UNDERGRADUATE BULLETIN
2020-2021

NYU SHANGHAI
上 海 纽 约 大 学

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1555 Century Ave
Pudong, Shanghai
China 200122

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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. Several 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 a global orientation. Students explore social and cultural foundations through courses that span cultures and contexts, both Chinese and international. Writing and language courses develop students' communication skills in both English and Chinese. Mathematics and science are a part of every student's education, as are courses which introduce or strengthen a student's understanding of algorithmic thinking.

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.

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 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. 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

The NYU Shanghai residence halls is located in the JinQiao area of Pudong. Housed in three towers of the Green Center complex, the residence hall is located within an international hub with easy access to both local and international shops and restaurants. By living alongside fellow students and Resident Assistants, 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 rigor of curriculum and grades, extracurricular activities, teacher and counselor evaluations, and a demonstrated interest in global citizenship, service, and leadership.

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*—three to four 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. Non-native English speakers may be required to complete English language testing and/or to participate in an online interview

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 Common Application.

Financial Support

NYU Shanghai is committed to providing the best financial aid package available based on an individual family's needs. As such, we invite all applicants, regardless of citizenship, to apply for financial aid through NYU Shanghai. US citizens and permanent residents should file the FAFSA and the CSS Profile; non-US citizens or permanent residents need only file the CSS Profile.

Transfer Applicants

NYU Shanghai currently only accepts first-year students. If you have already begun a university degree and are interested in applying, please contact our admissions office for more details.

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 if and when they may switch campuses.

Study Away Students

NYU undergraduate students from New York and Abu Dhabi may attend NYU Shanghai as full-time students for one or more semesters. Students should apply to study away through NYU's Office of Global Programs.

Special Undergraduate (Visiting Students)

Students from other four-year accredited undergraduate universities may attend NYU Shanghai as full-time students for one or more semesters. Students should apply to study away through NYU's Office of Global Programs.

Readmission of Former Students

Any former student who has been out of attendance for two or more 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.

Special (Postgraduate) Students

NYU Shanghai is not currently accepting postgraduate students to take undergraduate classes.

Advanced Standing

NYU Shanghai does not award credit for work completed at another college or university or advanced standing exams. In some cases, high school exam scores may be used for course placement. For a full list of eligible exams and scores, see: Core Curriculum Section.

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 (add NYU then ensure that Shanghai is listed as a campus of application on the Questions page)
- 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 via the CSS Profile and FAFSA, if applicable, by stated deadlines

Please apply in accordance with the following deadlines:

Milestone	Date
Early Decision I Application Deadline Notification Deadline Response to an offer of admission	Nov 1 Dec 15 Jan 3
Early Decision II Application Deadline Notification Deadline Response to an offer of admission	Jan 1 Feb 15 Mar 1
Regular Decision Application Deadline Notification Deadline Response to an offer of admission	Jan 1 Apr 1 May 1

How to Apply for Financial Aid

All applicants (regardless of citizenship) will need to submit the CSS 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 award in mid-December)
- Early Decision II: January 15th (to receive a financial aid award in mid-February)
- Regular Decision: February 20th (to receive a financial aid award by April 1)

Chinese Applicants
Admissions Regulations

上海纽约大学2020年招生方案（中国大陆学生）

上海纽约大学将中美优质高等教育的优势相结合，精心打造注重激发和提升学生创新能力的课程体系、教学环境和培养模式，致力于将学生培养成为能够适应未来社会高速发展、全球化激烈竞争的精英人才。学生入学时不分专业，通过完成涵盖不同学科和领域的核心课程，在对各个学科的内容、前景，以及自身特点有了深入认识以后，最迟可在大二结束前完成专业的选择。大学就读期间，学生可以选择前往纽约大学全球教育体系中的纽约校区、阿布扎比校区或分布于五大洲的11个学习中心进行为期1~2个学期的海外学习。

上海纽约大学在全面审视每位申请学生的申请材料的基础上，通过"校园日活动"评价、高中学业和高考成绩相结合的招生录取模式，选拔出一批最适合上海纽约大学的优秀学生，而非采用高考成绩为单一依据的招生录取方法。其中，"校园日活动"是上海纽约大学首创的招生录取重要环节，着重考察学生的语言能力、综合素质，以及与学校的适合度和匹配度。

一、招生对象

上海纽约大学寻找的是学业优异、英语能力突出，具有强烈求知欲和好奇心，勇于挑战自我，乐于尝试新事物，能够适应国际化竞争环境，并且愿意成为跨文化沟通桥梁的优秀高中毕业生。

符合高考报名条件并参加2020年高考的学生均可申请报考上海纽约大学。

上海纽约大学对申请材料进行审核后，将从所有申请学生中邀请部分优秀学生参加"校园日活动"，并在考量学生"校园日活动"表现的基础上，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2020年面向全国招收251名学生，招生计划不做分省安排，各省（自治区、直辖市）招生名额不设上下限，在所有申请学生中择优录取。

各省级招生主管部门编印的《2020年普通高

等学校招生专业和计划》中的上海纽约大学招生计划数及专业名称，仅用于学生高考志愿填报，与各省（自治区、直辖市）最终录取人数和学生入学专业无关。

三、申请方式

1.在线提交Slate申请

所有申请报考上海纽约大学的学生，都必须登录纽约大学Slate申请系统（https://connect.nyu.edu/apply），填写相关信息并完成两篇文书，于2020年1月1日前在线提交。

2.在线填写并打印《上海纽约大学2020年校园日活动申请表》

完成"Slate申请"注册步骤后，学生需在上海纽约大学"校园日活动报名系统"（https://cn.application.shanghai.nyu.edu/）实名注册，按要求在线填写、提交并打印《上海纽约大学2020年校园日活动申请表》。

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，所有申请材料应清晰、真实、完整。每页材料须在右上角空白处手写注明申请学生的9位Slate 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2029年校园日活动申请表》（请在上海纽约大学"校园日活动报名系统"下载打印，打印时务必选择A4纸格式）

（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相关部门公章。如中学有既定的格式，以中学出具并加盖公章的成绩单为准。
上海学生请同时提供已参加的选考科目成绩。

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。

（3）高中期间主要获奖证书复印件及其他证明自己特长和优势的材料（非必需）。

申请材料须于2020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（以当地寄出日期为准）。所有申请材料恕不退还，请学生自行备份。

邮寄地址：上海市浦东新区世纪大道1555号，上海纽约大学招生办公室收

邮编：200122　联系电话：021-2059 5599

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2020年2月5日以电子邮件形式通知学生初审结果。

2."校园日活动"

初审合格的学生受邀参加上海纽约大学"校园日活动"，学校通过"校园日活动"主要考察学生的英语运用能力，以及求知欲，领导力，学习能力，适应能力，沟通表达能力，心理素质，团读精神等各方面素质。
"校园日活动"全程用英语进行，在春节后的周末分批进行，具体时间和地点将另行通知。

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，对每位学生进行严谨的评价和讨论，并给予相应录取政策：

A. 预录取：学生须参加2020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（一二本录取批次合并的省为自主招生控制分数线，浙江为第一段分数线），上海纽约大学即予以录取。

B. 待录取：学生须参加2020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（一二本录取批次合并的省为自主招生控制分数线，浙江为第一段分数线），上海纽约大学将结合学生申请过程中的各项因素，包括高考成绩，综合评定，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、学费及奖助学金

2020年入学本科生学费：第一、二学年每年人民币120,000元，第三、四学年每年人民币180,000元。

被上海纽约大学录取的学生，学校将根据学生在"校园日活动"中的表现和申请材料给予部分学生奖学金。奖学金设二档，将按学期分四年发放：全球典范奖，共人民币240,000元；全球菁英奖，共人民币120,000元。

对于被上海纽约大学录取、但家庭无法承担学习和生活费用的学生，在学生按要求提供的家庭经济状况信息真实完整的前提下，学校将酌情提供助学金，学校不希望被录取的学生因家庭经济困难而失去终身发展的机会。

学生在校期间，还可申请国家助学贷款，及各级奖助学金。学校还会提供大量校内外实习机会进一步帮助学生减轻经济负担。

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：021-2059 5255
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：021-2059 5599
咨询邮箱：shanghai.admissions@nyu.edu
咨询现场：上海市世纪大道1555号上海纽约大学咨询中心
官方微博：上海纽约大学招生办（新浪微博）
官方QQ群：
上海纽约大学招生官方 - 华东　　111393813

上海纽约大学招生官方 - 华北东北
312415903

上海纽约大学招生官方 - 西南西北
584188864

上海纽约大学招生官方 - 华中华南
605743020

官方微信：NYUSHZS

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 2020--2021. 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 Albert course listing for information.

All fees are payable at the time of registration. The Office of the Bursar is located on the 10th floor of the campus building in room 1051. Online payments and wire transfers are to be paid to NYU Shanghai for the exact amount of the tuition and fees required. In the case of an 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 2020-2021 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 2020-2021 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 summer or January term 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 2020-2021

Direct Costs: Costs that you will be charged by NYU Shanghai	Cost
Tuition, Registration and Services Fees*	$54,882*
Health Insurance**	$3,706**
Room	$4,314
Estimated Books and Materials	$1204

Indirect Costs: Other educational costs incurred	Cost
Board (Meals)	$2,650
Estimated Personal Expenses	$1,000
Estimated Travel	$3,750

Total Cost of Attendance (Estimated)	$71,506

Tuition, Registration and Services Fees, per unit (19 or more units) $1,609. This charge will be assessed to students who take over 18 units.

**Health insurance charges vary. Your direct charges may vary.

***International students can use reliable exchange rate information while arranging financials in advance, official USD exchange rate will be published in July, 2020

Special Programs including Study Away

The tuition paid to NYU Shanghai is the cost of tuition for a semester away in NYU's global network (for a standard full time course load). However, the cost of attendance varies between the global academic centers and degree-granting campuses, for other expenses (i.e. room, board, travel) for study in the NYU Study Away programs and in NYU International Exchange Programs. Students may refer to the cost estimator to get an estimate of their expected cost of attendance per semester.

NYU January and Summer Terms

Starting in their freshman year, students are eligible for NYU January term. After completion of the freshman year students are eligible for NYU summer terms. NYU's January and Summer terms allow students more flexibility and 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 NYU Shanghai or one of the global study away sites or other degree-granting campuses. 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 from the NYU Shanghai Office of Global Affairs. Students should be aware that there are additional tuition fees for January and summer terms outside of the fall and spring semesters. Typically financial aid is not available for the terms.

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* - Make a Payment starting 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 below 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.

Undergraduate Refund Schedule

Withdrawing From ALL Courses (Fall and Spring Only)

A refundable credit balance may result on your student account because of financial aid disbursements, over-payments and/or account adjustments. Before you get any refund, please make sure you have valid bank account information that you wish the refunds to go to in Bursar's records. If you are not sure about your account info, please contact us to update or add new accounts.

For details on Refund and Withdraw, please visit :

Chinese Students:
https://shanghai.nyu.edu/academics/tuition/chinese/refunds-and-withdrawals

US Students:
https://shanghai.nyu.edu/academics/tuition/us/refunds-and-withdrawals

International Students:
https://shanghai.nyu.edu/academics/tuition/international/refunds-and-withdrawals

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 above "Refunds" page on the Office of the Bursar's website.

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 be comprised 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 and/or need-based scholarships is determined by a student's prior academic strengths, and upon demonstration of financial need from the results of the submitted financial aid form(s) .

NYU Shanghai Scholarship and/or grant renewal:
US Citizens and International Students (Non-Chinese Nationals)

Your scholarship and/or grant will be renewed in the same amount provided in your first year at NYUSH as long as you are enrolled as a full-time student (enroll in 12 credits or more per semester). Please note that if you enroll in 6-11 credits per semester, your scholarship/grant will be prorated. If you enroll in 5 credits or less per semester your scholarship and/or grant will be canceled.

US Citizens:
All returning undergraduate students will be reviewed for US federal financial aid eligibility with the successful submission of the FAFSA using NYU's school code (002785) for the relevant academic year. Federal financial aid may include Pell Grant and federal Direct Loans. Eligibility is based on financial need, anticipated enrollment, cost of attendance, and the availability of funds. We suggest that all students file by **May 1** in order to ensure that their financial aid offer will be ready in advance of the Bursar bill.

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): +86-21-2059-5599 for additional information regarding individual scholarship requirements.

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

The College Scholarship Service (CSS) Profile

The CSS Profile is required of all applicants, 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 have their noncustodial parent submit their own CSS Profile (or the NYU CSS Profile Waiver Request for the Noncustodial Parent with all 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.

- Visit https://cssprofile.collegeboard.org/to begin and submit the CSS Profile for both your custodial and noncustodial parent (if applicable).
- Students needing a CSS Profile Waiver Request for the Noncustodial Parent should contact *shanghai.financial.support@nyu.edu*.
- The New York University CSS school code number is 2785.
- The upcoming aid year's CSS Profile becomes available as of October 1.

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

Freshman Applicants CSS Profile Deadlines:

	Early Decision I	Early Decision II	Regular Decision
CSS Profile	November 15	January 15	February 15
CSS Profile for the noncustodial parent (if applicable)	November 20	January 20	February 15
Estimated Award Notification	mid-December	mid-February	April

official permanent resident applicants who would like to be considered for financial aid at NYU must submit the FAFSA in addition to the CSS Profile form.
- Visit *http://fafsa.gov* 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.
- The upcoming aid year's FAFSA becomes available as of October 1.

Freshman Applicants FAFSA Deadline:

	Early DeciSion I	Early Decision II	Regular Decision
FAFSA	November 15 *	January 15 *	February 15
Award Notification	mid-December *	mid-February *	April

* EARLY DECISION RECOMMENDED FILING DATE FOR FAFSA:
The FAFSA (NYU school code 002785) is required for federal financial aid and NYU scholarship consideration for all U.S. Citizens, Permanent Residents, and eligible non-citizens applying to our New York City campus and/or to NYU Shanghai. Early Decision admitted students who file and complete the FAFSA by the CSS Profile deadline will receive a financial aid package that includes federal financial aid eligibility at the time of admission. Early Decision admitted students who file and complete the FAFSA after the CSS Profile deadline will have their federal aid eligibility awarded upon receipt of the FAFSA. Use of the Data Retrieval Tool is preferred whenever possible.

Student Responsibilities
- US Citizens: You must submit a FAFSA application each year to renew the federal aid portion of the financial aid awarded at NYU.
- You should refer to *https://www.nyu.edu/admissions/financial-aid-and-scholarships/new-undergrad.html* for all financial aid application deadlines for freshman applicants. It is important to adhere to all applicable deadlines for aid consideration.
- Use NYU Albert at *albert.nyu.edu* to view and accept your financial aid awards.
- Please do not submit any additional documentation unless otherwise requested by the Office of Financial Support.
- It is important that you understand the conditions of the awards you accept. Contact the Office of Financial Support at *shanghai.financial.support@nyu.edu* if you have any questions.
- You must adhere to satisfactory academic progress standards to remain eligible for your NYU Shanghai scholarship and/or grant. 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 outside source. A change in your resources may affect the type of aid you may be eligibility for.
- 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 enrollment to fewer than 12 credits per semester or if you are enrolled full-time (at least 12 credits or more) but intend to begin part-time (less than 12 credits per semester) to discuss how those changes will impact your financial aid. 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 NYU University Office of the Registrar if you have a change of address by updating your contact information via NYU Albert at *albert.nyu.edu*. We use the records from the Office of the Registrar to administer financial aid.

Registration, Academic Advisement, and Counseling

Registrar's Office

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 or to view its website at shanghai.nyu.edu/academics/registration. Office hours are weekdays from 9 a.m. -11:30 a.m. and 1:00 p.m. to 5 p.m.

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

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.

Continuing Students

Students currently enrolled in NYU Shanghai register in November for the spring term and in April for the fall term. Before registering, students should plan a provisional schedule and put it in the "shopping cart" function of Albert. They should also discuss their program and courses with their advisor, who then clears them for registration. Students may use the "validate" function in Albert to validate all of the courses they would like to enroll in before their appointed registration time. 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. Students are also responsible for clearing other registration holds such as library holds.

Health Insurance and Immunization Policy

All full-time students must be in compliance with NYU Shanghai's health insurance and immunization requirements. For pre registration immunization requirements, please see: *http://www.nyu.edu/students/health-and-wellness/student-health-center/next-stop-health-requirements/shanghai.html*. 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.

Academic Advising

Academic advising is the process through which NYU Shanghai provides the necessary resources for students to make thoughtful 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 rests with each individual student, academic advisors and faculty mentors assist students by suggesting options and by discussing possible outcomes of the choices they make. Students can expect that their academic advisors and faculty mentors in the majors will help them:

- Define academic goals and evaluate progress towards those goals;
- Understand academic policies and requirements, provide guidance during course selection, and provide help with identifying other meaningful educational experiences;
- Identify institutional and community support services for assistance if necessary;
- Monitor progress as they move through the undergraduate program.

Each semester, students are required to communicate with their academic advisor (and first and second year students to meet with their advisor) to review their registration plan for the following semester and ensure that they are making normal progress towards their degree. It is the individual student's responsibility to make certain that he or she fulfills the requirements for

graduation.

A first year 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. The advisors serve as a liaison with other offices and can make referrals when appropriate. Advisors are therefore the best source for students to visit when they are unsure of where to go for help. Throughout the year, students needing additional assistance may also make an individual appointment with the Assistant Dean for Academic Affairs.

The Academic Resource Center

The Academic Resource Center (ARC) provides tutoring and support to students looking to reach their highest academic potential. Students can schedule a meeting through WCOnline, or drop by the ARC, for the following:

- Individual and small-group tutoring in over 30 Math, Computer Science, Natural Sciences, Business, Economics, Interactive Media Arts/Business, and Chinese Language courses
- Individual writing, speaking, and reading consultations at any stage of the learning process
- Academic coaching in areas such as critical reading, note-taking strategies, goal setting and time management
- Workshops on writing, creativity, applications and software

Students are also welcome to study on their own in the comfortable, supportive atmosphere of the Academic Resource Center.

Career Development Center

The NYU Shanghai Career Development Center (CDC) aims to provide comprehensive career guidance to the entire student body. The CDC collaborates with employers, alumni, faculty, other departments, and external organizations to provide a range of resources and opportunities for students to achieve personal and professional success.

Students may sign up for individualized appointments with a career coach throughout the year. An appointment with a career coach can help students with any of the following topics:

- Identifying and exploring career interests;
- Setting professional goals and developing an individual timeline;
- Effectively searching for internships and jobs in a particular field;
- Editing resumes and cover letters;
- Participating in a mock interview;
- Performing assessments to identify strengths, skills and interests;
- Exploring pre-professional and graduate school options;

Besides coaching appointments, students may find many other ways to gain professional skills and build connections to expand their network. The CDC offers robust career-related programming during the academic year including career fairs, career speakers, industry panels, skills workshops, alumni mentor matching, and much more.

Experiential Learning

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 its location in one of the financial, cultural, scientific, and media capitals of the world.

Many different types of opportunities are available to students; some involve volunteerism on the part of a student and some may be paid positions. Depending on their professional goals, students may choose to pursue off-campus internships, community service positions, research projects, competitions, conferences, and many other opportunities. For the purpose of securing and making the most of such opportunities, students should consider the following guidance.

Internship Regulations

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. International students who wish to participate in off-campus internships must follow the Internship Registration Process to ensure that the position meets legal criteria and is registered with the Chinese government. There are currently no restrictions on Chinese national students

participating in paid positions.

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.

Community Engagement

NYU Shanghai supports community-engaged learning components in academic courses such as service learning courses. We encourage students to seek out opportunities during their college career to apply their academic learning to understanding current social issues and local populations in the city of Shanghai and in greater China. These include faculty-led immersive learning trips and experiential learning opportunities that enhance academic study and research.

Preprofessional, Accelerated & Specialized Programs

Pre-Medical and Health Studies Program
It is important to understand that health-related 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 their area of interest along with completing the pre-medical and health curriculum.

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

Academic advisors and faculty mentors help students 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 NYU courses are equivalent to the basic set requirements most medical schools in the U.S. request. In general, most medical schools will expect applicants to have completed one year of biology, one year of physics, and two years of chemistry (through organic chemistry. However, specific medical schools may have additional requirements or modifications to those listed here. Students should carefully research the schools they are interested in for more information.

SUGGESTED COURSES FOR APPLICATION TO MEDICAL SCHOOL

- Foundations of Physics I & II Honors/ General Physics I & II
- FoS Physics I Laboratory & Physics II Lab
- Foundations of Chemistry I & II
- FoS Chemistry Laboratory
- Foundations of Biology I & II
- FoS Biology Laboratory
- Organic Chemistry I & II
- Bio chemistry I

In addition, many schools expect students to have taken the following courses:
- Calculus
- Statistics
- Introduction to Psychology
- Introductory sociology course
- Two writing courses. These courses cannot include Creative Writing and need to focus on writing or interpreting advanced texts

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 pre-law 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 pre-law 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.

3+2 Dual Bachelor's Program (CS & Engineering/ IMA & Engineering)

Students apply for admission to this program in their second year and complete their first three years at NYU Shanghai, pursing a Computer Science (CS) or Interactive Media Arts (IMA) major. Coursework at NYU Shanghai will focus on CS or IMA major, core curriculum, and STEM requirements. The final two years are spent at NYU Tandon in Brooklyn, focusing on advanced engineering coursework. Students who complete this program will earn the following degrees: NYU Shanghai, NYU, Chinese degree, and B.S. in Computer Engineering from NYU Tandon. The fifth year of study will require an additional year of tuition; the NYU Shanghai financial aid package will be extended to cover the fifth year of study. Interested students should work with their advisors to plan degree progress. Students may contact Dean Keith Ross (keithross@nyu.edu) for more information.

Counseling
Student Health Center

The Student Health Center is available for all students and no appointment is necessary. Counseling services are free on a voluntary basis for any student enrolled in NYU Shanghai. When necessary, medication and outside referrals are available. All conversations are kept strictly confidential. Student Health Center wellness counselors provide health-related advice and assistance in workshops, as well as in group and individual counseling.

The social and emotional conflicts that occur in a person's life occasionally prevents an individual 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. Wellness counselors provide an atmosphere where personal concerns can be examined and discussed freely and confidentially.

The Student Health Center at NYU Shanghai is committed to promoting a safe, informed, healthy and happy university community, by providing an array of professional services tailored to support our student's needs during their university life at NYU Shanghai. The Student Health Center is located on the 6th floor of the academic building is open Monday to Friday 8:30 a.m. - 5:30 p.m. The Center is staffed by highly trained professionals who are focused on supporting the needs of students. The Student Health Center's programs addresses the issues impacting students from a physical, emotional and health knowledge perspective and provides activities and resources that empower the students to achieve their academic potential.

The transition to adulthood and the navigation of college life presents wonderful opportunities, but can sometimes cause stress and varying emotions. We are also mindful of the great opportunities and added challenges of being a student in a mega city like Shanghai.

The Student Health Center provides medical and counseling support and promotes health knowledge through skills focused training and learning workshops in a warm and welcoming environment. All health services are confidential and offered to students free of charge. Walking-in hours and professional counseling appointments are offered to all students.

The Wellness Exchange is a 24 hour counseling hotline - all students can call for support. Tel: 021 2059 9999

Students with 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 qualified 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 Moses Center for Student Accessibility in New York determines qualified disability status and assists students in obtaining appropriate accommodations and services. The Moses Center 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 Moses Center for assistance. They should contact the Interim Assistant Director of the Academic Resource Center Tong Jin (*tong.jin@nyu.edu*) with any questions about 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
    Social Science

Bachelor of Science (B.S.)
    Biology
    Business and Finance
    Business and Marketing
    Chemistry
    Computer Systems Engineering
    Computer Science
    Data Science
    Electrical and Systems Engineering
    Interactive Media Arts
    Interactive Media + Business
    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 credits with a cumulative grade point average of at least 2.0. Within these, 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 registration in NYU Shanghai. Students may petition to follow the graduation requirements of a later cohort but must abide by all of the graduation requirements of the later cohort and may lose requirements (but not credits) earned for courses which meet requirements for the earlier cohort but not for the later one.

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 Academic Standards Committee 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 takes place annually at Commencement in May.

All graduated students receive: a New York University diploma (issued by New York University), a NYU Shanghai diploma (issued by Shanghai New York University), and a 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 credits 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 credits 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.

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.

