mathematics

This course is an introduction to discrete mathematics, emphasizing proof and abstraction, as well as applications to the computational sciences. Topics include sets, relations, and functions, graphs and trees, algorithms, proof techniques, and order of magnitude analysis, Boolean algebra and combinatorial circuits, formal logic and languages, automata, and combinatorics, probability, and statistics.
Prerequisite: None

CCCF-SHU 101W1

Perspectives on Humanities: Beyond Nature

The most recent developments in eco-criticism see a fatal flaw in our predominant conception of nature—as pure, beautiful, and grand—arguing that it alienates us from the very thing we wish to protect, and doing so, only ensures continued environmental degradation. The corrective is an expressly 21st century mode of ecological seeing and questioning that allows us to reconceive of ourselves and the world as beyond nature. But because the idea of nature remains so central to our understanding of ethics, law, human sexuality, psychology and personhood, and artistic representation, we must ask what implications the new ecology might have for our understanding of these features of culture. In this course we survey the positions of the new ecology, and then apply these methods of critique to examples of society, self, and art (throughout intellectual history up to the present). This application will both reveal how central nature is to our ideological understanding of culture and deconstruct our notion of the natural world. This course will extend writing skills and concepts learned in GPS Writing Workshop, focusing on critical theory, research, and academic writing and expression in the humanities. The primary assignments will be analytical essays and a digital expressions project.

CCCF-SHU 101W2

Perspectives on Humanities: Encounters with the Literary Hero

Although the 19th century idea of historically significant “great men” or heroes has long fallen into disfavor, there is no denying that the idea of the heroic has been a staple component of our literary legacy, be it of the East, West, or anywhere else in the world. In this Perspectives on Humanities course, we will explore the historical evolution--especially in the Western tradition-- of the hero both as a person of distinguished courage or ability, admired for his brave deeds and noble qualities, and as the central protagonist in a work of literature around whom the plot generally revolves. We will examine a great variety of literary heroes as they relate to their fictional worlds and to the literary genres they inhabit: the epic hero, the tragic hero, the Shakespearean hero, the female hero, the comic hero, the antihero, etc. In reading and discussing these primary sources, we also will discuss different critical approaches to the study of literature from traditional historical philology, comparative mythology, and psychoanalysis, to structuralism, formalism, and genre studies. This course will extend writing skills and concepts learned in GPS Writing Workshop, focusing on critical theory, research, and academic writing and expression in the humanities. The primary assignments will be analytical essays.

CCCF-SHU 101W3

Perspectives on Humanities: Tales of Gender and Power

This course will explore how human relationships are impacted by the expression, exercise, and experience of power. Special attention will be given (but not limited) to the primary family constellation, i.e. father-mother-son-daughter, and the lover-spouse alliance. Gender figures significantly in the relational dynamics among the above players--voluntarily, consciously or not--profoundly impacting the individual and groups. While our main objective is to gain a deeper, more complex understanding of the sometimes subtle yet potent play of power involved in the dynamics of gender relations, our examination of texts will also bring us close to other fundamental human issues, such as those relating to the “shadow” of the beast in human nature, the quest for knowledge (if not always wisdom), the uncertainties of identity and self, the creative need for love and community, the compulsive fear of/attraction to death, the longing for transformation and transcendence, among others. The course will draw on a range of literary texts (epic, novel, drama, etc.), products of visual culture, and forms of the expressive/performance arts to explore how each has chosen to articulate, animate and resolve the above human relationships. To gain perspective, we will apply a variety of critical lenses in our close readings of texts, including psychological and philosophical theorists such as Freud, Irigaray, Foucault and others. This course will extend writing skills and concepts learned in GPS Writing Workshop, focusing on critical theory, research, and academic writing and expression in the humanities. The primary assignments will be analytical essays and a digital expressions project.

CCCF-SHU 101W4

Perspectives on Humanities: Crossing World Boundaries

How does the experience of crossing borders and boundaries call our national identities into question? What happens to our personal identities when we cross cultural, linguistic, racial, gender, religious or ideological divides? This course prompts students to reflect on the personal, aesthetic, and political implications of crossing boundaries, build a critical vocabulary for defining modern and contemporary borders as cultural and geopolitical phenomena, and situate texts in global contexts. By applying theoretical perspectives from a wide range of disciplines, from anthropology and visual studies to feminism and postcolonial studies as well as critical studies of racism, we will reflect on our as well as others’ border-crossing experiences in literature, film, and other forms of expression such as social practice. This course will extend writing skills and concepts learned in GPS Writing Workshop, focusing on critical theory, research, and academic writing and expression in the humanities. The primary assignments will be analytical essays.

CCCF-SHU 101W5

Perspectives on Humanities: Stories of the End Times

In this course, we will explore the human apocalyptic imagination and its manifestations in sacred texts, in literature, and in film. We'll read novels and watch films that portray apocalyptic devastation in methods both real and unreal. Texts may include excerpts from the sacred texts of religious traditions, McCarthy's *The Road*, Atwood's *Oryx and Crake*, Wells's *The Time Machine*, and Kolbert's *The Sixth Extinction*; films may include Kubrick's *Dr. Strangelove* and Park's *Snowpiercer*, among others. We'll consider the questions asked (and sometimes answered) by each story we examine: What are their visions of human nature, historical progress, the relationship between humans and divine? What explicit or implicit assertions do these stories make about gender, race, and class? How can the apocalyptic be used as a method of persuasion? What do our stories of the end tell us about how we live now? This course will extend writing skills and concepts learned in GPS Writing Workshop, focusing on critical theory, research, and academic writing and expression in the humanities. The primary assignments will be analytical essays.

CCCF-SHU 120

Chinese Art and the Modern World

A thematic introduction to Chinese art from the fifteenth century to the present, with special attention to its interaction with the rest of the world. Media include architecture, painting, porcelain, print, and installations. Topics include Chinese gardens in the West, Chinese watercolors for international trade, realism and socialist realism, and ink play and abstract expressionism.

Prerequisite: None

CCCF-SHU 121

History of Chinese Cinemas

This course, the first segment in a two-semester survey of Chinese-language film history, traces the origins of Chinese cinema and its transformation and diversification into a multi-faceted, polycentric trans-regional phenomenon in China, Hong Kong, and Taiwan up to the 1960s. We study a number of film cultures in Shanghai/China, Hong Kong and Taiwan, including the complex web of their historical kinship ties, and place them within the regional and global contexts of modernity, revolution, nation-building, and attendant socio-cultural transformations. To investigate these unique yet interrelated films cultures together raises the question of national cinema as a unitary object of study, while suggesting new avenues for analyzing the complex genealogy of a cluster of urban, regional, commercial or state-sponsored film industries within a larger comparative and transnational framework. Topics related to screenings and discussions include urban modernity, exhibition and spectatorship, transition to sound, stardom and propaganda, gender and ethnic identities, and genre formation and hybridization.

Prerequisite: None

CCCF-SHU 122

China: Cultures and Contexts

More than a great books survey, this course seeks to bring students to a critical reading of some of the foundational texts that undergird China as a cultural and moral concept. In trying to understand and appreciate these texts, we must ask ourselves why they have commanded such a high degree of attention and respect by generations upon generations of people, who not only inherited these texts as part of their traditions, but also strove to redefine and reinvent these traditions through rigorous rereading and reinterpretation. In what ways do these texts continue to speak to us as moderns (or "postmoderns"), and to those outside the real or perceived Chinese world? To what extent do these old, even ancient, texts keep informing us when we are brought to the task of thinking and rethinking what it is to be human?

Prerequisite: None

CCCF-SHU 123

Chinese Literature in the 20th Century

A survey and critical examination of the concepts, institutions, canons, debates, experiments, and actions that gave rise to modern and contemporary Chinese literature. The course covers a variety of genres of literature in the People's Republic of China, Taiwan, and Hong Kong. The primary goal of the course is to familiarize students as much as possible with the most representative works of 20th-century China. Students will also explore relevant topics in historical, sociological, and cultural studies of modern China, from a literary perspective.

Prerequisite: None

CCCF-SHU 124

Chinese Music from Antiquity to the Present

This course explores the development of Chinese music from antiquity and the Tang period to the present day, with a particular focus on the role that music plays in Chinese society. Genres to be studied include folk song, opera, teahouse music, temple and procession music, as well as more contemporary forms, such as avant-garde and rock music. Questions to be considered include the gendered roles of male and female performers, the relationship between rural and

urban traditions, as well as both external influences on Chinese music and the influence of Chinese music outside of China.

Prerequisite: None

CCCF-SHU 125

Chinese Theatrical Traditions

This course surveys Chinese theatrical traditions from their pre-Tang origins to the present day. It focuses on three theatrical forms: 14th-century *zaju* plays, 16th- and 17th-century *chuanqi* plays, and recent theater from China, Taiwan, and Hong Kong.

Prerequisite: None

CCCF-SHU 126

Contemporary Chinese Art in Shanghai

China's contemporary art scene has exploded in the past few decades. This course surveys the main developments in Chinese art since 1949. It includes guest lectures and visits to public museums, galleries and artists' studios.

Prerequisite: None

CCCF-SHU 127

Paper Art: History and Practice

Beginning with the Chinese arts of Zhezhi (paper folding) and Jianzhi (paper cutting) the paper craft movement has roots on all continents. This course reviews the history of both Chinese and international traditions, in addition to examining contemporary practices. Additionally, students will have hands-on experience through weekly exercises in the fundamentals of paper engineering techniques and basic conductive materials, creating movable books and sculptures.

Prerequisite: None

CCCF-SHU 128

Contemporary Art & New Media

The contemporary art scene in China has developed quickly over the past three decades. The massive political, economic, and social changes the country has undergone since the end of the Cultural Revolution in 1976 have dramatically altered the country's cultural landscape. In this seminar course, the course will survey the main development areas in Chinese contemporary art from the end of the 1920s to the present day. Dedicated to responding to the new textures of China's metropolitan culture, it will look at the relationship between visual arts, new media, architecture, and performance in the mega-city of Shanghai, often regarded as the cradle of Chinese modernity. The class will be complemented by guest lectures and visits to public museums, galleries and artists' studios in and around Shanghai. Students will have the opportunity to meet leading figures from the art world in China as well as the international art community, including artists, museum directors, curators, art critics, and art dealers.

Prerequisite: None

CCCF-SHU 130

Screening Childhood

Childhood is a persistent topic of countless films and other screen-based media products worldwide, with an intended audience not limited to children. The focus of this course is not children's films per se, but "childhood" in world cinema and in popular culture, discussed from an array of historical and theoretical perspectives. The concerns and topics of the course include: the intimate relationship between early cinema and childhood (and by extension, childhood and modernity); conceptions and representations of childhood in different cinematic (and cultural) traditions and historical periods; ideological critiques and other theoretical models in engaging screen and media portrayals of childhood, including feminism, gender and sexuality studies, postcolonial studies, and child studies. Weekly screenings will feature early actualities, silent narrative film, musical, documentary, animation, and more. Students are expected to actively take part in discussions and presentations, and complete a final research paper.

CCCF-SHU 131

History of Chinese Cinemas II

The course offers a historical survey of Chinese-language cinema from the emergence of the new waves in Hong Kong, Taiwan and Mainland China in 1970s-1980s to the more recent formations around the turn of the new century. The distinctiveness of the three important Chinese cinemas and their increasing convergences after the Hong Kong handover in 1997, and under the impact of globalization, offer ideal laboratories for reconsidering the premises and usefulness of the concepts of national and transnational cinema. Along the same axis, we will also probe the problematic of cultural nationalism and neo-regionalism within the trans-Asian context, and the tension between the state's cultural policy and film industry, commercial cinema and art or independent cinema. Given the massive transformations in media technology and industrial organization in the last two decades, we will also consider the ramifications of new media for film and screen culture, including the burgeoning documentary movement, amateur and activist film/video practices. Screenings will include festival favorites, commercial blockbusters and DV works.

CCCF-SHU 9101

Cultural Foundations I

This course introduces the arts from their origins to the end of antiquity, as defined for these purposes by the roughly coincident dissolutions of the Gupta, Han, and Western Roman empires, focusing on how individuals and social relations are shaped in literature, the visual, plastic, and performing arts, and through music. Conceptions of the divine, the heroic, power and disenfranchisement, beauty, and love are examined within the context of the art and literature of East and South Asia, the Mediterranean world, and contiguous regions (such as Germania, Nubia, and Mesopotamia). Instructors prepare the way for Cultural Foundations II by giving some attention to the modes by which cultural transmission occurred across these regions prior to the rise of Islam.

Prerequisite: None

HUMN-SHU 229 (formerly CCCF--SHU 129)

Masters of Asian Cinema

This course introduces students to the basic concepts and methods in film studies by focusing on a select number of eminent auteurs in Asian cinemas. Our objectives are many: first, we situate within their particular socio-historical contexts the masterworks by master-directors like Akira Kurosawa, Yasujiro Ozu, Zhang Yimou, John Woo, Wong Kar-wai, Hou Hsiao-Hsien, Sanjay Leela Bhansali, Mani Ratnam, and Deepa Mehta. In doing so, we learn the divergent developments between and within Japanese, Chinese, and South Asian film industries. We then analyze how these directors make various stylistic choices to address issues of kinship, nation, gender, historical memory, modernity, and globalization. Against the background of 20th century cross-cultural encounters, we also study the contributions of these auteurs to world cinemas and the cross-fertilization in style between these film masters.

Prerequisite: None

CCSC-50
Physics I

Co-requisite: MATH-SHU 121

CCSC-51
Physics II

CCSC-SHU 100
Mathematics for the Sciences

This course is designed for students who would like to develop a better grounding of the specific mathematical methods used in the basic natural science courses, mainly in physics and chemistry. It is intended for students who would like to strengthen their mathematical skills so that they can better focus on the principles of the basic sciences. The course will review, as well as teach, how the concepts of algebra, trigonometry, vectors, calculus, differential equations, statistics as they are used in the sciences using specific examples from physics, chemistry, and applications in studies of classical mechanics, quantum mechanics, thermodynamics, electrostatics, theory of atoms and molecules, etc.

The pre-requisites are basic high school mathematics.

CCSC-SHU 130
Introduction to computer programming with Mathematica

Mathematica is a powerful tool for technical computing. It provides a robust computing environment that is used in biology, chemistry, economics, engineering, finance, mathematics, physics, and a wide range of other fields. It is designed for symbolic as well as numerical calculations, and for visualization of technical information.

The course will include the following topics: A brief introduction to computer science, Mathematica as a sophisticated symbolic and numeric calculator, programming in Mathematica and the concepts behind the language. Procedural, functional and rule based programming, parallel computing using multiple cores, dynamic interfaces (animation), image, audio and video processing. Students will solve interesting problems taken from various fields, including algebra, calculus, statistics, optimization, data analysis, science, engineering, economics and finance, and will complete a project which they will choose from within their own areas of interest.

Pre-requisite: Calculus or Honor Calculus.

CCSC-SHU 155
Biology and Biotechnology: Essential, Commercial Aspects, Ethical Considerations

The course presents the essential elements of biology and biotechnology in order to enable non-scientists to have a basic understanding and an ability to read non-technical material. The techniques of genetic engineering and antibody production and the use of stem cells for medical pursuits will be covered in a manner amenable to all educated persons. Included in the biology part are both evolution and simple genetics with examples mostly from humans. Topics such as cancer and the ebola virus are currently of great interest. Students with a wide range of backgrounds should benefit.

Prerequisite: None

Foundations of Science I

PHYS-SHU 91
Foundations of Physics I Honors (3 credits)

Measurement, Motion Along a Straight Line, Vectors, Motion in Two and Three Dimensions, Force and Motion, Kinetic Energy and Work, Potential Energy and Conservation of Energy, Center of Mass and Linear Momentum, Torque and Angular Momentum, Rotation and Rigid-Body Motion, Gravitation, Oscillations and Harmonic Motion, Lagrangian and Hamiltonian formulation of mechanics, Temperature, Heat, the First Law of Thermodynamics, Kinetic Theory of Gases, Entropy, the Second Law of Thermodynamics, Electric Force and Field, Electric Flux and Gauss's Law, Electric Fields in Matter, Maxwell's Equations for Electrostatics.

PHYS-SHU 71
FoS Physics Laboratory (2 credits)

This laboratory course is to accompany FoS physics lecture. Students will be familiarized with various techniques, equipment, data analysis skills, and ideas common to physics laboratories. Experiments in mechanics and thermodynamics are chosen to illustrate the experimental foundation of physics presented in the lecture courses. The laboratory will also emphasize scientific writing.

Co-requisite: MATH-121

CHEM-SHU 125
Foundations of Chemistry I (3 credits)

Foundations of Science II

PHYS-SHU 93
Foundations of Physics II Honors (2 credits)

CHEM-SHU 126
Foundations of Chemistry II (3 credits)

BIOL-SHU 21
Foundations of Biology I (3 credits)

CHEM-SHU 127
Foundations of Chemistry Laboratory (2 credits)

Foundations of Science III

PHYS-SHU 95
Foundations of Physics III (3 credits)

BIOL-SHU 22
Foundations of Biology II (3 credits)

BIOL-SHU 123
Foundations of Biology Laboratory (2 credits)

The course will teach students the skills needed in molecular biology research such as the hand-on techniques of microscopy, transformation, gene expression, PCR, gel electrophoresis, SDS-PAGE, and chromatography. The students will first learn these basic biological techniques in short experiment sets in the first half of the lab and then apply them as part of a Genetically-Modified Food project in the second half. The lab course will also emphasize literature search, scientific writing, peer reviewing, lab notes taking, poster and power point presentations, data analysis, and best practices in lab safety.

The lab is regarded as an extension to what the course lectures teach rather than a direct linear relationship whereby a lecture is directly applied in the lab. The pre-labs that are given as lectures before the actual lab begins span a weekly 30-45 min and explain the principles behind the techniques that the students will apply that lab. Students are required to study the lab procedure in advance and be prepared for a quiz and discussion of the material.

Learning Outcomes:

This course aims at teaching students how to think like a true researcher as well as apply the key molecular biology techniques.

During this course, students will be expected to: gain an understanding of the basics of molecular biology techniques and be able to apply these techniques in the lab;

acquire the habits of a good scientist including accuracy, cleanliness, orderliness, safety, honesty, teamwork, curiosity, good time management, and self-reliance;

develop the ability to convey scientific information; this includes keeping good records with in a lab notebook, writing a satisfactory report, and oral communication;

draw conclusions from observed facts and support these conclusions with peer-reviewed literature.

CCEX-SHU 111

The Domain of Crystals

Knowing the three-dimensional structure of a molecule is important for understanding its functional properties. Is it indeed possible to visually analyze a molecule and use the observed experimental data to build a three-dimensional model? This structural information can be obtained using a variety of analytical techniques such as X-ray crystallography, and can lead to significant breakthroughs in pharmaceuticals. Students grow crystals of different colors, shapes, and sizes and harvest them for physical and morphological characterization in order to understand the basic principles of atomic structure and theory, chemical bonding and reactions, thermochemistry, periodicity, and solution chemistry.

Prerequisite: None

CCEX-SHU 112

Mutations and Disease

The very word "mutations" tends to raise fear and apprehension since it is so often associated with physical deformities or exposure to harmful agents, including radiation. Perhaps such fear is warranted since many human diseases, including cystic fibrosis and cancer, are caused by "mutations", which are mere changes in the genetic information in DNA. Starting with basic concepts, this course explores important cellular macromolecules, such as DNA, and proteins as well as their three-dimensional structures that endow them with their specific functions. In fact, understanding how mutations induce alterations to macromolecular structures often sheds light on the characteristic symptoms and prognoses of some human diseases and syndromes. Laboratory projects, which focus on introduction to computer modeling, emphasize visualizing in a three-dimensional environment the normal and altered macromolecules associated with some common but complex human maladies.

Prerequisite: None

CCEX-SHU 113

Brain and Behavior

The relationship of the brain to behavior, beginning with the basic elements that make up the nervous system and how electrical and chemical signals in the brain work to effect behavior. Using this foundation, we examine how the brain learns and how it creates new behaviors, together with the brain mechanisms that are involved in sensory experience, movement, hunger and thirst, sexual behaviors, the experience of emotions, perception and cognition, memory and the brain's plasticity. Other key topics include whether certain behavioral disorders like schizophrenia and bipolar disorder can be accounted for by changes in the function of the brain, and how drugs can alter behavior and brain function

Prerequisite: None

CCEX-SHU 114

The Molecules of Life

Our lives are increasingly influenced by the availability of new pharmaceuticals, ranging from drugs that lower cholesterol to those that influence behavior. We examine the chemistry and biology of biomolecules that make up the molecular machinery of the cell. Critical to the function of such biomolecules is their three-dimensional structure that endows them with a specific function. This information provides the scientific basis for understanding drug action and how new drugs are designed. Beginning with the principles of chemical bonding, molecular structure, and acid-base properties that govern the structure and function of biomolecules, we apply these principles to study the varieties of protein architecture and how proteins serve as enzymes to facilitate biochemical reactions. We conclude with a study of molecular genetics and how recent information from the Human Genome Project is stimulating new approaches to diagnosing disease and designing drug treatments.

Prerequisite: None

CCEX-116

Where the City Meets the Sea: Studies in Coastal Urban Environments

Over half of the human population lives within 100 km of a coast and coastlines contain more than two-thirds of the world's largest cities. As a result, the world's natural coastal environments have been substantially modified to suit human needs. This course uses the built and natural environments of coastal cities as laboratories to examine the environmental and ecological implications of urban development in coastal areas. Using data from multiple coastal cities, student teams use fieldbased studies and Geographic Information System (GIS) data to examine patterns and processes operating in coastal cities. This course uses the local terrestrial, marine, and built environments as a laboratory to address these issues, and team projects requiring field work form a core component of the learning experience. As part of the NYU Global Network University initiative this course is being offered simultaneously in several NYU sites globally and students are collaborating extensively with students from their sister campuses through the duration of this course. no this course in the system.