Declaration

Students should discuss their major plans with their advisors. It is best to concentrate on completing breadth and general education requirements in the first two years since interest in majors may change as students take classes in different disciplines and changing majors may delay graduation for some students.

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.

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 in the NYU network. The courses used to complete the major or the minor must be taken in that disciplinary area.

Prerequisite Courses for Declaring a Major

Major	Final grade of C or higher in:
Biology	Foundations of Biology I
Business and Finance	Statistics for Business and Economics
Business and Marketing	Statistics for Business and Economics
Chemistry	Foundations of Chemistry II
Computer Science	Introduction to Computer Programming OR Introduction to Computer Science
Computer Systems Engineering	Introduction to Computer Programming OR Introduction to Computer Science
Data Science	Introduction to Computer Programming OR Introduction to Computer Science + Calculus
Economics	Microeconomics
Electrical and Systems Engineering	Introduction to Computer Programming OR Introduction to Computer Science
Global China Studies	Any required Global China Studies course
Honors Mathematics	Analysis I + Honors Linear Algebra II + Cumulative GPA 3.65 or higher in all classes and in Math classes
Humanities	Global Perspective on Society
Interactive Media Arts	Interaction Lab OR Communications Lab OR Application Lab OR Creative Coding Lab
Interactive Media and Business	Application Lab OR Interaction Lab OR Communications Lab OR Creative Coding Lab OR Principles of Financial Accounting OR Economics of Global Business
Mathematics	Multivariable Calculus
Neural Science	Foundations of Biology I
Physics	Foundations of Physics II
Social Science	Global Perspective on Society

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 but no more than two major courses may be approved for double counting unless otherwise specified in the major section of the Bulletin.

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 to complete two majors in the standard 128 credits. Requirements for completing a major as a double major are the same as detailed for the major requirements.

Core Curriculum classes do not count against double counting limits to fill major or minor requirements, but no single course may be used to meet more than two requirements.

The second major is declared the same way as the first but students do not receive priority in enrolling in second major classes before their last semester. Therefore, 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 that 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/or limit study away opportunities.

Requirements for Minors

Students may minor in subjects outside of their major. 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; 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. Students may use Core Curriculum classes to fill minor requirements but at least 12 credits of the minor must be unique to the minor, meaning that it is not double-counted

with any other major, minor, or core requirement. Additionally, no single course may be used to meet more than two requirements.

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. 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.

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 cumulative 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.)

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.

{ **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

- Courses
- Credits
- Examinations
- Grades
- Leaves

COURSES

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 credits per term, or 32 credits per year, which enables a student to complete the entire program of 128 credits in four years. Minimal full-time status entails completing at least 12 credits per term, or 24 credits 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 credits per year jeopardizes a student's full-time status and his or her eligibility to receive financial aid. Students may enroll in fewer than 12 credits in their final semester but still maintain full-time status if they are enrolled in the course(s) that they need to graduate that semester and have applied for degree conferral that term.

Students in good academic standing may register for more than 18 credits per term after their freshman year with the clearance of their academic advisor and approval of the Assistant Dean for Academic Affairs.

There are additional per credit costs for each credit 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 the Albert Student Center or file a Change Course Enrollment form available on the Registrar's Office website (shanghai. nyu.edu/academics/registration).

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 the instructor, any other relevant administrators, 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 full-time 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 full semester 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 third 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 except in cases of full semester withdrawal as recommended by Health and Wellness and accompanied by medical documentation. Students who are ill or have other serious personal circumstances should contact their advisor.

Complete Withdrawals

Students who wish to withdraw from all of 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, 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 academic 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 a 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.

Students that officially audit a course are expected to complete the work that is agreed upon by the instructor. There is no credit given for the course, though the course would appear on the student's record with a mark of "R" for Registered Auditor. If the student does not comply with the stated expectations, then the instructor could issue a "F" grade and that mark would be calculated into the student's overall GPA.

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 and/or will miss more than a week of classes due to medical reasons, should contact their academic advisor and the Office of Health and Wellness for assistance in excusing their absences from class.

Students who, in the judgment of the instructor, have not substantially met the requirements of the course or who have been excessively absent are not considered to have withdrawn from the course if they remain on the roster and may be given the final grade of F.

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 student's 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, provided the following conditions are met:
- If excused, students must inform faculty of their absence in advance and establish a plan and timeline with faculty to make up missed work. 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.

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 if students are presenting original research supported by an Academic Dean. 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 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 fulfill a core curriculum requirement 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. Some majors also offer independent study for exceptional students.

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. Core courses must be taken graded on A-F scale and may satisfy the core requirement with grade of D or better.

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 their advisor. When a student repeats a course, the grades from both times the student took the course will be recorded on the transcript but only the credits from the second time the course is taken will be counted. Furthermore, the two grades (from the first and second times) will be averaged in the before calculated in the cumulative grade point average.

For Chinese national students, a repeated course will take space in their free extra 8-credits beyond 128 total credits.

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

NYU graduate courses may be taken with approval of the respective graduate program and NYU Shanghai undergraduate major and following the practices of that bulletin. Enrollment is dependent on availability and completion of any required prerequisites. If graduate courses are applied toward the completion of requirements for the baccalaureate degree, no advanced credit is typically allowed for them in the University's graduate programs.

Students may take a total of 36 credits in other divisions of NYU, including any courses for particular minors approved by NYU Shanghai. Students seeking additional credits beyond the 36 credit limit must file a petition with the Office of Academic Affairs.

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. If such courses are taken at schools outside NYU, the credit will not transfer to NYU Shanghai.

Credits from any courses taken in NYU's School of Professional Studies will not be counted toward major requirements, the GPA, or the minimum 128 credits required for graduation.

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

Once admitted to NYU Shanghai, all courses counted toward the degree must be taken on campus or during an approved study abroad semester at one of NYU's degree-granting campuses, 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.

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, NYU New York, or NYU Abu Dhabi. Students who plan to take summer courses within the NYU Global Network need to get their course plan approved by their academic advisor for summer registration clearance before the appointed time.

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 registered academic accommodations that cause them to need additional time for tests.

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 students can leave earlier nor pressure students to take an examination on a reading day or weekend preceding the final examinations period.

5. No student is required to take more than two scheduled final examinations during a 24-hour period. A student who has more than two final examinations scheduled during a 24-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. 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.

7. 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.

8. Concerns related to a final examination, complaints about violations of the final examination policy or alterations of the final examination schedule should be directed 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 that 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. The proctor should update 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 must 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 a serious illness, a doctor's note must be presented to the Health & Wellness Center, which can verify the medical situation and inform the instructor. After confirmation by Health & Wellness, the student must submit a request to the instructor to receive a grade of Incomplete. It is up to the instructor and Academic Affairs to decide if a request for a grade of Incomplete will be granted. 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 replaced with a letter grade 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 replaced 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.

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 "-SHU") 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

Courses for major, minor, or core requirements must be taken on an A-F grading scale. 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, C- or lower may not be used to meet major or minor requirements or as a prerequisite for more advanced courses. (see "Pass/ Fail Option" for more details)

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 coursework.

To appeal an assigned grade (only final semester grades are assigned grades, midterm 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, unable to reach the faculty member, and/or 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 eligible for review 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 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 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" 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.

NYU Shanghai follows the Office of Global Programs policy regarding incomplete grades and study

away admission. Incomplete (I) grades on students' transcript must be resolved before an admissions decision for study away can be made.

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 required major courses or required core curriculum 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 credits each term. They are normally limited to upper-class majors but may be open to other well-qualified upper-class students. To register for an independent study, a student must complete an independent study form and obtain the approval of all relevant faculty and the Assistant Provost 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 credits of independent study during their four years, and no more than 8 credits may be taken in any one major. More specific information can be found by speaking with your academic advisor.

Pass/Fail Option

Students may elect one pass/fail option each term, including the summer sessions, for a total of not more than 32 credits 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 grade point average. F is counted in the grade point average.

The pass/fail option is not acceptable in coursework in fulfillment of requirements toward a major, minor, prerequisites for more advanced coursework, or 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 NYU Shanghai Advising or Registrar's website.

Chinese language and English for Academic Purposes courses cannot be taken P/F. Courses in other languages can be taken P/F but grades of C or higher must be earned for prerequisite to advance to higher level courses. Grades of P will not fulfill language course prerequisites.

Petitions

The NYU Shanghai Academic Standards Committee will consider petitions of students to waive graduation requirements or modify academic 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 instructions may be obtained from the Office of Academic Advising.

LEAVES

Leave of Absence

NYU Shanghai expects its students to maintain continuous registration in an academic program with the exception of summer breaks. However, it is sometimes necessary or desirable for a student to take a leave from enrollment for a period of time. The duration of the leave generally will be a minimum of one academic semester, or an equivalent four month period, to a maximum of two academic semesters or the equivalent in months (8 months). Such leaves may be voluntary or involuntary, and will be handled in accordance with the NYU-wide Student Leave Policy and Procedure (http://nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/student-leave-policy.html). As it applies to NYU Shanghai, the "Dean of the School" refers to the NYU Shanghai Dean of Students and the "Provost" refers to the NYU Shanghai Assistant Provost for Academic Affairs. Questions about references to specific offices within this policy should be referred to the NYU Shanghai Dean of Students. The paragraphs below briefly summarize the NYU Policy, but individuals considering a leave are encouraged to review the full NYU policy referenced above before making any final decisions.

NYU Shanghai students 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 campus events, or live in NYU housing. You may visit the campus for any other University-owned facilities only with the written permission of the Dean of Students or designee. Students on leave may not enroll in courses until they are approved to return.

Voluntary Leave

NYU recognizes that situations may arise when a student may want to voluntarily interrupt his or her academic studies. The University is committed to handling reasonable requests for leaves in a responsible manner. This policy may not be used in lieu of disciplinary action to address any violations of University rules, regulations, policies, or practices. A student who is granted a voluntary leave while on academic and/or disciplinary status will return to that same status.

Involuntary Leave

NYU may place a student on an involuntary leave of absence from that student's academic program when that student: (1) poses a direct threat to health and safety of self or others; and (2) is not able or not willing to take a voluntary leave of absence. This policy may not be used in lieu of disciplinary actions to address any violations of University rules, regulations, policies, or practices. A student who is placed on an involuntary leave while on academic and/or disciplinary status will return to that same status.

Returning from a Leave of Absence

Students returning from a leave of absence are expected to successfully complete one academic semester (Fall or Spring) of full-time coursework in Shanghai before being eligible to enroll in a study away program. If a student is absent for two or more consecutive terms, they will be placed on non-sanctioned leave. Any student who has been out of attendance and/or on non-sanctioned leave for two or more consecutive terms and who wishes to return must apply for readmission.

Placement Examinations, Degree Progress and Transcripts

Placement Examination for Chinese Language

Testing and Placement
Entering students who are not native speakers of Mandarin take an online placement exam prior to their first registration in NYU Shanghai. Online tests result in placement into the appropriate-level course. The online placement exam is used for new incoming students only to assess their language proficiency for a preliminary placement into Chinese language courses. In the case a student would like to demonstrate proficiency beyond the intermediate two level, thereby fulfilling the language requirement, the student must take an in-person placement exam.

Placement into the intermediate two level or a lower level course means that the student must coutinue his or her studies of Chinese until successful completion of the intermediate two level of Chinese, either through successful completion of Intermediate Chinese II (CHIN-SHU 202), Intermediate Chinese II- Accelerated (CHIN-SHU 202A), or Intermediate for Advanced Beginners (CHIN-SHU 211). In order to progress to higher levels of Chinese, students must earn a grade of C or better in Intermediate Chinese II or equivalent. Students may demonstrate equivalent proficiency by applying to take, and scoring an 85 or higher on a place-out exam. In some cases, adjustments in course placement may be made during the first weeks of class under advice and/or consent of instructors.

After matriculation, if a student requests to be placed out of intermediate two in order to fulfill the language requirement, the student must take an in-person place-out exam. The place-out exam must be taken and completed prior to the student's final semester. Requests for placeout/exemption exams must be submitted by email to the World Languages program (shanghai.worldlanguages@nyu.edu) at least thirty (30) days in advance of the proposed examination date/time.

Information on placement testing can be obtained from the Office of Academic Advising. Student may contact shanghai.worldlanguages@nyu.edu to request an in-person place-out exam. The in-person place-out exam are usually held at the beginning of each semester. More information can be found at the website: https://worldlanguages.shanghai.nyu.edu/en/languages/chinese

Placement Process for Writing as Inquiry

Students will be evaluated for placement in two different first-year writing courses. Student standardized test scores, Candidate Weekend scores, and a writing sample may be considered as part of the evaluation. In some cases, adjustments in placement may be made during the first weeks of class. Information on placement testing will be communicated to matriculating students by their advisors.

Quantitative Reasoning

A student who wishes to place out of the Core Curriculum Mathematics requirement or to place into a higher level math class will have the opportunity to take a math placement exam, usually held at the beginning of each semester.

Degree Progress

All students have access to their Degree Progress Report, as generated by the Office of the NYU University Registrar, on Albert, NYU's online registration and information system. The Degree Progress Report is a Student Information System (SIS) accounting of completed and remaining degree requirements. In addition, students are encouraged to consult their unofficial transcript while reviewing degree requirements.

Transcripts of Record

Unofficial transcripts are available on Albert.

A sealed NYU Shanghai official paper transcript should be requested from the NYU Shanghai Office of the Registrar by either physically visiting the office in the Pudong Academic Campus Building, Suite 1049, or sending an email from your NYU email account to shanghai.registrar@nyu.edu. Alternatively, students can request an official electronic transcript from the Albert Student Center. The "Request official transcript" link can be found under the "My Academics" section of Albert Student Center. Transcripts cannot be produced for anyone whose record has been put on hold for an outstanding University obligation. See the NYU Shanghai Registration website for further information on transcript requests.

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 official transcript.

Requesting Enrollment Verification

Students can request an official paper Enrollment Verification from the NYU Shanghai Office of the Registrar by either 1) physically visiting the office in the Pudong Academic Campus Building, Suite 1049; or 2) sending an email from their NYU email account to shanghai.registrar@nyu.edu

The following should be included in the request:

1. University ID Number
2. Current Name and any name under which you attended NYU
3. Date of Birth
4. School of the University attended
5. Dates of Attendance
6. Date of (Anticipated) Graduation

Seven business days should be allowed for processing from the time the Office of the Registrar is in receipt of a student's request.

For confirmation of a student's request, students should contact the Office of the Registrar at +86-21 2059 5750.

Special Handling

If a request requires special handling, students must request a paper Enrollment Verification from the NYU Shanghai Office of the Registrar. Specific special handling instructions should be sent in writing by contacting shanghai.registrar@nyu.edu. Special handling includes:

1. Sending paper Enrollment Verification to the student in separate sealed envelopes addressed to admissions offices of other universities

2. Sending paper Enrollment Verification with additional documents to be sent along with the NYU Shanghai Enrollment Verification. Additional documents can be sent to the Office of the Registrar via mail or email, or may be hand-delivered.

3. Specific requirements as part of the enrollment verification request (e.g. need passport number, dates outside of China, and countries being visited for visa purposes, etc.)

4. Requesting Enrollment Verification in Chinese/Bilingual form.

5. Express Delivery: The Office of the Registrar can assist students that are not on campus to deliver the paper Enrollment Verification via express mail.. Please note that requesting documents to be sent via express service does not guarantee the processing time. All requests are processed in the order in which the requests are received.
   - For express delivery, send the request to shanghai.registrar@nyu.edu with detailed contact information of receiver(s) (i.e. name of school/institute/company, address, post code, contact person, telephone number).

Note that all express-related expenses incurred shall be borne by the student requestor.

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. 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 by the Office of the Registrar. 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 with 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 student fails to meet standards for good academic standing, defined as cumulative and semester grade point average above 2.0 and maintaining 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 credits) 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 probationary term, (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 an additional 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 university clubs or organizations without the approval of the NYU Shanghai Academic Standards Committee.

NYU Shanghai follows the Office of Global Programs policy regarding academic probation and study away admission. Students currently on academic probation are ineligible for study away.

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, such as athletic facilities, the library, and computer labs (and including 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 Associate Provost for Academic Affairs in writing for permission to resume their studies.
2. 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 and must study in Shanghai.

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, and 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 those 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 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 that 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 phones, computers, other technology or any other means)

- providing assistance to acts of academic misconduct/dishonesty (e.g., sharing copies of exams via 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.

NYU 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 Associate Provost 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 Associate 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. The Associate Provost for Academic Affairs' office copy will also be kept in a confidential file. (The faculty member 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 second offense, the Associate Provost for Academic Affairs will determine if a mediated outcome is possible or proceed as follows:
    a. 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 an academic integrity violation has occurred and if so, will affirm the penalty. If the committee affirms the penalty, the Associate Provost will send the student by e-mail a penalty letter. 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. The penalty will ordinarily be stayed during the pendency of appeal.
    b. If the committee does not affirm the penalty, the report will be kept on file for a one-year period.

4. The student in all cases has the right to appeal to the Associaite Provost for Academic Affairs.

Community Standards

Academic communities exist to facilitate the process of acquiring and exchanging knowledge and understanding, to enhance the personal and intellectual development of its members, and to advance the interests of society. In order to realize its purpose, the University and its members must be free from personal injury or harm; bias or harassment; intimidation or coercion; damage or loss of property; disruption of educational and social activities; unreasonable interference with the exchange of concepts and ideas; and unreasonable interference with the administrative and supporting services offered by the University. Accordingly, all student members of the University community are expected to conduct themselves in a manner that demonstrates mutual respect for the rights and personal/academic well-being of others, preserves the integrity of the social and academic environment, upholds the core values of the institution and supports the mission of the University. The University has an inherent right to address behavior that impedes, obstructs, or threatens the maintenance of order and attainment of the aforementioned goals by violating the standards of conduct set forth in the NYU Shanghai Student Conduct Policies and the Academic Standards set forth in this bulletin as well as other policies that may be established by the respective NYU Schools, Global Sites, and administrative offices of the University. Students are expected to familiarize themselves and comply with all University policies; the NYU Shanghai Student Conduct Policies and Process are available at https://shanghai.nyu.edu/campuslife/community-standards/.

University Policies

- Privacy of Student Records
- Computing and Information Resources Code of Ethics
- Emergency Temporary Closing of the University
- Freedom of Expression
- Human Subjeccts in Research at NYU Shanghai

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 or 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 Guidelines for Compliance with FERPA (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 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 FERPA Guidelines.

Additional Information for Students about Records Access

Students may obtain additional information about access to their records from the NYU FERPA Guidelines. The NYU FERPA Guidelines may be viewed online, or by contacting 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 computing resources are provided for university purposes and are governed by the NYU Shanghai IT Guidelines. Any use of computing resources for commercial purposes or personal financial gain must be authorized in advance. Many of the agreements that the university has specifically forbid this kind of activity.
* Computing and information resources are community resources and may not be used to violate applicable law. 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 and copying of programs, digital information and databases are 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, which are primarily governed by the NYU Shanghai IT Guidelines. 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 in attendance 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 relevant Dean and arrange either for a qualified substitute or for a future make-up session.

D. Freedom of Expression

NYU Shanghai values 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

Within NYU Shanghai's campus buildings, any member of the NYU Shanghai community may distribute printed material, offer petitions for signature, make speeches, and hold protests or demonstrations. All such activities must be 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 others, and no one will be permitted to cause significant harm to 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 the university or 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 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.

E. Human Subjects in Research at NYU Shanghai

NYU Shanghai is committed to the protection of the rights and welfare of human subjects in research projects conducted by NYU Shanghai faculty, staff and students. All research involving human subjects must be reviewed and approved by the NYU Shanghai's Institutional Review Board (IRB) prior to being conducted. Our policies and procedures manual, "NYU Shanghai Institutional Review Board Procedures for Human Subjects Research Protection", details not only the policies and regulations governing research with human subjects, but also the procedures for submitting research proposals for review.

The IRB is responsible for ensuring compliance with all applicable regulations (US and Chinese), local laws and customs and institutional policies. All human subjects research at NYU Shanghai is conducted in accordance with the US policy and regulations found in 45CFR46, as well as in accordance with Chinese policy and regulations found in Measures for the Examination of Ethics for Biomedical Research Involving Humans. In the event of conflict between applicable standards of protection, NYU Shanghai follows the standard that provides greater protection to human subjects.

The Principal Investigator (PI) is ultimately responsible for assuring compliance with applicable University IRB policies and procedures, and for the oversight of the research study. The IRB recognizes one PI for each study. The PI is expected to abide by the highest ethical standards and to develop a protocol that incorporates the principles of the Belmont Report. He/she is expected to conduct research in accordance with the approved research protocol and to oversee all aspects of the research by providing supervision of support staff, including oversight of the informed consent process. The PI is responsible for obtaining prior IRB review and approval for any proposed changes to research methodology, recruitment, consent procedures, etc. to a previously approved protocol, except where an immediate change in protocol is warranted to protect the health and welfare of subject(s).

Information about and policies applicable to human subjects in research at NYU Shanghai are available at https://research.shanghai.nyu.edu/resources/human-subjects.

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 advisor 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 credits. 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 before a student's final semester 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 all graded courses taken through the J-term before the graduating cohort's final spring semester. This means that final spring semester grades are not used for determining Latin Honors and no adjustments are made to a student's status regarding Latin Honors based on final spring grades. Latin Honors are calculated once a year and only students who have at least 110 earned credits before the spring semester and have their degree conferred that spring or earlier are eligible for consideration. Students who complete their graduation requirements before the beginning of the final spring semester have all grades counted toward calculating Latin Honors.

The GPA cutoff for summa cum laude is the GPA included within the top 5 percent of the graduating class. The cut off for magna cum laude is the GPA included within the next 10 percent of the class. The cutoff for cum laude is the GPA included within the next 15 percent of the class.

Major Honors
Students may be awarded degrees with major honors if they complete the designated honors sequence in the major, maintain the requisite grade point average, and are selected by their major faculty. No more than 10 percent of students in a major may graduate with major 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 Associate 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 major 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.

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

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.

Senior Award in Arts

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

Senior Award in Sciences

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

Senior Award in Business

Awarded to the graduating senior who has excelled in business and who has contributed in a

noteworthy way to the life of the campus during four years.

Senior Award in Engineering and Computer Science

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

{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 curriculum for the 21st century, with globally-oriented as well as China-focused social and cultural courses, writing and language courses which develop students' communication skills in both English and Chinese, and courses which introduce or strengthen a student's understanding of Mathematics, science, and algorithmic thinking;
» 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 credits 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 the week prior to the start of the fall semester. The primary goals of this program are: to help new students smoothly transition to college life by introducing students to NYU Shanghai's liberal arts and sciences curriculum; provide information and resources to help students settle down in a new living and learning environment; help students get to know their peers; and foster an understanding and appreciation of the diverse community at NYU Shanghai. In addition to lectures and panels on academic and university resources, students will also benefit from a series of fun events, dialogues and tours during orientation week.

Study Away

Students are required to spend at least one semester studying at one of NYU's global academic centers or degree-granting campuses or at an approved International Exchange Programs (IEPs).

The earliest a student may study away and maximum semesters they may study away:

For Classes of 2022 and Later:
Students may choose to study away for up to two

semesters within the 4-semester window of second semester sophomore year through first semester senior year, but study away during spring of sophomore year may not be NY or AD.

Students are required to have completed Elementary Chinese II or 8 credits of English for Academic Purposes (EAP) before they are eligible to study away. Students should develop a study away plan in consultation with their academic advisor.

Students must be in attendance in Shanghai in their final semester. 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.

Courses that students need for their major are offered at the NYU global academic centers and degree-granting campuses allowing students to continue to fulfill many of their major requirements and make normal progress toward graduation. Students can reference global course options at NYU's degree-granting campuses and study away sites through the spreadsheet Courses Satisfying Shanghai Degree Requirements. Cost of attendance varies between the Global Academic Centers and degree- granting campuses. Students can reference the cost estimator to get an estimate of their expected cost of attendance per semester. Through the application process, students agree to the Study Away Standard.

Majors and Minors

NYU Shanghai offers its students an array of majors and minors. Our majors and minors showcase NYU's world-class faculty, major research strengths, and international distinction. These include:

NYU Shanghai majors are organized into three divisions each overseen by a Dean.

Arts & Sciences
Dean Maria Montoya
- Biology
- Chemistry
- Economics
- Global China Studies
- Humanities
- Interactive Media Arts
- Interactive Media and Business
- Mathematics
- Honors Mathematics
- Neural Science
- Physics
- Social Science

Business
Dean Yuxin Chen (Ray Ro as the Interim Dean during Dean Chen's 2020-2021 sabatical)
- Business and Finance
- Business and Marketing

Computer Science and Engineering
Dean Keith Ross
- Computer Science
- Computer Systems Engineering
- Electrical and Systems Engineering
- Data Science

Self-Designed Honors Major

Minors
Shanghai Minors
- Biology
  - Molecular and Cell Biology
  - Genomics and Bioinformatics
- Business
- Chemistry
- Chinese
- Computer Science
- Computer Systems Engineering
- Creative Writing
- Data Science
- Economics
- Electrical and Systems Engineering
- Global China Studies
- Humanities
- History
- Literature
- Philosophy
- Interactive Media Arts
- Interactive Media and Business
- Mathematics
- Neural Science
- Physics
- Social Science

Global Network Minors
- Art History Studies
- Art Studies
- Australian Culture and Society
- British Culture and Society
- Central European Culture and Society
- Cultural Studies
- Entrepreneurship and Innovation
- European Culture and Society
- Fashion Studies
- French Culture and Society
- German Culture and Society
- Global Cities Studies
- Global Public Health Studies
- Globalization Studies
- Italian Culture and Society
- Journalism Studies
- Latin American Culture and Society
- Middle Eastern Culture and Society
- Pan African Culture and Society
- Psychological Studies
- Photographic Studies
- Political Studies
- Sociological Studies
- Spanish Culture and Society
- Sustainability Studies
- West African Culture and Society

NYU cross-school minors
For the list of cross-school minors, see
http://www.nyu.edu/students/undergraduates/ academic-services/undergraduate-advisement/ unique-academic-opportunities/cross-school-minors/ cross-school-minors-by-school.html

{ Part V }

Core Curriculum Overview

The Core Curriculum forms the center of NYU Shanghai's globally-oriented liberal arts and sciences education. Through Core courses, students deepen their intellectual engagement with diverse perspectives from the past and present; they gain increased awareness of distinct disciplinary approaches to problem-posing and analysis; and they develop skills to ethically and effectively respond to global challenges.

Core Component	Required Courses
Social Foundations	Global Perspectives on Society (4 credits) Social Sciences Perspectives on China course (4 credits)
Cultural Foundations	Perspectives on the Humanities (4 credits) Humanistic Perspectives on China course (4 credits)
Writing	Writing as Inquiry (4 credits) Perspectives on the Humanities (4 credits)
Mathematics	Precalculus or Great Ideas in Mathematics (4 credits) or placement out of PreCalculus
Science	Experimental Discovery in the Natural World course (4 credits or 3 credits + Lab) Science, Technology and Society course (4 credits)
Algorithmic Thinking	Algorithmic Thinking course (4 credits)
Language	Chinese (through Intermediate II or equivalent competency) English for Academic Purposes (8 credits in a two-semester course sequence or equivalent competency)

Social and Cultural Foundations 1&2

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. 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.

Social Foundations has two components:
• a survey course called **Global Perspectives on Society**
• a disciplinary course from the category **Social Science Perspectives on China**

In *Global Perspectives on Society*, students 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 semester.

Social Science Perspectives on China courses explore Chinese society in depth and in comparative perspective. Students develop a global perspective through a Chinese lens by studying interactions among individuals, families, communities, and nations. Courses in this category develop students' understanding of historical and contemporary China and develop their ability to engage in qualitative and quantitative analyses of social, economic, and political institutions in China and abroad. This category may include courses in Chinese anthropology, economics, environmental studies, law, media studies, public health, politics, psychology, and sociology. This course may be taken at any point in a student's undergraduate experience.

Cultural Foundations has two components
• a writing course called **Perspective on the Humanities**
• a disciplinary course from the category **Humanistic Perspectives on China**

Perspectices on the Humanities is a content-based writing seminar designed to introduce students to the questions asked and methods used by a variety of disciplines in the humanities, including philosophy, history, and literature. *Perspectives on the Humanities* is also designed to reinforce and advance the writing and thinking skills learned in the first-year *Writing as Inquiry* workshop. Students take *Perspectives on the Humanities* in the fall of their second year and may choose from a variety of course topics. In addtion to satisfying one Cultural Foundations requirement, this course satisfies one of two writing requirements (see "Writing"). *Writing as Inquiry* is a prerequisite for *Perspectives on the Humanities*.

Humanistic Perspectives on China courses provide in-depth understanding of Chinese history, philosphy, culture, art, literature, etc. These courses explain the complex origins and the transformations of China through different time periods, emphasize the importance of examining China from a global perspective, and engage in the analysis of multiple textual and visual sources. These courses help students develop skills to critically analyze the internal developments as well as evaluate the global relevance of China historically and in contemporary times. This category may include courses in Chinese history, philosphy, art, architecture, drama, film, literature, and music. This course may be taken at any point in a student's undergraduate experience.

3 Writing

NYU Shanghai writing courses serve as an introduction to academic writing and inquiry at the university level. Students learn how to closely read academic, argumentative, and narrative texts; how to provide an interpretation supported by evidence; how to build logical arguments and develop research questions; and how to adapt their writing to different genres and audiences. In these courses, students come to see writing as a process, one that sharpens their thinking and allows them to pursue the questions that feel most urgent to them. The habits, dispositions, and skills taught in these classes may be transferred to communication in a variety of channels--academic, civic, business, personal, and creative. The capacities for critical analysis and nuanced self-expression developed in Writing Program classes will prove useful whatever a student's future endeavors.

Required courses: Students must complete two writing courses. Students take *Writing as Inquiry*, the first-year writing workshop, in the spring of their first year. Students are placed in either Writing I or Writing II; in Writing I, students spend additional time focused on areas of rhetoric, grammar, and style that are relevant to second language learners. Students must complete *Writing as Inquiry* (receiving a C or higher) before advancing to *Perspectives on the Humanities*, which is offered in the fall of the sophomore year (*Perspectives on the Humanities* also satisfies one Cultural Foundations requirements; see "Social and Cultural Foundations").

Math core courses are an initiation to the use of mathematics to model and understand natural phenomena. Students are expected to acquire basic computational skills and the understanding of foundational mathematical notions. In addition, students are exposed to proofs and logical operations in mathematics.

Mathematics 4

Students may fulfill their math requirement by taking **Precalculus,** by taking other courses designated as fulfilling the Mathematics component, or by placing out of the requirement. The relevant exam scores which may be used to fulfilling the core curriculum mathematics requirement are listed below. No corresponding credit as awarded and test scores cannot be used to fulfill a prerequisite for an upper-level course in that area.

- AP Calculus AB or BC: Score of 4 or higher
- IB Mathematics: Score of 6 or higher
- A Level Mathematics: Score of B or higher
- NYU Shanghai Placement Into Calculus

5 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, the biosphere, 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 fundamental concepts and applications, intellectual methods and analytical techniques that define modern science.

Science has two components:
* *Experimental Discovery in the Natural World,* which is composed of laboratory-based courses.
* *Science, Technology, and Society,* which is composed of non-laboratory-based courses that explore the impact of scientific thinking and innovations on our lives.

Students who are pursuing degrees in science disciplines—or who are taking the pre-health curriculum—will complete the Science core requirements through the Foundations of Biology, Chemistry, and Physics courses.

Students pursuing a Math or Honors Math major should refer to the major descriptions for specific science requirements.

The relevant exam scores which may be used to wholly or partially fulfill the Core Curriculum Science requirement are listed below. No corresponding credit is awarded and otherwise specified below test scores cannot be used to fulfill prerequisite for upper-level courses in that area.

Core Curriculum Science Category	Can be fulfilled by these exams (though no credit is given)
Science Technology and Society (STS)	• AP Environmental Science: Score of 4 or higher
Experimental Discovery (ED)	• AP Psychology: Score of 4 or higher fulfills core; score of 5 fulfills core and course equivalency for PSYCH-SHU 101 • IB Psychology HL (Higher Level): Score of 6 or higher fulfills core; score of 7 fulfills core and course equivalency for PSYCH-SHU 101 • A Level Psychology: Score of B or higher fulfills core; score of A fulfills core and course equivalency for PSYCH-SHU 101 • AP Physics C- Mech OR AP Physics C – E&M: Score of 4 or higher
Satisfies two categories and completes the entire Science Core Requirement: Experimental Discovery (ED) AND Science, Technology and Society (STS)	• AP Physics 1 & 2, Chemistry, OR Biology: Score of 4 or higher • AP Physics C- Mech and AP Physics C – E&M: Score of 4 or higher • IB Biology HL, Chemistry HL, OR Physics HL: Score of 6 or higher • A Level Biology, Chemistry, OR Physics: Score of B or higher
Algorithmic Thinking (AT)	• AP Computer Science A: Score of 4 or higher • IB Computer Science HL: Score of 6 or higher • NYU Shanghai Placement into Introduction to Computer Science

6 Algorithmic Thinking

Algorithmic Thinking courses cover the thought processes involved in formulating a problem, designing a solution for that problem within given specifications, and expressing the solution in an ordered series of predefined instructions. Students acquire and hone skills that allow them to organize and analyze data logically, to represent problems in terms of abstractions and patterns, to break these problems down into smaller parts, and to generalize problem-solving processes to wide scopes of application. All of these courses have a hands-on programming component.

Students must complete one 4-credit Algorithmic Thinking course.

The relevant exam scores which may be used to fulfill the Core Curriculum Algorithmic Thinking requirement are listed below. No corresponding credit is awarded.

- AP Computer Science A: Score of 4 or higher
- IB Computer Science: Score of 6 or higher
- NYU Shanghai Placement Into Introduction to Computer Science

Language study is central to NYU's educational mission to develop well-rounded global citizens. Through language study, students gain the ability to operate effectively in multilingual and multicultural contexts. All NYU Shanghai students will be able to use English and Chinese for a range of communicative aims.

Language 7

Core Chinese language courses prepare students to develop the communicative skills and competencies that allow them to engage in interpersonal and intercultural exchanges in the target language. Students will develop a greater cultural awareness of the context in which they study.

Required courses or proficiencies for Chinese: Students are required to successfully complete the intermediate two levels of Chinese, or to demonstrate an equivalent competency through a placement exam. They are encouraged to develop as much proficiency in Chinese as their major course of study allows. In the summer before the first year, students who did not attend a Chinese-medium high school will have their Chinese language level assessed and will be placed into the appropriate level course. Engineering and Foundations of Science students are unable to take 4-credit courses in Chinese in their first year because of the course requirements of their major. Therefore, they will be able to complete the Elementary and Intermediate Chinese course requirements by completing two-credit Chinese classes throughout their fall and spring semesters. These two-credit Chinese classes are not open to other major or study-away students. The Chinese language program offers multiple modalities of instruction, including formal intensive coursework during Summer Sessions, online study, and co-curricular language coaching with immersion experiences. In order to study away, students must successfully complete Elementary Chinese II with a grade of C or better. To satisfy the language requirement, students must earn a grade of C or better in Intermediate Chinese II or equivalent. In addition, students may demonstrate equivalent proficiency by applying to take and scoring an 80 or higher on a placement exam.

Core English for Academic Purposes (EAP) courses prepare students who did not attend an English-medium high school to engage communicatively at the high level demanded by the university's liberal arts context.

Required courses or proficiencies for English: Chinese speakers who did not attend an English-medium high school are required to complete up to 8 credits of EAP in the first two years, following a two-semester course sequence from EAP 100 to EAP 101. EAP 100 must be completed in the first year. Most students will complete a four-credit EAP seminar in the fall term and an EAP 101 seminar in the spring term. A small number of students taking courses sequences in the sciences will be eligible to take two two-credit EAP 100 seminars in the first year and to complete EAP 101 in the following year. Academic advisors will notify students if they are eligible for the two-credit seminar. Students must successfully complete EAP 101 before the end of their second year and before they study away. Students who demonstrate exceptionally strong competence on all learning outcomes as they complete EAP 100 may be recommended by faculty for exemption from EAP 101. Exemptions are rare and most students should expect to complete the full eight credits of EAP.

{Part VI}

Overview of Majors

Arts and Sciences

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 utilized to study fundamental processes in organisms as well as applying this information to improve human health, enhance rational management of our environment, develop forensic science, and augment the production of renewable energy with the concomitant sequestering of pollutants, as well as approach ethical and legal issues that impinge on biological discoveries and their applications. The Biology curriculum aims to produce scientists with inquisitive minds who are self-reliant and who seek high quality of information about how the natural world works.

Building on the foundational science courses in chemistry, physics, biology, students in the Biology major learn to use the contemporary tools and approaches that are available to solve problems in areas of the current life sciences. In developing the major, we are first focusing on covering the essential "pillars of biological concepts": molecular and cellular biology, genetics, and evolution. We also ensure that students are trained in modern methods of quantitative and computational analysis. The major is structured that students can take a diversity of upper-level courses upon completion of the core courses. These 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 biology major allows students to pursue independent research that could lead to an undergraduate thesis.

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 NYU's global network.

BIOLOGY

REQUIREMENTS FOR THE MAJOR

Note: 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 NYU's global network with prior approval. Students may not double-major in Biology and Neural Science.

Foundational Courses
- BIOL-SHU 21   Foundations of Biology I
- BIOL-SHU 22   Foundations of Biology II
- BIOL-SHU 123   FoS Biology Laboratory
- CHEM-SHU 125   Foundations of Chemistry I
- CHEM-SHU 126   Foundations of Chemistry II
- CHEM-SHU 127   FoS Chemistry Laboratory *OR*
  CHEM-SHU 128   Chemistry II Lab
- PHYS-SHU 11   General Physics I *OR*
  PHYS-SHU 91   Foundations of Physics I Honors
- PHYS-SHU 12   General Physics II *OR*
  PHYS-SHU 93   Foundations of Physics II Honors
- PHYS-SHU 71   FoS Physics Laboratory
- PHYS-SHU 94   Physics II Lab

Note:
1) Biology majors are encouraged to complete the above classes in their first 2 years.
2) Biology majors are not required to take Foundations of Physics III Honors and may substitute General Physics I & II for Foundations of Physics I & II Honors courses.
3) Relationship between General Physics and Foundations of Physics Honors : General Physics I & II is a calculus-based course for pre-meds, engineers and others who want a broad introduction and survey of basic physics including classical mechanics, electricity and magnetism, optics and waves, and thermal and statistical physics. Foundations of Physics I-IV Honors covers a similar set of topics in considerably greater depth, plus special relativity and an introduction to quantum mechanics, over four semesters. Please note that Foundations of Physics I & II Honors alone do not include some important topics, such as optics, thermal and statistical physics, which are included in Foundations of Physics III Honors, and introduction to mechanics and condensed matter physics in Foundations of Physics IV Honors. Therefore, students electing to take the Honors Physics track are highly recommended to take Foundations of Physics III Honors and Foundations of Physics IV Honors. Students with a strong high-school background in physics and maths are also highly recommended to take Foundations of Physics I-IV Honors.

Required Courses
- NEUR-SHU 100   Math Tools for Life Sciences or Biostatistics
- BIOL-SHU 250   Organismal Systems
- CHEM-SHU 225   Organic Chemistry I
- CHEM-SHU 225L   Organic Chemistry I Lab
- BIOL-SHU 998   Integrated Science Capstone (This course must be taken in the last semester before graduation)

Biology Electives - Choose Five
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 NYU's global network with prior approval.

Students are strongly encouraged (but not required) to take Organic Chemistry II as a general elective.

Sample Courses:
- BIOL-SHU 30   Genetics
- BIOL-SHU 31   Genetics Laboratory
- BIOL-SHU 271   Cell Biology: Body's Battle with Cancer
- BIOL-SHU 261   Genomics and Bioinformatics
- BIOL-SHU 263   Developmental Biology
- BIOL-SHU 314   Advanced Cell Biology Lab

•	BIOL-SHU 997	Independent Research *(Note that one 4-credit Independent Study is allowed to count towards the Biology major elective*
•	CHEM-SHU 881	Biochemistry I
•	CHEM-SHU 882	Biochemistry II
•	MATH-SHU 160	Networks and Dynamics
•	NEUR-SHU 201	Introduction to Neuroscience

Note: Pre-health 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 advising staff early on to ensure adequate course planning.

Biology Minor

A. Molecular and Cell Biology Minor
•	BIOL-SHU 21	Foundations of Biology I
•	BIOL-SHU 22	Foundations of Biology II
•	BIOL-SHU 123	FoS Biology Laboratory
•	BIOL-SHU 30	Genetics **OR**
	BIOL-SHU 263	Developmental Biology
•	BIOL-UA 36	At the Bench: Applied Molecular Biology DNA Techniques **OR**
	BIOL-UA 37	At the Bench: Applied Cell Biology **OR**
		One approved class to count towards this minor

B. Genomics and Bioinformatics Minor
•	BIOL-SHU 21	Foundations of Biology I
•	BIOL-SHU 22	Foundations of Biology II
•	BIOL-SHU 123	FoS Biology Laboratory
•	BIOL-SHU 261	Genomics and Bioinformatics
•	BIOL-SHU 267	Microbiology and Microbial Genomics **OR**
	BIOL-GA 1128	Systems Biology **OR**
	BIOL-UA 58	Evolution

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 the first semester of their first year. Sample Schedule 2 offers an alternate plan that involves beginning to pursue a Biology major in the spring semester of the first year. Students may propose alternative schedules to their advisors as well.

Year 1

Fall Semester

| Global Perspectives on Society | Core Class (Calculus) | 8 credits: General Physics I/Foundations of Physics I Honors, Foundations of Chemistry I, and FoS Physics Laboratory | 2 credits: English or Chinese |

Spring Semester

| Writing as Inquiry | Core Class | 8 credits: Foundations of Biology I, Foundations of Chemistry II, and Chemistry II Lab | 2 credits: English or Chinese |

Year 2

Fall Semester

| Perspectives on the Humanities | 5 credits: Organic Chemistry I + Organic Chemistry I Lab | 5 credits: Foundations of Biology II and FoS Biology Laboratory | Chinese, or General Elective |

Spring Semester

| 5 credits: General Physics II/ Foundations of Physics II Honors, and Physics II Lab | Organismal Systems | Math Tools for Life Sciences | Chinese, English, or General Elective (Organic Chemistry II for pre-med students) |

Year 3

Fall Semester

| Biology Elective | Biology Elective | Chinese, or General Elective | General Elective |

Spring Semester

| Biology Elective | General Elective | General Elective | General Elective |

Year 4

Fall Semester

| Bioloty Elective | General Elective | General Elective | General Elective |

Spring Semester

| Integrated Science Capstone | Biology Elective | General Elective | General Elective |

BIOLOGY
SAMPLE SCHEDULE 2

Year 1

Fall Semester

| Global Perspectives on Society | Core Class (Calculus) | Core Class | English, Chinese, or General Elective |

Spring Semester

| Writing as Inquiry | Core Class | 3 credits: Foundations of Biology I | English, Chinese, or General Elective |

Year 2

Fall Semester

| Perspectives on the Humanities | 10 credits: Foundations of Biology II, Foundations of Chemistry I, FoS Biology Laboratory, and FoS Chemistry Laboratory | Chinese, or General Elective | No Class |

Spring Semester

| Math Tools for Life Sciences | Organismal Systems | 3 credits: Foundations of Chemistry II | Biology Elective, Chinese, or General Elective |

Year 3

Fall Semester

| 5 credits: Organic Chemistry I + Organic Chemistry I Lab | Biology Elective | Biology Elective | General Elective |

Spring Semester

| Biology Elective | Biology Elective | General Elective (Could be Organic Chemistry II for pre-med students) | General Elective |

Year 4

Fall Semester

| 5 credits: General Physics I/Foundations of Physics I Honors, and FoS Physics Laboratory | General Elective | General Elective | General Elective |

Spring Semester

| 5 credits: General Physics II/Foundations of Physics II Honors, and Physics II Lab | Integrated Science Capstone | General Elective | General Elective |

CHEMISTRY

Chemistry 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. Chemistry is therefore the central science that bridges physics and the life sciences, and is a foundation to many other fields, such as materials science, earth science, and forensic science. The challenges that society faces in the twenty-first century, such as managing climate change, sourcing clean energy, and ensuring food security, are at their root chemical problems. With a global perspective and a broad science curriculum at its core, our chemistry major program gives students a comprehensive outlook necessary to tackle these challenges.

A key characteristic of the chemistry major at NYU Shanghai is a good balance between depth and breadth of study: following the foundational science courses in chemistry and physics, students take the essential "canon" of organic chemistry and physical chemistry lectures and labs. Students then have flexibility in choosing three or more chemistry electives in areas of specialization that interest them, including Inorganic Chemistry, Analytical Chemistry, Computational Chemistry, and Biochemistry courses. A distinguishing feature of chemistry is the importance of creativity, whether it be in synthesizing new molecules, discovering novel reactions and materials, or developing new theories of matter. All chemistry students undertake a research or literature review project during their last semester in an Integrate Science Capstone course. Advanced students are encouraged to undertake two or more semesters of research with faculty, potentially culminating in an undergraduate thesis and chemistry honors.

Majoring in chemistry provides good preparation for graduate study in chemistry and related fields, such as biochemistry, biomedicine, and materials science. Chemistry major students are also well prepared for professional school, including medical, pharmacy, dental, optometry, veterinary, forensic, and law school. Students who, instead, decide to enter industry after graduation are well-served by the combination of creative and quantitative skills developed in the chemistry major that transfer to diverse sectors from data science to biotechnology to finance.

REQUIREMENTS FOR THE MAJOR

Note: 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 NYU's global network with prior approval.

GPA minimum requirement

Physics, Chemistry and Electrical Engineering majors' students must achieve and maintain a minimum 3.0 cumulative and major GPA in order to declare the major. Since they are required to study away in NY or AD for their junior year in order to complete major coursework offered at those campuses, they must complete all of the prerequisite courses at NYU Shanghai for the junior year major classes they need to take in New York or AD before they will be admitted to study away. If declared majors fail to maintain a 3.0 GPA or do not complete the required courses during study away, they may be required to declare a different major to be able to graduate.

Foundational Courses

- CHEM-SHU 125   Foundations of Chemistry I
- CHEM-SHU 126   Foundations of Chemistry II
- CHEM-SHU 127   FoS Chemistry Laboratory
- CHEM-SHU 128   Chemistry II Lab
- PHYS-SHU 11   General Physics I *OR*
  PHYS-SHU 91   Foundations of Physics I Honors
- PHYS-SHU 12   General Physics II *OR*
  PHYS-SHU 93   Foundations of Physics II Honors
- PHYS-SHU 71   FoS Physics Laboratory
- PHYS-SHU 94   Physics II Lab

Note:

1)   Chemistry majors are strongly encouraged to complete the above classes in their first 2 years.
2)   Chemistry majors are not required to take Foundations of Physics III Honors and may substitute Foundations of Physics I & II Honors for General Physics I & II.
3)   Relationship between General Physics and Foundations of Physics Honors: General Physics I & II is a calculus-based course for pre-meds, engineers and others who want a broad introduction and survey of basic physics including classical mechanics, electricity and magnetism, optics and waves, and thermal and statistical physics. Foundations of Physics I- IV Honors covers a similar set of topics in considerably greater depth, plus special relativity and an introduction to quantum mechanics, over four semesters. Please note that Foundations of Physics I & II Honors alone do not include some important topics, such as optics, thermal and statistical physics, which are included in Foundations of Physics III Honors, and introduction to mechanics and condensed matter physics in Foundations of Physics IV Honors. Therefore, students electing to take the Honors Physics track are recommended to take Foundations of Physics III Honors and Foundations of Physics IV Honors. Students with a strong high-school background in physics and mathematics are also recommended to take Foundations of Physics I- IV Honors.

Required Courses

- CHEM-SHU 225   Organic Chemistry I +Organic Chemistry I Lab
- CHEM-SHU 226   Organic Chemistry II + Organic Chemistry II Lab
- CHEM-SHU 651   Physical Chemistry: Quantum Mechanics and Spectroscopy
- CHEM-SHU 652   Physical Chemistry: Thermodynamics and Kinetics
- CHEM-SHU 661   Physical Chemistry Laboratory
- MATH-SHU 151   Multivariable Calculus
- CHEM-SHU 998   Integrated Science Capstone

Chemistry Electives - Choose Three

- CHEM-SHU 285   Experimental Biochemistry
- CHEM-SHU 310   Biophysical Chemistry
- CHEM-SHU 312   Analytical Chemistry
- CHEM-SHU 711   Inorganic Chemistry
- CHEM-SHU 752   Computational Chemistry

- CHEM-SHU 881   Biochemistry I
- CHEM-SHU 882   Biochemistry II
- CHEM-SHU 997   Independent Study

Note:
1)   The Integrated Science Capstone must be taken in the last semester before graduation.
2)   Students interested in pursuing graduate study in Chemistry are strongly encouraged to take Inorganic Chemistry.
3)   Additional advanced chemistry courses in NYU's global network can also meet the Chemistry Electives requirement. Students should consult with their Academic Advisor for further details.