Prerequisite: None

CCEX-117

The Legacy of Tradition I: The Growth of Science in the West

This course will consider the origins and development of science in the West. What ancient principles are preserved? Beginning with early Greek "proto scientific" philosophy we will explore emerging paradigms of science through a consideration and replication of great experiments that had significant impact by changing accepted world views. Before turning to the scientific and ontological revolution of the 16th and 17th centuries we will investigate the assumptions of pre-modern science. Philosophical, religious and scientific arguments will be studied and evaluated. Representative works of Bacon, Descartes, Galileo and Newton will be read to introduce the outlook of early modern science. The course will conclude with a survey of some contemporary scientific theories that evoke the legacy of tradition. One lecture and laboratory each week. In the lab students will, to the extent possible, replicate classic experiments from the history of science (list and descriptions of experiments in preparation).

Prerequisite: None

CCEX-SHU 118

The Legacy of Tradition II: Science and Technology in Pre-Modern China

This course will consider the origins and development of science and technology in China. What ancient principles are preserved? Beginning with such early theories as yin-yang and change (Yi Jing) we will explore emerging paradigms of science and technology. We will consider the practical outlook associated with the wide range of Chinese technologies and their relationship to the emergence of scientific thinking. The influence of Western scientific attitudes and accomplishments, especially as mediated through the Jesuit and Protestant missions to China, will be studied. A question guiding the course will be that of why the world's most advanced technological civilization in the pre-modern era failed to experience a scientific revolution. Were the premises of Chinese cosmology and philosophy resistant to the development of science? Were Chinese approaches to astronomy and mathematics, and the understanding of the phenomenon of life as represented in classics of Chinese traditional medicine, adverse to scientific methods?

One lecture and laboratory each week. In the lab students will, to the extent possible, replicate classic experiments from the history of science and technology in China (list and descriptions of experiments in preparation).

Prerequisite: None

Science, Society and History

The courses in this category emphasize the impact of science on society as well as cultural and historical reactions to scientific discovery. They focus on pressing world issues and current technology addressed by the natural sciences and mathematics.

CCST-SHU 121

The Atom and Energy

$E=mc^2$: One simple equation encapsulates the power to grant life and death in equal measure. Life associated with fusion in the sun, radiation therapy, and nuclear energy; death via nuclear bombs and nuclear disasters. This course uses nuclear physics as a prism for exploring science as a human endeavor, focusing on the physics of the atomic nucleus and its technological applications. Arguments for and against nuclear power plants are analyzed, while the power and threat of nuclear weapons are assessed. The international treaties designed to limit the spread of nuclear weapons are scrutinized, emphasizing the challenges that lawmakers and citizens face in determining and guiding the uses of nuclear power as we grapple with the moral responsibility that all of us—scientists, politicians, and citizens—must bear for ourselves, our nations, and ultimately, for humanity.

Prerequisite: None

CCST-SHU 122

Life in the Universe

Why is Earth the only object in the solar system with obvious signs of life? How did the building blocks of life form on Earth? What is the likelihood that there are other forms of life out there? This course addresses these questions and more, by covering the chemical evolution of the Universe, the formation of our solar system, the search for and study of extra-solar planets, and the possible cosmological implications of life's existence.

Prerequisite: None

CCST-SHU 123

State and Fate of the Earth

What is the current state of Earth in terms of human well-being and human impact on Earth's natural systems? Issues such as energy, CO₂, climate, agriculture, water, and material fluxes are intricately tied together as a global system that has expanded by about 3% per year. This growth rate will lead to a world in 2050 in which the average world citizen will have a life approximately equal to that of the average European or Japanese today. Will this be possible and what will be the implications for the issues above? In this inquiry-based seminar, substantial portions of the course will require students to conduct research by locating, using, and sharing technical papers and data bases, synthesizing facts and viewpoints, making presentations, and writing short technical papers that will be peer-reviewed by the other "researchers" in the class. The course includes field trips relevant to the topics above.

Prerequisite: None

CCST-SHU 124

Social Issues in the New Biosciences

While the 20th century has often been characterized as the Century of Physics, many have already named the 21st century as the Century of Genetics. Important markers highlight the speed and drama of the molecular genetic revolution. These include the technique of somatic nuclear cell transfer (with the realization of mammalian cloning and the specter of human cloning) and germ-line gene therapy (with its specter of altering the genetic makeup of future generations). Alongside these markers is the promise of stem cell cures for many human ailments and diseases, and DNA identification technology to exonerate the innocent and convict the guilty. But this is only the beginning, since the newest developments promise to go far beyond "cure" to delve into human "enhancements" of mental acuity and physical prowess. This course examines these and other developments, lodging the heated debates that each generates in both social and cultural histories and current incarnations.

Prerequisite: None

CCST-SHU 125

Interconnected: The History and Theory of Networks

Since the formation of trade routes connecting early civilizations, networks have been central to human exchange. Silk, jade, gold, and other goods, as well as the cultural elements of language, art, scientific discovery, philosophy and religion traveled the 6,500 km between southeast Asia and southern Europe on an elaborate system of trails, roads and waterways. This course will explore the development of several human made networks beginning with these early trade routes. Further consideration will be given to the construction of transcontinental railways, the development of electrical telegraph and telephone systems, in addition to the evolution of modern digital communication platforms such as the world wide web. The cultural conditions that encouraged the emergence of these networks, as well as the social outcomes resulting from their adoption, will both be explored through readings and critical dialog. Students will become familiar with: economic principles; network theories and topologies; the development and standardization of protocols; methods for encoding information; concerns about infrastructure, logistics, and security; as well as legislation governing information ownership, privacy, and

censorship. Students will also be asked to consider the future of networks as it relates to themes such as crowd-sourcing, software-defined networks, and the Internet of Things.

Prerequisite: None

CCST-SHU 126

From Ancient Cosmology to Science

This course will consider the origins of science in ancient cosmologies. What principles are preserved? Considering the classical Chinese, Indian and Western traditions, the question of how and to what extent culture determines the paradigms of science will be investigated. We begin with formative texts from the Chinese, Indian and Western traditions, including the Rig Veda, the Upanishads (India), the I Jing, Dao De Jing, and the neo-Confucian synthesis (China) and the pre-Socratic Ionian physicists (Western), then turn to the development of modern science. Representative works of Bacon, Descartes, Galileo and Newton will be read in parallel with seminal texts describing the rise of modern science in China and India. The course will conclude with a survey of contemporary cosmological theories to see how some ancient ideas are retained in modern science.

Prerequisite: None

CCST-SHU 127

Serendipity in Science

In 1754 the antiquarian Horace Walpole coined the word serendipity based on the Persian fairy tale "The Three Princes of Serendip," whose heroes "were always making discoveries, by accidents and sagacity, of things they were not in quest of." In the ensuing centuries, the word has had a colored history. Many of the major scientific and technological developments that shape our modern economy and culture had serendipitous components, including X-rays, penicillin, nylon, vulcanization of rubber, Post-Its, Velcro, saccharin, Nutrasweet, Teflon, insulin, the Pap test, super glue and a host of others. In this course we examine the history of serendipity, the synergism between the scientific background and experience of the individual scientist and researcher, and some of the many serendipitous breakthroughs that have changed and extended our lives and continually improved our standard of living.

Prerequisite: None

CCST-SHU 128

The Rise of Modern Science

This is a survey of the history of scientific disciplines and scientific methods from the "Scientific Revolution" of the seventeenth century to the present. We will discuss the ways of knowing such as reason, observation, experiment, and modeling. Our topics include science and religion, science and war, and the development of key scientific disciplines, institutions, and forms of communication. While focusing on physical and life sciences we will also ask about connections between a science of things and a science of human beings and human society. Students read original works by Newton, Lavoisier, Darwin, Freud, and Einstein, among others.

Prerequisite: None

CCST-SHU 129

Information Societies

Proclamations of the "personal computer revolution" and the advent of the "Information Age" are now history, if only three decades old. Recently developed digital media have also been associated with radical changes and even the "death" of traditional forms of communication. This class will evaluate the relationship between information technology and society, "the media and the message," from a broad historical perspective. Students will learn about the major material transformations in information support, from scroll to web, with a focus on Western civilization. A comparative attention to the Middle East and East Asia for the Early Modern period and the Soviet political project for twentieth century developments will allow for a more nuanced interpretation of the notion of "modernity" associated with the "from printing press to Internet" narrative arc. We will build toward an understanding of the interdependencies between technological and social systems in several steps. First, we will establish a longue duree perspective by surveying the scroll-to-codex transformation, and sketch contours of a Eurasian geographical plane by following paper's transition from China to the Middle East and Europe. Next, we will read foundational texts on the history of the printing press with a special focus on transformations in science and religion. We will then overview the famous nineteenth-century developments in information and communication technologies. We will ask about their roles in shaping individuals' gender and professional identities as well as in the governance of transatlantic empires. The emergence of big corporations in parallel with the modern bureaucratic apparatus and new recording and data processing technologies is our fourth step. Toward the end of the class, we look at how the WWII calculating machine, the computer, acquired the functions of a "media machine" and took center stage in the debates about alternative political systems. We conclude with an exploration of contemporary visions for blurring space and time, ubiquitous computing, and promises of ultimate technological transcendence: trans-humanism. To preserve a uniting element in this wide ranging material, each of these steps will systematically explore particularly important locations where technological and social changes are negotiated, such as the library, the printing workshop, the publishing house, the office, and, finally, the classroom and the body itself.

Prerequisite: None

CCST-SHU 130

Animals, Nature, Environment

This course will explore urgent issues concerning the relation of human civilization to the natural environment in which it is embedded. There are three main components: The first investigates the human relationship with animals, starting from what are the differences between us and animals, and what these differences mean today. Second, we explore broader issues of "nature": how we humans have conceived of ourselves as distinct from, or even superior to Nature; or, alternatively, enslaved to our inner nature. Third, we study global environmental issues, including how environmentalism emerged in the industrial era, what is its place in today's world, and what the prospects are for finding solutions to the most urgent global problems.

Prerequisite: None

CCST-SHU 131

Introduction to the Use of Scientific Data in Historical Research

Scientific data potentially useful for the study of the past are today available in unprecedented quantity to historians and archaeologists. The scientific contributions most useful to the study of human activity and historical events involve genetics, palynology (the study of sediments), isotopic analysis (the study of chemical compounds in plants, soil, and human remains), and the reconstruction of ancient climates, based on the study of tree rings (dendrology), ice cores, and stalagmites. The availability of high resolution data makes it possible to gain a better understanding of the environmental and climatic conditions in which human events took place. Moreover, genetic data may be useful to trace migrations and demographic movements. Finally, the reconstruction of ancient diets can provide valuable information on the economic activities of ancient societies. The course will provide a broad-gauged introduction to the historical application of a variety of scientific data, with a special focus on Chinese and Central Asian history.

Prerequisite: None

CCSF-SHU 101L

Global Perspectives on Society I

In this two-semester course, we will examine ten central questions concerning life as a human being. Each topic will be engaged through the close study of several texts that have been recognized as important over the course of history. The texts will reflect contrasting perspectives of different individuals, cultures, and time periods.

While studying each topic, students will be encouraged to consider, and to revisit, three central questions:

- When we speak about the world, present or past, how do we know that things are “true”?
- When we speak about ethical duties, is everything contextual, relative, and socially constructed, or are there “universals”?
- When we speak about “great books,” why and in what ways do certain texts acquire special significance?

The format of the course will follow a weekly pattern. On two days, students will be divided into 25-student sections that meet in a 75-minute class taught by Global Postdoctoral Fellows. On a third day, the entire first-year class will participate in a single 75-minute class taught by the Vice Chancellor. Students will also be divided into 15-student writing workshops that each meet in two 75-minute classes a week taught by experts in expository writing.

The central topics are as follows:

Fall Term:

- Strangers and Strangers (duties not to harm, duties to help, etc.)
- Property, Labor, and Economic Exchange
- Sovereignty and Law (natural law, positive law, rights, etc.)
- War, Collective Violence, and International Relations
- Humans, Other Species, and the Environment

Prerequisite: None

CCSF-SHU 101W1 & 101W2

Global Perspectives on Society I - Writing Workshop I and II

This is the Writing Workshop attached to the Global Perspectives on Society I Lecture.

CCSF-SHU 102L

Global Perspectives on Society II

In this two-semester course, we will explore a set of timeless questions about how society is, or should be, organized, as those questions have been explored by serious writers from different times and different cultures. Each week, students will meet once in recitation sections with Global Postdoctoral Fellows, twice in writing workshops with Writing Faculty, and once as an entire class with Professor Lehman, along with occasional guest speakers.

Course Objectives and Outcomes

In this second semester students will continue to be introduced to writings that help to define what it means to be “well educated.” By engaging these writings, students will reflect repeatedly on several overarching questions, including how it is we know things to be “true,” whether ethical duties are universal or defined by context, and why certain texts have come to be thought of as “great.” Second semester topics will include men and women, children, Gods and mortals, and humans, animals, and the environment. Over the semester students will build from skills developed in the first semester. They will continue to enhance their abilities to read carefully and thoughtfully, to consider questions from more than one perspective, to participate in respectful and serious intellectual explorations of difficult questions, and to write essays that make effective and appropriate use of the ideas of others as they present the students’ own ideas to different audiences of readers. *Prerequisite: CCSF-101*

CCSF-SHU 102W1 & 102W2

Global Perspectives on Society II - Writing Workshop I and II

This is the Writing Workshop attached to the Global Perspectives on Society II Lecture.

CCSF-SHU 120

Modern China and the World Economy (formerly The Rise of Modern China)

China’s development in recent decades has benefited greatly from its integration into the world market. The rise of modern China also has significant impact on the global economy and systems. This course focuses on the linkages and interactions between China’s domestic development and the world economy, covering trade and finance. Presentation will stress key concepts (e.g., comparative advantage, gains from trade, internal and external balance, exchange rate), basic analytical frameworks, and their application to current events. It will also discuss new developments since the 2008 global financial crisis and the rethinking on policies, such as changing patterns of global supply chains, regional and global trade negotiations and liberalization, global financial imbalances and rebalancing, and reform of the international systems.

Prerequisite: None

CCSF-SHU 121

China's Development in a Comparative Perspective

This course focuses on China's political and economic development over the last century and a half with particular attention to the last 33 years, the so-called Reform Period. Our three primary objectives are to (1) understand the historical trajectory of China's development path; (2) consider in what ways and to what degree the growth experiences of East Asia's high-performing economies helped inform China's economic policymakers decisions and shed light on the prospects for the long-term success of reforms in China; (3) assess the state of China's contemporary political economy. *Prerequisite: None*

CCSF-SHU 122

Traditional Chinese Wisdom and Its Transformation in Modern Times

This course will give a brief survey of Chinese philosophy from the pre-Qin period to the present in the perspective of world philosophy. To capture the quintessence of traditional Chinese wisdom, we will focus on three most influential schools of thought in ancient China, namely, Confucianism, Taoism and Buddhism. We will delineate the evolution of Confucianism from Confucius to Neo-Confucianism in Song and Ming dynasties, distinguish Taoism as philosophy from Taoism as religion, and examine the process of sinicization of Buddhism, taking Zen Buddhism as a paradigm case. In modern times, against the background of the exchange between the Chinese and the Western cultures, traditional Chinese wisdom, through the creative work of modern Chinese thinkers, obtained a new lease of life. Under the heading of the modernization of traditional Chinese wisdom, we will examine three most prominent schools in the 20th century Chinese philosophy, namely, contemporary Neo-Confucianism, Tsinghua school of realism (the Chinese analytic philosophy), and Chinese Marxism. Students are required to read the assigned texts before each class and actively participate in class discussions. *Prerequisite: None*

CCSF-SHU 123

Contemporary Chinese Political Thought (formerly China's Political Thought in the Post-Maoist Era)

This course introduces students to perspectives on contemporary Chinese political and social thought as presented in academic publications, media reports, social commentary and postings on the Chinese Internet. It covers selected key topics in the disciplines of political, social, and cultural studies. It examines and compares Chinese and Western views on major developments and current issues. The course also introduces students to a variety of styles of writing and research methods as well as skills of cultural translation relevant to the study of contemporary China and Chinese thought. *Prerequisite: None*

CCSF-SHU 124

Growing Shanghai, Shrinking Detroit

Less than a century ago, the Paris-of-the-East Shanghai and the Paris-of-the-West Detroit belonged to the most modern, booming metropolises in the world, until both cities declined. Today, the global city of Shanghai has revived its old glory days, while Detroit officially filed for bankruptcy in July this year. In this course, we take Shanghai and Detroit as case studies to examine the challenges and consequences of our fast-urbanizing world. We will explore the historical and economic factors influencing the transformation of these cities, as well as look at how its citizens are experiencing these sweeping changes. *Prerequisite: None*

CCSF-SHU 125

Global Cultural Heritage

In this course we explore the special place of "cultural heritage" in global life today. We will trace the journeys of cultural heritage items around the world — from the war trophies and curiosity cabinets of history, to our modern era's museums, and the global movements in antiquities, art, and other objects from the global South to collectors and museums in the global North, through looting, smuggling, and trade. Topics we'll investigate include "biographical objects" and the anthropology and psychology of collecting; the social life of objects of desire; the construction of value and knowledge in the representation and display of such objects; the beginnings of museums and their global spread; the concepts of national and global cultural heritage; as well as a series of ongoing international legal and moral battles over heritage, including cases related to China. *Prerequisite: None*

CCSF-SHU 130

China Encounters the World

This is a lecture course on China's encounters with the world in the late 19th and 20th centuries. The course analyzes the age-old Chinese "Central Kingdom" self-image and how the image was overturned during modern times in face of Western and Japanese challenges; it explores the Chinese "victim mentality" and its impact on China's modern international experience; it examines China's foreign policy issues in the context of its political, economic, social and cultural

developments in broader terms; it also pays special attention to the role of “human agencies” in the shaping of historical processes.

CCSF-SHU 131

The Cultural Revolution

This is a reading and research seminar with an emphasis on China's “Great Proletarian Cultural Revolution” as the main subject of scholarly discussion and investigation. Why did the Cultural Revolution occur? How did it evolve? Why did it last so long (as compared with Mao Zedong's original plans)? How did it eventually end? What historical lessons one may learn from it? These are the questions to be explored in the course.

JOUR-SHU 9202

Methods and Practice: Journalism

Provides an introduction to the work of the reporter, with particular focus on covering China, and offers students a chance to learn and practice basic journalism skills, including news writing, descriptive & feature writing, and writing for TV etc. Feedback on assignments is given in individual meetings. Visiting speakers and field trips also offer insights into the role of the journalist and the challenges faced. *Prerequisites: None*

LWSOC-SHU 9251

Topics in Law & Society: Law, Culture, & Politics in China

This course will study China's governance in the context of America's own governance system. We will consider how to compare American and Chinese governance systems, and whether and how concepts can be translated between them—so that the countries, and their citizens can learn from, and cooperate with, one another. In the process, we hope to learn about China, but also to reflect—in the light of 9/11 and Iraq—more deeply on our own understanding of how American governance works—and how it is seen by the world.

SCA-SHU 9634

Global Connections: Shanghai

This course examines Shanghai's attempts to position itself at the forefront of the largest and fastest process of urbanization the world has ever seen. It explores the city's attempts to build itself into the future metropolis of 21st century. It does so by facilitating a deep engagement with the city that combines reading based discussions on issues of urbanism, capitalism and creativity with in depth field trip explorations.

The course has 3 separate but interrelated components:

1. Field-trips designed to provide a direct engagement with the issues of the course.
2. Reading-based lecture and seminar discussions
3. An individual research project.

ECON-SHU 1

Principles of Macroeconomics

Focuses on the economy as a whole (the “macroeconomy”). Begins with the meaning and measurement of important macroeconomic data (on unemployment, inflation, and production), then turns to the behavior of the overall economy. Topics include long-run economic growth and the standard of living; the causes and consequences of economic booms and recessions; the banking system and the Federal Reserve; the stock and bond markets; and the role of government policy.

ECON-SHU 2

Principles of Microeconomics

Focuses on individual economic decision-makers—households, business firms, and government agencies—and how they are linked together. The emphasis is on decision making by households and firms and how these decisions shape our economic life. Explores the different environments in which businesses sell their products, hire workers, and raise funds to expand their operations; the economic effects of trade between nations; and the effects of various government policies, such as minimum-wage legislation, rent controls, antitrust laws, and more.

ECON-SHU 10

Intermediate Microeconomics

Rigorous examination of consumer choice, profit-maximizing behavior on the part of firms, and equilibrium in product markets. Topics include choice under uncertainty, strategic interactions between firms in noncompetitive environments, intertemporal decision making, and investment in public goods.

Prerequisites: Principles of Microeconomics or Microeconomics for Business or for students who entered NYU-SH pre Fall 2015 Microeconomics and either Calculus or Mathematics for Economics.

ECON-SHU 150

Microeconomics

Basic microeconomic principles: applications of supply and demand analysis; consumer choice; theory of the firm under perfect and imperfect competition; game theory and strategy; and theory and policy issues in market imperfections, such as monopoly and antitrust, externalities and regulation, imperfect information and regulation, income distribution, etc.

Prerequisite: MATH-SHU 121 or 201

ECON-SHU 201

Mathematics for Economists

This course explores applications of calculus to basic differential equations and functions of several variables, which arise in virtually all fields of applied mathematics including Economics. Topics addressed include first and second-order differential equations, surface and line integrals, divergence, gradient, curl, and the theorems of Gauss, Green, and Stokes.

Prerequisite: MATH-121

ECON-SHU 202

Intermediate Macroeconomics

Study of aggregate economic analysis with special attention paid to the determination of the level of income, employment, and inflation. Critically examines both the theories and the policies associated with them.