General Electives
Students may take any courses in NYU's global network to satisfy the general elective requirements, but are strongly encouraged to take the following mathematics and computer science courses.

Recommended Mathematics General Electives:
- MATH-SHU 235   Probability and Statistics
- MATH-SHU 265   Linear Algebra and Differential Equations

Recommended Computer Science General Elective:
- CSCI-SHU 11   Introduction to Computer Programming
- CSCI-SHU 101   Introduction to Computer Science

Chemistry Minor
- CHEM-SHU 125   Foundations of Chemistry I
- CHEM-SHU 126   Foundations of Chemistry II
- CHEM-SHU 127   FoS Chemistry Laboratory
- CHEM-SHU 128   Chemistry II Lab
- CHEM-SHU 225   Organic Chemistry I + Organic Chemistry I Lab
- CHEM-SHU 226   Organic Chemistry II + Organic Chemistry II Lab

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 courses in the first semester of their first year. Sample Schedule 2 offers an alternate plan that pursues a chemistry major beginning in the fall semester of the second year. Students may propose alternative schedules to their advisors as well.

Year 1

Fall Semester

| Global Perspectives on Society I | Core Class (Calculus) | 8 credits: Foundations of Chemistry I, FoS Chemistry Laboratory, and General Physics I/Foundations of Physics I Honors | 2 credits: English or Chinese |

Spring Semester

| Writing as Inquiry | Multivariable Calculus | 8 credits: Foundations of Chemistry II, Chemistry II Lab, General Physics II/Foundations of Physics II Honors | 2 credits: English or Chinese |

Year 2

Fall Semester

| Perspectives on the Humanities | 5 credits: Organic Chemistry I + Lab | 2 credits: FoS Physics I Laboratory | Core, Chinese or General Elective |

Spring Semester

| Core Class | 5 credits: Organic Chemistry II + Lab | 2 credits: Physics II Lab | Chinese, English or General Elective |

Year 3

Fall Semester

| Physical Chemistry: Quantum Mechanics and Spectroscopy | Chemistry Elective | Chinese or General Elective | General Elective |

Spring Semester

| Physical Chemistry Laboratory | Physical Chemistry: Thermodynamics and Kinetics | Chemistry Elective, e.g. Inorganic Chemistry | Chinese or General Elective |

Year 4

Fall Semester

| Chemistry Elective | General Elective | General Elective | General Elective |

Spring Semester

| Integrated Science Capstone | General Elective | General Elective | General Elective |

CHEMISTRY
SAMPLE SCHEDULE 2

Year 1

Fall Semester

| Global Perspectives on Society | Core Class | Core or General Elective | English, Chinese, or General Elective |

Spring Semester

| Writing as Inquiry | Core Class (Calculus) | Core or General Elective | English, Chinese, General Elective |

Year 2

Fall Semester

| Perspectives on the Humanities | 10 credits: Foundations of Chemistry I, FoS Chemistry Laboratory, General Physics I/Foundations of Physics I Honors, and FoS Physics Laboratory | No Class | English, Chinese, General Elective |

Spring Semester

| Multivariable Calculus | 10 credits: Foundations of Chemistry II, Chemistry II Lab, General Physics II/Foundations of Physics II Honors, and Physics II Lab | No Class | English, Chinese, General Elective |

Year 3

Fall Semester

| 5 credits: Organic Chemistry I + Lab | Physical Chemistry: Quantum Mechanics and Spectroscopy | Chemistry Elective | Chinese or General Elective |

Spring Semester

| 5 credits: Organic Chemistry II + Lab | Physical Chemistry: Thermodynamics and Kinetics | Physical Chemistry Laboratory | Chinese or General Elective |

Year 4

Fall Semester

| Chemistry Elective | Chemistry Elective | General Elective | General Elective |

Spring Semester

| Integrated Science Capstone | General Elective | General Elective | General Elective |

The best way to understand the world you live in is arguably 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 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.

Building on these principles, the Economics major is designed to foster rigorous analytical abilities both in neoclassical and behavioral economics, critical writing and communication skills, and the capacity to interpret and use statistical data—all in the service of developing sound economic reasoning and problem-solving skills. These transferable strengths are of value in a broad array of academic and professional paths, from economics, business, or law, to public service or graduate studies.

ECONOMICS

REQUIREMENTS FOR THE MAJOR

Note: 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 NYU's global network with prior approval. 3-credit versions of courses can generally substitute for a 4-credit required course but note that a 2-credit course with a similar title or content will not by itself meet the requirement of the named required course.

Economics major students must either take Calculus (MATH-SHU 131), place out of Calculus, or take Honors Calculus, in order to satisfy the Mathematics requirement in the core curriculum.

Required Courses
- ECON-SHU 1   Principles of Macroeconomics **OR**
    ECON-SHU 251   Economics of Global Business
- ECON-SHU 3   Microeconomics **OR**
    ECON-SHU 2   Principles of Microeconomics
- ECON-SHU 10   Intermediate Microeconomics
- ECON-SHU 202   Intermediate Macroeconomics
- ECON-SHU 301   Econometrics
- MATH-SHU 235   Probability and Statistics **OR**
    BUSF-SHU 101   Statistics for Business and Economics

Economics Electives - 24 Credits, at least 8 credits must be from "Advanced Economics Electives" and at least one course must be from "Economics Capstone Electives"

The courses listed below are not an exhaustive list. If you would like to see if a course not listed below can count as an Economics Elective, please contact your advisor to have the course reviewed.

Advanced Economics Electives
- ECON-SHU 201   Mathematics for Economists *(substituted by taking both Linear Algebra AND Multivariable Calculus)*
- ECON-SHU 225   Advanced Economic Theory
- ECON-SHU 402   Advanced Econometrics
- ECON-SHU 409   Advanced Topics in Macroeconomics
- ECON-SHU 416   Game Theory: Advanced Applications
- ECON-SHU 423   Econometrics for High Dimensional and Financial Data

Economics Electives
- BPEP-SHU 9042   The Political Economy of East Asia (formerly ECON-SHU 211)
- BPEP-SHU 238   International Economics
- ECON-SHU 5   Math for Econ 1: Optimization
- ECON-SHU 207   Urban and Real Estate Economics
- ECON-SHU 213   Causal Inference in the Social Sciences
- ECON-SHU 215   Economic History
- ECON-SHU 216   Introduction to Game Theory
- ECON-SHU 238   History of Modern Economic Growth: Exploring China From a Comparative Perspective
- ECON-SHU 260   International Trade
- ECON-SHU 306   Economics of Education
- ECON-SHU 316   Industrial Organization
- ECON-SHU 317   Quantitative Methods for the Economics of Gender
- ECON-SHU 332   Monetary Economics
- ECON-SHU 335   Development Economics
- ECON-SHU 338   International Economics
- ECON-SHU 342   Behavioral Economics
- ECON-SHU 349   Health Economics
- ECON-SHU 351   Labor Economics
- ECON-SHU 353   Public Economics
- ECON-SHU 355   Law and Economics
- ECON-SHU 360   Experimental Economics

- • ECON-SHU 368 Financial Economics
- • ECON-SHU 997 Economics Independent Study

Economics Capstone Electives
- • ECON-SHU 400 Economics Capstone Research
- • ECON-SHU 453 Economics Honors Program (same as BUSF-SHU 3 Business Honors Program)

Economics Minor
- • BUSF-SHU 101 Statistics for Business and Economics **OR**
  MATH-SHU 235 Probability and Statistics **OR**
  MATH-SHU 233 Theory of Probability **OR**
  MATH-SHU 234 Mathematical Statistics
- • ECON-SHU 1 Principles of Macroeconomics **OR**
  ECON-SHU 251 Economics of Global Business
- • ECON-SHU 3 Microeconomics **OR**
  ECON-SHU 2 Principles of Microeconomics
- • ECON-SHU 202 Intermediate Macroeconomics **OR**
  ECON-SHU 10 Intermediate Microeconomics
- • 8 credits from the Economics elective list

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 the first year. Sample Schedule 2 offers an alternate plan that begins in the second year. Students may propose alternative schedules to their advisors as well.

Year 1

Fall Semester

| Global Perspectives on Society | Core Class (Calculus) | Core or Principles of Macroeocnomics | English or Chinese |

Spring Semester

| Writing as Inquiry | Microeconomics | Probability and Statistics or alternate courses | English or Chinese |

Year 2

Fall Semester

| Perspectives on the Humanities | Intermediate Macroeconomics | Principles of Macroeconomics or Econometrics | Chinese or Core |

Spring Semester

| Intermediate Macroeconomics | Econometrics or Multivariate Calculus or Mathematics for Economists | Economics Elective or Core | Chinese or Core |

Year 3

Fall Semester

| Core Class | Economics Elective | General Elective | General Elective |

Spring Semester

| Core Class | Economics Elective | Advanced Economics Elective | General Elective |

Year 4

Fall Semester

| Core Class | Advanced Economics Elective | General Elective | General Elective |

Spring Semester

| Core Class | Economics Capstone Research | General Elective | General Elective |

ECONOMICS
SAMPLE SCHEDULE 2

Year 1

Fall Semester

| Global Perspectives on Society | Core Class (Pre-Calculus or Calculus) | Core or General Elective | English or Chinese |

Spring Semester

| Writing as Inquiry | Calculus or Core Class | Core or General Elective | English or Chinese |

Year 2

Fall Semester

| Perspectives on the Humanities | Microeconomics | Probability and Statistics or alternate courses | Core or General Elective |

Spring Semester

| Principles of Macroeconomics | Econometrics | Mathematics for Economists or Multivariate Calculus or General Elective | Core or General Elective |

Year 3

Fall Semester

| Intermediate Microeconomics | Intermediate Macroeconomics | Core or General Elective | General Elective |

Spring Semester

| Core or General Elective | Economics Elective | Economics Elective | General Elective |

Year 4

Fall Semester

| Core or General Elective | Economics Elective | Advanced Economics Elective | Economics Capstone Elective |

Spring Semester

| Core or General Elective | Advanced Economics Elective | Economics Capstone Elective | General Elective |

Global China Studies

China is once again a major force in the world. Beyond the scope of conventional area studies, the innovative interdisciplinary major in Global China Studies allows students to cultivate up-to-date knowledge and critical skills about China. It aims at deepening their understanding of China's interactions with the wider world as well as comprehending the trends within China, at individual, societal, state, and global levels, and in the context of socio-economic, religious, cultural, and political transformations.

The Global China Studies major offers two options. Students may opt to take the track that requires an extensive study of China in a global setting through the completion of an interdisciplinary curriculum without the need for additional Chinese language courses. They could also choose the advanced track option, which trains students to acquire a higher level of Chinese proficiency in addition to developing focused research skills needed for postgraduate professional and academic pursuits. In either case, majors in Global China Studies will graduate with the capacity to become qualified practitioners and thinkers of a changing China in the world.

REQUIREMENTS FOR THE MAJOR

GCS Major - Total Major Credits: 36
This track is for students interested in developing in-depth knowledge about China through the study of Chinese history, society, literature, arts, and politics in a global setting with an emphasis on innovative research methods. Students must take a wide range of courses on China and are encouraged to complete a minor of their choosing. This track is recommended for students who plan to seek employment in the private sector, research institutions, or admission into graduate school.

Required Courses: 20 credits

GCHN-SHU 110 The Concept of China (4 credits)

China and the World: Choose Two (8 credits)
Courses in this category focus on China in a broader global setting, concentrating on its contacts, historical and/or contemporary, with the outside world. The aim is to examine the dynamics of Chinese history, politics, economy, and culture as interconnected and integrated with various regions of the world. Select two of the following:
- GCHN-SHU 164   The History of the Silk Road(s) (Originally: The Stuff of Legends: The Many Meanings of the Early Silk Road(s))
- GCHN-SHU 264   Chinese Migrant and Diasporic Network
- HIST-SHU 250   Tianxia: Traditional China and the World (Originally: China at the Center? An Exploration of Chinese Foreign Relations)
- HIST-SHU 312   China Encounters the World
- GCHN-SHU 165   China and the Islamic World
- SCA-SHU 9634   Global Connections: Shanghai
- SOCS-SHU 341   Cross-Strait Relations

Two-semester capstone course (8 credits)
Fall Semester: Methodologies in China Studies; Spring Semester: Research Project Seminar.

The first semester of this two-semester capstone course will focus on the methodologies of China-related research, examining the importance and shortcomings of Chinese primary sources and data, familiarizing with and learning how to access and use key archives, museums, libraries, research tools, databases, and digital websites, and analyzing some of the pivotal books and articles on China. Students will also draft a research proposal, with a preliminary bibliography, and identify a faculty mentor for the second semester of the capstone course. During the second semester, students will work primarily with their respective mentors, but are required to also participate and make presentations at a weekly research seminar. Those opting for GCS major do not have to demonstrate competency in reading and analyzing Chinese language sources.

Global China Studies Electives (16 Credits)
Choose four courses from the list, with at least one course from each of the following three categories:

1.Chinese History, Society, and Culture
Courses in this category focus on the examination of aspects and periods of Chinese history, social values and conditions, and cultural traditions and practices.

 Sample courses:
- GCHN-SHU 165   China and the Islamic World
- GCHN-SHU 224   Chinese Maritime History
- GCHN-SHU 231   Social and Cultural Debates in 20th Century China
- GCHN-SHU 255   Eat, Pray, Ponder: Chinese Intellectual Culture Through Ages
- GCHN-SHU 267   The Cultivated City
- HIST-SHU 145   Food and Drugs in Chinese History
- HIST-SHU 153   History of Modern China

- PHIL-SHU 105   Introduction to Chinese Philosophy
- RELS-SHU 9270   Religion and Society in China
- SOCS-SHU 236   The Chinese Family
- SOCS-SHU 254   Ethnographies of Change in China

2.Chinese Media, Arts, and Literature
Courses in this category examine the artistic and literary productions by the Chinese in and outside China, as well as the trends in print, audio-visual, digital and social media.

Sample courses:
- GCHN-SHU 156   History of Chinese Art
- JOUR-SHU 203   Journalism and Society in China
- LIT-SHU 226   History of Chinese Cinema
- GCHN-SHU 263   Voices from the Margin: Modern Chinese and Sinophone Studies
- HUMN-SHU 229   Masters of Asian Cinema
- HUMN-SHU 366 (266)   Shanghai Stories
- INTM-SHU 268   Acoustic Ethnography of the Yangtze River Delta
- MCC-SHU 9451   Global Media Seminar: China

3.The Politics, Economy, and Environment of China
Courses in this category examine the contemporary political, economic, legal, and environmental theories, policies, and practices in the People's Republic of China.

Sample courses:
- BUSF-SHU 188   Chinese Business and Financial: A Bilingual Introduction
  (CHIN-SHU 429)
- BUSF-SHU 288   Doing Business in China
- CCSF-SHU 123   Contemporary Chinese Political Thought
- ECON-SHU 238   History of Modern Economic Growth: Exploring China From a
  Comparative Perspective
- GCHN-SHU 240   Modern Chinese Governance
- GCHN-SHU 243   Chinese Environmental Studies
- SOCS-SHU 133   Urbanization in China
- SOCS-SHU 160   Intro to International Politics
- SOCS-SHU 275   US-China Relations

Study Abroad: Students enrolled in this track may study abroad for a maximum of two semesters.

Global China Studies minor
Four classes in Global China Studies, one of which should be either the Concept of China course or a course listed under the "China and the World" category. Students may take up to two advanced or post-advanced language in fulfillment of this minor.

Global China Studies
SAMPLE SCHEDULE 1

Year 1

Fall Semester

| Global Perspectives on Society | Core Class | Core Class | English, Chinese, Core, or General Elective |

Spring Semester

| Writing as Inquiry | Core Class | The Concept of China | English, Chinese, Core, or General Elective |

Year 2

Fall Semester

| Perspectives on the Humanities | China and the World | GCS Elective | Core, Chinese or General Elective |

Spring Semester

| China and the World | GCS Elective | Core Class | Core, Chinese or General Elective |

Year 3

Fall Semester

| GCS Elective | General Elective | General Elective | General Elective |

Spring Semester

| GCS Elective | General Elective | General Elective | General Elective |

Year 4

Fall Semester

| General Elective | GCS Capstone | Core Class | General Elective |

Spring Semester

| General Elective | GCS Capstone | General Elective | General Elective |

Global China Studies
SAMPLE SCHEDULE 2

Year 1

Fall Semester

| Global Perspectives on Society | Core class | Core class | English, Chinese, Core or General Elective |

Spring Semester

| Writing as Inquiry | Core Class | Core or General Elective | English, Chinese, Core or General Elective |

Year 2

Fall Semester

| Perspectives on the Humanities | The Concept of China | China and the World | Core or Chinese |

Spring Semester

| China and the World | GCS Elective | Core Class | Core or Chinese |

Year 3

Fall Semester

| GCS Elective | GCS Elective | General Elective | General Elective |

Spring Semester

| GCS Elective | General Elective | General Elective | General Elective |

Year 4

Fall Semester

| General Elective | GCS Capstone | Core Class | General Elective |

Spring Semester

| General Elective | GCS Capstone | General Elective | General Elective |

REQUIREMENTS FOR THE MAJOR

Advanced GCS Track - Total Major Credits: 40
This advanced track is for students interested in combining advanced training in the Chinese language with a deep knowledge of Chinese history, society, literature, arts, and politics in a global setting, as well as with an exploration of innovative research methodologies. It is recommended for students who plan to seek admission into graduate school, or employment in research institutions, governmental and non-governmental organizations in China or elsewhere that focus on China-related issues.

Required Courses: 28 Credits

GCHN-SHU 110 The Concept of China (4 credits)

China and the World (4 Credits)
Courses in this category focus on China in a broader global setting, focusing on its contacts (historical and/or contemporary) with the outside world. The aim is to examine the dynamics of Chinese history, politics, economy, and culture as interconnected and integrated with various regions of the world. Select one of the following:
- GCHN-SHU 164   The History of the Silk Road(s) (Originally: The Stuff of Legends: The Many Meanings of the Early Silk Road(s))
- GCHN-SHU 264   Chinese Migrant and Diasporic Networks
- HIST-SHU 250   Tianxia: Traditional China and the World (Originally: China at the Center? An Exploration of Chinese Foreign Relations)
- HIST-SHU 312   China Encounters the World
- GCHN-SHU 165   China and the Islamic World
- SCA-SHU 9634   Global Connections: Shanghai
- SOCS-SHU 341   Cross-Strait Relations

Language courses (8 Credits)
Non-Native Chinese Speakers: Advanced Chinese I & II
Native Chinese speakers are required to further develop their academic reading and writing skills as well as Classical Chinese reading abilities through two of the following classes
- GCHN-SHU 283   Reading and Viewing Modern China
- GCHN-SHU 233   Foreign Societies in Classical Chinese Writing
- GCHM-SHU 255   Eat, Pray, Ponder: Chinese Intellectual Culture Through Ages *with speical requirements*
- Other courses with special requirements (ask GCS Area Leader)

Chinese for Advanced Undergraduate Research (4 Credits)
This aim of these courses is to expand Chinese language research skills. Students will read, analyze, and use Chinese language sources to write, in English, response reports and research paper(s). The courses under this category will be taught in English. Select one of the following:
- GCHN-SHU 283   Reading and Viewing Modern China
- GCHN-SHU 200   Topics in Global China Studies: Introduction to Classical Chinese
- GCHN-SHU 233   Foreign Societies in Classical Chinese Writing

Two-semester capstone course (8 Credits)
Fall Semester: Methodologies in China Studies; Spring Semester: Research Project Seminar.

The first semester of this two-semester capstone course will focus on the methodologies of China-related research, examining the importance and shortcomings of Chinese primary sources and data, familiarizing with and learning how to access and use key archives, museums, libraries, research tools, databases, and digital websites, and analyzing some of the pivotal books and articles on China. Students will also draft a research proposal, with a preliminary bibliography, and identify a faculty mentor for the second semester of the capstone course. During the second semester, students will work primarily with their respective mentors, but are required to also participate and make presentations at a weekly research seminar. Those opting for Advanced GCS major must demonstrate competency in reading and analyzing Chinese language sources.

Global China Stdies Electives (12 Credits): Take one course each from the following three categories:

1. Chinese History, Society, and Culture
Courses in this category focus on the examination of aspects and periods of Chinese history, social values and conditions, and cultural traditions and practices.

Sample courses:
- GCHN-SHU 165   China and the Islamic World
- GCHN-SHU 224   Chinese Maritime History
- GCHN-SHU 231   Social and Cultural Debates in 20th Century China
- GCHN-SHU 255   Eat, Pray, Ponder: Chinese Intellectual Culture Through Ages
- GCHN-SHU 267   The Cultivated City
- GCHN-SHU 275   Memory Politics in China
- HIST-SHU 145   Food and Drugs in Chinese History
- HIST-SHU 153   History of Modern China
- PHIL-SHU 105   Introduction to Chinese Philosophy
- RELS-SHU 9270   Religion and Society in China
- SOCS-SHU 236   The Chinese Family
- SOCS-SHU 254   Ethnographies of Change in China

2. Chinese Media, Arts, and Literature
Courses in this category examine the artistic and literary productions by the Chinese in and outside China, as well as the trends in print, audio-visual, digital and social media.

Sample courses:
- GCHN 156   History of Chinese Art
- JOUR-SHU 203   Journalism and Society in China
- LIT-SHU 226   History of Chinese Cinemas
- GCHN-SHU 263   Voices from the Margin: Modern Chinese and Sinophone Studies
- HUMN-SHU 229   Masters of Asian Cinema
- HUMN-366(266)   Shanghai Stories
- INTM-SHU 268   Acoustic Ethnography of the Yangtze River Delta
- MCC-SHU 9451   Global Media Seminar: China

3. The Politics, Economy, and Environment of China
Courses in this category examine the contemporary political, economic, legal, and environmental theories, policies, and practices in the People's Republic of China.

Sample courses:
- BUSF-SHU 188   Chinese Business and Financial: A Bilingual Introduction
  (CHIN-SHU 429)
- BUSF-SHU 288   Doing Business in China
- CCSF-SHU 123   Contemporary Chinese Political Thought
- ECON-SHU 238   History of Modern Economic Growth: Exploring China From a
                        Comparative Perspective
- GCHN-SHU 240   Modern Chinese Governance
- GCHN-SHU 243   Chinese Environmental Studies
- SOCS-SHU 133   Urbanization in China
- SOCS-SHU 160   Intro to International Politics
- SOCS-SHU 275   US-China Relations

Study Abroad: Students enrolled in the Advanced Global China Studies track may only spend no more than one semester abroad.

Advanced Global China Studies

SAMPLE SCHEDULE 1

For students who have advanced Chinese language skills and start to take Advanced Chinese I course in their first semester of second year.

Year 1

Fall Semester

| Global Perspectives on Society | Core Class | Core Class | English, Chinese, Core or General Elective |

Spring Semester

| Writing as Inquiry | Core Class | The Concept of China | English, Chinese, Core or General Elective |

Year 2

Fall Semester

| Perspectives on the Humanities | China and the World | Advanced Chinese Course 1 | Core or General Elective |

Spring Semester

| GCS Elective | Advanced Chinese course 2 | Core Class | Core, Chinese or General Elective |

Year 3

Fall Semester

| GCS Elective | General Elective | General Elective | General Elective |

Spring Semester

| GCS Elective | Chinese for Advanced Undergraduate Research | General Elective | General Elective |

Year 4

Fall Semester

| General Elective | GCS Capstone | Core Class | General Elective |

Spring Semester

| GCS Capstone | General Elective | General Elective | General Elective |

Advanced Global China Studies

SAMPLE SCHEDULE 2

For students who start to take Advanced Chinese I in their first semester of third year

Year 1

Fall Semester

| Global Perspectives on Society | Core Class | Core Class | English, Chinese, Core, or General Elective |

Spring Semester

| Writing as Inquiry | Core Class | Core or General Elective | English, Chinese, Core, or General Elective |

Year 2

Fall Semester

| Perspectives on the Humanities | The Concept of China | Core or General Elective | Core or Chinese |

Spring Semester

| China and the World | GCS Elective | Core Class | Core or Chinese |

Year 3

Fall Semester

| General Elective | Advanced Chinese Language Course 1 | GCS Elective | General Elective |

Spring Semester

| GCS Elective | Advanced Chinese Language Course 2 | General Elective | General Elective |

Year 4

Fall Semester

| GCS Capstone | Chinese for Advanced Undergraduate Research | Core Class | General Elective |

Spring Semester

| GCS Capstone | General Elective | General Elective | General Elective |

The Humanities major combines a rigorous general education in the humanities with a concentrated focus on a particular discipline or theme. The requirements for the major are designed to allow students to construct a program of study that fits their own intellectual interests.