Prerequisites: ECON-150 & 201

ECON-SHU 203

History of Economic Thought

Begins with a short introduction to mercantilism, then moves to the classical school, examining the contributions of its main figures (Smith, Malthus, Ricardo, Mill, and others). Ends with Marx's reaction to classical doctrines and the Marginalist Revolution of the late 19th century, which set the foundation of modern neoclassical economics. Conceptually, covers a variety of topics but focuses on two main entities: first, the normative aspects of the debate on the factors determining the value of commodities and the related issue of the principles that ought to govern the allocation of wealth; and second, various theories of economic growth and historical change, including predictions made on the future of capitalism.

Prerequisite: ECON-150

ECON-SHU 204

Ethics and Economics

Study of the interface between ethical and economic theories. Specific topics covered include a brief overview of various ethical ideas, an analysis of the ethical presuppositions of modern economic theory (especially welfare economics), utilitarian ethics, the moral status of free exchange, the ethical implications of imperfect knowledge between bargaining parties, cost-

benefit analysis and human rights, the economic content of the "general welfare," and laissez-faire.

Prerequisite: ECON-150

ECON-SHU 205

Poverty and Income Distribution

Defines poverty and welfare. Analyzes who the poor are, why some people are rich and others poor, equality of opportunity, income and status, inequality, trends in the degree of inequality, government's role in income distribution, and international comparisons of inequality.

Prerequisite: ECON-150

ECON-SHU 206

Economics of Energy and the Environment

Economic analysis of major policy issues in energy and the environment, both domestic and international. Emphasis on market solutions to various problems and market limitations in the allocation of environmental resources. Energy issues focus on OPEC and world oil markets, with attention to reducing oil import vulnerability; taxation and regulation of production and consumption; conservation of natural resources; and the transition to alternative energy sources. Environmental issues include policies to reduce pollution. Substantial attention is paid to global warming caused by consumption of fossil fuels.

Prerequisite: ECON-150

ECON-SHU 207

Urban Economics

The city as an economic organization. Urbanization trends, functional specialization, and the nature of growth within the city; organization of economic activity within the city and its outlying areas, the organization of the labor market, and problems of urban poverty; the urban public economy; housing and land-use problems; transportation problems; and special problems within the public sector.

Prerequisite: ECON-150

ECON-SHU 208

Money and Banking

Money supply; banking as an industry; banks as suppliers of money; the Federal Reserve System and monetary control; monetary theory; and contemporary monetary policy issues.

Prerequisite: ECON-150

ECON-SHU 209

Financial Crises

This course will allow students to understand the origin and evolution of financial crises. Various policy options that may prevent and mitigate financial crises and the restructuring of the global financial architecture to prevent or limit future crises will be examined. Although the course will focus mostly on the US and on the most recent financial crisis, it will also examine earlier financial crises in the US (such as the Great Depression) and past financial bubbles such as the 17th century Dutch Tulip mania and the 1997 Asian crisis.

Prerequisite: ECON-150

ECON-SHU 212

Contemporary Chinese Economic Issues

This course presents a practical and timely overview of the dynamic set of issues related to the major, ongoing changes in the Chinese economy and their effects both in China and abroad. Topics of discussion cover major issues on the macroeconomic, microeconomic, and political-economic front in China today: what China has done and where it is going, China's coming onto the world economic stage, market entry and access issues, dealing with important cultural issues, moving goods and capital around China, the "winners" and "losers" coming out of the reform, the ongoing process of China's transition from a primarily agricultural to a primarily industrial/service economy, protecting trade secrets, and other key issues. The readings are meant to be a background to build knowledge, and as this will be structured as a seminar, students are encouraged and graded on their active class participation and address issues of personal interest regarding the Chinese economy.

Prerequisite: ECON-202

ECON-SHU 213

Causal Inference in the Social Sciences

Questions that have answers in data are called empirically verifiable questions. That is, instead of debating based on logic, anecdotes, past experiences and personal beliefs, we can collect and carefully analyze large amounts of data on what people really did, thought, felt and obtained, to find out what really happened.

Some causal questions are worth billions of tax-payer dollars. For example, do class size reductions boost student achievement? Does universal childcare improve child development?

Some causal questions often cause heated social debates. For example, does increasing economic inequality hurt economic growth? Does proliferation of fast food restaurants cause obesity?

Some causal questions are of personal interest. For example, do tall people get paid more? How much does beauty help one's career? Do job market outcomes depend on individual names?

To design effective policy interventions, to guide meaningful debates on many important social issues, to discover the actual experiences of people of different height, beauty and ethnicity, evidence needs to be credible.

The tools introduced in this course will help you become a qualified detective when investigating causal questions related to political, social, economic and business phenomena with data.

Students will learn how to interpret, design, and execute empirical research using Stata software.

Prerequisite: None

ECON-SHU 251

Economics of Global Business

This course, intended for Business and Finance students, examines the forces driving toward globalization: the integration of national business activities into globally competitive markets. International trade is a key driver of global integration. The role of comparative advantage as a determinant of the location of production is examined. Also examined are the reasons for and effects of government policies that create impediments to international trade. The second part of the course surveys the role of money and finance in global economic activity. The role of exchange rates as key variables in global finance is introduced. Also examined is the role of government policies toward the foreign exchange market, including the choice between fixed and floating exchange rates and the use of exchange controls to create impediments to currency exchanges. The course also introduces the concept of foreign direct investment and discusses the rising importance of multinational corporations.

Prerequisite: ECON-150

ECON--SHU 255

Economic Development

Studies the problem of economic underdevelopment, with special reference to the countries of Asia, Latin America, and Africa. The building blocks of economic theory are used to understand the historical experiences of these countries. Macroeconomic topics covered include economic growth, income distribution, and poverty, with particular emphasis on the concept of underdevelopment as a circular, self-reinforcing trap. Microeconomic topics include the study of particular markets that are especially relevant to developing countries: those for land, labor, and credit. Notions of market fragmentation, limited information, and incentive problems receive emphasis. Ends with international issues: trading patterns, capital flows, and global financial crises are studied from the viewpoint of developing countries.

Prerequisite: ECON-150

ECON-SHU 301

Econometrics

Examines a number of important areas of econometrics. The topics covered include identification and estimation of simultaneous equations models; model specification and testing; estimation of discrete choice models; and the analysis of duration models. In addition to covering the relevant theoretical issues, the course includes the application of these methods to economic data.

Prerequisite: ECON-201

BPEP-SHU 9042 (formerly ECON-SHU 211)

The Political Economy of East Asia: China's Development in a Comparative Perspective

This course focuses on China's political and economic development over the last century and a half with particular attention to the last 33 years, the so-called Reform Period. Our three primary objectives are to (1) understand the historical trajectory of China's development path; (2) consider in what ways and to what degree the growth experiences of East Asia's high-performing economies helped inform China's economic policymakers decisions and shed light on the prospects for the long-term success of reforms in China; (3) assess the state of China's contemporary political economy. *Prerequisite: ECON-150 and SOCS-160*

Electrical Engineering

EENG-SHU 251

Circuits

This course covers Passive DC circuit elements, Kirchoff's laws, electric power calculations, analysis of DC circuits, Nodal and Loop analysis techniques, voltage and current division, Thevenin's and Norton's theorems, and source-free and forced responses of RL, RC and RLC circuits.

Prerequisite: MATH-121

EENG-SHU 301

Advanced Circuits

The course concentrates on differential and multistage amplifier, current mirrors, current sources, active loads; frequency response of MOSFET, JFET and BJT amplifiers; Bode plots; feedback amplifiers, gain-bandwidth rule and feedback effect on frequency response; Class A, B and AB output stages; op-amp analog integrated circuits; piecewise-linear transient response; determination of state of transistors; wave-shaping circuits; MOS and bipolar digital design; noise margin, fan-out, propagation delay; CMOS, TTL, ECL; and an alternate week laboratory. The course studies design and analysis of analog integrated circuits, frequency response of amplifiers, feedback amplifiers, TTL and CMOS digital integrated circuits. *Prerequisite: EENG-251*

EENG-SHU 304

Electromagnetic Fields and Waves

Electromagnetic wave propagation in free space and in dielectrics, starting from a consideration of distributed inductance and capacitance on transmission lines. Electromagnetic plane waves are explored as a special case. The reflection and transmission of pulsed sources at discontinuities are discussed, while impedance transformation and matching are presented for harmonic time dependence. Snell's law and the reflection and transmission coefficients at dielectric interfaces are derived for obliquely propagation plane waves. Guiding of waves by dielectrics and by metal waveguides is demonstrated. Alternate-week laboratory. Objectives: Establish foundations of electromagnetic wave theory applicable to antennas, transmissions lines and materials; increase appreciation for properties of materials through physical experiments.

Prerequisite: CCSC-110 or BIOL-21

EENG-SHU 306

Instrumentation, Sensors and Actuators

The course focuses on electrical circuits and components, passive and active filtering for signal conditioning, dynamic measurement system response characteristics, analog signal processing, digital representation, data acquisition, sensors, actuators and actuator characteristics. Studies of measurement systems via computer simulation also are discussed. The laboratory experiments draw upon examples from all disciplines of engineering such as data acquisition, operational amplifiers, temperature measurement, and motion and force measurements.

Prerequisite: EENG-251

EENG-SHU 322

Electronics

This course focuses on circuit models and amplifier frequency response, op-amps, difference amplifier, voltage-to-current converter, slew rate, full-power bandwidth, common-mode rejection, frequency response of closed-loop amplifier, gain-bandwidth product rule, diodes, limiters, clamps and semiconductor physics. Other topics include Bipolar Junction Transistors; small-signal models, cut-off, saturation and active regions; common emitter, common base and emitter-follower amplifier configurations; Field-Effect Transistors (MOSFET and JFET); biasing; small-signal models; common-source and common gate amplifiers; and integrated circuit MOS amplifiers. The alternate-week laboratory experiments on OP-AMP applications, BJT biasing, large signal operation and FET characteristics. The course studies design and analysis of operational amplifiers; small-signal bipolar junction transistor and field-effect transistor amplifiers; diode circuits; differential pair amplifiers and semiconductor device-physics fundamentals. *Prerequisite: EENG-251*

EENG-SHU 351

Analogue and Digital Communication Theory

The course introduces the principles of the various analog communication fundamentals. Amplitude modulation and demodulation, angle modulation and demodulation. Noise performance of various receivers and information theory with source coding theorem are also dealt. The labs emphasize experiential learning of basic analog and digital communication theory concepts and applications, including experiments demonstrating analog and digital modulation techniques.

Prerequisite: EENG-303(2054)

EENG-SHU 352

Control Systems

The course introduces the principles of dynamic system modeling, analysis, and feedback control design with extensive, hands-on computer simulation. Modeling and analysis of dynamic systems. Description of interconnected systems via transfer functions and block/signal-flow diagrams. System response characterization as transient and steady-state responses and error considerations. Stability of dynamical systems: Routh-Hurwitz criterion and Nyquist criterion. Graphical methods for dynamical system analysis and design: root locus and Bode plot. Computer-aided feedback control design for mechanical, aerospace, robotic, thermo-fluid, and vibratory systems.

Prerequisite: MATH-124

EENG-SHU 354

Electrical Energy and Power Systems

Introduction to electric-energy sources, energy-storage devices, energy economics, environmental issues and electrical hazards. Principles of electric power systems transmission and distribution. Basic electromechanical conversion systems pulse and distribution transformers, induction rotating machines. Principles of electric energy conversion, static power supplies, static controllers and electric-power quality. Fundamentals of power management heat-sinks and cooling systems. Experiments with basic electrical machines.

Prerequisite: EENG-304

EENG-SHU 355

Digital Signal Processing

The course introduces the principle concepts of discrete-time signals and systems, frequency analysis, sampling of continuous time signals, the z-transform, implementation of discrete time systems, the discrete Fourier transform, fast Fourier transform algorithms, filter design techniques. The labs cover experiential learning of digital signal processing concepts, and require students to use knowledge to create and build prototypes that demonstrate their understanding of the material covered in the lecture.

Prerequisite: EENG-303(2054)

EENG-356

Communication Systems

The course introduces the principles of the various analog communication fundamentals. Amplitude modulation and demodulation, angle modulation and demodulation. Noise performance of various receivers and information theory with source coding theorem are also dealt. The labs emphasize experiential learning of basic analog and digital communication theory concepts and applications, including experiments demonstrating analog and digital modulation techniques.

Prerequisite: EENG-303(2054)

EENG-SHU 375

Robotic Systems

This course presents an overview of Robotics covering a selection of topics including Controls, Localization, Motion Planning, Sensing, Kinematics, and Human-Robot Interaction. Practical lab and simulation exercises complement the lectures. The students will further specialize and consolidate their knowledge through semester-long hands-on projects that involve the design, implementation, and testing of robotic systems and applications.

Prerequisite: EENG-352

EENG-SHU 400

Senior Capstone Design Project I

The goal of The Capstone Design Project is to provide students with a major design experience that leverages the knowledge and skills acquired through their undergraduate studies and co-curricular experiences. Its structure includes a process of design with measurable metrics, and incorporation of appropriate engineering standards and multiple realistic constraints. Emphasis is placed on clearly framing the design problem and following the design process to result in an optimized design solution. Students are encouraged to build prototypes of their designs and seek validation of their solutions through simulations and experiments, as appropriate. The Capstone Project aims to be collaborative and trans-disciplinary across several engineering streams. The emphasis is on students applying the design process to solve real-world problems in a 21st century, global context. The projects address engineering and technology topics that overlap with the sciences, social sciences, liberal arts or business. The Capstone provides an opportunity to integrate technical, human, aesthetic, business and ethical concerns with engineering design. Students practice critical skills in communication, team-building, and project management. There is a mid-semester review of the projects. Students complete their design, as well as build and test their prototypes, if applicable, in spring semester. The senior year culminates in a comprehensive project report and design review by a committee of faculty and other professionals. Senior Capstone Design Project I (ENGR-AD-400) and Senior Capstone

Design Project II (ENGR-AD-401) both consist of two, seven-week modules. Module I, in the fall semester, has a lecture and a project component focusing on the design process, problem definition, project management and Ethics. Module II in the fall is focused on creating the design solution, which is implemented in Module III and tested and validated in Module IV.

Prerequisite: Senior Standing

EENG-SHU 401

Senior Capstone Design Project II

The goal of The Capstone Design Project is to provide students with a major design experience that leverages the knowledge and skills acquired through their undergraduate studies and co-curricular experiences. Its structure includes a process of design with measurable metrics, and incorporation of appropriate engineering standards and multiple realistic constraints. Emphasis is placed on clearly framing the design problem and following the design process to result in an optimized design solution. Students are encouraged to build prototypes of their designs and seek validation of their solutions through simulations and experiments, as appropriate. The Capstone Project aims to be collaborative and trans-disciplinary across several engineering streams. The emphasis is on students applying the design process to solve real-world problems in a 21st century, global context. The projects address engineering and technology topics that overlap with the sciences, social sciences, liberal arts or business. The Capstone provides an opportunity to integrate technical, human, aesthetic, business and ethical concerns with engineering design. Students practice critical skills in communication, team-building, and project management. There is a mid-semester review of the projects. Students complete their design, as well as build and test their prototypes, if applicable, in spring semester. The senior year culminates in a comprehensive project report and design review by a committee of faculty and other professionals. Senior Capstone Design Project I (ENGR-AD-400) and Senior Capstone Design Project II (ENGR-AD-401) both consist of two, seven-week modules. Module I, in the fall semester, has a lecture and a project component focusing on the design process, problem definition, project management and Ethics. Module II in the fall is focused on creating the design solution, which is implemented in Module III and tested and validated in Module IV.

Prerequisite: EENG-400

EENG-SHU 2054 (formerly 303)

Signals and Systems

This course centers on linear system theory for analog and digital systems; linearity, causality and time invariance; impulse response, convolution and stability; the Laplace, z- transforms and applications to Linear Time Invariant (LTI) systems; frequency response, analog and digital filter design. Topics also include Fourier Series, Fourier Transforms and the sampling theorem. Weekly computer-laboratory projects use analysis- and design-computer packages. The course establishes foundations of linear systems theory needed in future courses; use of math packages to solve problems and simulate systems; and analog and digital filter design.

Prerequisite: MATH-124

EENG-SHU 3193 (formerly 353)

Very Large Scale Integrated (VLSI) Circuit Design

The course offers an overview of integrated circuit-design process: planning, design, fabrication and testing; device physics: PN junction, MOSFET and Spice models; inverter static and dynamic behavior and power dissipation; interconnects: cross talk, variation and transistor sizing; logic gates and combinational logic networks; sequential machines and sequential system design; subsystem design: adders, multipliers, static memory (SRAM), dynamic memory (DRAM). Topics include floor planning, clock distribution, power distribution and signal integrity; Input/Output buffers, packaging and testing; IC design methodology and CAD tools; implementations: full custom, application-specific integrated circuit (ASIC), field programmable gate arrays (FPGA). The course provides foundations of VLSI design and custom VLSI design methodology and state-of-the-art CAD tools.

Prerequisite: EENG-322

The English for Academic Purposes (EAP) Seminar is designed to model a college classroom—students will engage with the content of the course individually and in small groups; in formal and informal writing and speaking assignments; and by participating in group projects—but there will be additional emphasis on refining and expanding English language skills. As students engage with course content, they will practice high-level language, communication, and discourse skills required for the university setting, with an emphasis on speaking and listening.

ENGL-SHU 100A

English for Academic Purposes: Storying Science: How the Narratives of Science Have Changed

The objective of this seminar is for students to develop and practice academic speaking, listening, reading, and writing skills that will enable them to engage in discourse about how we view science as a discipline. We will explore the history of scientific rhetoric by investigating two co-dependent narrative arcs in the “story” of science: the way scientists write/talk/think in scientific discourse, and the way we write/talk/think about science and scientists. For centuries, science bore little resemblance to the empirical discipline that we recognize today, yet, while modern science has claimed the language and tools of objectivity, it is wrong to believe that it is free of argument, controversy, and bias. We will consider how science emerged from philosophy, advanced, and adjusted its methodology through ages of renaissance, enlightenment, industrialization, and global expansionism, and usurped religion as the ultimate authority on the “great” questions of life along the way. We will discuss the genres of science writing, science in media and digital science, and debate questions of ethics and popularization. In parallel, we will look at the ways in which science and scientists have been portrayed in popular culture, literature and the visual arts, and equally, how a desire to appear “scientific” has influenced everything from literary theory to advertising.

ENGL-SHU 100B

English for Academic Purposes: Where do we go from here?

This freshman EAP course is designed to help develop your academic speaking, listening, reading and writing skills in English. At the same time, as a content-based EAP course, it will aim to help you better understand, discuss, and apply some key concepts from social science and philosophy. Specifically, this course will examine a distinction many have made in the Twentieth and Twenty-first Centuries (and earlier) between two ways of knowing and living that human beings exhibit. These two ways are summed up in the course’s title as 1) Massification (a.k.a. objectification, alienation, dehumanization) and 2) Humanization (a.k.a. authenticity, critical consciousness, liberation). To examine this theme, the course will be further divided into four parts: (1) To begin, we will explore and discuss theories regarding how human beings psychologically & socially construct knowledge/reality. (2) We will then go on to apply these concepts in order to examine a critical feature of our modern world, namely how it is shaped by consumerism/materialism. (3) This will, in turn, lead us to examine the social, environmental, psychological effects consumerism is having on our world and ourselves. (4) This will finally lead us to examine some fundamental, philosophical questions human beings have asked for ages, such as: What is happiness and how can it be attained? How can one live a meaningful life at this time? How can we improve our society (locally, national and globally)?

ENGL-SHU 100C

English for Academic Purposes: Cities and Urban Consciousness

Cities and Urban Consciousness aims to develop students’ speaking, listening, reading, and writing skills while at the same time engendering an intuitive sense of the city. Instead of lectures delivering factual knowledge, the course relies on the mutually enriching interaction between knowing, understanding, thinking and feeling to achieve as comprehensive a sense of urban reality as possible. While all four language modalities will be practiced, there is a special focus on speaking and listening. The emphasis is on sensibility and communicating sensibility, encouraging the much-neglected ‘unquantifiables’ as a legitimate area of enquiry, as capable of contributing to research as any other. The course draws on and replicates the lived urban experience in the student’s learning, straddling the Humanities, Social Science and STEM.

ENGL-SHU 100D

English for Academic Purposes: The Corporation and the Individual

In this English for Academic Purposes seminar, we will develop speaking, listening, writing, and reading skills while exploring the relationship between the corporation, or business organization, and the individual. The root of the word “corporation” is “corps” or “body,” and this body has become a complex being in the 21st century. How is it like and not like an individual? What is its obligation to its human parts and what obligation do those human parts have to the whole? In a time of globalization, those human parts are in motion and the borders of the body itself have become more fluid, less narrowly defined. What new models of this “body” are emerging? How is it positioned (or not) to meet the demands of the developing century? Are there parallels to this “body” in nature itself? Who are traditional “insiders” and “outsiders” and how might such

roles be reimagined? As we interrogate the role of innovation and creative problem-solving in a business setting, we will apply such principles to our own work in the classroom and evaluate their impact. What lessons can be learned or new models explored?

ENGL-SHU 100E

English for Academic Purposes: Consumerism, Alienation, and Human Happiness

This freshman English for Academic Purposes (EAP) course is designed to help you develop the speaking, listening, reading, writing and critical thinking skills you need to study successfully in an English-speaking university. Since it is a thematic, content-based EAP course, it also aims to assist you to develop and apply your understandings of certain concepts from social science and the humanities that are important to a well-rounded liberal arts education. Specifically, this course will explore what some regard as an unprecedented, global crisis humanity seems to be facing, a crisis arising from the influences of consumerism and materialism on modern society and culture. We will further examine what it may mean to live a meaningful life at this time in history, and what some keys to creating a more sustainable and happier future might be.

ENGL-SHU 100F

English for Academic Purposes: Business and Social Responsibility

In this seminar, we will develop speaking, listening, reading, and writing skills while investigating business organizations. In particular, we will look at businesses and their responsibilities to the cities and communities in which they operate. Increasingly, businesses are viewed as being accountable to their communities—to the environment, to their workforces and to the cities and towns that house their headquarters and factories. Some now believe that social problems, in both developing and developed countries, are on a scale that governments and non-profit organizations cannot address alone. They argue that only businesses have the resources to address these problems and that there needs to be an "evolution" in capitalism...an evolution in business goals and practices that will help create sustainable and livable cities, i.e., cities in which people desire to live as well as work. We will begin the course by looking at different business models and new concepts in capitalism. We will then look specifically at Shanghai and the role that businesses and other types of organizations play in addressing the many social problems that a city such as Shanghai faces. There will be an emphasis on both creative and critical thinking as we ask questions, analyze problems and come up with our own solutions.

ENGL-SHU 100G

English for Academic Purposes: Negotiating Self and Other

This seminar is meant to develop English for academic purposes literacy in all four language modalities (speaking, listening, reading, and writing) by exploring an interdisciplinary theme that, while grounded in the social sciences, also cuts across the humanities, especially philosophy. The "self" is a natural place to begin. The problem is that this is all-too-often simply taken for granted. What are selves? Are we what we say we are? But what about the way we appear to others? An important constraint on what we may become is our membership in various communities. Students will be presented with a variety of texts (written and visual, including video, audio clips, and print advertising) in order to assist them in forming their opinions about the process of negotiation between self and other in society. Moreover, the concept of "negotiation" itself will be highlighted and explored in this context. Some of the subthemes that will be discussed will be self-concept and identity construction, culture and sub-culture, treatment of minority groups, gender identity development, and material and consumer identities.

ENGL-SHU 100S1

**English for Academic Purposes: Storying Science:
How the narratives of science have changed - Part I**

Part I of two sections: The objective of this seminar is for students to develop and practice academic speaking, listening, reading, and writing skills that will enable them to engage in discourse about how we view science as a discipline. We will explore the history of scientific rhetoric by investigating two co-dependent narrative arcs in the "story" of science: the way scientists write/talk/think in scientific discourse, and the way we write/talk/think about science and scientists. For centuries, science bore little resemblance to the empirical discipline that we recognize today, yet, while modern science has claimed the language and tools of objectivity, it is wrong to believe that it is free of argument, controversy, and bias. We will consider how science emerged from philosophy, advanced, and adjusted its methodology through ages of renaissance, enlightenment, industrialization, and global expansionism, and usurped religion as the ultimate authority on the "great" questions of life along the way. We will discuss the genres of science writing, science in media and digital science, and debate questions of ethics and popularization. In parallel, we will look at the ways in which science and scientists have been portrayed in popular culture, literature and the visual arts, and equally, how a desire to appear "scientific" has influenced everything from literary theory to advertising.

ENGL-SHU 100S2

English for Academic Purposes: Cities and Urban Consciousness - Part I

Part I of two sections: Cities and Urban Consciousness aims to develop students' speaking, listening, reading, and writing skills while at the same time engendering an intuitive sense of the city. Instead of lectures delivering factual knowledge, the course relies on the mutually enriching interaction between knowing, understanding, thinking and feeling to achieve as comprehensive a sense of urban reality as possible. While all four language modalities will be practiced, there is a special focus on speaking and listening. The emphasis is on sensibility and communicating sensibility, encouraging the much-neglected 'unquantifiables' as a legitimate area of enquiry, as capable of contributing to research as any other. The course draws on and replicates the lived urban experience in the student's learning, straddling the Humanities, Social Science and STEM.

ENGL-SHU 100S3 (formerly 101S1)

English for Academic Purposes: Storying Science: How the Narratives of Science Have Changed

The objective of this seminar is for students to develop and practice academic speaking, listening, reading, and writing skills that will enable them to engage in discourse about how we view science as a discipline. We will explore the history of scientific rhetoric by investigating two co-dependent narrative arcs in the "story" of science: the way scientists write/talk/think in scientific discourse, and the way we write/talk/think about science and scientists. For centuries, science bore little resemblance to the empirical discipline that we recognize today, yet, while modern science has claimed the language and tools of objectivity, it is wrong to believe that it is free of argument, controversy, and bias. We will consider how science emerged from philosophy, advanced, and adjusted its methodology through ages of renaissance, enlightenment, industrialization, and global expansionism, and usurped religion as the ultimate authority on the "great" questions of life along the way. We will discuss the genres of science writing, science in media and digital science, and debate questions of ethics and popularization. In parallel, we will look at the ways in which science and scientists have been portrayed in popular culture, literature and the visual arts, and equally, how a desire to appear "scientific" has influenced everything from literary theory to advertising.

ENGL-SHU 101A

English for Academic Purposes: Seminar: Storying Science – Advanced

[See above]

ENGL-SHU 101B

English for Academic Purposes: Where do we go from here? Massification vs. Humanization – Advanced

This freshman EAP course is designed to help develop your academic speaking, listening, reading and writing skills in English. At the same time, as a content-based EAP course, it will aim to help you better understand, discuss, and apply some key concepts from social science and philosophy. Specifically, this course will examine a distinction many have made in the Twentieth and Twenty-first Centuries (and earlier) between two ways of knowing and living that human beings exhibit. These two ways are summed up in the course's title as 1) Massification (a.k.a. objectification, alienation, dehumanization) and 2) Humanization (a.k.a. authenticity, critical consciousness, liberation). To examine this theme, the course will be further divided into four parts: (1) To begin, we will explore and discuss theories regarding how human beings psychologically & socially construct knowledge/reality. (2) We will then go on to apply these concepts in order to examine a critical feature of our modern world, namely how it is shaped by consumerism/materialism. (3) This will, in turn, lead us to examine the social, environmental, psychological effects consumerism is having on our world and ourselves. (4) This will finally lead us to examine some fundamental, philosophical questions human beings have asked for ages, such as: What is happiness and how can it be attained? How can one live a meaningful life at this time? How can we improve our society (locally, national and globally)?

ENGL-SHU 101C

English for Academic Purposes: Seminar: Negotiating Self and Other – Advanced

This seminar is meant to develop English for academic purposes literacy in all four language modalities (speaking, listening, reading, and writing) by exploring an interdisciplinary theme that, while grounded in the social sciences, also cuts across the humanities, especially philosophy. The "self" is a natural place to begin. The problem is that this is all-too-often simply taken for granted. What are selves? Are we what we say we are? But what about the way we appear to others? An important constraint on what we may become is our membership in various communities. Students will be presented with a variety of texts (written and visual, including video, audio clips, and print advertising) in order to assist them in forming their opinions about the process of negotiation between self and other in society. Moreover, the concept of 'negotiation' itself will be highlighted and explored in this context. Some of the subthemes that will be discussed will be self-concept and identity construction, culture and sub-culture, treatment of minority groups, gender identity development, and material and consumer identities.

ENGL-SHU 101D

The Corporation and the Individual

In this English for Academic Purposes seminar, we will develop speaking, listening, writing, and reading skills while exploring the relationship between the corporation, or business organization, and the individual. As this is a 101-level EAP seminar, students will be expected to show greater control of academic speaking and listening and greater autonomy over the learning process than they did in the 100-level seminar. Students will be expected to facilitate seminar discussions and deliver mid-length presentations. The root of the word "corporation" is "corps" or "body," and this body has become a complex being in the 21st century. How is it like and not like an individual? What is its obligation to its human parts and what obligation do those human parts have to the whole? In a time of globalization, those human parts are in motion and the borders of the body itself have become more fluid, less narrowly defined. What new models of this "body" are emerging? How is it positioned (or not) to meet the demands of the developing century? Are there parallels to this "body" in nature itself? Who are traditional "insiders" and "outsiders" and how might such roles be reimagined? As we interrogate the role of innovation and creative problem-solving in a business setting, we will apply such principles to our own work in the classroom and evaluate their impact. What lessons can be learned or new models explored?

ENGL-SHU 101E

Cities and Urban Consciousness

Cities and Urban Consciousness aims to develop students' speaking, listening, reading, and writing skills while at the same time engendering an intuitive sense of the city. Instead of lectures delivering factual knowledge, the course relies on the mutually enriching interaction between knowing, understanding, thinking and feeling to achieve as comprehensive a sense of urban reality as possible. As this is a 101-level EAP seminar, students will be expected to show greater control of academic speaking and listening and greater autonomy over the learning process than they did in the 100-level seminar. Students will be expected to facilitate seminar discussions and deliver mid-length presentations. The emphasis is on sensibility and communicating sensibility, encouraging the much-neglected 'unquantifiables' as a legitimate area of enquiry, as capable of contributing to research as any other. The course draws on and replicates the lived urban experience in the student's learning, straddling the Humanities, Social Science and STEM.

ENGL-SHU 101G

Intercultural Communication

Part of the mission of NYU-Shanghai is to enable students to 'immerse themselves in English, the language of international communication' as well as 'master the skills of cross-cultural effectiveness.' These are perhaps the most important goals that students can set for themselves in today's global world where people from disparate cultures must come together to solve the big problems of the age. As this is a 101-level EAP seminar, students will be expected to show greater control of academic speaking and listening and greater autonomy over the learning process than they did in the 100-level seminar. Students will be expected to facilitate seminar discussions and deliver mid-length presentations. In order to become effective in communicating across cultural boundaries, one must first 'know thyself' and the way that cultural self is perceived by others. Just as a fish in water is not aware of the water, it is difficult to see the always shifting cultural contexts in which global citizens "swim." At the core of the course is the idea that language and culture are inseparable. Linguistic competence itself is not enough for successful communication in a diverse multicultural world. Students will be engaged to conceptualize and practice intercultural communication and etiquette that is both verbal and non-verbal, question assumptions they have about "normal" communication, and develop the ability to perceive and communicate from multiple intercultural points-of-view. They will also be prompted to develop their own set of intercultural values in light of what they have learned.

ENGL-SHU 101S2

Cities and Urban Consciousness

Cities and Urban Consciousness aims to develop students' speaking, listening, reading, and writing skills while at the same time engendering an intuitive sense of the city. Instead of lectures delivering factual knowledge, the course relies on the mutually enriching interaction between knowing, understanding, thinking and feeling to achieve as comprehensive a sense of urban reality as possible. As this is a 101-level EAP seminar, students will be expected to show greater control of academic speaking and listening and greater autonomy over the learning process than they did in the 100-level seminar. Students will be expected to facilitate seminar discussions and deliver mid-length presentations. The emphasis is on sensibility and communicating sensibility, encouraging the much-neglected 'unquantifiables' as a legitimate area of enquiry, as capable of contributing to research as any other. The course draws on and replicates the lived urban experience in the student's learning, straddling the Humanities, Social Science and STEM.

ENGL-SHU 110 (formerly ART-SHU 110)

English Language Seminar: Intercultural Communication

This short course will provide students with the opportunity to practice their academic English by learning about intercultural communication and etiquette. Students will be engaged to think about 'intercultural variables' and 'communication styles' that involve both verbal and non-verbal communication. Much of the course will include reflection on short case studies of intercultural contact between Chinese and Americans (other cultures may also be considered). Students will be encouraged to question assumptions they have about "normal" communication. They will also be prompted to develop their own set of intercultural values in light of what they have learned. The course will include focused practice in the use of all four language modalities: speaking, listening, writing, and reading.

ENGL-SHU 120 (formerly ART-SHU 120)

English Language Seminar: British Literature, 18th Century to the Present

This course will offer a survey of British literature from the eighteenth century to the present, beginning with the Romantic period and ending with postcolonial literature. Students will study the process of canon formation and the writing of literary history, the growing division between popular and high literature, and the representation of imperialism and postcolonialism. Students will develop critical thinking skills and practice English reading and writing skills through class discussion, essay writing, and short weekly writing assignments. Authors will include Jane Austen, William Wordsworth, Lord Alfred Tennyson, Virginia Woolf, and others.

WRIT-SHU 159

Creative Writing

Prerequisite: None

Global China Studies

GCHN-SHU 110

The Concept of China

From the Warring States period to the present, what have Chinese and others understood to be the meaning of “China,” and what have been the broad implications of this understanding? This course is divided into four chronological periods: Antiquity—from the period of the ‘central kingdoms’ to the formation of the early empire; Middle Period—China Among Equals; Early Modern: 1350-1910—China, Global Trade, and Imperialism; Modern: 1910-present—China Reduxa
Prerequisite: None

GCHN-SHU 201

Digital Chinese Humanities

This course introduces students to computational thinking with specific reference to Global China Studies, and provides a foundation for future research. Areas of focus may include the creation, enhancement, and analysis of digitized written texts, especially primary sources; methodologies for the use of the internet as a research and translation tool; the production and processing of photographs: audio recordings: video clips: and geospatial data.
Prerequisite: None

GCHN-SHU 202

Archaeology in China

Archaeological discoveries since the early twentieth century and especially in recent years have transformed our understanding of China’s past. This courses addresses those discoveries, introduces students to the art and science of Chinese paleography, and to issues related to site preservation and the world cultural heritage. *Prerequisite: None*

GCHN-SHU 207

20th-century Chinese Writers in Global Context

The literary scene in the 20th century Chinese-speaking world is diverse in sound and script, vast in the scope of subject matters, and challenging for those migrant or exilic minds whose creative energy is driven by their critical insight to the world around them. Working in,outside, and between places like mainland China, Taiwan, Hong Kong, Malaysia, America, and France, Chinese-language writers may have in mind an imagined community of fellow countrymen when they write. Oftentimes, however, they may also ask provocative questions about nationalism, linguistic loyalty, and authenticity as Anglophone, Francophone, or bilingual writers living in the West. From and across multiple cultural margins, they speak to probe the nature of modernity, cultural contact, and otherness amid the global flows of labor and ideas. How do Lu Xun, Lao She, Ha Jin, Alai, and Gao Xingjian represent China on the world stage and find their place in this picture? Where in their works can we find stylistic and cultural hybridization? How do novels and stories by Zhang Ailing, Bai Xianyong, Maxine Hong Kingston, Gish Jen, and Shirley Lim cement or deconstruct the conventional ground on which we compare Eastern and Western civilizations? What kind of an alternative literary geography, and worldview, do these writers offer?
Prerequisite: None

GCHN-SHU 224

Chinese Maritime History

Investigates China’s long tradition of shipbuilding and navigational practice in terms of internal riverine communication, coastal defense, and ocean voyages; its early naval dominance; the famous Ming treasure fleets that sailed as far the Persian Gulf and the east coast of Africa; Qing shipyards; and recent developments.
Prerequisite: None

GCHN-SHU 231

Social and Cultural Debates in 20th Century China

“Our present trouble lies in our clinging to old institutions without knowing how to change,” Kang Youwei wrote in a letter to the Emperor in 1898. Kang’s concern would dominate intellectual debates over the twentieth century. In this course we will explore social and cultural debates in 20th-century China, focusing on topics such as Confucianism, social reform, nationalism, women empowerment, and art and literature. The questions that will guide this course include: Why did scholars like Kang Youwei and Liang Qiyao advocate reform and constitutional monarchy, while others, like Sun Yat-sen and Qiu Jin, called for revolution and the overthrow of the empire? What led to the Chinese Civil War between the Nationalists and the Communists? What was the May Fourth Movement about? Who are Mr. Science and Mr. Democracy? What did Hu Shi and Chen Duxiu mean when they declared classical language ‘dead’? What are Lu Xun’s Diary of a Madman and Ding Ling’s Miss Sophia’s Diary really about? What did Mao Zedong mean when he claimed at the Yan’an Forum, in 1942: “There is in fact no such thing as art for art’s sake [...] literature and art are the cogs and wheels in the whole revolutionary machine”? What is meant by the Cultural Fever of 1980s China? What made the ‘hooligan’ (流氓) author Wang Shuo a national bestseller in the 1980s? What were the main points of debate between the New Left and the neo-Liberals in the 1990s?

GCHN-SHU 240

Modern Chinese Governance

State structure and governance and the question of transition from single party authoritarian rule in a poor society. Considers alternative trajectories from a single party authoritarian rule in a middle income society to a democratic society like those of the formerly authoritarian East Asian societies surrounding China.

Prerequisite: None

GCHN-SHU 241

Chinese Revolutions

Revolutions both successful and unsuccessful in China; foreign influences and their significance in this context. Ideology, participation, leadership, strategies and tactics adopted by such diverse groups as the White Lotus, Taiping, and Boxers; the 1911 nationalist and 1949 communist revolutions, and their legacies.

Prerequisite: None

GCHN-SHU 242

Mao and the Chinese Revolution

This course introduces the historical relationship established in the twentieth century between Mao Zedong, his philosophy of history and revolution, and the Chinese Revolution in global context. The course provides a thematic lens through which to view one aspect of modern Chinese and global history. The working premise is that the revolution made Mao as much as Mao made the revolution. We will investigate Mao's thought and theories, as well as his revolutionary practice, not as biographical artifacts but as products of and contributors to the revolutionary situation in China and the world in the twentieth century. We end with Mao's afterlives.

Prerequisite: None

GCHN-SHU 243

Chinese Environmental Studies

How and why has the understanding of humans' relationship to nature changed in China, and how effectively has the Chinese state responded to environmental challenges at the local, national and global levels? Examines changing approaches to resource exploitation and sustainable development taking into account the impact of different political frameworks.

Prerequisite: None

GCHN-SHU 250

Chinese Geographies

This course examines questions of geography, topography, and ethnography from the early imperial period to the present with special attention to Chinese borderlands. Topics include the relation between center and periphery; cross-border relations; the changing population of residents and sojourners. Han and minorities; travel and transportation networks; and trade and material exchanges including the "tributary system."

Prerequisite: None

GCHN-SHU 251

Worldwide Chinese Diaspora

This course introduces students to the history and cultural formations of worldwide Chinese migrations and diasporic communities, including change over the last two centuries and evolving global diasporic relationships and interactions. Some topics of interest include Zheng He's legendary maritime travels on the imperial treasure fleets, the opium trade and its implication for early transnational Chinese capitalism, labor migration and exclusion in North America, socio-political and cultural indigenization of Chinese communities in Southeast Asia, and the coolie trade in the Caribbean region. Materials of study include history, essay, literature, and film.

Prerequisite: None

GCHN-SHU 252

20th-Century East Asia-U.S. Relations

This is a lecture course focusing on the changing relationship between East Asian countries and the United States in the 20th-century. On the basis of reviewing the early encounters between East Asia and America in the 18th and 19th centuries, this course covers the major political, economic, military, and cultural developments, as well as the dynamics underlying them, that have shaped the confrontation and cooperation between various East Asian countries and the United States in the past 100 years. In particular, this course aims to help students develop a better understanding of how nations with different values, cultural-historical backgrounds, political institutions, and levels of economic development may coexist in today's world.

Prerequisite: None

GCHN-SHU 263

Voices from the Margin: Modern Chinese and Sinophone Writers

The literary scene in the modern and contemporary Chinese-speaking world is diverse, vast, and challenging for the migrant and exilic minds whose creative energies are often driven by their poignant insights to the turbulent events around them. Working in, outside, and between places like mainland China, Taiwan, Hong Kong, America, and parts of Southeast Asia, Chinese-language writers ask questions about nationalism, tradition, ethno-linguistic politics, and cultural authenticity. They speak from and across multiple cultural margins to probe the nature of modernity, cross-cultural contact, and otherness amid the global flows of labor and ideas.

This course invites students to participate in the ongoing discursive and historiographical debates over the study of "modern Chinese literature" through a fast-emerging transnational and comparative perspective. Reading stories, novels, and essays by both established and marginalized writers, we place the traditional nation-based rubric of Chinese literary studies in critical dialogues with a set of jarring historical contexts: Euro-American imperialism, Chinese emigration and their settler-colonial history, the post-1949 political split, and global decolonization movements, among others. We ask: how do writers represent China on the world stage? Where in their works can we discern stylistic and cultural hybridization? How do they variously cement or deconstruct the conventional East-West divide? What alternative literary geographies and worldviews do they offer? We begin with the satirical modernists of Republican-era China. Next, we turn to Hong Kong and Taiwan for identity debates, colonial legacies, nativism, and postmodern cultures. In light of the global migration history, we also study narratives from Chinese-speaking America, Malaysia, and Singapore to analyze how writers creatively deconstruct the notion of Chineseness. Finally, we discuss the changing terms of exclusion and inclusion of ethnic minorities in present-day Han-Chinese societies, to further expose the internal fractures within the global Sinophone cultures.

GCHN-SHU 264

Chinese Migrant and Diasporic Networks

The history of Chinese emigration spans numerous centuries, continents, and islands. Equally heterogeneous, one should note, are the lived experiences of migrants and their younger generations. In recent decades, ideas like "Chinese transnationalism" and the "rise of China" have gained ground among popular and academic circles East and West; at times, they generate the nervous Exclusion-era imagination of a looming "Asiatic takeover." Such a fervently growing imagination notwithstanding, this line of discourse and belief suggests a number of persistent problems in the studies of Chinese overseas, or Chinese diaspora: for one, while recognition of a global Chinese presence has taken on renewed importance in recent years, scholarly conversations have been modest and sporadic at best, when it comes to scrutinizing the full spectrum of migrant and diasporic cultures (both in and prior to the twentieth century) beyond the re-iterations of ethnic homogeneity, nationalist sentiments, nostalgia, and cultural alienation. Among the humanists, the failure to address long-term practices of social indigenization, multiethnic networks, and the change of cultural affinities makes our current historical juncture a particularly urgent one for reconsidering the meanings of these globalizing networks and the applicability of "Chinese" to the inherently diverse diasporic articulations. Materials of our study are drawn from multidisciplinary sources, including history, theory, fiction, and visual culture. Students learn to explore the intricate conditions underlying the representations, making, and unmaking of Chinese subjectivities. Some topics of interest include Zheng He's now legendary maritime travels on the imperial treasure fleets, the opium trade and its implication for early transnational Chinese capitalism, labor migration and exclusion in North America, socio-political and cultural indigenization of Chinese communities in Southeast Asia, and the coolie trade in the Caribbean region.