The curriculum is cross-cultural in foundation and reflects the interdisciplinary strength of our faculty in areas including art history, history, philosophy, literature, religion, film and media, and cultural studies. The Humanities faculty teach course that span the globe, covering the histories and contemporary cultures of Asia, Africa, Europe and the Americas. In these courses, students learn to employ multiple disciplinary perspective and to engage with a wide range of different sources, from literary fiction to courtroom trial transcripts, from classical paintings to contemporary political cartoons and posters.

The Humanities major provides students with advanced skills in critical reading, academic writing, interpretation, analysis and argument that are highly valuable and readily transferable to many careers. While some Humanities majors pursue post-graduate oppurtunities in academia with the goal of contributing to contemporary scholarship in their favorite fields, many others successfully use the skills they develop in their Humanities studies - including their advanced research skills and their capacity to critically engage with our globalizing world - to pursue a wide range of career paths.

In the Humanities introductory and foundation courses, students acquire a set of methods for humanistic inquiry. Students then develop an area of thematic or disciplinary focus by taking courses in Shanghai and other NYU sites in consultation with advisors. In the senior year, they take the Capstone Course and produce a final thesis to showcase their intellectual development.

HUMANITIES

REQUIREMENTS FOR THE MAJOR

Humanities Major Requirements – 46 credits

With advisement and guided planning from the student's academic advisor and Humanities faculty, a student must take the following courses in order to meet the requirements for the Humanities major:

Introductory courses – 16 credits (at least 8 credits of which must be Foundations courses)

Foundations Courses - Choose at least 8 credits from this category
These are a sub-species of Introductory Courses that provide students with a reflective introduction to the methods and/or fundamental theories in a particular discipline. Appropriate introductory courses offered by faculty from other majors may also be classified as Foundations courses for purposes of the Humanities major, for example a methodologically oriented introduction to anthropology.

Courses that satisfy this requirement include but are not limited to:
- PHIL-SHU 101   Foundations: What is Philosophy?
- LIT-SHU-101   Foundations: What is Literature?
- HIST-SHU 101   Foundations: What is History?
- ART-SHU 101   What is Art?

Other Introductory Courses
If you take more than two Foundations courses, the first two count towards the Foundations requirement outlined above, and the remaining count towards the general Introductory course requirement. Additional courses that satisfy the general Introductory course requirement include but are not limited to:
- ART-SHU 610   Art is a Hammer
- HIST-SHU 110   U.S. History Through Literature and Film
- HIST-SHU 208   Europe's Long Twentieth Century
- HIST-SHU 302   History of Water
- HIST-SHU 153   History of Modern China
- GCHN-SHU 110   Concept of China
- GCHN-SHU 156   History of Chinese Art
- GCHN-SHU 164   History of the Silk Road
- GCHN-SHU 263   Voices from the Margin: Modern Chinese and Sinophone Writers
- GCHN-SHU 264   Chinese Migrant and Diasproic Networks
- HUMN-SHU 168   Penning the Self(ie): Writing the Human Condition
- HUMN-SHU 229   Masters of Asian Cinema
- HUMN-SHU 231   Contemporary Art History and Theory in North America and Europe
- HUMN-SHU 185   Gender and Migration in Islam
- PHIL-SHU 40   Ethics
- PHIL-SHU 70   Logic
- PHIL-SHU 80   Philosophy of Mind
- PHIL-SHU 105   Introduction to Chinese Philosophy
- CRWR-SHU 159   Introduction to Creative Writing
  (WRIT-SHU 159)

Advanced Courses (24 credits total, at least 4 credits of which must be an Interdisciplinary Course, and at least 12 credits total must fit together thematically in a way that can serve as a basis for a capstone project).

Advanced Interdisciplinary Courses - Choose at least 4 credits from this category
These are a sub-species of advanced courses that are explicitly interdisciplinary in orientation. For example, they may involve both historical and literary approaches to a topic, or philosophical and historical approaches to a topic, or literary and philosophical approaches to a topic.

Courses that satisfy this requirement include but are not limited to the following courses. Classes designated as an Advanced Interdisciplinary Course can be used either to fulfill the Advanced

Interdisciplinary course requirement or the broader Advanced Course requirement:
- ART-SHU 9077   Contemporary Art and New Media in China
- GCHN-SHU 351   Buddhism, Nature and Technology in China
- HIST-SHU 303   Histories and Politics of Noise
- HUMN-SHU 240   Gender, Sexuality, and Culture
- SOCS-SHU 229   Capitalism, Socialism, Communism: Theory and Practice
- SOCS-SHU 272   The U.S. Constitution: Is It Relevant to China?
- PHIL-SHU 90   Philosophy of Science
- PHIL-SHU 91   Philosophy of Biology
- PHIL-SHU 130   Philosophy of Technology

Other Advanced Courses

In addition to those courses listed above as Advanced Interdisciplinary courses, additional courses that satisfy this requirement include but are not limited to:
- ART-SHU 629   The Villian
- LIT-SHU 246   Introduction to Gender and Feminism in African Literature
- HIST-SHU 232   Moments of Europe
- PHIL-SHU 80   Philosophy of Mind
- PHIL-SHU 90   Philosophy of Science
- PHIL-SHU 130   Philosophy of Technology
- HIST-SHU 303   Histories and Politics of Noise
- HIST-SHU 239   New York: History of the City
- HUMN-SHU 200   French Cinema: The Birth of the Seventh Art
- HIST-SHU 225   Global Space Age
- HIST-SHU 209   Witches, Magic and the Witch Hunts in the Atlantic World, 1400-1700
- HIST-SHU 313   China Goes Global: How China and the World Transformed Each Other
- HUMN-SHU 366   Shanghai Stories
- LIT-SHU 253   Comparative Islamic Feminisms in World Literature
- WRIT-SHU 219   Intermediate Fiction Workshop

Note: At least 12 credits (usually three 4-credit courses) of your Advanced Courses must fit together thematically in a way that can serve as a basis for a capstone project. The aim of this requirement is to allow students to select a set of courses that builds towards a capstone project. Students should consult with student advisor and with Humanities professors to discuss how best to fulfill this requirement.

One example of a thematically linked sequence of courses (in this case a multidisciplinary sequence, linked by the topic of gender):
- HUMN-SHU 240   Gender, Sexuality, and Culture
- LIT-SHU 253   Comparative Islamic Feminisms in World Literature
- HIST-SHU 209   Witches, Magic and the Witch Hunts in the Atlantic World, 1400-1700

Another example of a thematically linked sequence of courses (in this case a disciplinary sequence, linked by the methodology of philosophy):
- PHIL-SHU 80   Philosophy of Mind
- PHIL-SHU 90   Philosophy of Science
- PHIL-SHU 91   Philosophy of Biology

Capstone Sequence - 6 credits

In their final year of course work, Humanities majors are required to complete a substantial research project during a two-semester sequence of capstone courses. The credits for the capstone courses will be distributed across the Fall and Spring semesters as follows:

In the Fall semester, students earn 2 credits for enrolling in the Humanities Capstone Seminar (HUMN-SHU 400A) and completing the required sequence of preparatory assignments for their research project. In the Spring semester, they may choose one of the following two options:

Option 1: Continue their research projects with the capstone instructor and turn in the capstone thesis

with all other required work for the course (HUMN-SHU 400, 4 credits).

Option 2: Continue in an Advanced 4-credit course, and complete the capstone thesis as part of the course with approval and advisement from the instructor of the course. Students selecting Option 2 should inform their academic advisor and the Humanities Area Leader of their decision before the end of Fall semester.

In total, the Capstone sequence accounts for 6 credits total in two courses, the 2-credit Capstone Seminar in the Fall semester and a 4-credit research based course in the Spring semester.

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 the first year. Sample Schedule 2 offers an alternate plan that begins in the second year. Students may propose alternative schedules to their advisors as well.

Year 1

Fall Semester

| Global Perspectives on Society | Core Class | Core Class | English, Chinese, Core or General Elective |

Spring Semester

| Writing as Inquiry | Humanities Introductory Course (Foundations) | Core Class or General Elective | English, Chinese, Core or General Elective |

Year 2

Fall Semester

| Perspectives on the Humanities | Humanities Introductory Course | Humanities Introductory Course (Foundations) | Core, General Elective or Chinese |

Spring Semester

| Core Class | Humanities Introductory Course | Core Class | Core, General Elective or Chinese |

Year 3

Fall Semester

| Core or General Elective | Humanities Advanced course (Interdisciplinary course) | Humanities Advanced course | General Elective |

Spring Semester

| Humanities Advanced course | Humanities Advanced course | General Elective | General Elective |

Year 4

Fall Semester

| Humanities Advanced course | Humanities Advanced course | 2-credit Humanities Capstone Seminar | General Elective |

Spring Semester

| 4-credit Humanities Capstone | General Elective | General Elective | General Elective |

HUMANITIES

SAMPLE SCHEDULE 2

Year 1

Fall Semester

| Global Perspectives on Society | Core Class | Core Class | English, Chinese, or General Elective |

Spring Semester

| Writing as Inquiry | Core Class | Core Class or General Elective | English, Chinese, or General Elective |

Year 2

Fall Semester

| Perspectives on the Humanities | Humanities Introductory Course (Foundations) | Humanities Introductory Course | Core Class, General Elective, or Chinese |

Spring Semester

| Core Class | Humanities Introductory Course (Foundations) | Humanities Introductory Course | Core Class, General Elective, or Chinese |

Year 3

Fall Semester

| Humanities Advanced courses (Interdisciplinary course) | Humanities Advanced courses | Core Class | Core class or General Elective |

Spring Semester

| Humanities Advanced courses | Humanities Advanced courses | General Elective | General Elective |

Year 4

Fall Semester

| Humanities Advanced courses | Humanities Advanced courses | 2-credit Humanities Capstone Seminar | General Elective |

Spring Semester

| 4-credit Humanities Capstone | General Elective | General Elective | General Elective |

Interactive Media Arts (IMA) encourages students to explore the expressive possibilities of emerging media. Our students are challenged to combine practice and theory, connecting technical skills with historical knowledge, cultural understanding, and conceptual thinking. Areas of expertise include 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, media theory, interactive installation, and the philosophy of technology. Our curriculum, community, and active learning environment facilitate student acquisition of both conceptual insights and practical skills, encouraging our students to explore their personal interests whilst engaging both critically and creatively with new technologies.

All IMA majors take a required foundation course, What is New Media? A course designed to give students a strong theoretical and historical background in new media arts. They may then choose between 4 other foundation courses. Interaction Lab, Communications Lab, Application Lab, and Creative Coding Lab. Interaction Lab introduces students to the fields of interaction design, physical computing and digital fabrication, and provides students with foundational skills in electronics prototyping and an introduction to basic computer programming. Communications Lab introduces students to concepts and tools in order to produce multimedia content for print, photography, audio, and video. Application Lab introduces modern rapid software prototyping, theories of innovation, early-stage business concepts, and user experience design. Creative Coding Lab introduces students to the fundamentals of computation, software design, and web technologies.

Students then choose from a range of elective categories across the disciplines of art & design, humanities, science, computation, and business with great freedom to make a selection based on their personal interest and future career goals. Students will receive guidance in their choices if they want to specialize in a particular area (business, arts, humanities or computer science). All majors finish with a two semester Capstone Studio course that synthesizes theoretical research and practice to produce an emerging media project and related essay.

INTERACTIVE MEDIA ARTS

REQUIREMENTS FOR THE MAJOR

Note: Not every course listed is taught every semester, and in any given semester other courses may be offered that fulfill a particular requirement. Requirements may be met through equivalent courses in the global network with prior approval.

Foundations - 12 credits
This foundation is required.
- INTM-SHU 205 What is New Media?

Students may choose any two of the following courses:
- INTM-SHU 101 Interaction Lab
- INTM-SHU 110 Application Lab
- INTM-SHU 120 Communications Lab
- INTM-SHU 103 Creative Coding Lab

Electives - 24 credits
Sample Courses
- INTM-SHU 193 Chinese Cyberculture
- INTM-SHU 130 Working with Electrons
- INTM-SHU 132 Kinetic Light
- INTM-SHU 134 Movement Practices and Computing
- INTM-SHU 138 Extended Perception
- INTM-SHU 150 Storytelling in Mixed Reality
- INTM-SHU 151T Learning with Turtles
- INTM-SHU 194T Global Media Cultures
- INTM-SHU 195 After Us: Post-Human Media
- INTM-SHU 202 Media Architecture
- INTM-SHU 204 Critical Data and Visualization
- INTM-SHU 207 AI and Culture: Paths of Definition, Paths of Development
- INTM-SHU 214 User Experience Design
- INTM-SHU 215 Machine Learning for New Interfaces
- INTM-SHU 217 Make Believe
- INTM-SHU 222 Introduction to Robotics
- INTM-SHU 226 Artificial Intelligence Arts
- INTM-SHU 227T ABC Browser Circus
- INTM-SHU 228T Digital Sculpture
- INTM-SHU 238 Toy Design and Prototyping
- INTM-SHU 241 Creative Learning Design
- INTM-SHU 242 Exhibition: Next
- INTM-SHU 243 Introduction to Animation
- INTM-SHU 247T Creative Game Design and Development
- INTM-SHU 254 Nature of Code
- INTM-SHU 266 Digital Heritage
- INTM-SHU 271 Remade in China
- INTM-SHU 280C VR/AR Fundamentals
- INTM-SHU 284 Digital Sculpting for Facial Animation
- INTM-SHU 289 Exploring & Creating Sonic Environment
- INTM-SHU 296 The Planetary: Computation in the Anthropcene
- BUSF-SHU 211 Design Thinking
- CRWR-SHU 245 Speculative Fictions
- PHIL-SHU 130 Philosophy of Technology: Thinking Machines

Capstone - 8 credits
- INTM-SHU 400 Capstone Studio I
- INTM-SHU 401 Capstone Studio II

REQUIREMENTS FOR THE MINOR

Foundations - 8 credits
Students may choose any two of the following courses:
- INTM-SHU 101   Interaction Lab
- INTM-SHU 103   Creative Coding Lab
- INTM-SHU 110   Application Lab
- INTM-SHU 120   Communications Lab
- INTM-SHU 205   What is New Media?

Electives - 7 - 8 credits
Students may take any 7 - 8 credits worth of electives from the Interactive Media Arts elective list.

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 the first year. Sample Schedule 2 offers an alternate plan that begins in the second year. Students may propose alternative schedules to their advisors as well.

Year 1

Fall Semester

| Global Perspectives on Society | Core Class | Core Class or General Elective | English, Chinese, Core or General Elective |

Spring Semester

| Writing as Inquiry | Core Class | What is New Media? or Interaction Lab or Application Lab or Communications Lab or Creative Coding Lab | English, Chinese, ore or General Elective |

Year 2

Fall Semester

| Perspectives on the Humanities | What is New Media? or Interaction Lab or Application Lab or Communications Lab or Creative Coding Lab | Interactive Media Elective | Core, Chinese or General Elective |

Spring Semester

| Core Class | Interactive Media Elective | What is New Media? or Interaction Lab or Application Lab or Communications Lab or Creative Coding Lab | Core, Chinese or General Elective |

Year 3

Fall Semester

| Interactive Media Elective | Core Class | Interactive Media Elective | General Elective |

Spring Semester

| Interactive Media Elective | General Elective | General Elective | General Elective |

Year 4

Fall Semester

| Capstone I | Interactive Media Elective | General Elective | General Elective |

Spring Semester

| Capstone II | General Elective | General Elective | General Elective |

INTERACTIVE MEDIA ARTS
SAMPLE SCHEDULE 2

Year 1

Fall Semester

Global Perspectives on Society	Core Class	Core Class or General Elective	English, Chinese, Core or General Elective

Spring Semester

Writing as Inquiry	Core Class or General Elective	Core Class	English, Chinese, core or General Elective

Year 2

Fall Semester

Perspectives on the Humanities	What is New Media? or Interaction Lab or Application Lab or Communications Lab or Creative Coding Lab	Interactive Media Elective	Core, Chinese or General Elective

Spring Semester

Core Class	What is New Media? or Interaction Lab or Application Lab or Communications Lab or Creative Coding Lab	Interactive Media Elective	Core, Chinese or General Elective

Year 3

Fall Semester

Interactive Media Elective	What is New Media? or Interaction Lab or Application Lab or Communications Lab or Creative Coding Lab	Core Class	General Elective

Spring Semester

Interactive Media Elective	Interactive Media Elective	General Elective	General Elective

Year 4

Fall Semester

Capstone I	Interactive Media Elective	General Elective	General Elective

Spring Semester

Capstone II	General Elective	General Elective	General Elective

INTERACTIVE MEDIA + BUSINESS

The Interactive Media + Business (IMB) major is where innovation + business meet through emerging media technology. It teaches how innovative ideas combine with technology, creativity and business principles to yield viable products, services and experiences. Students of Interactive Media + Business (IMB), will be challenged to imagine and implement interactive products and services that fearlessly investigate the recently possible in media, technology, and communication. IMB majors are also expected to think holistically about the impact of their work in society as well as the business value, whether it involves software or hardware, virtual or physical, product or experiment. The IMB major welcomes interest in entrepreneurship in all forms — large organizations or startups, for-profit or not-for-profit — that bring about disruptive changes and create positive social impact. Students of IMB will acquire a design-and-build mindset and gain experience by implementing creative solutions to real business problems in order to graduate well prepared for stimulating careers or future learning journeys in diverse organizations across the globe.

IMB majors and minors will take a unique blend of interactive media and business foundation courses, including Application Lab, which introduces modern rapid software prototyping, theories of innovation, early-stage business concepts, creative coding and user experience design. For their second emerging media foundation, IMB students will choose between one of 4 courses: *Interaction Lab*, which covers interaction design, electronics, computation, and digital fabrication, *Communications Lab*, which covers digital media production methods, including imaging, audio, video, and Web development, or *What is New Media?* A course designed to give students a strong theoretical and historical background in new media arts and *Creative Coding Lab*, which introduces students to the fundamentals of computation, software design, and web technologies.
Business foundations include Economics of Global Business and Principles of Financial Accounting.

Students also choose from a range of flexible core and elective categories across the disciplines of business, emerging media, art and design, the humanities, social and physical sciences, as well as computation and data. Majors finish with a year-long Capstone Studio course by synthesizing methods of research and practice to produce an interactive project and business plan.

REQUIREMENTS FOR THE MAJOR

Note: Not every course listed is taught every semester, and in any given semester other courses may be offered that fulfill a particular requirement. Requirements may be met through equivalent courses in the global network with prior approval

Emerging Media Foundation Courses (pick 2 of 5): 8 credits
- INTM-SHU 110   Application Lab
- INTM-SHU 103   Creative Coding Lab
- INTM-SHU 101   Interaction Lab
- INTM-SHU 120   Communications Lab
- INTM-SHU 205   What is New Media

Required Business Foundation Course: 8 credits
- ECON-SHU 251   Economics of Global Business
- BUSF-SHU 250   Principles of Financial Accounting

Business Flexible Core Courses: 8 credits
Choose 2 from the following (sophomore standing required):
- BUSF-SHU 210   Business Analytics
- BUSF-SHU 351   Operations Management
- MGKT-SHU 301   Management and Organizations
- MKTG-SHU 1   Introduction to Marketing
- BUSF-SHU 142   Information Technology in Business and Society
- BUSF-SHU 202   Foundations of Finance

Business Elective Courses: 12 credits
Any Business core or elective
Sample Courses:
- BUSF-SHU 311   New Venture Strategy
- MKTG-SHU 57   Digital Marketing
- MKTG-SHU 110   Branding and Innovation

Interactive Media Arts/Business Elective Courses: 20 credits
Sample Courses:
- INTM-SHU 226   Artificial Intelligence Arts
- INTM-SHU 232   Critical Data and Visualization
- IMBX-SHU 211   Design Thinking
- IMBX-SHU 101T   Life Design
- IMBX-SHU 102T   Global Experience Design
- IMBX-SHU 103T   Understanding Financial Technology
- CCST-SHU 132   Creativity Considered

A complete and current list of courses is available at: ima.shanghai.nyu.edu/curriculum/

Capstone Studio: 8 credits

Important Notes:
- IMB majors are subject to the general degree requirements of NYU Shanghai. They must complete 128 total credits with a cumulative grade point average of at least 2.0.
- IMB majors are not able to double major in either Business & Finance, Business & Marketing, or Interactive Media Arts.
- The required Business & Finance and Business & Marketing course, Foundations of Finance, is optional for IMB majors. Students wishing to take Foundations of Finance must fulfill these prerequisites: Calculus, Microeconomics, and Statistics for Business and Economics.
- IMB students can take Economics of Global Business at other locations only if they meet the prerequisites.
- Microeconomics and Statistics for Business and Economics can be counted as Business electives for IMB majors

- Students who began NYU Shanghai before the 2018-2019 academic year who have already taken Communications Lab and Interaction Lab may substitute one of them for Application Lab.

INTERACTIVE MEDIA + BUSINESS
SAMPLE SCHEDULE 1

This is just one example of how a student could organize their courses if pursuing a IMB major. It assumes a student begins taking IMB major courses in the first year. Sample Schedule 2 offers an alternate plan that begins in the second year. Students may propose alternative schedules to their advisors as well.

Year 1

Fall Semester

| Global Perspectives on Society | Core Class | Core Class | English, Chinese, core or General Elective |

Spring Semester

| Writing as Inquiry | Core Class | Emerging Media Foundation Course | English, Chinese, core or General Elective |

Year 2

Fall Semester

| Perspectives on the Humanities | Emerging Media Foundation Course | Interactive Media Elective | Core, Chinese or General Elective |

Spring Semester

| Economics of Global Business | Principles of Financial Accounting | Interactive Media Elective | Core, Chinese or General Elective |

Year 3

Fall Semester

| Interactive Media Elective | Core Class | Business Flexible Core | Core or General Elective |

Spring Semester

| Interactive Media Elective | Business Flexible Core | Business Elective | Business Elective |

Year 4

Fall Semester

| Capstone Seminar (IMB) | Core Class or General Elective | Business Elective | General Elective |

Spring Semester

| Capstone Seminar (IMB) | Interactive Media Elective | General Elective | General Elective |

INTERACTIVE
MEDIA + BUSINESS
SAMPLE SCHEDULE 2

Year 1

Fall Semester

| Global Perspectives on Society | Core Class | Core Class | English, Chinese, Core or General Elective |

Spring Semester

| Writing as Inquiry | Core Class or General Elective | Core Class | English, Chinese, core or General Elective |

Year 2

Fall Semester

| Perspectives on the Humanities | Emerging Media Foundation Course | Interactive Media Elective | Core, Chinese or General Elective |

Spring Semester

| Economics of Global Business | Emerging Media Foundation Course | Principles of Financial Accounting | Core, Chinese or General Elective |

Year 3

Fall Semester

| Interactive Media Elective | Interactive Media Elective | Core Class | Business Flexible Core |

Spring Semester

| Interactive Media Elective | Business Flexible Core | Business Elective | Interactive Media Elective |

Year 4

Fall Semester

| Capstone Seminar (IMB) | Business Elective | Core Class or General Elective | General Elective |

Spring Semester

| Capstone Seminar (IMB) | Business Elective | General Elective | General Elective |

Mathematics is the cornerstone of science. It provides both the language and the framework for scientific thought, incorporating logical rigor and the power of abstraction. These attributes allow human ingenuity to extract deep scientific understanding from relatively simple experiments and physical observations. Mathematics plays a double role: On the one hand, it is a scientific field of its own that has yielded powerful and surprisingly beautiful theroretical constructions. On the other hand, mathematics provides the toolbox needed to solve problems and to model phenomena observed in nature or of interest in industry and technology. As such, mathematics allows humans to model the physical universe, to build efficient algorithms in computing, to develop powerful artificial intelligence methods, to analyze financial markets, to produce predictions for climate science, to map and study the human genome, to analyze the structure of the human brain, and a long list of etcetera's.