GCHN-290

Topics in Global China Studies

Specific topics vary from semester to semester.

Prerequisite: None

RELS-SHU 9270

Religion and Society in China: Ghosts, Gods, Buddhas and Ancestors

This course is a survey of the major historical and contemporary currents of China's religious thought and practice, including Buddhism, Confucianism, Daoism and "popular religion". It will focus on the interactions between such teachings and practices, as well as on the role of religion in Chinese society. You will study topics such as divination, visual culture, ritual, ancestor worship, morality, longevity techniques, healing practices and meditation. A selected number of primary and secondary sources will be discussed in each lecture; documentary films and visits to religious sites will be also key constituents of the course.

HUMN-SHU 226

The Global Economy in the 20th Century

This course explores global economic history from the second industrial revolution and colonial economies of the late nineteenth century to the multipolar globalization of the late twentieth and early twenty-first centuries. It will trace the rise and relative decline of different national economies, especially the United States, and chart how technology, trade, investment, and politics created different economic connections. Topics will include different forms of production, changing cultures of consumption, shifting labor forces, economic crises, and the economic theories such as Keynesianism, neoliberalism, communism, and modernization, which have shaped economies across the long twentieth century. Jeffrey Frieden's *Global Capitalism: Its Fall and Rise in the Twentieth Century* will be the basic text for the course. Additional articles and book chapters will supplement this book. Excerpts from documentaries and feature films on such themes as microcredit, mass consumption and deindustrialization/reindustrialization will be shown. Students will write two six page papers and have a final exam. In addition, they will be asked to track one country and its changing place and fortunes/misfortunes in the global economy and submit brief reports on that throughout the term. Students will choose a smaller country rather than one of the major global players about whom we will read more extensively. Those reports will be 1-2 pages each and will be submitted every third week of the semester, for a total of 4 reports and a total of 6-8 pages of writing. The final exam will be a mixture of short identifications and two essay questions. A list of 5 essay questions will be given out in advance and on the day of the exam, Professor Nolan will choose the questions on which students will write.

Prerequisite: None

HUMN-SHU 229

Masters of Asian Cinema

This course introduces students to the basic concepts and methods in film studies by focusing on a select number of eminent auteurs in Asian cinemas. Our objectives are many: first, we situate within their particular socio-historical contexts the masterworks by master-directors like Akira Kurosawa, Yasujiro Ozu, Zhang Yimou, John Woo, Wong Kar-wai, Hou Hsiao-Hsien, Sanjay Leela Bhansali, Mani Ratnam, and Deepa Mehta. In doing so, we learn the divergent developments between and within Japanese, Chinese, and South Asian film industries. We then analyze how these directors make various stylistic choices to address issues of kinship, nation, gender, historical memory, modernity, and globalization. Against the background of 20th century cross-cultural encounters, we also study the contributions of these auteurs to world cinemas and the cross-fertilization in style between these film masters.

HUMN-SHU 240

Gender, Sexuality, and Culture

This course invites students to think about some of the most carefully controlled but also fervently sought-after questions since the time of Plato: what is the difference between gender and sex? What is the relationship between our gendered bodies, behaviors, and identities? How does sex, something we do, translate to the discourse of sexuality, something we talk about? What is the measurement of normality? If art indeed imitates and even changes life, in what ways do images of gender performance in literary and visual culture also reproduce and perhaps reshape our own experiences as gendered and sexed beings in a society? What can gender and sexuality tell us about the construction of culture, its boundaries, and its "outlaws"? Through the reading of philosophical, literary, historical, medical, and visual texts, and through discussions of case studies in mass media, we learn to see gender and sexuality as an evolving historical phenomenon rather than essentialist notions. We ask how the development of human interest in sexuality coincides with the burgeoning of governing techniques in modern times to police and promote sex simultaneously—as desirable and useful on the one hand, but also forbidden and harmful on the other. Lastly, as humanists, we ask how the boundary of our body (that is, our inside and outside in the most literal sense) is marked less by our blood cells, skin pores, or molecules than by our use of language.

Prerequisite: None.

HUMN-SHU 260

Critical Theories and Methods of Literary Studies

Major texts in critical theory from Plato to Derrida are considered in relation to literary practice. The first half of the course focuses on four major types of critical theory: mimetic, ethical, expressive, and formalist. The second half turns to 20th-century critical schools, such as Russian and American formalism, archetypal criticism, structuralism, psychoanalytic criticism, feminism, reader-response theory, deconstruction, and historicism.

Prerequisite: None

HUMN-SHU 264

Reading The Dream of the Red Chamber

The Dream of the Red Chamber is an epic literary classic produced by Cao Xueqin in the middle of the 18th century. Following the traditional form of Chinese fiction, known as "the chaptered novel," it covers a vast terrain of Chinese culture and social life and is widely regarded as the culmination of the vernacular novel of imperial China and a synthesis of Chinese aesthetic

and philosophical traditions. With the tragic love story between two teenage members of an aristocratic clan in southern China at its dramatic center the novel intimately explores the questions concerning what is eternal and what is ephemeral; love and affection, or "qing," as the heart of being that both animates and destroys life; the nature of individual talent and its fragility; the excesses and decadence of the privileged; as well as the growing, if hidden, social and class tensions. Its manifold structure, intricate plot development, coupled with its dazzling array of memorable characters, makes this novel the most complex and colorful of all times. Both reading and discussions are conducted in English.

Prerequisite: None

HUMN-SHU 265

Country and City in Modern Chinese Literature and Film

The story of modern China is, in a sense, the story of the transformation of a rural society into an urban, industrial one. This change has altered people's experience and consciousness and, in turn, their cultural visions and artistic expressions. This course focuses on the tension and mutual dependency between country and city in modern China as viewed through the prism of Chinese fiction and film. The class discusses such works as Lu Xun's Hometown and New Year's Sacrifice, Mao Dun's Spring Silkworm, Shen Congwen's Vegetable Garden, Ailing Chang's Sealed Off, and Shi Zhecun's One Evening in the Rainy Season, and such films as Crows and Sparrows and The World.

Prerequisite: None

HUMN-SHU 267

Representing Ethnicity in Mainland China and Beyond A Comparative Study

This course introduces students to the various theories, practices, and representations of multiculturalism in mainland China, Taiwan, Hong Kong, and Singapore from the 20th century onwards. Setting focus on how ethnicity (minzu) and race (zhongzu) emerge as a historically grounded and changing public discourse, we engage in a comparative examination of multiculturalism as an incomplete ideal. Within and across each of these multiethnic, or multiracial, societies where Han Chinese constitute the majority, we ask how nation-building processes bear on the transformation of minority culture, and vice versa. Toward the end of the course, we also probe the growing impact of domestic and transnational labor migration on the so-called ethnic mosaic. Our goal is not only to understand diversity as a social reality; in asking how such a reality finds voice in various artistic forms including short story, novel, documentary and fiction film, we also train students to do the rigorous work of literary and cultural criticism.

Prerequisite: None

HUMN-SHU 268

Empires & The Political Imagination

Empires-polities which maintained and enhanced social and cultural distinction even as they incorporated different people-have been one of the most common and durable forms of political association. This course will focus on the comparative study of empires from ancient Rome and China to the present, and upon the variety of ways in which empires have inspired and constrained their subjects' ideas of rights, belonging, and power. The study of empire expands our ideas of citizenship and challenges the notion that the nation-state is natural and necessary. Students in this course will explore historians' approaches to studying empires. We will investigate how empires were held together-and where they were weak-from perspectives that focus on political, cultural, and economic connections over long distances and long time periods. Readings will include historical scholarship on the Roman, Chinese, Mongol, Ottoman, Habsburg, Russian, French, British, and American empires, as well as primary sources produced by people living in these and other imperial polities.

Prerequisite: None

HUMN-SHU 269

Empires in World History

Throughout history, few people lived for very long in a polity that consisted entirely or even mainly of people with whom they shared a language and culture. Any examination of the variety of human cultures must take account of the political structures within which people tried to make their way, sometimes seeking higher degrees of autonomy, sometimes accommodating to rulers' authority, sometimes trying to extend their own power over others. Empires-polities which maintained and enhanced social and cultural distinction even as they incorporated different people-have been one of the most common and durable forms of political association. This course will focus on the comparative study of empires from ancient Rome and China to the present, and upon the variety of ways in which empires have inspired and constrained their subjects' ideas of rights, belonging, and power. The study of empire expands our ideas of citizenship and challenges the notion that the nation-state is natural and necessary. Students in this course will explore historians' approaches to studying empires. We will investigate how empires were held together-and where they were weak- from perspectives that focus on political, cultural, and economic connections over long distances and long time periods. Readings will include historical scholarship on the Roman, Chinese, Mongol, Ottoman, Habsburg, Russian, French, British, German, and American empires, as well as primary sources produced by people living in these and other imperial polities.

Prerequisite: None

Shanghai Stories

This course provides an introduction to the history and culture of Shanghai through the eyes of fiction writers. We will read short stories (in English translation) by Chinese, British, American, Japanese, French, Polish, and South African writers who lived in the city between 1910 and 2010. Their stories will take us on an imaginary city tour through time and space: from businessmen, politicians, and prostitutes gathering in the nightclubs of the old Bund, to Jewish refugees struggling to find a home in the poor shikumen neighborhoods of Hongkou, to teachers and students fighting political battles at the university campuses during the Cultural Revolution, and young urban youth pursuing cosmopolitan lifestyles in the global city of today. The course also includes trips to various places featured in the stories and guest lectures by some of Shanghai's most famous writers today.

Prerequisite: None

HIST-SHU 120

The Mongol Conquest in World History

The Mongol conquest was a major turning point in world history. Not only did it remake the map of much of Eurasia and the Middle East, but it transformed the economic foundations of pre-existing societies, their political systems and cultural traditions. At the same time, the world (as it was then known) became more interconnected, and commercial networks were developed. Beginning with an examination of the reasons behind the rise of the Mongols, and proceeding to an analysis of their conquest, the course will focus on several thematic issues, such as the Mongol political culture, their military system, their territorial expansion, and their government and administration in all the constitutive parts of their empire (China, Central Asia, Iran, and Russia). Moreover, special attention will be paid to relations between the Mongols and Europe, and to the development of commercial routes. Original sources in translation, in particular diplomatic documents, chronicles and reports will be included in the readings. The course will be complemented by visual materials to illustrate how the Mongols have been represented in movies and popular culture.

HIST-SHU 125

China's Last Empire: Understanding Qing History, 1636-1911

The Qing empire was the second major empire of China ruled by foreigners (first by the Mongols, second by the Manchus). Thinking of the Qing state not merely as a Chinese dynasty but as an empire provides us with an approach to examine a wider range of connections and imaginations. We will ask how the Manchu institutions and the role of frontiers gave the last empire its particular shape and identity. We will study the Qing empire in its relation to the world, the students will gain a sense of how Qing China and global processes have interacted and shaped each other. The course proceeds and develops as a mix of thematically and chronologically organized topics. The topics that we will explore include the Manchu conquest and the formation of the Manchu state, the Manchu way of life and "sinicization," prosperity in the High Qing and its problems, opium wars and treaty ports, disorder and dissent in the late Qing, the fall of the Qing empire and the 1911 revolution, the legacies of the Qing empire. In surveying this history from the formation of the Manchu empire to the creation of the Chinese republic in 1912, this course aims to provide an understanding of the changes, contingencies, and continuities in the making of modern China. The material we cover will range beyond that of scholarly works, to include Chinese and Manchu primary materials in English translation, visual materials, and film screenings--all of which will constitute sources of information as well as topics for analysis. (satisfies Core Curriculum: Social Science Perspectives on China)

HIST-SHU 126

World History: Part I

This course examines the emergence of world societies and the interactions between them from prehistoric times to about 1450CE. A comprehensive study of specific periods and regions will be followed by an in-depth analysis of primary sources and cross-regional contacts.

HIST-SHU 153

History of Modern China Since 1840

This course covers the history of China focusing on the past two centuries and especially the 20th century, when China underwent several major revolutions. We will follow chronologically the development of China starting with the foundation and consolidation of its last major dynasty, the Qing in 1644, moving through the collapse of the dynastic system and the rise of the first Republic of China in 1912, continuing through the Nationalist Revolution of 1927, and ending with discussions of the formation and development of the People's Republic of China since 1949. Large themes that run through the course include the impact of Western colonialism on China, the role of internal rebellions and wars in giving rise to new political and social formations, the impact of Japanese aggression on China's state and society, the Nationalist and Communist Revolutions, and the endurance of the centralized Chinese state. Two excursions to historic sites in Shanghai will reinforce students' knowledge and understanding of the subject matter while also highlighting the important role of Shanghai in modern Chinese history.

HIST-SHU 225

The Global Space Age

Over the course of the twentieth century the infinite void that surrounds planet Earth has stimulated the human imagination as never before. For several decades, anticipation of human spaceflight was intimately bound with futuristic visions of techno scientific progress, while space exploration became key to societal self-images. This course charts the rise and fall of the Age of Space from a global perspective. Individual sessions will be devoted to the 'rocket fad' of the Weimar Republic, Nazi 'wonder weapons', the so-called Sputnik shock and the American moon landings, as well as providing an introduction to the historical origins of techno-nationalism, from the Cold War to today's Space Race in Asia.

HIST-SHU 232

Moments of Europe

This course will provide a broad introduction to the history of Europe since the French Revolution. Organized around eight exemplary 'moments of Europe' spanning two centuries, it will familiarize students with some of the principal themes and methods involved in the writing of Modern European History. Structured chronologically, individual sessions will be devoted to the revolutions of the early nineteenth century, processes of nation building, fin-de-siècle culture, the causes, experiences and effects of the First and Second World Wars, the transeuropean protest movements of the 1960s and 1970s, in addition to the crucial question of whether a distinctive European identity has developed over time. Materials used include political treatises, fiction, images and film.

HIST-SHU 240

The Soviet Empire, 1917-1991

This course explores the history of the Soviet Union from its birth as a utopian experiment in October 1917 to its final collapse in December 1991. Through the extensive use of original documents, literary and artistic works, and artifacts of popular culture, the course examines the major political, cultural, and social events that contributed to the rise and fall of the Soviet Empire. While emphasis will be given to the fundamental issue of the nature and evolution of Soviet political culture, the course will also explore essential social, scientific, and artistic transformations that helped to shape the domestic Soviet experience and its international repercussions.

HIST-SHU 302

History of Water

While global citizens have long been concerned about conserving and rationing our use of fossil fuels, the same cannot be said for an even more precious resource – water. Only in the last few years have government agencies, NGOs, and the market begun to tackle the problem of dwindling water resources. The current statistics and projections are dire. If we do not come up with new technologies to conserve water and use it more efficiently, more people will be without clean water or enough food. The United Nations estimates that by 2030 as many as 4 billion people will not have access to enough water for their basic needs. During the course of this semester we will read about both contemporary issues that affect us as well as look at the historical context in which these problems developed. We will use case studies as a method for discussing these issues. Case Studies will include: the United States, in particular the American West and New York City; Early Modern Venice and Egypt, and modern day African and China.

HIST-SHU 303

Histories and Politics of Noise

In this seminar, students will consider the idea that "noise" has a history, and that its history dates long before the industrial revolution's ratcheting up of noise levels due to heavy machinery and the reproduction and amplification of sound through electronic technologies. Some noises pierce our ears and disrupt both our hearing and our thinking. In contrast, background noises may be loud, persistent, and even harmful to our ears, but they suffuse our everyday lives so fully that we can ignore them. Despite our daily subjective encounters with noise, can noise have a political meaning as well, one that transcends our individual experiences with din and discord, cacophony and clamor? This course explores noise's relationship to history and politics. By spending the semester reading, talking, and writing about noise, we will seek to comprehend it rather than contain it.

HIST-SHU 312

China Encounters the World

This is a lecture course on China's encounters with the world in the late 19th and 20th centuries. The course analyzes the age-old Chinese "Central Kingdom" self-image and how the image was overturned during modern times in face of Western and Japanese challenges; it explores the Chinese "victim mentality" and its impact on China's modern international experience; it examines China's foreign policy issues in the context of its political, economic, social and cultural developments in broader terms; it also pays special attention to the role of "human agencies" in the shaping of historical processes.

HIST-SHU 325

The New Cold War History

This is a reading and research seminar with an emphasis on the “new “Cold War history—a scholarly phenomenon emerging in the 1990s, along with the end of the global Cold War and the new opportunities to conduct multiarchival and multi-source research for scholars of international history. Students in this class will be exposed to various new interpretations, new methods of research, and new ways of thinking associated with the new Cold War history studies. Readings in this class will be focused on the scholarship that has appeared since the early and mid-1990s. Students are required to write several books reviews and a comprehensive review essay, as well as to present and critique the comprehensive review essay in class. The ultimate purpose of the course is to help students take the Cold War as a useful reference to pursue a better understanding of the challenges facing the human race in the 21st century.

HIST-SHU 341

European Religion from the Reformation to the Enlightenment

European Christendom exploded in the sixteenth century, creating a fragmented and fractious religious landscape that still marks Europe (and Christianity worldwide) to this day. In this undergraduate lecture course, students will examine the significant changes European Christendom experienced between the Protestant and Catholic Reformations through the Enlightenment, and will explore the impact of new religious dogmas, beliefs, practices, and institutions upon the broader order of European politics, society, and culture. The readings, which consist of both primary and secondary sources, will demonstrate that the religious changes in this period shaped not only the thinking of theologians and clergymen, but also affected the everyday lives of people throughout Europe. Furthermore, the course will examine how various denominations of European Christianity participated in Europe’s commercial, colonial, and imperial projects in the Americas, Africa, and Asia. Students will thus also consider the interactions, both within and beyond Europe, between European Christianity and other world religions.

LIT-SHU 150

World Drama: Classical Conceptions

This course attempts to infuse global content and employ global perspectives in studying the classics from great theatrical traditions of the world. To examine the classics from ancient Greece through Renaissance Europe to Restoration England along with those from classical China, India and Japan is to transform how they are understood; also transformed is one’s understanding of drama when studying Sophocles, Kalidassa, Shakespeare, Tang Xianzu, Chikamatsu and Molière in the same sequence. The objective is to deepen our understanding of the diverse aesthetic principles and cultural values that continue to impact today’s theatre and drama around the world. This course is an upper level elective for NYU Shanghai Humanities majors and NYU New York English majors.

LIT-SHU 220

Shakespeare I: tragical comedies

Midsummer Night’s Dream
The Merchant of Venice
The Tempest

“Comedies, Histories, Tragedies”—these categories originate with the First Folio of 1623. They are, arguably, not those of Shakespeare, who had been dead for seven years when Heminges and Condell, two actors in the playwright’s company, put the volume together. On the evidence of the plays themselves the scheme is far too rigid. For example, *The Merchant of Venice* is billed as a comedy, but its humor is of the darkest and most troubling kind. The court impresario in *A Midsummer Night’s Dream* introduces the play within the play (a hilarious farce in which two characters die) as promising “very tragical mirth.” Titus Andronicus is a tragedy; yet at the moment of his most profound suffering, Titus bursts into laughter. His brother asks, “Why dost thou laugh? it fits not with this hour,” to which Shakespeare’s tragic hero replies: “Why, I have not another tear to shed.”

Through close reading, with attention to their historical and critical context, and by means of film adaptations of the plays, these two courses will explore the “fit” between laughter and tears in Shakespearean theater.

LIT-SHU 221

Shakespeare II: Comical Tragedies

Titus Andronicus
The First Part of King Henry the Fourth
Anthony and Cleopater

“Comedies, Histories, Tragedies”—these categories originate with the First Folio of 1623. They are, arguably, not those of Shakespeare, who had been dead for seven years when Heminges and Condell, two actors in the playwright’s company, put the volume together. On the evidence of the plays themselves the scheme is far too rigid. For example, *The Merchant of Venice* is billed as a comedy, but its humor is of the darkest and most troubling kind. The court impresario in *A Midsummer Night’s Dream* introduces the play within the play (a hilarious farce in which two characters die) as promising “very tragical mirth.” Titus Andronicus is a tragedy; yet at the

moment of his most profound suffering, Titus bursts into laughter. His brother asks, "Why dost thou laugh? it fits not with this hour," to which Shakespeare's tragic hero replies: "Why, I have not another tear to shed."

Through close reading, with attention to their historical and critical context, and by means of film adaptations of the plays, these two courses will explore the "fit" between laughter and tears in Shakespearean theater.

LIT-SHU 222

Chinese Poetry (in Translation)

China's rich record of profoundly beautiful poetry is integral to its identity as a civilization, a nation, a people. English-language translations of that poetry are attempts--also often profoundly beautiful in their own right--to translate something essential about that very identity. Yet, as we know, much is always "lost in translation," and different versions of different classic texts vary greatly in what is shown, what is hidden, what is distorted, and what is invented. For those with little knowledge of Chinese poetry, this class will serve as an introduction by way of English translations; for those with a strong knowledge of the original Chinese classics, the class will re-present poets from Li Bai and Du Fu to Bei Dao and Gu Cheng as they have variously appeared globally to Anglophone readers the world over. All students will deepen their engagements not only with poetry and challenges of Chinese-English literary translation, but also with compelling questions arising from the philosophy of language, translation theory and literary criticism that ask us to radically reconsider how culture is represented, transmitted, and transformed by the act translation. (*satisfies Core Curriculum: China Arts*)

LIT-SHU 223

Magic and Realism in Chinese Literature

Magic realism is a term that was originally coined by Franz Roh in 1925 to describe Post-expressionist visual art in Europe; however, since that time it has become synonymous with a literary genre in which marvelous elements touch and merge into an otherwise normal reality. Traditionally this genre has been associated with Latin American literature and writers, most famously Gabriel Garcia Marquez and Jorge Luis Borges. Yet, the global spread of this genre indicates that it is not exclusively the creative voice of a post-colonial mind, seeking to reconcile its new present with the traditions (and often superstitions) of a colonial and pre-colonial past. Today, the political criteria for inclusion in the genre is as subject to question, as are the very terms post-colonial and post-modern and their allocation. As the magic realist novel is taken up by author's whose cultural history would seem to exclude them from this category, it has revealed its import in the critical landscape as a form with a "capacity to link many different literatures" (206).

In this class we will be reading several magic realist novels and short stories from authors born in different countries, including Columbia, India, and the USA as we build up to a consideration of the genre as found in modern Chinese literature. We will examine how each of these authors uses the magic realist voice to speak to his or her cultural history, national future and personal sense of identity. Since classes will involve analyzing the texts from a variety of theoretical stances, and discussing our responses to their ideas and content, students should be prepared to keep up with the reading and contribute in class.

Works Cited:

De La Campa, Roman. "Magic Realism and World Literature: A Genre for the Times?" *Revista Canadiense de Estudios Hispánicos*. 23:2 (Invierno 1999): 205-19.
(*satisfies Core Curriculum: China Arts*)

LIT-SHU 224

Hispanic Cities in Translation

This course introduces twentieth century narratives of urban life from Spain and Latin America. Through artistic and cultural depictions, the urban hubs of Barcelona, Madrid, Buenos Aires, Mexico City, Havana and New York can be read as archaeological sites of history and memory. We will read and discuss the novels, short stories and poetry of diverse authors including Federico García Lorca, Jorge Luis Borges, Roberto Bolaño, Alejo Carpentier and Octavio Paz, working with translations of their work in English. Using images, newspaper accounts, filmic and documentary representations, students will analyze and distinguish specific national, regional and linguistic contexts, while grappling with larger thematic notions of intellectual, literary, and artistic migration across national borders.

PHIL-SHU 70 (formerly HUMN- SHU 204)

Logic

This is an introductory course in formal logic. No prior knowledge of logic, mathematics or philosophy will be assumed. We will study a number of logical systems, and learn some methods for producing derivations and determining validity in these systems. We will also learn how to translate sentences and arguments from ordinary language into these systems, and examine some applications of logic to traditional philosophical problems.

Prerequisite: None

PHIL-SHU 90

Philosophy of Science

This is a survey course in general philosophy of science. Our topics include: Is scientific knowledge different from other forms of knowledge? Should the history of science be seen as an ever-increasing advance of knowledge? Given that most scientific theories have turned out to be false, are we justified in believing that our current theories are true? What are scientific explanations, and what makes an explanation better than another? Do the laws of nature govern the world or simply encapsulate some interesting patterns in the world? What is the relationship between more and less fundamental scientific theories? We will examine these questions through readings drawn from both the history and philosophy of science.

Prerequisite: None

PHIL-SHU 150 (formerly HUMN- SHU 203)

Central Problems in Philosophy

This course is an introduction to the problems and methods of contemporary philosophy. Topics may include: 1. What is the relationship between mind and body? 2. Can belief in the existence of the external world be justified? 3. Are there any good arguments for the existence of God? 4. Can we act freely if everything that we do is determined by laws of nature? 5. Is there a theory of how we ought to live?

Prerequisite: None

Interactive Media Arts

INTM-SHU 10J

Neighborhood, Map, Phone

In this class, students will work in small groups to explore and annotate the neighborhood around NYU's Shanghai campus. Students will learn how to use basic digital mapping and annotation tools, on both phones and computers, to understand and document the neighborhood. (*Science, Technology and Society*)

INTM-SHU 10I

Interaction Lab

In this foundation course students will be asked to think beyond the conventional forms of human computer interaction (i.e. the keyboard and mouse) to develop interfaces that consider the entire body, the body's capacity for gesture, as well as the relationship between the body and its environment. Students will learn the principles of electronics and programming as they build projects using the Arduino microcontroller platform, a small computer based on open source hardware and software. When used in conjunction with various sensors and actuators, Arduino is capable of gathering information about and acting upon the physical world. In addition to these physical computing techniques, students will also learn to harness the methods of traditional computation for the purposes of self-expression. The fundamentals of programming: variables, conditionals, iteration, functions and objects, will be explored first through the use of JavaScript, an approachable scripting language most commonly associated with the Web, and later by using the Java based Processing language. Students will gain a deeper appreciation of the expressive possibilities of computation as they learn to author their own software, and not simply use that which is provided to them. Additional topics will include digital fabrication using 3D printers and laser cutters, the exchange, manipulation, and presentation of data, algorithmic drawing and animation techniques, as well as the synthesis of images, audio, and video. Structured weekly exercises are aimed at building practical skills, however students are encouraged to experiment wildly, and are free to pursue their own diverse interests in their midterm and final projects. Required Course. (Formerly known as Introduction to Computational Media & Physical Computing)

Prerequisite: None

INTM-SHU 120

Communications Lab

In this foundation course, designed to provide students with a framework to effectively communicate through digital means, students will explore the possibilities of digital media by successively producing projects that make use of digital images, audio, video, animation, and the Web. Students learn in a laboratory context of hands-on experimentation, and principles of interpersonal communications, media theory, and human factors will be introduced in readings and investigated through discussion. Adobe Creative Cloud and other relevant software applications will be examined, and the basics of fundamental web languages HTML and CSS will be studied, to establish a diverse digital toolkit. Weekly assignments, group, and independent projects, as well as project reports will be assigned in each of the core areas of study. Required Course.

Prerequisite: None

INTM-SHU 165

Talking Fabrics

This course will explore the history of textiles and how to communicate through the medium of fabric using new technologies. We communicate using fabric every day. The clothes we wear, which bags we carry our belongings in, and the economic and social price we pay for textiles speak volumes about our identities. The art of fabric-making entered human culture so early that we often use it for important metaphors. Our history is woven together by the tales we spin from our common threads. This course will cover basic textile crafts such as sewing, embroidery and patternmaking along with techniques on how to integrate textiles with electronic circuitry. New methods of fabric-making such as 3D Printing textiles and laser cutting fabrics will also be covered.

Prerequisite: INTM- 10I / Counts as: Arts & Entertainment and Skill Development

INTM-SHU 171

Interactive Performance

Digital content has become an important aspect of performance and the performing arts. This course will cover the challenges and possibilities of creating and incorporating interactive media in live and unpredictable environments such as the stage, a concert hall, or an outdoor venue. Programming performative interfaces and creating physical computing props will be the primary vehicles for the class. Prior programming or performing experience is not required. Communications Lab is a prerequisite but can be waived with proven experience in digital image processing. The performance discipline, being an inherently collaborative arena, places heavy emphasis on teamwork. An open mind to work with other artists, technologists and creative leaders is a must. Students are expected to present a live staged performance during the semester.

Prerequisite: INTM- 120 (Old Category: Interactive Art & Entertainment / New Category: New Media & Entertainment)

INTM-SHU 180

Design Expo

Design Expo is an exercise in imagining a product or service from the “near future” (3-5 years) of technology. Students will be given a theoretical question (last year’s was “How can users make sense of a world with a billion accessible sensors?”) and will work in groups to imagine possible products, services, or solutions that would answer that question. The groups will research the problem, imagine possible solutions, solicit feedback, and return to the drawing board with what they’ve learned. The class will culminate in a presentation of the imagined product or service, as a demo or prototype, to a group of knowledgeable designers. The class is sponsored by Microsoft, who will announce this year’s question later this fall. One group will be selected by the review panel to travel to Microsoft’s Redmond campus in the United States, in July of next year, to present their work at Microsoft’s annual Faculty Summit.

INTM-SHU 181

Open Source

Students in this course will investigate the history, culture, and practice of the open-source movement. Open-source is a model for creativity that promotes the formation of communities centered around the sharing of ideas as well as intellectual property. We will explore how the open-source movement has influenced and revolutionized industries as diverse as technology, fashion, art and industrial production. This course aims to equip students with the knowledge and skills to understand a major force that is already shaping the future. All course materials, resources, and student work will be made publicly available via an open-source license. And student work will be created, documented, and shared within existing open-source communities, for example, on Instructables, Thingiverse, and GitHub, websites that facilitate the production and sharing of open-source projects. The class will also include a field trip to a local maker community and guest speakers will share their experiences with students. By the end of the course, students will have had the opportunity to make contributions to existing open-source communities as well as to establish their own open-source projects.

INTM-SHU 184

Exploring Net Literature

Exploring Net Literature is a seminar taking a comparative look at the production of stand-alone texts in the Chinese-speaking and English-speaking internet. (Chinese texts will be read in translation.) Students will look at four different types of text: explanatory writing (Baikē and Wikipedia sites); journalistic writing (factual accounts of events, as produced by collaborating groups); and literature (net literature in Chinese; fan fiction in English.) The fourth text will be one of the student’s choosing, for their final paper.

In addition to reading the relevant texts and theoretical accounts of their production, we will study the behaviors and negotiations of the participants, and will engage in ‘distant reading’, asking questions about texts that can only be answered with computers. Examples are: What is the differing link structure of Baikē and Wikipedia articles on the same subject? Which Harry Potter characters appear more frequently in Chinese vs. English fiction set in that universe? What are the patterns of participation on collaborative writing sites?

The work of the class is readings, class discussion, group work, and applying new interpretative tools to the selected texts. Students will write a mid-term and a final paper about the work. No previous technical experience is required.

INTM-SHU 190

Collective Methods

Humans have an inherent impulse to collaborate and share. In this course, designed for NYU Shanghai Interactive Media Arts majors studying abroad, students will be asked to integrate a variety of collaborative processes and methodologies for sharing into their work. First, by establishing a coauthored or user-generated storytelling environment for the collection and distribution of narratives, either fiction or nonfiction. Next, students will learn to programmatically acquire and aggregate data from a variety of online sources. Official APIs for popular social media outlets will be introduced, and standard methods for data parsing as well as unofficial data scraping techniques will both be employed to create online mashups featuring content from multiple sources. Students will then propose and execute an open content / open source final project that synthesizes the concepts and techniques explored within this course. Readings and discussions will further involve students in debate over related issues, including intellectual property and open data. Students are encouraged to incorporate site specific elements into their projects, and students and their collaborators will be free to use text, audio, video, animation, and transmedia approaches within their work.

Note: This course is an online distributed course. Registration for this course is limited to IMA Majors studying at the Global Sites. (Old Category: Interactive Art & Entertainment / New Category: New Media & Entertainment)

INTM-SHU 193 / MCC-SHU 9993

Chinese Cyberculture

This course provides a general overview of some of the key topics that constitute Chinese cyberculture. We focus specifically on four main areas: censorship and netizens; the companies which dominate the online economy; the history and development of the electronic industry and

game culture and Internet addiction. These topics are examined within the context of several overarching themes: technological determinism, protectionism, the nature of innovation and the increasingly intimate relationship of humans and machines. In addition, this course will guide students through the development of a research project on a related theme of their choosing.

Prerequisite: None

INTM-SHU 211

Animation and Dynamic Surfaces

Contemporary animation is no longer constrained to the single flat screen; it can now be seen on surfaces of any shape and size. This course takes students from traditional animation techniques to contemporary outputs. In the first part of the course students will learn the process of character design as well as script and storyboard development to create two animated shorts. The course then examines outputs afforded by new technologies, such as interactivity, multiple screens and projection mapping. Software includes DragonFrame (for stop motion capture), Adobe After Effects and Premiere (for digital compositing, animating, and sequencing), as well as MadMapper (for projection mapping), and Processing (for interactivity). Drawing skills are not necessary for this course, however students will keep a personal sketchbook.

Prerequisite: None

INTM-SHU 212

Sound & Vision

In this course students will explore various techniques, both practical and experimental, for sound and video synthesis as it relates to the production of multimedia applications as well as live audio visual performance. Comprehensive practical experience and substantial applied knowledge will be acquired through lectures, coursework, and critique. Students will begin by learning to work with the Max graphical programming environment, which is based on a patch bay metaphor, to produce their own programs (Max patches). Working with Max involves the visual arrangement and interconnection of blocks representing various inputs, outputs, and functions. Through the application of Max's MSP and Jitter extensions, students will take advantage of the real-time audio and video processing capabilities of the application. Additionally, sound sequencing software, Ableton Live, will be integrated with Max. The application of sound control protocols, such as MIDI (Musical Instrument Digital Interface) and OSC (Open Sound Control), will be introduced and investigated. Students will be encouraged to consider new possibilities for input and output afforded by the use of various sensors and actuators with Arduino. Existing off-the-shelf motion controllers, for example the Wii Remote, Microsoft Kinect, and Leap Motion will also be adopted to capture and interpret movement and gesture for the purposes of controlling audio and video. For their final projects, students will create a unique musical instrument. The class culminates in a live performance where students will perform their instruments in front of an enthusiastic audience. Elective: Arts & Entertainment and Skill Development.

Prerequisite: INTM-SHU 101 or 120 or Permission of the instructor

INTM-SHU 219

Studio Courses

These courses are to be taken in conjunction with one or more other, disciplinary courses. Students are expected to generate an idea or ideas inspired by the other course(s) and then build something with new interactive technology, supporting their investigations in the other field(s). Examples might be a device for monitoring traffic at a particular street corner, for a sociology class, or a data visualization for an economics class.

INTM-SHU 220

Machine Life

This course explores the frontiers, intersections and increasingly intimate intermixing of humans and machines. It does so by examining developments in wearable and embedded computing, genetic engineering, robotics and Artificial Intelligence. These more empirical investigations will occur alongside theoretical discussions and science fiction speculations on cyborgs, virtual reality and the future of the human species. In addition to research and writing assignments this course will involve a practical recitation in which students create or design sketches of a machine that reflects the themes discussed in the course.

Prerequisite: INTM-SHU 101 or 120 or Permission of the instructor

INTM-SHU 221

Creating Immersive Worlds

This introductory course will focus on building virtual worlds and understanding what makes them compelling experiences for others. Throughout the course, students will become familiar with critical concepts such as play testing and object-oriented programming in addition to developing proficiency in software tools such as Unity3D (Game Engine), Blender (3D modelling), Photoshop (Texturing) and Github (Source code control). Students will work in collaborative teams to create interactive virtual worlds. No previous programming experience needed.

Prerequisite: None

INTM-SHU 222

Introduction to Robotics

Since the beginning of civilization, humans have fantasized about intelligent machines sensing and acting autonomously. In this course students will discover what robots are, learn how to design them, and use simple tools to build them. Students will use open source hardware to explore sensors and electronics, in addition to designing and building robot bodies and actuators through a variety of digital fabrication technologies. Using a set of community developed tools, students will become familiar with concepts such as mechatronics, inverse kinematics, dynamics and machine learning. No previous programming or electronics experience is necessary, however students will be guided through a series of design challenges that their robots should be able to accomplish. With an emphasis on experimentation, peer learning, and team work, the objective of this course is to share in the excitement of robotics by enabling students to make their own creations.

Prerequisite: None

INTM-SHU 225

Media and Participation

Making words and images public used to be difficult, complex, and expensive. Now it's not. That change, simple but fundamental, is transforming the media landscape. A publisher used to be required if you wanted to put material out into the public sphere; now anyone with a keyboard or a camera can circulate their material globally. New, cheap forms of communication have opened the floodgates to a massive increase in the number and variety of participants creating and circulating media. This change, enormous and permanent, is driving several effects in the media landscape today. This course covers the transition from a world populated by professional media makers and a silent public to one where anyone who has a phone or a computer can be both producer and consumer. This change, brought about by the technological and economic characteristics of digital data and networks, is upending old industries -- newspapers, music publishing, moviemaking -- faster than new systems can be put in place. The result is chaos and experimentation as new ways of participating in the previously sparse media landscape are appearing everywhere. This course will provide a brief history and economics of the previous media landscape, the design of digital networks that upend those historical systems, and new modes of participation for sharing words, images, audio and video. We will look at the dynamics of both English-language services, such as Twitter, Facebook and Instagram, and, in translation, Chinese-language services such as Sina Weibo, Weixin and QQ. The class will consist of class discussion around readings and lectures, in-class presentations and analysis of new uses of media that you observe (or participate in) outside class. There will be two written analyses of the media landscape, one at mid-term and one final paper.

Prerequisite: None

INTM-SHU 231

Developing Web

The Web now permeates most aspects of modern existence, and as a result, web development has become an indispensable skill complementary to many diverse disciplines. Students in this course will gain fluency in essential web languages and development approaches through a series of creative yet practical exercises aimed at touching on many important aspects of today's multi-faceted World Wide Web -- by building responsive websites, engaging games, and rich internet applications for the desktop, mobile devices, and Arduino microcontroller. Design principles will be explored through corresponding HTML and CSS structures, and will be based on a consideration for typography, images, audio and video. Dynamic data and interaction will be investigated through client-side scripting techniques using JavaScript, including the popular jQuery library. User generated content and the importance of content management will be reflected on through server-side scripting techniques utilizing the PHP based WordPress platform. Data storage and retrieval will be made possible through the application of MySQL databases and the HTML5 Local Storage specification. And universal data exchange formats, JSON and XML, will be part of an ongoing experimentation with third party APIs (Application Programming Interfaces) such as Flickr, Freebase, Google Maps, Twitter, Xively & YouTube.

Prerequisite: None

INTM-SHU 234

Rapid Prototyping

Beginning with a design problem or challenge, and following a period of analysis and research, a designer can begin to draft, prototype, test, and evaluate possible solutions, often repeating these operations several times until the design reaches maturity. Agile software development methodologies, which involve the formation of self-organized cooperative teams, frequent deadlines with deliverables, and a willingness to accept changing conditions and requirements, have radically changed the way software is being produced. Additionally, new applications, such as Fritzing, 123D Circuits, and Eagle have greatly facilitated the process of electronic circuit design. And Computer Aided Design (CAD) applications, for example Rhinoceros and Tinkercad, and newly available digital fabrication equipment have dramatically quickened the pace with which designers can create physical prototypes. Students in this course will be confronted with a series of design challenges for which they have to propose and prototype possible solutions. The first design challenge will entail the entire class working together to

produce a software prototype by adopting agile strategies. The second design challenge will involve students in the process of refining a circuit, and will require bringing a prototype from schematic, to breadboard, perfboard, and finally resulting in a printed circuit board. For the third design challenge, students will explore the use of 3D printers, laser cutters, computer numerical control (CNC) machines, and other tools to produce a physical prototype. Students will then be free to work on a personal design challenge for their final project. Elective: Design and Skill Development.

Prerequisite: INTM-SHU 101 or Permission of the instructor

INTM-SHU 240

Solar Solutions: Considering The Sun in our Digital Future

Solar power is on track to be a major contributor to renewable energy systems of the future. Small scale photovoltaic cells can provide energy directly at point of use without the expense of an electricity grid and with the added benefit that the energy is free and non-polluting. This class examines how photovoltaic cells can be incorporated into interactive art, internet enabled devices and anything in between. We will look at the science behind various photovoltaic panels, calculate power requirements, and build our understanding about panel assembly and use. Among other things, students will experiment with solar circuits, BEAM robotics (Biology, Electronics, Aesthetics and Mechanics) and how to use photovoltaic cells with micro-controllers. Throughout the semester students will design a series of conceptual paper prototypes and physical prototypes as solutions to artistic and design challenges given throughout the course. *Prerequisite: INTM-101 / Old Category: Interactive Art & Entertainment + Skill building / New Category: Experimental Interfaces & Physical Computing.*

INTM-SHU 250

Special Topics in Digital Humanities: Street Food & Urban Farming

This course introduces and makes use of digital tools (audio, video and mapping technologies) to research and record an immersive engagement with the city. It also includes a lab-based workshop in interactive media that is designed around a relevant theme. This semester the course focuses on street food & urban farming. The preservation, adaptation and disappearance of street food raise many issues that are central to contemporary Shanghai: globalization, creativity and cultural heritage, urbanization, the informal economy, and the environment. This course examines these topics by focusing on the following questions: How is Shanghai working to both integrate and exclude its migrant population? What room is there for itinerant vendors and the informal markets of the streets in the 21st century metropolis? What role does creativity play in the attempts to preserve the city's culinary heritage? How does street food contribute to the city's attempts to provide safe, affordable and nutritious food for its ever-growing population? Adding an extra dimension to our analysis of food in the city, the course will include an intensive workshop on urban farming led by experts in the field. This will involve; an introduction to the challenges and opportunities of urban farming in China; a tour to a local urban garden, and a hands-on component aimed at building a hydroponic window farm in the IMA lab. (Old Category: Seminar / New Category: Seminar).

Prerequisite: None

INTM-SHU 270

Expressing Data

Human beings are producing, consuming and sharing data at any given moment. However, what kinds of data are meaningful to us? How do we capture and collect that data? What are the best ways to present it? What stories do we want to tell with data? This course will explore these questions and more. Students will learn basic techniques for data collection and filtering. Student projects can be digital, physical, visual, musical, or (with approval) take any form imagined. *Prerequisite: INTM-101 (Old Category: Interactive Art & Entertainment + Skill building / New Category: Computation & Data)*

INTM-SHU 280

Global Media - China

This course looks at the transformation of China's media landscape over the past two decades through market reforms, commercialization and new technology - including the drastic growth of tabloid newspapers and magazines; the transformation of television into a multi-billion dollar industry, with ambitions to go global; and the equally significant rise of the Internet and, with it, the growing influence of online public opinion, along with the way in which this has led to significant changes both in China's traditional media, and in the way the country is governed. The course will also look at continuing tensions between those seeking to push for greater openness in the media, and the censors and ideological critics who believe it has already gone too far. *Prerequisite: None*

MATH-SHU 9
Precalculus

This course is designed as a preparation for calculus, including study of basic properties of polynomials, rational functions, exponential and logarithmic functions, and trigonometric functions. Systems of linear equations and matrix operations are also covered. *Prerequisite: Placement via NYUSH mathematics placement exam. Equivalent to MATH-UA 009, MATH-AD 101*

MATH-SHU 010
Quantitative Reasoning: Great Ideas in Mathematics

This one-semester course serves as an introduction to great ideas in mathematics. During the course we will examine a variety of topics chosen from the following broad categories. 1) A survey of pure mathematics: What do mathematicians do and what questions inspire them? 2) Great works: What are some of the historically big ideas in the field? Who were the mathematicians that came up with them? 3) Mathematics as a reflection of the world we live in: How does our understanding of the natural world affect mathematics (and vice versa). 4) Computations, proof, and mathematical reasoning: Quantitative skills are crucial for dealing with the sheer amount of information available in modern society. 5) Mathematics as a liberal art: Historically, some of the greatest mathematicians have also been poets, artists, and philosophers. How is mathematics a natural result of humanity's interest in the nature of truth, beauty, and understanding? Why is math a liberal art?
Prerequisite: None. For students in Humanities.