NYU Shanghai offers two tracks for a degree in Mathematics: Mathematics and Honors Mathematics. Both tracks develop the pure and applied aspects of the discipline. Math majors acquire a solid grasp of the main areas of mathematics while being invited, through a number of electives courses, to apply this knowledge in a wide range of areas, including computer science, physics, chemistry, engineering, data science, operations research, finance, etc. Graduates are qualified either to continue with further graduate education, or to start a career in industry, financial institutions, logistics, statistical consulting, or any activity requiring abstraction capability, mathematical modeling skills or relying on intensive computational or quantitative techniques.

The Honors Math track requires students to take the Honors version of the mandatory Math courses and to keep both a general and a Math GAP higher or equal to 3.65. Honors courses have a broader scope and breadth than the regular courses, exposing students to general definitions and complete proofs. The Honors program is very demanding, as the combination of distinguished professors and a homogeneous selected audience results in fast moving courses that often become undistinguishable from gradute courses.

MATHEMATICS

REQUIREMENTS FOR THE MAJOR

The program is formed by three components: (1) Core courses, (2) Required Math courses (3) Math electives

Math requirements: Students much either take MATH-SHU 131 Calculus, place out of Calculus or take MATH-SHU 201 Honors Calculus, in order to satisfy the Mathematics requirement in the core curriculum

Science requirements: Students must choose two lectures plus one lab of the following list

Lecture sections (choose two):
- Foundations of Biology I (BIOL-SHU 21), Foundations of Biology II (BIOL-SHU 21)
- General Physics (PHYS-SHU 11) or Foundations of Physics Honors (PHYS-SHU 91), General Physics II (PHYS-SHU 12) or Foundations of Physics II Honors (PHYS-SHU 93)
- Foundations of Chemistry I (CHEM-SHU 125), Foundations of Chemistry II (CHEM-SHU 126)

Lab sections (choose one associated to one of the lecture sections chosen above):
- FoS Biology Laboratory (BIOL-SHU 123)
- FoS Physics Laboratory (PHYS-SHU 71), Physics II Lab (PHYS-SHU 94)
- FoS Chemistry Laboratory (CHEM-SHU 127)

Alternative courses may be accpeted upon prior approval by the program leader. These courses must make a substantial use of Mathematics and mathematical modeling. Not every course listed is taught every semester, and in any given semester other courses may be offered as a replacement. Requirements may be met through equivalent courses in the global network with prior approval. 3-credit versions of courses can generally substitute for a full 4-credit course requirement. A 2-credit course with a similar title or content will not by itself meet the requirement of the named course.

Required Mathematics Courses
Students wishing to major in Mathematics are strongly advised to take the course MATH-SHU 140 Linear Algebra in their first year, as it is a prerequisite for most advanced math courses. Note that thsi course can be taken at the same time as MATH-SHU 131 Calculus

- MATH-SHU 140   Linear Algebra
- MATH-SHU 143   Foundations of Mathematical Methods or MATH-SHU 201 Honors Calculus
- MATH-SHU 151   Multivariable Calculus
- MATH-SHU 235   Probability and Statistics or MATH-SHU 233 Honors Theory of Probability
- MATH-SHU 262   Ordinary Differential Equations *or*
  MATH-SHU 362   Honors Ordinary Differential Equations

Math Electives
Additionally to Calculus and the five required mathematics course, students are required to choose eight Math Electives. At least two must be from the category "Constrained Math Electives". Note that most elective courses require either the course MATH-SHU 143 Foundations of Mathematical Methods or the course MATH-SHU 201 Honors Calculus. Courses with a * can be used to complete the senior thesis projects in the senior year (see below).

Constrained Math Electives
This list is not exhaustive; other courses may be added if approved.
- MATH-SHU 141   Honors Linear Algebra I
- MATH-SHU 142   Honors Linear Algebra II*
- MATH-SHU 236   Mathematics of Data Sceince and Machine Learning*

- MATH-SHU 282   Functions of a Complex Variable
- MATH-SHU 328   Honors Analysis I
- MATH-SHU 329   Honors Analysis II*
- MATH-SHU 339   Real Variables*
- MATH-SHU 348   Abstract Algebra I*
- MATH-SHU 349   Abstract Algebra II*
- MATH-SHU 350   Probability Limit Theorems*
- MATH-SHU 375   Topology*
- MATH-SHU 377   Differential Geometry*
- MATH-SHU-G 2550   Functional Analysis

Additional Mathematics Electives

This list is not exhaustive; other courses may be added if approved.

- CSCI-SHU 2314   Discrete Mathematics
- MATH-SHU 160   Networks and Dynamics
- MATH-SHU 226   Functional Analysis
- MATH-SHU 234   Mathematics of Statistics and Data Science I
- MATH-SHU 236   Mathematics of Statistics and Data Science II*
- MATH-SHU 250   Mathematics of Finance*
- MATH-SHU 251   Introduction to Math Modeling*
- MATH-SHU 252   Numerical Analysis
- MATH-SHU 263   Partial Differential Equations*
- MATH-SHU 345   Introduction to Stochastic Processes*
- MATH-SHU 997   Math Independent Study*

Senior Thesis

In their senior year, each Mathematics student is additionally required to complete a Senior Thesis, ending with a written report and an oral presentation. This thesis can be completed as part of any of your senior courses if indicated in the above list by an *.

MATHEMATICS MINOR

Students wishing to minor in Mathematics are required to take four 4-credit mathematics courses at the Calculus level or higher.

MATHEMATICS
SAMPLE SCHEDULE 1

This is one example of how a student could organize their courses if pursuing a Mathematics major. All the required courses are taken in the first two years, which opens the doors to most mathematics electives. It is strongly advised to take Linear algebra in the first year as it is a prerequisite for most of the other Mathematics courses.

Year 1

Fall Semester

| Global Perspectives on Society I | Calculus (Core Class) | Linear algebra | English, Chinese, Core or General Elective |

Spring Semester

| Writing as Inquiry | Multivariate Calculus | Foundations of Mathematical Methods | English, Chinese, Core or General Elective |

Year 2

Fall Semester

| Perspectives on the Humanities | Probability and Statistics | Math or General elective | Chinese, Core or General Elective |

Spring Semester

| Core Class | Ordinary Differential Equations | Math or General elective | Chinese, Core or General Elective |

Year 3

Fall Semester

| Core class or General Elective | Math Elective | Math Elective | General Elective |

Spring Semester

| Math or General Elective | Math Elective | Math Elective | General Elective |

Year 4

Fall Semester

| General Elective | Math Elective*/ Math Elective | Math or General Elective | General Elective |

Spring Semester

| General Elective | Math Elective*/ Math Elective | Math or General Elective | General Elective |

MATHEMATICS
SAMPLE SCHEDULE 2

This schedule is an example for students who want to explore topics in computer science in the course of their studies. These could be replaced for instance by courses in physics, chemistry, economics, or finance.

Year 1

Fall Semester

| Global Perspectives on Society | Core Class (Calculus) | Core/ General Elective | English, Chinese, Core or General Elective |

Spring Semester

| Writing as Inquiry | Linear algebra | Core/ General Elective | English, Chinese, Core or General Elective |

Year 2

Fall Semester

| Perspectives on the Humanities | Probability and Statistics | Multivariate Calculus | Core, General Elective or Chinese |

Spring Semester

| Core Class | Ordinary Differential Equations | Foundations of Mathematical Methods | Core, General Elective or Chinese |

Year 3

Fall Semester

| Core Class or General Elective | Math Elective | Math Elective | Math or General Elective |

Spring Semester

| Math or General Elective | Math Elective | Math Elective | General Elective |

Year 4

Fall Semester

| General Elective | Math Elective | Math Elective | General Elective |

Spring Semester

| General Elective | Math Elective | Math Elective | General Elective |

REQUIREMENTS FOR THE MAJOR

Students wishing to major in Honors Mathematics must have achieved a general GPA of 3.65 or higher, and a GPA of 3.65 or higher in the major sequence. The earliest students are able to decalre the major is after completion of Honors Analysis I and Honors Linear Algebra II and posting of their spring semester freshman year grades. If the GPA requirements are not met, the students may graduate as Mathematics majors but retain the Honors designation of the individual courses they took on their transcripts.

The program is formed by three components: (1) core courses, (2) required Math courses and (3) Math electives.

Core Requirements

Math requirements: They are satisfied by approving either MATH-SHU 201 Honors Calculus or the combination of Calculus plus Foundations of Mathematical Methods. Acceptance in MATH-SHU 328 Honors Analysis I automatically entails the satisfaction of the core math requirements.

Science requirements: Students must choose two lectures plus one lab of the following list. Please note prerequisite courses for planning and course selection.

Lecture sections (choose two):
- Foundations of Biology I (BIOL-SHU 21), Foundations of Biology II (BIOL-SHU 21)
- General Physics (PHYS-SHU 11) or Foundations of Physics Honors (PHYS-SHU 91), General Physics II (PHYS-SHU 12 or Foundations of Physics II Honors (PHYS-SHU 93)
- Foundations of Chemistry I (CHEM-SHU 125), Foundations of Chemistry II (CHEM-SHU 126)

Lab sections (choose one associated to one of the lecture sections chosen above):
- FoS Biology Laboratory (BIOL-SHU 123)
- FoS Physics Laboratory (PHYS-SHU 71), Physics II Lab (PHYS-SHU 94)
- FoS Chemistry Laboratory (CHEM-SHU 127)

Alternative courses may be accepted upon prior approval by the program leader. These courses must make a substantial use of Mathematics and mathematical modeling. Not every course listed is taught every semester, and in any given semester other courses may be offered as a replacement. Requirements may be met through equivalent courses in the global network with prior approval. 3-credit versions of courses can generally substitute for a full 4-credit course requirement. A 2-credit course with a similar title or content will not by itself meet the requirement of the named course.

Required Mathematics Courses
- MATH-SHU 141   Honors Liner Algebra I
- MATH-SHU 142   Honors Linear Algebra II
- MATH-SHU 233   Theory of Probability
- MATH-SHU 282   Functions of a Complex Variable
- MATH-SHU 328   Honors Analysis I
- MATH-SHU 329   Honors Analysis II*
- MATH-SHU 348   Abstract Algebra I
- MATH-SHU 362   Honors Ordinary Differential Equations

Math Electives
Honors students are required to choose five Math Electives. It is strongly encouraged to take the required mathematics courses first. This list is not inclusive; other courses may be added if approved. Courses with a * can be used to complete the Senior Thesis in the senior year (see below)

- MATH-SHU 160   Networks and Dynamics
- MATH-SHU 226   Functional Analysis
- MATH-SHU 234   Mathematics of Statistics
- MATH-SHU 236   Mathematics of Data Science and Machine Learning*
- MATH-SHU 250   Mathematics of Finance*

- MATH-SHU 251   Introduction to Math Modeling
- MATH-SHU 252   Numerical Analysis*
- MATH-SHU 263   Partial Differential Equations*
- MATH-SHU 329   Honors Analysis II*
- MATH-SHU 339   Real Variables*
- MATH-SHU 345   Introduction to Stochastic Processes*
- MATH-SHU 349   Abstract Algebra II*
- MATH-SHU 350   Probability Limit Theroems*
- MATH-SHU 375   Topology*
- MATH-SHU 377   Differential Geometry
- MATH-SHU 997   Math Independent Study*
- MATH-SHU-G 2550   Functional Analysis
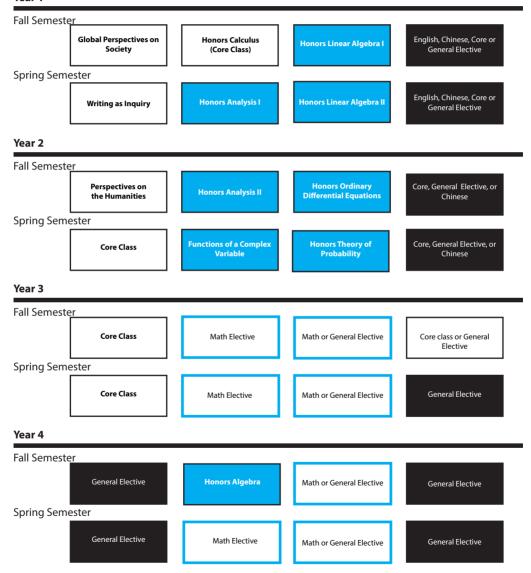
Senior Thesis

In their senior year, each Mathematics student is additionally required to complete a Senior Thesis, ending with a written report and an oral presentation. This special project can be completed as part of any of your senior courses if indicated in the above list by an *.
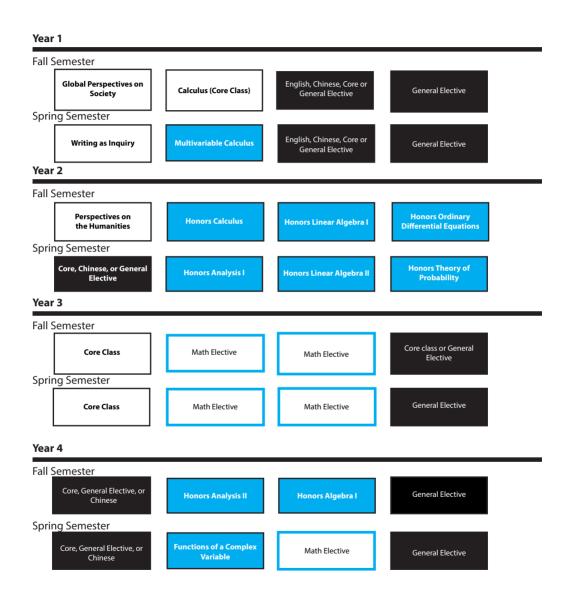
HONORS MATHEMATICS
SAMPLE SCHEDULE 1

This is just one example of how a student could organize their courses if pursuing an Honors Mathematics major. Taking all required courses in the first two years allows access to most honors math electives.

Year 1

Fall Semester

Global Perspectives on Society	Honors Calculus (Core Class)	Honors Linear Algebra I	English, Chinese, Core or General Elective

Spring Semester

Writing as Inquiry	Honors Analysis I	Honors Linear Algebra II	English, Chinese, Core or General Elective

Year 2

Fall Semester

Perspectives on the Humanities	Honors Analysis II	Honors Ordinary Differential Equations	Core, General Elective, or Chinese

Spring Semester

Core Class	Functions of a Complex Variable	Honors Theory of Probability	Core, General Elective, or Chinese

Year 3

Fall Semester

Core Class	Math Elective	Math or General Elective	Core class or General Elective

Spring Semester

Core Class	Math Elective	Math or General Elective	General Elective

Year 4

Fall Semester

General Elective	Honors Algebra	Math or General Elective	General Elective

Spring Semester

General Elective	Math Elective	Math or General Elective	General Elective

HONORS MATHEMATICS
SAMPLE SCHEDULE 2

This is an alternative schedule for students who decide to enroll in the Honors Mathematics track at a later time.

Year 1

Fall Semester

| Global Perspectives on Society | Calculus (Core Class) | English, Chinese, Core or General Elective | General Elective |

Spring Semester

| Writing as Inquiry | Multivariable Calculus | English, Chinese, Core or General Elective | General Elective |

Year 2

Fall Semester

| Perspectives on the Humanities | Honors Calculus | Honors Linear Algebra I | Honors Ordinary Differential Equations |

Spring Semester

| Core, Chinese, or General Elective | Honors Analysis I | Honors Linear Algebra II | Honors Theory of Probability |

Year 3

Fall Semester

| Core Class | Math Elective | Math Elective | Core class or General Elective |

Spring Semester

| Core Class | Math Elective | Math Elective | General Elective |

Year 4

Fall Semester

| Core, General Elective, or Chinese | Honors Analysis II | Honors Algebra I | General Elective |

Spring Semester

| Core, General Elective, or Chinese | Functions of a Complex Variable | Math Elective | General Elective |

Neural Science

Neural science (NS) 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. We attract students who are interested in understanding the brain's command of all its diverse functions including but not limited to the following questions: How do cell circuits enable us to read and speak? How and why do we form relationships? How do we think, remember, despair, or motivate? What are possible causes of devastating disorders of the brain and body, as well as ways to prevent or cure them?

The NS major studies the brain and its impact on behavior and cognitive functions, the understanding of which is regarded as the Holy Grail of the current century. Increasing understanding of the brain will enable scientists to develop treatments for neurodegenerative diseases (such as Parkinson's disease & Alzheimer's disease) and mental illnesses. NS research will also help us find out more about normal human behavior and mental wellbeing, and can thus help develop artificial intelligence as well as treating illnesses. NS research could also lead to better understanding of how we learn, allowing us to optimize our intelligence. These developments are likely to provide significant benefits for society and have implications for a diverse range of public policy areas such as health, education, law, and security.

The undergraduate NS curriculum blends courses from many of the basic sciences (such as mathematics, biology, physics, & chemistry) as a foundation for higher level work in NS. NS major requirement contains 6 required courses including one capstone course and 2 elective courses. In addition, students who demonstrate a genuine interest in research and achieve a grade point average of 3.65 or higher in all courses required for the major and over all courses taken for credit can apply to be on Honors Track.

REQUIREMENTS FOR THE MAJOR

Not every course listed below is taught in every semester. In any given semester, other courses may be offered that fulfill the requirement. Requirements may be met through taking equivalent courses in the Global Network with the prior approval from the Director of Undergraduate Studies (DUS) for Neural Science. Students may not double major in Neural Science and Biology.

Foundational Courses
- BIOL-SHU 21   Foundations of Biology I
- BIOL-SHU 22   Foundations of Biology II
- BIOL-SHU 123   FoS Biology Laboratory
- CHEM-SHU 125   Foundations of Chemistry I
- CHEM-SHU 126   Foundations of Chemistry II
- CHEM-SHU 127   FoS Chemistry Laboratory **OR**
  CHEM-SHU 128   Chemistry II Lab
- PHYS-SHU 11   General Physics 1 **OR**
  PHYS-SHU 91   Foundations of Physics I Honors
  PHYS-SHU 12   General Physics II **OR**
  (**PHYS-SHU 93**)   Foundations of Physics II Honors
- PHYS-SHU 71   FoS Physics Laboratory
- PHYS-SHU 94   Physics II Lab

Note:
1. NS majors are encouraged to complete the above classes in their first 2 years.
2. NS majors are not required to take Foundations of Physics III Honors and may substitute General Physics I & II for Foundations of Physics I & II Honors.
3. Relationship between General Physics and Foundations of Physics Honors: General Physics I & II is a calculus-based course for pre-meds, engineers and others who want a broad introduction and survey of basic physics including classical mechanics, electricity and magnetism, optics and waves, and thermal and statistical physics. Foundations of Physics I- IV Honors covers a similar set of topics in considerably greater depth, plus special relativity and an introduction to quantum mechanics, over four semesters. Please note that Foundations of Physics I & II Honors alone do not include some important topics, such as optics, thermal and statistical physics, which are included in Foundations of Physics III Honors, and introduction to mechanics and condensed matter physics in Foundations of Physics IV Honors. Therefore, students electing to take the Honors Physics track are highly recommended to take Foundations of Physics III Honors and Foundations of Physics IV Honors as well. Students with a strong high-school background in physics and mathematics are also highly recommended to take Foundations of Physics Honors I- IV.

Required Major Courses (All Six)
- NEUR-SHU 100   Math Tools for Life Math Tools for Life Sciences(Spring)
- NEUR-SHU 201   Introduction to Neural Science (Fall)
- NEUR-SHU 251   Behavioral and Integrative Neuroscience (Spring)
- NEUR-SHU 210   Cellular and Molecular Neuroscience (Fall)

One approved upper-level course in either Psychology or Biology:
Approved upper-level Psychology courses:
- NEUR-SHU 222   Perception
- NEUR-SHU 265   Neural Bases of Speech and Language

*The following courses will not be offered at NYU Shanghai but students may take one of them at New York to fulfill the requirement.

- PSYCH-UA 29   Cognition
- PSYCH-UA 44   Lab in Perception
- PSYCH-UA 46   Lab in Human Cognition
- PSYCH-UA 55   Psychology, Neuropsychology, and Medicine
- PSYCH-UA 300   From Illusions to Inference

Approved upper-level Biology courses:
- BIOL-SHU 30   Genetics
- BIOL-SHU 50   Immunology
- BIOL-SHU 263   Developmental Biology
- CHEM-SHU 881   Biochemistry I
- CHEM-SHU 882   Biochemistry II

*The following courses will not be offered at NYU Shanghai but students may take one of them at New York to fulfill the requirement.

- BIOL-UA 25   Principles of Animal Physiology
- BIOL-GA 1501   Mathematics in Medicine and Biology
- BIOL-GA 1502   Computers in Medicine and Biology

Major Capstone Course: NEUR-SHU 997/998 Independent Study in Neural Science (2-4 credits, can be repeated once): Open to senior neural science majors with permission of DUS.

Independent Study must have a combined total of at least 4 credits but no more than 8 credits to fulfill the major capstone course requirement. The 4-credit requirement can be fulfilled in 1 semester with a 4-credit load or over 2 semesters with a 2-credit load in each semester.

Major Electives (Choose Two)
- MATH-SHU 160   Networks and Dynamics (Spring)
- NEUR-SHU 10   Free Will and the Brain (Spring)
- NEUR-SHU 222   Perception (Spring, can count as an approved upper-level Psychology course)
- NEUR-SHU 261   Neurobiology of Decision Making (Spring)
- NEUR-SHU 265   Neural Bases of Speech and Language (Fall, can count as an approved upper-level Psychology course)
- NEUR-SHU 270   Introduction to Theoretical Neuroscience (Fall)
- NEUR-SHU 303   Introduction to Linguistics: The Science of Human Language (Fall)

*The following courses will not be offered at NYU Shanghai but students may take one of them at New York to fulfill the requirement.

- NEURL-UA 302   Special Topics in Neural Science
- NEURL-UA 305   Development and Dysfunction of the Nervous System

General Electives
Students may take any courses in the NYU system to meet the general elective requirements. They are strongly encouraged (but not required) to take Introduction to Programming and choose from the following listed courses to develop research skills.

Recommended Computer Science General Electives:
- CSCI-SHU 101   Introduction to Computer Science
- CSCI-SHU 220   Algorithms
- CSCI-SHU 358   Theory of Computation
- CSCI-SHU 360   Machine Learning
- CSCI-SHU 372   Artificial Intelligence
- CSCI-SHU 402   Advanced Algorithms
- EENG-SHU 2054   Signals and Systems
- EENG-SHU 251   Circuits
- EENG-SHU 352   Control Systems
- EENG-SHU 375   Robotic Systems
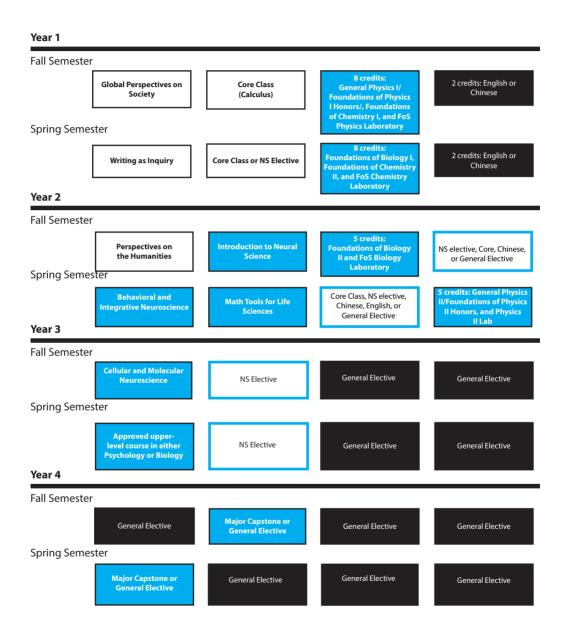
Recommended Mathematics General Electives:

- MATH-SHU 151   Multivariable Calculus
- MATH-SHU 140   Linear Algebra
- MATH-SHU 233   Theory of Probability
- MATH-SHU 235   Probability and Statistics
- MATH-SHU 263   Partial Differential Equations

Neural Science Minor
- BIOL-SHU 21   Foundations of Biology I
- BIOL-SHU 22   Foundations of Biology II
- BIOL-SHU 123   FoS Biology Laboratory
- NEUR-SHU 201   Introduction to Neural Science
- NEUR-SHU 251   Behavioral and Integrative Neuroscience **OR**
  (NEUR- SHU 210)   Cellular and Molecular Neuroscience

NEURAL SCIENCE
SAMPLE SCHEDULE 1

This is just one example of how a student could organize their courses if pursuing a NS major. It assumes a student begins taking NS major courses in the first semester of their first year. Sample Schedule 2 offers an alternate plan that involves beginning to pursue a NS major in the spring semester of the first year. Students may propose alternative schedules to their advisors as well.