MATH-SHU 20 (formerly 130)
Statistics for the Social and Behavioral Sciences

This course introduces students to the use of statistical methods in social and behavioral science research. Topics include: descriptive statistics; introduction to probability; sampling; statistical inference concerning means, standard deviations, and proportions; correlation; analysis of variance; linear regression, including multiple regression analysis. Applications to empirical situations in the social and behavioral sciences are an integral part of the course.
Prerequisite: None

MATH-SHU 110
Calculus

(See MATH-SHU 121)

MATH-SHU 112
Multivariable Calculus and Differential Equations

(See MATH-SHU 212)

MATH-SHU 120
Discrete Mathematics

(See CSCI-SHU 2314)

MATH-SHU 121 (formerly 110)
Calculus

This course presents the foundations of calculus for functions of a single variable. Topics addressed include limits, continuity, rules of differentiation, approximation, antiderivatives, indefinite and definite integrals, the fundamental theorem of calculus, integration techniques, and improper integrals. *Prerequisite: Placement via NYU SH Mathematics Placement Examination or a grade of C or better in Math- 9.*

MATH-SHU 123 (formerly 151)
Multivariable Calculus

This course explores calculus of functions of several variables. Topics covered include power series, differentiation and integration of functions of several variables, including directional derivatives, the gradient, line and multiple integrals, and the theorems of Green, divergence, and Stokes.
Prerequisite: Grade of C or better in MATH-121

MATH-SHU 140
Linear Algebra

This first course in linear algebra covers systems of linear equations, vectors, linear transformations, matrices and their determinants, vector spaces, basis and dimension, eigenvectors and eigenvalues, quadratic forms, and matrix decompositions. In addition to its role as an essential topic within mathematics, linear algebra is also critically useful throughout the sciences: for example, in estimation theory, chemical equations, electrical networks, and heat distributions.
Prerequisite: Grade of C or better in MATH-121

MATH-SHU 141 (formerly 206)

Advanced Linear Algebra I

This is the first semester of a 2-semester course in linear algebra for advanced mathematics majors. Topics covered include systems of linear equations, matrices, LU decomposition, determinants, vector spaces, linear independence, basis and dimension, subspaces and quotient spaces, linear transformations, eigenvalues and eigenvectors, Jordan canonical forms, inner products, orthogonality, quadratic forms, extrema of functions, and symmetric and positive matrices.

Prerequisite: Placement on NYU SH mathematics placement exam.

MATH-SHU 142

Advanced Linear Algebra II

This course is a continuation of Honors Linear Algebra I. Topics covered include eigenspaces, multiplicities of eigenvalues, diagonalization, the Schur decomposition theorem, inner product spaces, the Gram-Schmidt process, orthogonality, adjoint maps, spectral theory, self-adjoint, normal, and unitary maps, bilinear forms, the Cholesky theorem, singular value decomposition, pseudoinverses, least-squares solutions via normal equations, ideals of polynomials, reducibility of maps, nilpotence, the Jordan decomposition theorem, minimal polynomials, the Penrose-Frobenius theorem, and stochastic matrices. Example covered from applications include data compression, optimization, QR factorization of least squares approximation, solutions of simultaneously coupled polynomial equations, determination of the critical temperature of a superconductor, and image compression via singular value decomposition.

Prerequisite: Grade of C or better in MATH-SHU 141

MATH-SHU 150

Probability and Statistics

(See MATH-SHU 235)

MATH-SHU 151

Multivariable Calculus

(See MATH-SHU 123)

MATH-SHU 160

Networks and Dynamics

This is a post-calculus mathematics course that is designed to prepare students to enter a broad set of majors, from natural sciences through social sciences. The preliminary goal is to address the following challenge: today's science and world at large requires us to understand how the dynamical interactions between individual units in a complex network give rise to collective behavior, be it genetic network that makes us who we are, neural network underlying our brain functions, social network of friends through Facebook or WeChat. The language for providing a scientific understanding of such systems is the mathematics of network theory, linear algebra, and differential equations. These topics are integrated to provide a unifying course that introduces analysis methods and mathematical models for understanding dynamical network behavior. Computer simulations will be a major component of this hands-on course.

Prerequisite: Grade of C or better in MATH-SHU 121. Not open to students who have taken MATH-SHU 264.

MATH-SHU 201

Honors Calculus (formerly Calculus Emphasizing Proofs)

This is a rigorous course in single-variable calculus for mathematics majors, providing preparation for advanced courses in analysis. Topics covered include number systems, functions, graphs, vectors, conic sections, polar coordinates, limits, continuity, least upper bounds, the derivative, convexity and concavity, inverse functions, parametric curves, Riemann sums, integrals, and the fundamental theorem of calculus.

Prerequisite: Placement via NYU SH Mathematics Placement Examination.

MATH-SHU 202

Analysis I

(See MATH-SHU 328)

MATH-SHU 203

Analysis II

(See MATH-SHU 329)

MATH-SHU 212 (formerly 112 & 124)

Multivariable Calculus and Differential Equations

This course explores advanced topics in calculus. Topics covered include sequences and series, power series, matrix algebra in dimensions two and three, first and second-order differential equations, series solutions of differential equations, and differentiation and integration of functions of several variables, including directional derivatives, the gradient, and double, triple, and line integrals.

Prerequisite: Grade of C or better in MATH-121

MATH-SHU 228

Earth's Atmosphere and Ocean: Fluid Dynamics & Climate

This course is an introduction to the dynamical processes that drive the circulation of the atmosphere and ocean, and their interaction. Lectures will be guided by consideration of observations and experiments, with the goal of developing an understanding of the unifying principles of planetary fluid dynamics. Topics include the global energy balance, convection and radiation (the greenhouse effect), effects of planetary rotation (the Coriolis force), structure of atmospheric circulation (the Hadley cell and wind patterns), structure of the oceanic circulation (wind-driven currents and the thermohaline circulation), and climate variability, including El Niño and anthropogenic warming.

Prerequisite: Grade of C or better in MATH-SHU 121 or MATH-SHU 201

MATH-SHU 230

Introduction to Fluid Dynamics

Fluid dynamics is the branch of physics that describes motions of fluids as varied as the flow of blood in the human body, the flight of an insect or the motions of weather systems on Earth. The course introduces the key concepts of fluid dynamics: the formalism of continuum mechanics, the conservation of mass, energy and momentum in a fluid, the Euler and Navier-Stokes equations, viscosity and vorticity. These concepts are applied to study classic problems in fluid dynamics, such as potential flow around a cylinder, the Stokes flow, the propagation of sound and gravity waves and the onset of instability in shear flow.

Prerequisite: Grade of C or better in MATH-123 or 329

MATH-SHU 233

Theory of Probability

This course is an introduction for mathematics majors to the mathematical treatment of random phenomena occurring in the natural, physical, and social sciences. Topics covered include axioms of mathematical probability, combinatorial analysis, the binomial distribution, Poisson and normal approximation, random variables, probability distributions, generating functions, and Markov chains and their applications.

Prerequisite: Grade of C or better in MATH-SHU 123 or MATH-SHU 329. Not open to students who have taken MATH-SHU 235.

MATH-SHU 234

Mathematical Statistics

A continuation of Theory of Probability, this course is an introduction to the mathematical foundations and techniques of modern statistical analysis for the interpretation of data in the quantitative sciences. Topics covered include the mathematical theory of sampling, normal populations and distributions, Chi-squared, t, and F distributions, hypothesis testing, sequential analysis, correlation, regression, analysis of variance, and applications to the sciences.

Prerequisite: Grade of C or better in MATH- 233.

MATH-SHU 235 (formerly 150)

Probability and Statistics

This course comprises a combination of the theory of probability and the mathematical foundations with techniques of modern statistical analysis. It is designed to acquaint the student with both probability and statistics in the context of their applications to the sciences. In probability: mathematical treatment of chance; combinatorics; binomial, Poisson, and Gaussian distributions; law of large numbers and the normal distribution; application to coin-tossing, radioactive decay, and so on. In statistics: sampling; normal and other useful distributions; testing of hypotheses; confidence intervals; correlation and regression; and applications to scientific, industrial, and financial data.

Prerequisite: Grade of C or better in MATH- 121 and 140. Not open to students who have taken MATH- 233.

MATH-SHU 240

Combinatorics

This course introduces basic concepts in combinatorics and techniques for counting and enumeration. Topics covered include generating functions, the principle of inclusion and exclusion, Polya counting, graph theory, and modern algorithms and data structures for graph-theoretic problems.

Prerequisite: Grade of C or better in MATH- 121 or 201

MATH-SHU 245

Mathematical Choice Theory

This course is a mathematical examination of the main ideas of decision theory, including game, auction, and social choice theory. Topics covered include strategic and extensive form games, existence and properties of equilibria (Nash, Bayesian, perfect, sequential, correlated), the expected utility maximization theorem, the core, auction and mechanism design under independent and interdependent values, the revenue equivalence theorem, voting models, Arrow's impossibility theorem, the Gibbard-Satterthwaite theorem, and implementation theory. We also discuss current applications of these ideas to bargaining agreements, auction design, and voting systems.

Prerequisite: Grade of C or better in MATH- 121 or 201

MATH-SHU 252

Numerical Analysis

In numerical analysis, one explores how mathematical problems can be analyzed and solved with a computer. This has very broad applications in mathematics, physics, engineering, finance, and the life sciences. This course gives an introduction to numerical analysis for mathematics majors. Theory and practical examples using Matlab will be combined to study a range of topics, from simple root-finding procedures to differential equations and the finite element method.

Prerequisite: Grade of C or better in MATH-123 and 140 or MATH-141 and 329

MATH-SHU 262

Ordinary Differential Equations

This course introduces the main ideas of ordinary differential equations. Topics include vector fields, existence and uniqueness of solutions to first-order linear differential equations, stability, higher order differential equations, the Laplace transform and numerical methods, linear and nonlinear systems, and Sturm-Liouville theory.

Prerequisite: Grade of C or better in MATH- 121 and 140 or MATH- 141 and 201

MATH-SHU 263

Partial Differential Equations

Many laws of physics are formulated as partial differential equations. This course discusses the simplest examples, such as waves, diffusion, gravity, and static electricity. Nonlinear conservation laws and the theory of shock waves are discussed, as well as further applications to physics, chemistry, biology, and population dynamics.

Prerequisite: Grade of C or better in MATH- 262

MATH-SHU 264

Dynamical Systems

Topics will include dynamics of maps and of first order and second-order differential equations: stability, bifurcations, limit cycles, dissection of systems with fast and slow time scales. Geometric viewpoint, including phase planes, will be stressed. Chaotic behavior will be introduced in the context of one-variable maps (the logistic), fractal sets, etc. Applications will be drawn from physics and biology. There will be homework and projects, and a few computer lab sessions (programming experience is not a prerequisite).

Prerequisite: Grade of C or better in MATH-121 and 140 or MATH-141 and 201. Not open to students who have taken MATH-160.

MATH-SHU 282

Functions of a Complex Variable

Complex variables and functions play an essential role in many branches of mathematics and science. In this course, we cover basic aspects of the theory, including differentiation of complex functions, the Cauchy-Riemann equations, Cauchy's theorem and integral formula, singularities, Laurent series, conformal mapping, analytic continuous, and applications to fluid flow.

Prerequisite: Grade of C or better in MATH-123 and 140 or MATH-141 and 329.

MATH-SHU 328 (formerly 202)

Analysis I

This course is a continuation of Calculus Emphasizing Proofs. Topics covered include integration techniques, trigonometric functions, the logarithm, exponential functions, approximation by polynomials, sequences, series, convergence, uniform convergence, power series, Taylor series, complex numbers and functions, Euclidean spaces, and basic topology.

Prerequisite: Grade of C or better in MATH-201

MATH-SHU 329 (formerly 203)

Analysis II

This course is a continuation of Analysis I, with emphasis on functions of several variables. Topics covered include the topology of Euclidean space, the Stone-Weierstrass theorem, the implicit and inverse function theorems in several variables, Jordan regions, linear transformations, differentiation of integrals, and integration of differential forms.

Prerequisite: Grade of C or better in MATH-328

MATH-SHU 348

Honors Algebra I

This introduction to abstract algebra is a rigorous study of groups and rings. Topics covered include symmetric and linear groups, the Sylow theorems, classification of finitely generated abelian groups, polynomial and quotient rings, ideals, principal ideal domains, unique factorization, and the Nullstellensatz.

Prerequisite: Grade of C or better in MATH- 123 and 140, or MATH-141 and 329.

MATH-SHU 349

Honors Algebra II

This course is a continuation of Honors Algebra I, with a focus on fields and Galois theory. Topics covered include normal and separable field extensions, splitting fields, Galois groups, solvability by radicals, roots of unity, cyclotomic polynomials, geometric constructions, and finite fields.

Prerequisites: Grade of C or better in MATH-UA 348.

MATH-SHU 362

Honors Ordinary Differential Equations

MATH-SHU 375

Topology

This course presents the basic ideas of point-set topology, as well as their interactions with analysis and algebra. Topics covered include topological spaces, metric spaces, compactness, Tychonoff's theorem, separation axioms, Urysohn's lemma, covering spaces, fundamental groups, and homotopy groups.

Prerequisite: MATH-328

MATH-SHU 377

Differential Geometry

This course investigates the differential properties of curves and surfaces. Topics covered include differential manifolds and Riemannian geometry.

Prerequisite: MATH-329

MATH-SHU-G 2043

Scientific Computing

This course is intended to provide a practical introduction to computational problem solving. Topics covered include the notions of well-conditioned and poorly conditioned problems, forward and backward stability of an algorithm, basic techniques for numerical solutions of linear and nonlinear equations, numerical optimization, principles of numerical interpolation, differentiation and integration, splines and quadrature schemes, numerical methods for solving ordinary differential equations, matrix factorizations and computational techniques, and basic principles of the discrete (fast) Fourier transform, with applications to signal processing, data compression and solutions of differential equations.

Prerequisite: Grade of C or better in MATH- 123 and 140 or MATH- 141 and MATH- 329.

MATH-SHU-G 2140

Representation Theory

This course introduces the basic elements of representation theory. Topics covered include representations and characters of finite, compact, and Lie groups, induced representations, the theorems of Artin, Brauer, and Pe-ter-Weyl, Lie algebras, algebraic geometry, and applications of representation theory to algebra and physics.

Prerequisite: Grade of C or better in MATH- 349

MATH-SHU-G 2210

Number Theory

This course builds on the ideas of abstract algebra, but also employing analytic techniques. Topics include valuations, Dedekind domains, Minkowski's theorem, ramification, the Riemann-Roch theorem and Riemann-Hurwitz formula, connections to Riemann surfaces and algebraic curves, reciprocity, zeta functions, and the prime number theorem.

Prerequisite: Grade of C or better in MATH- 349

MATH-SHU-G 2430

Real Variables

This course is a continuation of the analysis sequence with a focus on measure and function spaces. Topics covered include Lebesgue measure and integration, abstract measure spaces, Lebesgue differentiation, the Radon-Nikodym theorem, Fubini's theorem, L_p and Hilbert spaces, the Riesz representation theorem, and Fourier series.

Prerequisite: Grade of C or better in MATH- 329

MATH-SHU-G 2550

Functional Analysis

This course on applications of concepts in functional analysis gives special emphasis to function spaces used in practice, including Hilbert, Hardy, and Sobolev spaces. Other topics covered include the spectral theorem and its application to differential equations, Fourier series, compact operators, Fredholm determinants, measure, volume, and nonlinear analysis for infinite-dimensional spaces, and Brownian motion.

Prerequisite: Grade of C or better in MATH- 141 and MATH-SHU-G 2430.

CSCI-SHU 2314 (formerly MATH-SHU 120 & 237)

Discrete Mathematics

This course is an introduction to discrete mathematics, emphasizing proof and abstraction, as well as applications to the computational sciences. Topics include sets, relations, and functions, graphs and trees, algorithms, proof techniques, and order of magnitude analysis, Boolean algebra and combinatorial circuits, formal logic and languages, automata, and combinatorics, probability, and statistics.

Prerequisite: Grade of C or better in MATH- 121 or 201

NEUR-SHU 10J

What Can Neuroscience Tell Us About Free Will?

The concept of free will plays a central role in society, in particular in the criminal justice system. In this course, we will explore the concept of free will and related topics in neuroscience such as intention and self-control. We will cover the evidence from neuroscience that argues that behavior is, under normal conditions, not deterministic, thus providing a material basis for the concept of individual agency. We will then address the neuroscience evidence for cases where individual agency is reduced through external influence via learning and the reward and punishment systems. Finally, we will examine the most extreme cases of this, psychiatric disorders that reduce agency: addiction, compulsive disorders, and anxiety disorders.

Prerequisite: None

NEUR-SHU 201

Introduction to Neural Science

An introductory lecture course covering the fundamental principles of neuroscience. Topics will include: principles of brain organization; structure and ultrastructure of neurons; neurophysiology and biophysics of excitable cells; synaptic transmission; neurotransmitter systems and neurochemistry; neuropharmacology; neuroendocrine relations; molecular biology of neurons; development and plasticity of the brain; aging and diseases of the nervous system; organization of sensory and motor systems; structure and function of cerebral cortex; modeling of neural systems.

Prerequisite: CCSC-110

NEUR-SHU 251

Behavioral and Integrative Neuroscience

This lecture and laboratory course addresses the physiological and anatomical bases of behavior. Lectures and laboratory experiments will emphasize mammalian sensory, motor, regulatory, and motivational mechanisms involved in the control of behavior, and higher mental processes such as those involved in language and memory.

Prerequisite: NEUR-201

NEUR-SHU 260

Development and Dysfunction of the Nervous System

This course will explore how the nervous system develops in normal animals, and how genetic and epigenetic factors can disrupt these processes. Lectures on normal developmental mechanisms will be interleaved with those on disorders to provide a solid foundation for our discussions of abnormal events during maturation. The lectures on normal development cover a broad range of topics including differentiation, axon outgrowth, synapse formation, specificity of connections, and plasticity. The lectures on dysfunction include autism, dyslexia, mental retardation, specific language impairment, hearing loss, blindness, ADHD, demyelinating or neurodegenerative disorders, and axon regeneration. The major goals of the course will be understand the extent to which current theories can explain the etiology of each disorder, and to learn how basic research can best facilitate advances in our knowledge and, ultimately, lead to treatments or cures.

Prerequisite: CCSC-114 & NEUR-251

NEUR-SHU 265

Neural Bases of Speech and Language

How does our brain work to enable us to speak and understand language? Are there special parts of the brain dedicated to speech and language? What is it like to be abnormal at speech or lose language? This course provides an introduction of the neuroscience research of speech and language, and interdisciplinary field at the heart of human cognitive neuroscience. Lectures cover basic aspects of language processing in the healthy brain, ranging from early sensory perception to higher level semantic interpretation, as well as a range of neurological and developmental language disorders, including aphasia, dyslexia, and other speech and language impairment. Functional neuroimaging and electrophysiological techniques will be introduced. The goal of this course is to let students acquire basic knowledge of neurolinguistics, as well as familiarise the ideas of interdisciplinary research in the intersection of cognitive science and neuroscience.

Prerequisite: None

NEUR-SHU 280

Special Topics in Neural Science

A seminar course providing in-depth treatment of an area of current interest neuroscience. Lectures will present background material and address current problems in the area related to the topic. Students will read and discuss review articles and current literature on the topic. Course content will be determined on a semester-by-semester basis. Possible topics include "Decision Making"; "Neurobiology of Learning and Memory"; "Signal Processing in Neural Networks"; "Intro to Computer Modeling of Neuronal Systems"; "Cognitive Neuroscience"; "Can Exercise Change Your Brain?"; "Molecular Mechanisms of Memory"; "Color Vision"; and "Neuroeconomics and Decision-Making."

Prerequisite: BIOL-201

NEUR-SHU 301

Cellular and Molecular Neuroscience

A lecture course that provides students with broad exposure to current questions and experimental approaches in cellular neuroscience. Lectures are organized into three areas: cell structure and organization of the vertebrate central nervous system, mechanisms underlying neural signaling and plasticity, and control of cell form and its developmental determinants.

Prerequisites: CCSC-114 & NEUR-251

PHYS-SHU 71

FoS Physics Laboratory

This laboratory course is to accompany FoS physics lecture. Students will be familiarized with various techniques, equipment, data analysis skills, and ideas common to physics laboratories. Experiments in mechanics and thermodynamics are chosen to illustrate the experimental foundation of physics presented in the lecture courses. The laboratory will also emphasize scientific writing.

PHYS-SHU 91

Foundations of Physics I Honors

Measurement, Motion Along a Straight Line, Vectors, Motion in Two and Three Dimensions, Force and Motion, Kinetic Energy and Work, Potential Energy and Conservation of Energy, Center of Mass and Linear Momentum, Torque and Angular Momentum, Rotation and Rigid-Body Motion, Gravitation, Oscillations and Harmonic Motion, Lagrangian and Hamiltonian formulation of mechanics, Temperature, Heat, the First Law of Thermodynamics, Kinetic Theory of Gases, Entropy, the Second Law of Thermodynamics, Electric Force and Field, Electric Flux and Gauss's Law, Electric Fields in Matter, Maxwell's Equations for Electrostatics.