Year 1

Fall Semester

| Global Perspectives on Society | Core Class (Calculus) | 8 credits: General Physics I/ Foundations of Physics I Honors/, Foundations of Chemistry I, and FoS Physics Laboratory | 2 credits: English or Chinese |

Spring Semester

| Writing as Inquiry | Core Class or NS Elective | 8 credits: Foundations of Biology I, Foundations of Chemistry II, and FoS Chemistry Laboratory | 2 credits: English or Chinese |

Year 2

Fall Semester

| Perspectives on the Humanities | Introduction to Neural Science | 5 credits: Foundations of Biology II and FoS Biology Laboratory | NS elective, Core, Chinese, or General Elective |

Spring Semester

| Behavioral and Integrative Neuroscience | Math Tools for Life Sciences | Core Class, NS elective, Chinese, English, or General Elective | 5 credits: General Physics II/Foundations of Physics II Honors, and Physics II Lab |

Year 3

Fall Semester

| Cellular and Molecular Neuroscience | NS Elective | General Elective | General Elective |

Spring Semester

| Approved upper-level course in either Psychology or Biology | NS Elective | General Elective | General Elective |

Year 4

Fall Semester

| General Elective | Major Capstone or General Elective | General Elective | General Elective |

Spring Semester

| Major Capstone or General Elective | General Elective | General Elective | General Elective |

NEURAL SCIENCE
SAMPLE SCHEDULE 2

Year 1

Fall Semester

| Global Perspectives on Society | Core Class (Calculus) | Core Class | English, Chinese or General Elective |

Spring Semester

| Writing as Inquiry | Core Class | 3 credits: Foundations of Biology I | English, Chinese or General Elective |

Year 2

Fall Semester

| Perspectives on the Humanities | Intro to Neural Science | 8 credits: Foundations of Chemistry I, Foundations of Biology II, and FoS Biology Laboratory | No class |

Spring Semester

| Math Tools for Life Sciences | Behavioral and Integrative Neuroscience | 5 credits: Foundations of Chemistry II and FoS Chemistry Laboratory | Chinese or General Elective |

Year 3

Fall Semester

| Cellular and Molecular Neuroscience | NS Elective | General Elective | Chinese or General Elective |

Spring Semester

| Approved upper-level course in either Psychology or Biology | NS Elective | General Elective | General Elective |

Year 4

Fall Semester

| 5 credits: General Physics I/Foundations of Physics I Honors and FoS Physics Laboratory | Major Capstone or General Elective | General Elective | General Elective |

Spring Semester

| 5 credits: General Physics II/Foundations of Physics II Honors and Physics II Lab | Major Capstone or General Elective | General Elective | General Elective |

PHYSICS

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 may participate in activities ranging from the writing of realistic computer modeling of fundamental physical principles to the modeling of financial activities, as well as the more traditional activities of physicists and mathematicians. Those trained in physics are found in many occupations, such as various fields of engineering, computer technology, health, environmental and earth sciences, communications, finance, 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. Our interdisciplinary approach and experimental work is geared to meet the current demand for scientists with well-integrated backgrounds who became the leaders in modern scientific scholarship and who pursue careers in research, education, industry, health care, business, and publishing.

REQUIREMENTS FOR THE MAJOR

Note: Note: Not every course listed below is taught in every semester. In any given semester, other courses may be offered that fulfill the requirement. Requirements may be met through taking equivalent courses in NYU's global network with the prior approval.

GPA minimum requirement

Physics, Chemistry and Electrical Engineering majors' students must achieve and maintain a minimum 3.0 cumulative and major GPA in order to declare the major. Since they are required to study away in NY or AD for their junior year, they must complete all of the prerequisite courses at NYU Shanghai for the junior year major classes they need to take in New York or AD before they will be admitted to study away. If declared majors fail to maintain a 3.0 GPA or do not complete the required courses during study away, they may be required to declare a different major to be able to graduate.

Foundational Courses

- BIOL-SHU 21   Foundations of Biology I
- BIOL-SHU 123   FoS Biology Laboratory
- CHEM-SHU 125   Foundations of Chemistry I
- CHEM-SHU 126   Foundations of Chemistry II
- CHEM-SHU 128   Chemistry II Lab
- PHYS-SHU 91   Foundations of Physics I Honors **OR**
  PHYS-SHU 11   General Physics I (with a B+ or better grade)
- PHYS-SHU 93   Foundations of Physics II Honors
- PHYS-SHU 95   Foundations of Physics III Honors
- PHYS-SHU 96   Foundations of Physics IV Honors
- PHYS-SHU 71   FoS Physics Laboratory
- PHYS-SHU 94   Physics II Laboratory

Note:

1) Relationship between General Physics and Foundations of Physics Honors: General Physics I & II is a calculus-based course for pre-meds, engineers and others who want a broad introduction and survey of basic physics including classical mechanics, electricity and magnetism, optics and waves, and thermal and statistical physics. Foundations of Physics I-IV Honors covers a similar set of topics in considerably greater depth, plus special relativity and an introduction to quantum mechanics, over four semesters. It should be emphasized that Foundations of Physics I & II Honors alone do not include some important topics, such as optics, thermal and statistical physics, which are included in Foundations of Physics III Honors, and introduction to quantum mechanics and condensed matter physics in Foundations of Physics IV Honors. Therefore, students electing to take the Honors Physics track are highly recommended to take Foundations of Physics III Honors and Foundations of Physics IV Honors as well.
2) Students who have taken General Physics I and received a B+ or better grade also satisfy the prerequisite to take Foundations of Physics II Honors. Such students may also become Physics Majors and do not have to retake Foundations of Physics I Honors. However, students who already are interested in majoring in Physics, as well as those interested in the honors track, or those with a strong high-school background in physics and mathematics are strongly recommended to take Foundations of Physics I-IV Honors.
3) Physics majors are not required to take Foundations of Biology II.
4) Physics majors are required to take Linear Algebra and Differential Equations. They should not take Linear Algebra.

Required Courses

- MATH-SHU 151   Multivariable Calculus
- MATH-SHU 235   Probability and Statistics
- MATH-SHU 265   Linear Algebra and Differential Equations
- PHYS-SHU 106   Mathematical Physics
- PHYS-SHU 251   Electricity and Magnetism
- PHYS-SHU 301   Quantum Mechanics

- PHYS-SHU 302   Statistical Mechanics and Thermodynamics
- PHYS-SHU 303   Advanced Physics Laboratory
- PHYS-SHU 998   Integrated Science Capstone (This course must be taken in the last semester before graduation)

Physics Electives - Choose Two
- PHYS-SHU 210   Computational Physics
- PHYS-SHU 252   Solid State Physics
- PHYS-SHU 255   Biophysics
- PHYS-SHU 314   Astrophysics
- PHYS-SHU 315   Nuclear and Particle Physics

Physics Minor
- PHYS-SHU 91   Foundations of Physics I Honors **OR**
  PHYS-SHU 11   General Physics I
- PHYS-SHU 93   Foundations of Physics II Honors **OR**
  PHYS-SHU 12   General Physics II
- PHYS-SHU 71   FoS Physics Laboratory
- PHYS-SHU 94   Physics II Laboratory
- Two Physics Elective Courses (Must bring total credits of the minor courses to 16 or more)

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 the first semester of their first year. Sample Schedule 2 offers an alternate plan that involves beginning to pursue a Physics major in the spring semester of the first year. Students may propose alternative schedules to their advisors as well.

Year 1

Fall Semester

| Global Perspectives on Society | Core Class (Calculus) | 8 credits: Foundations of Physics I Honors, Foundations of Chemistry I, and FoS Physics Laboratory | 2 credits: English or Chinese |

Spring Semester

| Writing as Inquiry | Multivariable Calculus | 8 credits: Foundations of Physics II Honors, Physics II Lab and Foundations of Biology I | 2 credits: English or Chinese |

Year 2

Fall Semester

| Perspectives on the Humanities | Linear Algebra and Differential Equations | 5 credits: Foundations of Physics III Honors and FoS Biology Laboratory | Probability and Statistics |

Spring Semester

| 8 credits: Foundations of Physics IV Honors, Foundations of Chemistry II, and FoS Chemistry Laboratory | Mathematical Physics | Core or General Elective | English or Chinese |

Year 3

Fall Semester

| Electricity and Magnetism | Quantum Mechanics | Physics Elective | Chinese or General Elective |

Spring Semester

| Statistical Mechanics and Thermodynamics | Physics Elective | General Elective | Chinese or General Elective |

Year 4

Fall Semester

| Advanced Physics Lab | General Elective | General Elective | Chinese or General Elective |

Spring Semester

| Integrated Science Capstone | General Elective | General Elective | Chinese or General Elective |

PHYSICS
SAMPLE SCHEDULE 2

Year 1

Fall Semester

| Global Perspectives on Society | Core Class (Calculus) | Core Class | English, Chinese, or General Elective |

Spring Semester

| Writing as Inquiry | Core Class | Multivariable Calculus | English, Chinese, or General Elective |

Year 2

Fall Semester

| Perspectives on the Humanities | 8 credits: Foundations of Physics I Honors, Foundations of Chemistry I, and FoS Physics Laboratory | Linear Algebra and Differential Equations | No Class |

Spring Semester

| Probability and Statistics | 8 credits: Foundations of Physics II Honors, Physics II Lab, Foundations of Biology I | General Elective | No Class |

Year 3

Fall Semester

| 5 credits: Foundations of Physics III Honors and FoS Biology Laboratory | Chinese or General Elective | General Elective | General Elective |

Spring Semester

| Mathematical Physics | 8 credits: Foundations of Physics IV Honors, Foundations of Chemistry II, FoS Chemistry Laboratory | Chinese or General Elective | No Class |

Year 4

Fall Semester

| Physics Elective | Electricity and Magnetism | Quantum Mechanics | General Elective |

Spring Semester

| Statistical Mechanics and Thermodynamics | Advanced Physics Lab | Physics Elective | Integrated Science Capstone |

Social scientists study human interactions among individuals, families, communities, and nations. Using a range of analytical, interpretive, and experimental tools from anthropology, economics, sociology, political science, and psychology, social scientists seek to understand conflict and cooperation, epidemics of disease and poverty, social organization and social change, kinship and belonging, human development, systems of exchange, and other enduring questions at the center of our shared humanity.

Students who complete the Social Science major at NYU Shanghai will be prepared to pursue careers and advanced study in fields as diverse as anthropology, business, development, economics, education, environmental studies, law, psychology, political science, public health, public service, sociology, and social policy. The major offers students a unique opportunity to explore broad areas of social science research and thought, while also allowing a concentration in one disciplinary area or a synthetic combination of fields within the major. The Social Science major encourages interdisciplinary inquiry into the complex problems of our contemporary world and the cross-disciplinary exchange that is at the heart of many of the most interesting advances in social science research today.

Social Science majors at NYU Shanghai develop competence in a variety of research tools in two methods courses and complete two interdisciplinary core courses on classic forms of social science analysis and new frontiers in social science research. Social Science majors select two foundational courses in the social science disciplines, and three focus courses in one track to deepen their engagement with a social science discipline (anthropology, political science, psychology, or sociology)* or an interdisciplinary topic of interest (for example, environmental studies, global health, international relations, or political economy). China––its peoples and politics––is an important focus for teaching and learning in the major, but the major is purposefully global in perspective and heterogeneous in the methodological and analytical scope of its course offerings. Social Science majors complete an independent research project as part of a senior year capstone project.

*NYU Shanghai students interested in a disciplinary focus in Economics are advised to pursue the Economics major instead of the Social Science major.

SOCIAL SCIENCE

REQUIREMENTS FOR THE MAJOR

Note: While Calculus is not a requirement in the Social Science major, some methods course options and some focus courses in the political economy track do require Calculus as a prerequisite. Thus, students are encouraged to consider what courses and track they plan to take for the Social Science major and whether Calculus is a prerequisite.

Not every course listed is taught every semester, and in any given semester other courses may be offered that fulfill these requirements. Requirements may be met through equivalent courses in NYU's global network with prior approval.

Foundational Courses (100-200 level) - Two Courses

These courses provide an introduction to the foundational knowledge and building blocks of analytic methods in a range of Social Sciences. Typical coursework: A mix of lectures, discussion, assignments, shorter essays, quizzes, and/or exams.

Sample Courses
- SOCS-SHU 135   Environment and Society
- SOCS-SHU 136   Human Society and Culture
- SOCS-SHU 150   Introduction to Comparative Politics
- SOCS-SHU 160   Introduction to International Politics
- SOCS-SHU 170   Introduction to Global Health
- SOCS-SHU 133   Urbanization in China
- PSYC-SHU 101   Introduction to Psychology
- ECON-SHU 1   Principles of Macroeconomics
- ECON-SHU 3   Microeconomics
- ECON-SHU 251   Economics of Global Business

Methods Courses (100–300 level) - Two Courses

These courses equip students with tools to both critically consume and create advanced social scientific research. Methods courses include introductory courses and more advanced courses which may have one or more prerequisites. Additional methods courses are available at the study away sites, NYU New York, and NYU Abu Dhabi.

Sample Courses
- SOCS-SHU 141   Methods of Social Research
- SOCS-SHU 210   Statistics for the Behavioral and Social Sciences
- SOCS-SHU 318   Ethnographic Methods
- SOCS-SHU 350   Empirical Research Practice
- BUSF-SHU 101   Statistics for Business and Economics
- ECON-SHU 301   Econometrics
- MATH-SHU 235   Probability and Statistics

Core Courses (200-300 level) - Two Courses

The Social Science core courses are interdisciplinary courses that create unexpected connections between the Social Science disciplines. Classic Problems courses introduce the history and philosophy of the social scientific approach. New Challenges courses introduce new approaches to current challenges in Social Science research. Students must take one course from each of the two core categories. Social Science core courses are not widely available at the study away sites, NYU New York, or NYU Abu Dhabi; students should plan to take them in Shanghai.

Classic Problems in Social Science

Sample Courses
- SOCS-SHU 229   Capitalism, Socialism, Communism
- SOCS-SHU 236   The Chinese Family
- SOCS-SHU 245   Ethnographic Thinking
- SOCS-SHU 253   Nature in Social Thought

New Challenges in Social Science

Sample Courses

- SOCS-SHU 238   Merchants, Chiefs, and Spirits
- SOCS-SHU 234   Image as Evidence
- SOCS-SHU 270   Social Change in Contemporary China
- SOCS-SHU 334   Legal Psychology

Note: Students who complete two Social Science core courses may use additional core courses to complete the focus requirement if appropriate for their approved choice of focus.

Focus Courses (200-400 level, Two must be 300 or 400 level) - Three Courses
Students select a disciplinary or interdisciplinary track in which to focus within the social science major.

Disciplinary tracks include*
- Anthropology,
- Psychology,
- Political Science
- Sociology.

Interdisciplinary tracks include
- Environmental Studies,
- Global Health,
- International Relations,
- Political Economy.

Students may also petition to self-design a different interdisciplinary track with prior approval of the track and the focus courses for the track from the Area Head; approval for interdisciplinary tracks will not be granted retroactively.

*Students who wish to focus in Economics are advised to pursue the Economics major instead.

Students must complete 3 courses in one track, at least 2 of which must be at the advanced level (300 or 400 level). Your academic advisor can help you determine which courses count for each track, and at which level, if it is not clear from the course code. Tracks are noted on student transcripts; for students who self-design a track, "Self-Designed" will appear as the track of record on their transcripts. Additional 200 level focus couses are widely available at the study away sites, NYU New York, and NYU Abu Dhabi; some 300 and 400 level focus courses are available at other sites, but students should plan on taking them at NYU Shanghai or consult with their Academic Advisors to determine where 300 or 400 level focus courses in their track are offered.

Sample Courses (Note: some courses count for more than one track; consult your Academic Advisor for details)

Anthropology
- SOCS-SHU 241   Cultures of Business and Work
- SOCS-SHU 254   Ethnographies of Change in China

Political Science (See also courses listed under the Political Economy and International Relations tracks, many of which also count for the Political Science track)
- SOCS-SHU 220   Law and Society in the U.S.
- SOCS-SHU 272   The U.S. Constitution: Is It Relevant to China?
- SOCS-SHU 339   Comparative Revolutions
- SOCS-SHU 340   Comparative Constitutions

Psychology
- PSYC-SHU 201   Social Psychology
- PSYC-SHU 234   Developmental Psychology

- PSYC-SHU 329   Parenting and Culture
- PSYC-SHU 238   Abnormal Psychology
- PSYC-SHU 349   Cultures of Psychology
- PSYC-SHU 352   Psychology of Human Sexuality

Sociology
- MCC-SHU 9451   Global Media Seminar: China
- SOCS-SHU 227   Inequality and Society
- SOCS-SHU 360   Urban Sociology

Environmental Studies
- GCHN-SHU 243   Chinese Environmental Studies
- SOCS-SHU 230   Science in Environmental Policy
- SOCS-SHU 333   Global Environmental Politics

Global Health
- SOCS-SHU 306   Pestilence: Critical Perspectives in Global Health
- SOCS-SHU 445   Topics in Society, Health, and Medicine

International Relations
- SOCS-SHU 232   International Law and Institutions
- SOCS-SHU 275   U.S. China Relations
- SOCS-SHU 341   Cross-Strait Relations
- SOCS-SHU 370   Chinese Foreign Policy

Political Economy
- BPEP-SHU 9042   Political Economy of East Asia
- ECON-SHU 215   Economic History
- ECON-SHU 238   History of Modern Economic Growth
- ECON-SHU 260   International Trade
- LWSO-SHU 491   International Investment Transactions in Developing Countries
- SOCS-SHU 426   Poverty and Inequality Around the Globe

Capstone Course - One Course

Students complete a capstone seminar course during their senior year. As part of the capstone seminar students conduct an independent research project in their track using the methods, theories, and data with which they have become familiar over the course of completing the major. The capstone seminar must be completed in Shanghai.

Social Science Minor

Students who wish to complete a minor in Social Science must complete one of the methods courses from the list of approved Social Science methods courses and three additional courses from the list of approved Social Science Foundational, Core, or Focus courses.

Social Science
SAMPLE SCHEDULE 1

This is just one example of how a student could organize their courses if pursuing a Social Science major. It assumes a student begins taking Social Science major courses in the first year. Sample Schedule 2 offers an alternate plan that begins in the second year. Students may propose alternative schedules to their advisors as well.

Year 1

Fall Semester

| Global Perspectives on Society | Core Course | Core Course | English or Chinese |

Spring Semester

| Writing as Inquiry | Foundational Course | Core Course | English or Chinese |

Year 2

Fall Semester

| Perspectives on the Humanities | Foundational Course | Social Science Core | Core class or Chinese |

Spring Semester

| Core class, or Chinese | Core Course | Social Science Core | Methods Course |

Year 3

Fall Semester

| Core Course | Focus Course | General Elective | General Elective |

Spring Semester

| Focus Course | General Elective | Core or General Elective | General Elective |

Year 4

Fall Semester

| Methods Course | Focus Course | General Elective | General Elective |

Spring Semester

| Capstone Course | Core Course | General Elective | General Elective |

Social Science
SAMPLE SCHEDULE 2

Year 1

Fall Semester

| Global Perspectives on Society | Core Course | Core Course | English or Chinese |

Spring Semester

| Writing as Inquiry | Core Course | Core Course | English or Chinese |

Year 2

Fall Semester

| Perspectives on the Humanities | Foundational Course | Social Science Core | Core class or Chinese |

Spring Semester

| Core class, or Chinese | Core Course | Social Science Core | General Elective |

Year 3

Fall Semester

| Foundational Course | Focus Course | Core or General Elective | General Elective |

Spring Semester

| Methods Course | Focus Course | Core or General Elective | General Elective |

Year 4

Fall Semester

| Focus Course | Methods Course | General Elective | General Elective |

Spring Semester

| Capstone Course | Core Course | General Elective | General Elective |

BUSINESS

BUSINESS AND FINANCE

BUSINESS AND MARKETING

BUSINESS AND FINANCE

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 program at NYU Shanghai is designed to provide students with 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 and statistics;

c) a focused introduction to accounting, analytics, finance, marketing, operations, and organizational management.

The Business & Finance major helps students develop knowledge and skills in corporate finance, investments management, securities trading, financial markets, and more.

REQUIREMENTS FOR THE MAJOR

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 NYU's global network with prior approval. 3-credit versions of courses can generally substitute for a 4-credit requirement but note that a 2-credit course with a similar title or content will not by itself meet the requirement of the named course. All students in their senior year are required to take at least one business course that fulfills the senior thesis requirement.

Business Core
- BUSF-SHU 101   Statistics for Business and Economics
- BUSF-SHU 202   Foundations of Finance
- BUSF-SHU 250   Principles of Financial Accounting
- ECON-SHU 3   Microeconomics
- ECON-SHU 251   Economics of Global Business

Finance Core
- BUSF-SHU 303   Corporate Finance

Business Electives - Choose Two
- BUSF-SHU 142   Information Technology in Business and Society
- BUSF-SHU 210   Business Analytics
- BUSF-SHU 351   Operations Management
- MGMT-SHU 301   Management and Organizations
- MKTG-SHU 1   Introduction to Marketing

Finance Electives - Choose Two
Any 4-credit Finance elective course offered at NYU Shanghai (such as those listed below) or any 3-credit Finance elective course offered by Stern Finance Department can be counted as a Finance elective. Taking two 2-credit Finance courses will be counted as meeting the requirement of one Finance elective.

- BUSF-SHU 304   Futures and Options
- BUSF-SHU 305   Debt Instruments and Markets
- BUSF-SHU 286   Chinese Financial Markets
- BUSF-SHU 321   Equity Valuation
- BUSF-SHU 229   Behavioral Finance
- BUSF-SHU 244   Portfolio Management

Non-Finance Electives - Choose Two from the Following Areas
- Accounting
- Business Analytics
- Management
- Marketing
- Operations
- Information System

China Business Studies - Choose One*
- BUSF-SHU 288   Doing Business with China
- BUSF-SHU 200D   Business Consulting in China
- MKTG-SHU 288   Strategic Marketing in China

*Students who are admitted into the Business and Economics Honors Program and conduct a China related research may fulfill the China Business Studies requirement with the credits from Business and Economics Honors Program.

Business and Finance majors Tracks Requirement (Optional):

1. Business Accounting Track
Business and Finance majors may complete a "Business Accounting track" within the major by taking

Principles of Financial Accounting and Managerial Accounting and choosing one approved accounting course✱ in fulfilling their two "Non-Finance Elective" requirements. (✱Students should consult their academic advisor on the approved courses)

2. Business Analytics Track
Business and Finance majors may complete a "Business Analytics track" within the major by taking Business Analytics and Information Technology in Business & Society as the Business Electices and choosing one additional Operations/Information System/Analytics course(e.g., Operations Management) in fulfilling their two "Non-Finance Elective requirements.

3. Business Marketing Track
Business and Finance majors may complete a "Marketing track" within the major by taking Introduction to Marketing as one of their Business Electives and choosing two Marketing Elective courses in fulfilling their two "Non-Finance Elective" requirements.

4. Business Management Track
Business and Finance majors may complete a "Management track" within the major by taking Management and Organizations as one of their Business Electives and choosing two approved management courses* in fulfilling their two "Non-Finance Electives" requirements. (*Students should consult their advisors on the approved courses.)

Business Minor
Required Courses
- BUSF-SHU 101   Statistics for Business and Economics
- BUSF-SHU 250   Principles of Financial Accounting
- ECON-SHU 3   Microeconomics
- ECON-SHU 251   Economics of Global Business (Students can take Introduction to Macroeconomics and Intermediate Macroeconomics to substitute EGB)
- MATH-SHU 121 or 131   Calculus

Choose One Elective Course
Please note that the business minor elective list below is complete, no courses outside of the list will be approved.