PHYS-SHU 93

Foundations of Physics II Honors

Prerequisites: CCSC-103 or PHYS-91

PHYS-SHU 95

Foundations of Physics III

Prerequisites: CCSC-108 or PHYS-93

PHYS-SHU 106

Mathematical Physics

Mathematical preparation for the junior and senior courses in physics. Vector analysis, Fourier series and integrals, ordinary differential equations, matrices, partial differential equations, and boundary-value problems.

PHYS-SHU 210

Computational Physics

Introduction to computational physics, with an emphasis on fields of current research interest where numerical techniques provide unique physical insight. Topics are chosen from various branches of physics, including numerical solution of ordinary and partial differential equations, eigenvalue problems, Monte Carlo methods in statistical mechanics, field theory, dynamical systems, and chaos.

Prerequisite: (CCSC-114 or PHYS-95) & MATH-124

PHYS-SHU 250

Mechanics

Intermediate-level course on the principles and applications of dynamics. Topics include rotational kinematics and dynamics, conservation laws, central force motion, Lagrange's and Hamilton's equations, normal modes and small oscillations, accelerated reference frames, Fourier analysis, and chaos theory.

Prerequisite: (CCSC-114 or PHYS-95) & MATH-212

PHYS-SHU 251

Electricity and Magnetism

Introduction to Maxwell's equations with applications to physical problems. Topics include electrostatics, magnetostatics, the solution of the Laplace and Poisson equations, dielectrics and magnetic materials, electromagnetic waves and radiation, Fresnel equations, transmission lines, and wave guides.

Prerequisite: (CCSC-114 or PHYS-95) & MATH-212

PHYS-SHU 252

Solid State Physics

Solid state physics cover the principles of crystallography; crystal structure; lattice vibrations; band theory—metals and insulators; semiconductors; magnetism; and superconductivity. Topics of current interest such as high temperature superconductivity, quantum Hall Effect, and fullerenes may be included, depending on interest.

Prerequisite: PHYS-250

PHYS-SHU 255

Biophysics

Introduction to the physical mechanisms underlying biological processes. Elements of equilibrium and nonequilibrium statistical mechanics are used to explain how the molecular-scale components of biological cells store and process information, how they organize themselves into functional structures, and how these structures cooperatively endow organisms with the ability to eat, move, respond to the environment, communicate and reproduce.

Prerequisite: PHYS-250

PHYS-SHU 301

Quantum Mechanics

Designed to provide a rigorous mathematical introduction to quantum mechanics, this course covers the Schrödinger and Heisenberg description of quantum systems, application to basic atomic structure and simple boundary condition problems, quantum statistics, and perturbation theory.

Prerequisite: (CCSC-114 or PHYS-95) & MATH-160

PHYS-SHU 302

Statistical Mechanics and Thermodynamics

Topics include relation of entropy to probability and energy to temperature, the laws of thermodynamics, Maxwell-Boltzmann, Bose-Einstein, and Fermi-Dirac statistics, equations of state for simple gases and chemical and magnetic systems, and elementary theory of phase transitions.

Prerequisite: PHYS-250

PHYS-SHU 303

Advanced Physics Laboratory

A further development of the experimental techniques introduced in Foundations of Science as applied to modern physics. Following a number of introductory experiments, students have at their option a variety of open-ended experiments they can pursue, including the use of microcomputers for data analysis. Experimental areas include Mossbauer effect, cosmic rays, magnetic resonance, superfluidity and super-conductivity, and relativistic mass.

Prerequisite: CCSC-114 or PHYS-95

PHYS-SHU 314

Astrophysics

Introduction to modern astrophysical problems with an emphasis on the physical concepts involved: radio, optical, and X-ray astronomy; stellar structure and evolution; white dwarfs, pulsars, and black holes; and galaxies, quasars, and cosmology.

Prerequisite: PHYS-250

PHYS-SHU 315

Nuclear and Particle Physics

The phenomenology and experimental foundations of nuclear and particle physics are explored in this course, with emphasis on the fundamental forces underlying particle interactions.

Prerequisite: PHYS-250

PHYS-SHU 999

Physics Research in Shanghai

SOCS-SHU 100

Public Speaking in a Leadership Context

The purpose of this course is to provide a competitively chosen cohort of NYUSH sophomores with at least a 3.0 GPA a unique opportunity to practice and improve their public speaking and public presentation skills within a leadership development context. All students will take the class together and enrollment is capped at 24 students. Students will submit applications to the class during the spring/early summer of 2015, stating the reasons for their interest, and receive word of their selection by the NYUSH administration by early July. Students will be instructed on various public speaking tips and will be given assignments outside of class and various exercises in class to learn what goes into an effective speech or presentation and how to enhance their public speaking skills. They will read, listen to, and analyze some of the world's greatest speeches; take part in both individual and team-based public speaking exercises; and receive detailed feedback from the instructor and classmates on content, style, organization, and delivery. The aims are that by the conclusion of the class, students will be familiar with numerous different types of speeches and presentations, will understand how leaders can use their public speaking skills to good effect, will have learned both how to employ positive speech techniques and to minimize negative speech habits, and will have more confidence in their own public speaking ability.

The course will be offered for 2 credit hours. Attendance is mandatory, as no part can be repeated or replicated. Application required.

SOCS-SHU 129

Taboo and Pollution

This course is an in-depth introduction to the study of taboo, dirt, and cleanliness. We'll examine a range of actual examples from around the world, including taboos around sexuality, hair, and blood; food taboos, and other taboos governing religious practices; disgust, fear, and avoidance; modern and contemporary conceptions of hygiene, filth, and waste treatment; as well as the ideas underlying racism and social purity, built on the logic of taboo. We'll survey and discuss a wealth of writings, including the latest attempts to re-think and understand the classic topic of taboo. This is mainly through anthropology (Valeri, Douglas, Steiner, and other authors) but also through crucial contributions from psychology and literary studies (Freud, Kristeva, and others). Students will engage in research and writing, including on their own personal experiences of taboo and pollution.

Prerequisite: None

SOCS-SHU 131

China and International Law

China's emergence as a ubiquitous player in world politics brings it into sustained contact with the existing world order, held together—sometimes tightly, sometimes loosely—by international law on a number of issue areas. This course considers international law and Chinese politics in a few key areas in an effort to appreciate that fact. The course has two main objectives: to deliver an interdisciplinary approach to international law marked by a discussion of China's domestic politics and foreign relations, and to help you to develop the ability to do original, analytical research that's relevant to the topics at hand. We will first introduce public international law and ground it in theories of international relations and Chinese politics. We will then explore how China and other countries create and navigate law regarding state rights and duties, human rights, environmental protection, the global economy, war and war-fighting, and territorial disputes.

Prerequisite: None

SOCS-SHU 132

Shanghai: Urban Planning and Development of a Twenty-First Century Global City

Shanghai continues to encounter the challenges and opportunities of a precipitously urbanizing geography, as urban planning has changed from being a socialist provider of goods and welfare to a supporter of China's expansion through the new "reform and opening up" market economy. In this course, we will delve into the economic, political, and cultural roles of cities, with a special focus on Shanghai – probably the best living laboratory to study urban planning in the world. In order to understand Shanghai in a theoretical context, two sets of readings will be introduced for each topic: classic writings in the field of urban studies/planning/sociology, architecture, history, and writings specific to Shanghai. This theoretical context will be heavily supplemented by a series of hand-on field trips, taking full advantage of Shanghai as our planning laboratory. The goal of this course is to introduce students to urban design, urban studies and city planning, as well as to help students develop their critical observation, analysis, and thinking skills regarding urban environment.

Prerequisite: None

SOCS-SHU 141

Methods of Social Research

This is an introduction to research methods in the social sciences. It is intended to provide a foundation for an understanding of the major approaches in the social sciences to the collection and analysis of quantitative and qualitative data, and the specification and testing of theories. Special attention will be given to new methods developed to study online contents, the Internet

and social media (e.g., online flow, audiences, virality and impact). The course covers the logic of scientific inquiry and various research techniques such as experimentation, scientific sampling, survey research, field methods, archival data, and quantitative analysis that are commonly used by researchers in economics, education, political science, psychology, and sociology. The most basic goal of the class is to provide students with sufficient understanding of the basic elements of research design to be critical readers of research publications in the social sciences. In particular, they should be able to understand how the researchers arrived at their conclusions, assess whether the design of the study is adequate to support them, and possibly identify shortcomings in the design that would affect the conclusions. After completing this course students should have an overall sense of the range of methodologies for data collection and analysis available to the social science researcher, and the elements of study design required to ensure the results will actually be informative. This is not a statistics or quantitative methods class, and there will be no systematic instruction in the use of statistical software, or other quantitative analysis of data. Students seeking training in social statistics should take a course in social statistics.

SOCS-SHU 150

Introduction to Comparative Politics

Why do some nations succeed while others fail? What is the relationship between regime type and prosperity? Can "struggling" countries learn from more "successful" ones? How do we define the success and failure of nations in the first place? This course will address these and other questions about the relationship between the domestic politics of a country and the outcomes in the country that most humans care about -- wealth, happiness, stability, opportunity, and more. Students will learn tools for analyzing complicated issues like politics and prosperity through a social scientific lens. Students will master the fundamentals of the area of Comparative Politics through assignments, readings, exams, and hands-on analysis opportunities. Students will be challenged to leave their expectations and presumptions about "good" or "bad" regimes at the door, and come in, sleeves rolled up, ready to rigorously engage in the disciplined practice of Comparative Politics -- including question whether it even makes sense to "compare" "politics" at all. The course will prepare students for upper level coursework in Political Science as well as general life success.

Prerequisite: None

SOCS-SHU 160

Introduction to International Politics

What are the causes of war? Why are some countries able to cooperate over issues like trade or the environment, while others are not? What is the role of international organizations and alliances, such as the UN, NATO, and the EU in the international state system? This course will give students an introduction to thinking analytically and systematically about outcomes in the international system, will teach them the prevailing major theories about these issues, and will equip students to begin to formulate their own answers to these questions. Students will learn a set of formal tools to analyze complex world events, which will prepare them for upper level international relations and other social science courses, as well as to become comfortable applying social science methodologies and theories to better understanding the world around us. The class will use some basic math, including introductory game theory, and some background in inferring statistical results will be helpful, but is not required. Over the course of the semester students will be challenged to apply the models and theories from class to real world situations.

Prerequisite: None

SOCS-SHU 172

U.S. Constitution

Welcome to the United States Constitution. I am looking forward to an exciting term of thinking about what the U.S. Constitution means and whether its ideas and rules can or should be exported to the People's Republic of China. American constitutional law is important and interesting, but it is also inherently confusing. My chief goal is to minimize the confusion that the material presents, in hopes that we can get some insight on what it means for the Constitution to supply rules of law conferring and limiting governmental officials' authority. Understanding the U.S. Constitution can be difficult for two reasons. First, American constitutional law purports to limit very powerful political actors with law-making and law-enforcing authority - members of Congress, state legislatures, governors, Presidents, judges, etc. It is not obvious how a piece of paper, a mere parchment barrier, can limit such actors. We know how ordinary law controls private people: If you disobey ordinary law, then the police might put you in jail, or a judge may force you to pay a fine. But constitutional law tries to tell the judge and police what to do. Why should they listen? Who will put them in jail if they ignore the law? How does a mere piece of paper limit (for instance) the President, who is himself or herself the chief executive with control over federal law enforcement? Unlike ordinary law, constitutional law requires powerful political actors voluntarily to obey the rules. The "real" constitution that judges and other politically powerful people actually follow, therefore, can be very different from the written constitution. Some of these hidden constitutional rules are contained in the hearts and minds of most Americans: They are unspoken assumptions about how We the People should be governed. For instance, "popular sovereignty" - the idea that a majority of citizens should control the government, because they represent everyone, including the minority of citizens - is one of those assumptions. Some of these rules and principles are more explicit: they are contained in

the official interpretations of the written Constitution by judges, the Congress, the President, or important lawyers like the Attorney General. These official interpretations can be "precedents" that political leaders feel obliged to obey. When these precedents contain detailed reasons, then they are called "doctrine." The doctrine is sometimes regarded as just as much part of the constitution as its text. Some hidden rules are not officially recognized as doctrine: They are more like "qian guise" – customs that people follow even though they do not admit it. To know the real constitution rather than just the paper constitution, it is important to be familiar with both basic Page 2 of 14 unwritten principles, official doctrine and qian guise. Second, the written Constitution in the United States is very old and very hard to change through the formal amendment process contained in the Constitution's text (that is, Article V). The actual Constitution, therefore, gets updated not so much through formal written amendments as through big political fights. These changes take place over a long period of American history. To understand how the Constitution has changed in the past and might change in the future, it is important to be familiar with this history. We will, therefore, spend a lot of time discussing the basic principles and political fights that have shaped the Constitution's real meaning.

In addition to trying to figure out what American law is, we will also spend some time thinking about what constitutional law should be. The People's Republic of China provides a good opportunity for thinking about whether and to what extent constitutional practices from one society can and should be used in another society. The Fourth Plenum of the Eighteenth People's Congress announced a new commitment to rule according to the 1982 Constitution of the People's Republic of China. Would any American ideas help with this commitment, or not? Comparing the American with the Chinese experience can be a good way of understanding both better. This class also presents an opportunity to practice forensic and expository English. That is a fancy way of saying that I want you to get better at describing, and arguing about, law in spoken and written English. We will hold three in-class debates on whether the PRC should adopt, modify, or reject American practices on three specific constitutional topics: Judicial review, executive power, and subnational ("state" in the United States, "provincial" in China) power. For the purposes of these debates, the class will be divided into two "teams," one for and the other against the Chinese adoption of an American idea. In addition, everyone must write three short (750-1,000 word) essays attacking or defending three American positions. Of course, to attack or defend an idea, you have to describe it accurately: Part of the mission of your papers and spoken presentations is not only to argue about the law effectively, but also to describe the law clearly.

Prerequisite: None

SOCS-SHU 185

The Relationship Between Government and Religion

This course examines the relationship between government and religion. To this end, the course concentrates on the interpretation, meaning, application, and wisdom of 16 words from the American Constitution: "Government shall make no law respecting an establishment of religion or prohibiting the free exercise thereof." These 16 words serve as a starting point for the course because they broadly prohibit government entanglement with religion while simultaneously bestowing government with the responsibility to protect religious freedom. The primary texts of the course are the opinions of the United States Supreme Court, the highest Court in the United States, and final authority on interpretations of the Constitution. Prior knowledge of the subject matter or the United States is not a prerequisite for this class.

Application required.

SOCS-SHU 226

Poverty and Inequality Around the Globe

This course is designed to understand more formally and rigorously the causes and consequences of high and rising poverty and inequality around the globe, which is central to our preparation as global citizens. Globalization appears to be one of the major reasons to contributing the ever higher incomes of the top 1% in the U.S., for example, even as it lifts hundreds of millions of workers in Asia out of poverty. The overarching goals of this course are that students learn about poverty and inequality in both the poor and rich countries and why it matters to everyone. Students will learn the ways in which poverty and inequality around the globe are shaped by multifaceted contexts; understand the ways how the rich countries (i.e., US and UK) address their own poverty and inequality issues and how the major social policies and programs may affect people's well-being or quality of life; and develop beginning expertise in understanding social policy content, policy actions of agencies, and political bodies and the skills needed to influence social policy. This course is particularly concerned with philosophies of global justice and the ethics of global citizenship. Students are expected to critically reflect upon their own engagements with poverty action and their own aspirations for social change. This course emphasizes the roles that social issues, values, power, politics, the economy, discrimination, and advocacy play in the dynamic policy making and implementation environment. This course thus provides students with the basic policy related competencies and practice skills for conducting research-informed policy analysis and advocating for policy change. There are no prerequisites for the class although students should be prepared to tackle advanced social science readings and analysis.

Prerequisite: None

SOCS-SHU 251

Topics in Law & Society: Law, Culture, & Politics in China

We live in a world where there is an emerging global focus on governance—the ways in which government, market and civil society can be used to address public problems—both domestic and global. In Beijing as well as Washington experts now use the same global vernacular of “governance” to discuss approaches to pressing public problems. Conference goers in either place will hear terms (often in English) such as democracy, rule of law, transparency, civil society, NGO/NPO (Nongovernment organization, nonprofit organization), GDP, crisis management, environmental sustainability, and CSR (corporate social responsibility.) But however flat the new common language may make the world seem to observers, the same words may have different meanings in different heads. In each country the practical meanings of such terms are shaped by what might be called different “operating systems.” In its remarkable rise, China studies the experiences of the world. America may have invented modern pragmatism, but China (“black cat white cat, it does not make a difference as long as it catches mice”) may now be its leading practitioner. But while China seeks to learn from the western—it seeks to modify them to “Chinese characteristics,” China’s own cultural values and traditions, as they have evolved over millennia.

Prerequisite: None

SOCS-SHU 450

Chinese Environmental Government

As the 21st century began, pundits debated whether, like the 20th, it would also be “America’s century,” whether China’s remarkable economic rise would make it “China’s century,” or, perhaps, one seeing the development of “Chimerica.” At the same time, it was also said that environmental limits to development will be the primary shaper of countries and their fortunes—with China (and India), with huge population and rapid development, and the U.S., with high per capita consumption, as keys to the future of the planet. This course will study China’s environmental challenges and governance in the context of America’s own environmental challenges and governance system, and in the context of the challenges to the two countries as the primary sources of the world’s greenhouse gas emissions. We will consider how developments may shape business, government, and culture, and the ways in which China and America may learn from one another.

Prerequisite: None

NYU Shanghai

Leadership and Faculty

NYU Shanghai has a world class faculty and administration in Shanghai as well as a large cohort of affiliated faculty from across NYU's Global Network. At NYU Shanghai professors are scholars, scientists, and artists who are proven and innovative teachers and leaders of international standing in their fields. They have been appointed because of their commitment to cutting-edge research and engaged teaching methods to build the university of the future, NYU Shanghai.

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JEFFREY S LEHMAN

Vice Chancellor
J.D. University of Michigan Law School

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Academic Calendar

ORIENTATION

Aug. 21	Fri	Freshman Move In Day
Aug. 22	Sat	First Day of Orientation and Convocation
Aug. 25	Tue	Returning/Study Away Move In Day
Aug. 26	Wed	First Day of Orientation Returning/Study Away

FALL SEMESTER

Aug. 31	Mon	Fall Semester Classes Begin Fall 1st 7-week Classes Begin
Sept. 3	Thu	Commemoration Day: No Classes
Sept. 6	Sun	Legislative Day
Sept. 11	Fri	Add/Drop Course Deadline
Sept. 28	Mon	Mid-Autumn Festival Holiday
Tue, Sept. 29 - Fri, Oct. 2		National Day Holiday: Fall Break
Oct. 23	Fri	Last Day of Fall 1st 7-week Classes
Oct. 26	Mon	First Day of 2nd 7-week Classes
Oct. 30	Fri	Midterm Grades Deadline
Nov. 6	Fri	Course Withdrawal Deadline Grading Option (P/F) Deadline
Nov. 15	Sun	Legislative Day: Classes meet on a Thursday schedule
Nov. 23	Mon	Registration for Spring Semester 2015 Begins (tentative)
Thu, Nov. 26 - Fri, Nov. 27		Thanksgiving Holiday
Nov. 29	Sun	Legislative Day: Classes meet on a Friday schedule
Dec. 11	Fri	Last Day of Fall Semester Classes Last Day of Fall 2nd 7-week Classes
Dec. 12	Sat	Reading Day
Mon, Dec. 14 - Fri., Dec. 18		Final Exams

Final Grades Deadline Grades are due 72 hours after the scheduled final exam date.

WINTER BREAK

Sat, Dec. 19 - Sun, Jan. 3 No classes

OPTIONAL JANUARY TERM

Jan. 4	Mon	January Term Classes Begin
Jan. 21	Thu	Last Day of January Term Classes

2015-2016

SPRING SEMESTER

Jan. 22	Fri	Study Away Students Move In Day
Jan. 23-24	Sat-Sun	Study Away Student Orientation
Jan. 25	Mon	Spring Semester Classes Begin
		Spring 1st 7-week Classes Begin
Feb. 5	Fri	Add/Drop Course Deadline
Mon, Feb. 8 - Fri, Feb. 12		Spring Festival Holiday
March 18	Fri	Last Day of Spring 1st 7-week Classes
March 21	Mon	Spring 2nd 7-week Classes Begin
March 25	Fri	Midterm Grades Deadline
April 1	Fri	Course Withdrawal Deadline
		Grading Option (P/F) Deadline
April 4-8	Mon-Fri	Spring Recess (includes Qingming Holiday)
April 18	Mon	Registration for Fall Semester 2015 Begins (tentative)
April 24	Sun	Legislative Day: Classes meet on a Monday schedule
May 2	Mon	China Labor Day Holiday
May 13	Fri	Last Day of Spring Semester Classes
May 13	Fri	Last Day of Spring 2nd 7-week Classes
May 14	Sat	Reading Day
Mon, May 16 - Fri, May 20		Final Exams

Final Grades Deadline Grades are due 72 hours after the scheduled final exam date.

OPTIONAL SUMMER SEMESTER

SUMMER SESSION I

May 23	Mon	Summer Session I Classes Begin
May 27	Fri	Add/Drop Course Deadline - Summer Session I
June 9	Thu	Dragon Boat Festival (Duanwu Festival)
June 10	Fri	Course Withdrawal Deadline: Summer Session I
July 1	Fri	Last Day of Summer Session I Classes

SUMMER SESSION II

July 4	Mon	Summer Session II Classes Begin
July 8	Fri	Add/Drop Course Deadline - Summer Session II
July 22	Fri	Course Withdrawal Deadline: Summer Session II
Aug. 12	Fri	Last Day of Summer Session II Classes



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