- BUSF-SHU 142   Information Technology in Business and Society
- BUSF-SHU 202   Foundations of Finance
- BUSF-SHU 210   Business Analytics
- BUSF-SHU 303   Corporate Finance
- BUSF-SHU 351   Operations Management
- MGMT-SHU 301   Management and Organizations
- MKTG-SHU 1   Introduction to Marketing

Economics majors must complete two of the additional courses listed below to complete the minor within the double counting limits.

- BUSF-SHU 142   Information Technology in Business and Society
- BUSF-SHU 202   Foundations of Finance
- BUSF-SHU 210   Business Analytics
- BUSF-SHU 351   Operations Management
- MGMT-SHU 301   Management and Organizations
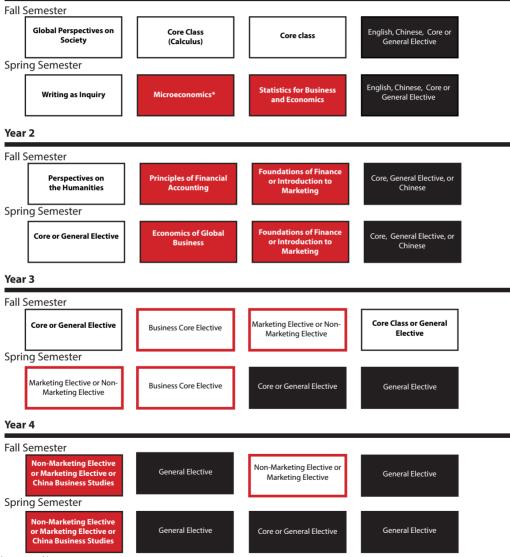- MKTG-SHU 1   Introduction to Marketing

BUSINESS AND FINANCE
SAMPLE SCHEDULE

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 the first year. Students may propose alternative course sequences to their advisors as well.

Students interested in majoring in Business are recommended to take Calculus 131 in their first semester so that they can complete the Microeconomics, Foundations of Finance, Corporate Finance sequence before studying away and have flexibility in taking upper level electives.

Year 1

Fall Semester

| Global Perspectives on Society | Core Class (Calculus)* | Core Class | English, Chinese, Core or General Elective |

Spring Semester

| Writing as Inquiry | Microeconomics** | Statistics for Business and Economics | English, Chinese, Core or General Elective |

Year 2

Fall Semester

| Perspectives on the Humanities | Principles of Financial Accounting | Foundations of Finance | Core, General Elective, or Chinese |

Spring Semester

| Core Class | Economics of Global Business | Corporate Finance | Core, General Elective, or Chinese |

Year 3

Fall Semester

| Core Class or General Elective | Business Core Elective | Finance Elective or Non-Finance Elective | Core Class or General Elective |

Spring Semester

| Core Class or General Elective | Business Core Elective | Finance Elective or Non-Finance Elective | General Elective |

Year 4

Fall Semester

| Non-Finance Elective or Finance Elective or China Business Studies | Finance Elective or Non-Finance Elective | Core or General Elective | General Elective |

Spring Semester

| Non-Finance Elective or Finance Elective or China Business Studies | General Elective | Core or General Elective | General Elective |

Important Notes:
*Students need to pass Calculus with a grade of C or above to fulfill the math core requirement for the business majors
**Students can only take ECON-SHU 3 Microeconomics in Shanghai. It is highly recommended that students complete ECON-SHU 3 Microeconomics prior to study away.
***Students may take up to three Stern Business courses per semester while studying away.

BUSINESS AND MARKETING

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 program at NYU Shanghai is designed to provide students with 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 and statistics;

c) a focused introduction to accounting, analytics, finance, marketing, operations, and organizational management.

The Business & Marketing major helps students develop knowledge and skills in marketing management, customer insights, brand management, and more.

REQUIREMENTS FOR THE MAJOR

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 NYU's global network with prior approval. 3-credit versions of courses can generally substitute for a 4-credit requirement but note that a 2-credit course with a similar title or content will not by itself meet the requirement of the named course. All students in their senior year are required to take at least one business course that fulfills the senior thesis requirement.

Business Core
* BUSF-SHU 101   Statistics for Business and Economics
* BUSF-SHU 202   Foundations of Finance
* BUSF-SHU 250   Principles of Financial Accounting
* ECON-SHU 3   Microeconomics
* ECON-SHU 251   Economics of Global Business

Marketing Core
* MKTG-SHU 1   Introduction to Marketing

Business Electives - Choose Two
* BUSF-SHU 142   Information Technology in Business and Society
* BUSF-SHU 210   Business Analytics
* BUSF-SHU 303   Corporate Finance
* BUSF-SHU 351   Operations Management
* MGMT-SHU 301   Management and Organizations

Marketing Electives - Choose Two
Any 4-credit Marketing elective course offered at NYU Shanghai (such as those listed below) or any 3-credit Marketing elective course offered by Stern Marketing Department can be counted as a Marketing elective. Taking two 2-credit Marketing courses will be counted as meeting the requirement of one Marketing elective.

NOTE: For Class of 2020 and beyond, either MKTG-SHU 9 or MKTG-SHU 2 below must be chosen as one of the two Marketing electives.

* **MKTG-SHU 2**   **Consumer Behavior**
* **MKTG-SHU 9**   **Research for Customer Insights**
* MKTG-SHU 3   Advertising Management
* MKTG-SHU 57   Digital Marketing
* MKTG-SHU 288   Strategic Marketing in China

Non-Marketing Electives - Choose Two from the Following Areas
* Accounting
* Business Analytics
* Management
* Finance
* Operations
* Information System

China Business Studies - Choose One *
* BUSF-SHU 288   Doing Business within China
* BUSF-SHU 200D   Business Consulting in China
* MKTG-SHU 288   Strategic Marketing in China

* Students who are admitted into the Business and Economics Honors Program and conduct a China related research may fulfill the China Business Studies requirement with the credits from Business and Economics Honors Program.

Business and Marketing majors Tracks Requirement (Optional):

1. Business Accounting Track
Business and Marketing majors may complete a "Business Accounting track" within the major by taking Principles of Financial Accounting and Managerial Accounting and choosing one approved accounting course* in fulfilling their two "Non-Finance Elective" requirements. (* Students should consult their academic advisor on the approved courses)

2. Business Analytics Track
Business and Marketing majors may complete a "Business Analytics track" within the major by taking Business Analytics and Information Technology in Business & Society as the Business Electices and choosing one additional Operations/Information System/Analytics course(e.g., Operations Management) in fulfilling their two "Non-Finance Elective requirements.

3. Business Finance Track
Business and Marketing majors may complete a "Finance track" within the major by taking Corporate Finance as one of their Business Electives and choosing two Finance Elective courses in fulfilling their two "Non-Marketing Elective" requirements.

4. Business Management Track
Business and Marketing majors may complete a "Management track" within the major by taking Management and Organizations as one of their Business Electives and choosing two approved management courses* in fulfilling their two "Non-Finance Electives" requirements. (*Students should consult their advisors on the approved courses.)

BUSINESS AND MARKETING
SAMPLE SCHEDULE

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 the first year. Students may propose alternative course sequences to their advisors as well.

Students interested in majoring in Business are recommended to take Calculus 131 in their first semester so that they can complete the Microeconomics, Foundations of Finance, Corporate Finance sequence before studying away and have flexibility in taking upper level electives.

Year 1

Fall Semester

Global Perspectives on Society	Core Class (Calculus)	Core class	English, Chinese, Core or General Elective

Spring Semester

Writing as Inquiry	Microeconomics*	Statistics for Business and Economics	English, Chinese, Core or General Elective

Year 2

Fall Semester

Perspectives on the Humanities	Principles of Financial Accounting	Foundations of Finance or Introduction to Marketing	Core, General Elective, or Chinese

Spring Semester

Core or General Elective	Economics of Global Business	Foundations of Finance or Introduction to Marketing	Core, General Elective, or Chinese

Year 3

Fall Semester

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

Spring Semester

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

Year 4

Fall Semester

Non-Marketing Elective or Marketing Elective or China Business Studies	General Elective	Non-Marketing Elective or Marketing Elective	General Elective

Spring Semester

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

Important Notes:
*Students need to pass Calculus with a grade C or above to fulfill the math core requirement for the business majors
**Students can only take ECON-SHU 3 Microeconomics in Shanghai. It is highly recommended that students complete ECON-SHU 3 Microeconomics prior to study away.
***Students may take up to three Stern Business courses per semester while studying away.

COMPUTER SCIENCE AND ENGINEERING

COMPUTER SCIENCE

COMPUTER SYSTEMS ENGINEERING

DATA SCIENCE

ELECTRICAL AND SYSTEMS ENGINEERING

Computer Science at NYU Shanghai is designed to create technological leaders with a global perspective, a broad education, and the capacity to think creatively. Computer science focuses on how to design, build, and effectively use the computers and systems that we interact with every day — from the iPhones in our hands to the complex databases in our banks and hospitals and to the self-driving cars of the future. Because computer technology powers the most essential functions of business, industry, government and entertainment, computer scientists have tremendous opportunities for growth and exploration.

The Bachelor of Science in Computer Science is a rigorous program that not only covers fundamental computer science subjects - such as object-oriented programming, computer architecture, algorithms, and operating systems – but provides a wide variety of elective courses, spanning artificial intelligence, game programming, natural language processing, information visualization, security and privacy, computer networking, machine learning, and database design. Students are actively encouraged to pursue research with NYU Shanghai computer science professors, all of whom are renown in their respective fields. Students are involved in an increasing number of interdisciplinary initiatives across the university, including the Center for Data Science and Artificial Intelligence and the Neuroscience Research Institute.

Computer science graduates have a myriad of career paths, including creating products for major high-tech companies such as Google, Tencent, Microsoft, founding or joining a high-tech startup, applying computer science savoir-faire in the public sector such as healthcare, law enforcement, or transportation, or going on to do cutting-edge research in a Ph.D. program. Household names such as Bill Gates, Mark Zuckerberg, Larry Page, Melisa Myers, Robin Li, and Kai-Fu Lee all began in computer science.

COMPUTER SCIENCE

REQUIREMENTS FOR THE MAJOR

Note: 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 NYU's global network with prior approval. 3-credit versions of courses can generally substitute for a full 4-credit course requirement. A 2-credit course with a similar title or content will not by itself meet the requirement of the named course.

Required Major Course
- CSCI-SHU 101   Introduction to Computer Science
  (prereq: Placement test or CSCI-SHU 11 Intro to Computer Programming)
- MATH-SHU 235   Probability and Statistics **OR**
  MATH-SHU 233   Theory of Probability **OR**
  BUSF-SHU 101   Statistics for Business and Economics
- CENG-SHU 202   Computer Architecture
  (prereq: CSCI-SHU 11 Intro to Programming or CSCI-SHU 101 Intro to Computer Science) **OR**
  CSCI-UA 201   Computer Systems Organization
- CSCI-SHU 210   Data Structures
  (prereq: CSCI-SHU 101 Intro to Computer Science, A- or above in CSCI-SHU 11 Intro to Computer Programming)
- CSCI-SHU 215   Operating Systems
  (prereq: CSCI-SHU 210 Data Structures; CENG-SHU 202 Computer Architecture or Computer Systems Organization)
- CSCI-SHU 220   Algorithms
  (prereq: CSCI-SHU 210 Data Structures and CSCI-SHU 2314 Discrete Math or MATH-SHU 140 Linear Algebra or MATH-SHU 141 Honors Linear Algebra)
- CSCI-SHU 2314   Discrete Mathematics
  (co-requisite or prereq: MATH-SHU 121 Calculus)
- CSCI-SHU 420   Senior Project

Computer Science Electives - Choose Four
The courses listed below are not an exhaustive list. In particular, most of the CS elective courses at Tandon, College of Arts and Sciences, or Abu Dhabi can be used as NYU Shanghai CS electives. If you would like to see if a course not listed below can count as an elective, please contact your advisor to have the course reviewed.

- CENG-SHU 201   Digital Logic
- CENG-SHU 350   Embedded Computer Systems
- CENG-SHU 304   Computer Security
- CSCI-SHU 222   Introduction to Game Programming
- CSCI-SHU 235   Information Visualization
- CSCI-SHU 304   Network Security
- CSCI-SHU 308   Computer Networking
- CSCI-SHU 310   UNIX System Programming
- CSCI-SHU 213   Introduction to Databases
- CSCI-SHU 360   Machine Learning
- CSCI-SHU 410   Software Engineering
- INTM-SHU 231   Developing Web
- CSCI-SHU 188   Computer Music
- CSCI-SHU 240   Introduction to Optimization and Mathematical Programming
- CSCI-SHU 378   Introduction to Cryptography
- CSCI-SHU 375   Reinforcement Learning

Computer Science Minor
- CENG-SHU 202   Computer Architecture
- CSCI-SHU 101   Introduction to Computer Science
  (prereq: CSCI-SHU 11 Introduction to Computer Programming or placement exam)
- CSCI-SHU 210   Data Structures
- One computer science elective course

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 the first year. Sample Schedule 2 offers an alternate plan that begins in the second year. Students may propose alternative schedules to their advisors as well.
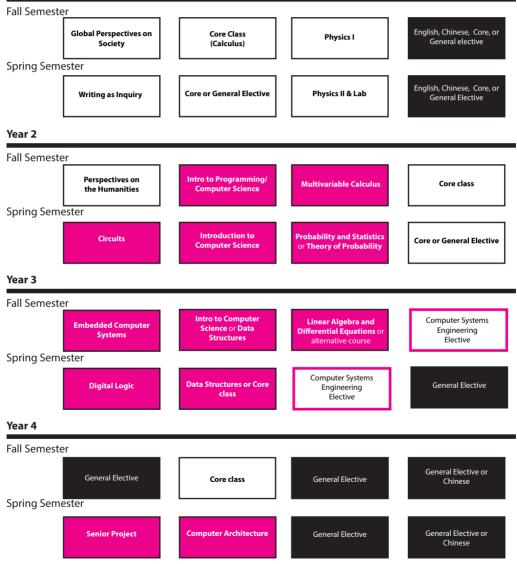
Year 1

Fall Semester

Global Perspectives on Society	Core Class (Calculus)	Core Class (Intro to Programming/Computer Science)	English, Chinese, Core, or General Elective

Spring Semester

Writing as Inquiry	Core Class	Introduction to Computer Science or Data Structures	English, Chinese, Core, or General Elective

Year 2

Fall Semester

Perspectives on the Humanities	Data Structures or Computer Science Elective	Discrete Mathematics	Core, General Elective, or Chinese

Spring Semester

Core Class	Computer Science Elective	Computer Architecture	Core, General Elective, or Chinese

Year 3

Fall Semester

Core or General Elective	Computer Science Elective	Algorithms	General Elective

Spring Semester

Core or General Elective	Computer Science Elective	Probability and Statistics or alternate statistics course	General Elective

Year 4

Fall Semester

Operating Systems	Computer Science Elective or General Elective	General Elective	General Elective

Spring Semester

Senior Project	General Elective	General Elective	General Elective

COMPUTER SCIENCE
SAMPLE SCHEDULE 2

Year 1

Fall Semester

Global Perspectives on Society	Core Class (Calculus)	Core class	English, Chinese, Core, or General Elective

Spring Semester

Writing as Inquiry	Core class	Core or General Elective	English, Chinese, Core, or General Elective

Year 2

Fall Semester

Perspectives on the Humanities	Core Class (Intro to Programming/Computer Science)	Discrete Mathematics	Core, General Elective, or Chinese

Spring Semester

Computer Science Elective	Introduction to Computer Science or Data Structures	Computer Architecture	Core, General Elective, or Chinese

Year 3

Fall Semester

Computer Science Elective	Data Structures or Computer Science Elective	Probability and Statistics or alternate statistics course	General Elective

Spring Semester

Algorithms	Computer Science Elective	General Elective	General Elective

Year 4

Fall Semester

Core class	Computer Science Elective or General Elective	Operating Systems	General Elective

Spring Semester

Computer Science Elective	Senior Project	General Elective	General Elective

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 Systems 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 webcams, 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.

COMPUTER SYSTEMS ENGINEERING

REQUIREMENTS FOR THE MAJOR

Note: To fulfill the Core Curriculum Science requirement, students must take: 1) PHYS-SHU 91 Foundations of Physics I Honors or PHYS-SHU 11 General Physics I; 2) PHYS-SHU 93 Foundations of Physics II Honors or PHYS-SHU 12 General Physics II ; and 3) PHYS-SHU 94 Physics II Lab.

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 NYU's global network with prior approval. 3-credit versions of courses can generally substitute for a full 4-credit course requirement. A 2-credit course with a similar title or content will not by itself meet the requirement of the named course.

Required Major Courses
- CENG-SHU 201   Digital Logic
- CENG-SHU 202   Computer Architecture
- CENG-SHU 350   Embedded Computer Systems
- CSCI-SHU 101   Introduction to Computer Science
- CSCI-SHU 210   Data Structures
- EENG-SHU 251   Circuits
- EENG-SHU 400   Senior Capstone Design Project (4-credit project taken in the spring semester of senior year)
- MATH-SHU 123   Multivariable Calculus
- MATH-SHU 235   Probability and Statistics *OR*
  MATH-SHU 233   Theory of Probability
- MATH-SHU 265   Linear Algebra and Differential Equations *OR*
  MATH-SHU 140   Linear Algebra *OR*
  MATH-SHU 160   Networks and Dynamics

Electives - Choose Two
The courses listed below are not an exhaustive list. If you would like to see if a course not listed below can count as an elective, please contact your advisor to have the course reviewed.

- CSCI-SHU 215   Operating Systems
- CENG-SHU 302   Compilers
- CENG-SHU 303   Parallel and Distributed Computing
- CENG-SHU 304   Computer Security
- CSCI-SHU 304   Network Security
- CSCI-SHU 308   Computer Networking
- CSCI-SHU 310   UNIX System Programming
- CSCI-SHU 340   Introduction to Databases
- EENG-SHU 3193   Very Large Scale Integration Circuit Design
- EENG-SHU 322   Electronics
- EENG-SHU 375   Robotic Systems

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

Computer Systems Engineering Minor
- CENG-SHU 201   Digital Logic
- CENG-SHU 202   Computer Architecture *OR*
  CENG-SHU 350   Embedded Computer Systems
- CSCI-SHU 11   Introduction to Programming *OR*
  INTM-SHU 101   Interaction Lab
- CSCI-SHU 101   Introduction to Computer Science
- EENG-SHU 251   Circuits

COMPUTER SYSTEMS ENGINEERING
SAMPLE SCHEDULE 1

This is just one example of how a student could organize their courses if pursuing a CSE major. It assumes a student begins taking CSE major courses in the first year. Sample Schedule 2 offers an alternate plan that begins in the second year. Students may propose alternative schedules to their advisors as well.

Year 1

Fall Semester

| Global Perspectives on Society | Core Class (Calculus) | Intro to Programming/ Computer Science | English, Chinese, Core, or General Elective |

Spring Semester

| Writing as Inquiry | Introduction to Computer Science | Multivariable Calculus | English, Chinese, Core, or General Elective |

Year 2

Fall Semester

| Perspectives on the Humanities | Digital Logic | Physics I | Core, General Elective, or Chinese |

Spring Semester

| Intro to Computer Science or Data Structures | Circuits | Physics II & Lab | Core, General Elective, or Chinese |

Year 3

Fall Semester

| Data Structures or Core Class | Computer Architecture | Probability and Statistics or Theory of Probability | Computer Systems Engineering Elective |

Spring Semester

| Computer Systems Engineering Elective | Linear Algebra and Differential Equations or alternative course | Embedded Computer Systems | General Elective |

Year 4

Fall Semester

| General Elective | Core or General Elective | Core or General Elective | General Elective |

Spring Semester

| Core or General Elective | Senior Project | General Elective | General Elective |

COMPUTER SYSTEMS ENGINEERING
SAMPLE SCHEDULE 2

Year 1

Fall Semester

| Global Perspectives on Society | Core Class (Calculus) | Physics I | English, Chinese, Core, or General elective |

Spring Semester

| Writing as Inquiry | Core or General Elective | Physics II & Lab | English, Chinese, Core, or General Elective |

Year 2

Fall Semester

| Perspectives on the Humanities | Intro to Programming/ Computer Science | Multivariable Calculus | Core class |

Spring Semester

| Circuits | Introduction to Computer Science | Probability and Statistics or Theory of Probability | Core or General Elective |

Year 3

Fall Semester

| Embedded Computer Systems | Intro to Computer Science or Data Structures | Linear Algebra and Differential Equations or alternative course | Computer Systems Engineering Elective |

Spring Semester

| Digital Logic | Data Structures or Core class | Computer Systems Engineering Elective | General Elective |

Year 4

Fall Semester

| General Elective | Core class | General Elective | General Elective or Chinese |

Spring Semester

| Senior Project | Computer Architecture | General Elective | General Elective or Chinese |

Data Science at NYU Shanghai is designed to create data-driven leaders with a global perspective, a broad education, and the capacity to think creatively. Data science involves using computerized methods to analyze massive amounts of data and to extract knowledge from them. Data science addresses a wide-range of data types, including scientific and economic numerical data, textual data, and image and video data. This new discipline draws from methodologies and tools in several well-established fields, including computer science, statistics, applied mathematics, and economics. Data science has applications in just about every academic discipline, including sociology, political science, digital humanities, linguistics, finance, marketing, urban informatics, medical informatics, genomics, image content analysis, and all branches of engineering and the physical sciences. The importance of data science is expected to accelerate in the coming years, as data from the web, mobile sensors, smartphones, and Internet-connected instruments continues to grow.

Students who complete the major will not only have expertise in computer programming, statistics, and data mining, but also know how to combine these tools to solve contemporary problems in a discipline of their choice, including the social science, physical science, and engineering disciplines. Upon graduation, data science majors have numerous career paths. Data Science majors can go on to graduate school in data science, computer science, social science, business, finance, medicine, law, linguistics, education, and so on. Outside of academia, there are also myriad career paths. Not only can graduates pursue careers with traditional data-driven computer-science companies and startups such as Google, Facebook, Amazon, and Microsoft, but also they can also be valuable to companies in the transportation, energy, medical, and financial sectors. Graduates can also pursue careers in the public sector, including urban planning, law enforcement, and education.

DATA SCIENCE

REQUIREMENTS FOR THE MAJOR

Note: 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. 3-credit versions of courses can generally substitute for a full 4-credit course requirement. A 2-credit course with a similar title or content will not by itself meet the requirement of the named course.

Foundational Courses
- CSCI-SHU 101   Introduction to Computer Science
- MATH-SHU 235   Probability and Statistics *OR*
  MATH-SHU 233   Theory of Probability

Required Major Courses
Programming & Computer Science
- CSCI-SHU 210   Data Structures

Mathematics
- MATH-SHU 123   Multivariable Calculus *OR*
  MATH-SHU 328   Honors Analysis I
- MATH-SHU 140   Linear Algebra *OR*
  MATH-SHU 265   Linear Algebra and Differential Equations *OR*
  MATH-SHU 141   Honors Linear Algebra I

Data Analysis
- CSCI-SHU 360   Machine Learning
- ECON-SHU 301   Econometrics *OR*
  MATH-SHU 234   The Mathematics of Statistics
- CSCI-SHU235   Information Visualization *OR*
  CSCI-SHU 220   Algorithms *OR*
  CSCI-SHU 240   Introduction to Optimization and Mathematical Programming

Data Management
- CSCI-SHU 213   Databases

Concentration Courses
- Domain-area courses
- DATS-SHU 420   Data Science Project

Note: Students who are strong in mathematics are encouraged to take Analysis I and Analysis II (in place of Multivariable Calculus), Honors Linear Algebra I (in place of Linear Algebra), and Theory of Probability.

Concentration Options
Domain-Area Courses for Concentration in Finance
- DATS-SHU 420   Data Science Senior Project (Not Required for students who are enrolled in 6-credit Business and Econ Honors Program)
- ECON-SHU 3   Microeconomics
- BUSF-SHU 250   Principles of Financial Accounting
- BUSF-SHU 202   Foundations of Finance
- BUSF-SHU 303   Corporate Finance
– 14 courses total

Domain-Area Courses for Concentration in Marketing
- DATS-SHU 420   Data Science Senior Project (Not Required for students who are enrolled in 6-credit Business and Econ Honors Program)
- ECON-SHU 3   Microeconomics
- BUSF-SHU 250   Principles of Financial Accounting
- BUSF-SHU 202   Foundations of Finance
- MKTG-SHU 1   Introduction to Marketing
– 14 courses total

Domain-Area Courses for Concentration in Economics
- DATS-SHU 420   Data Science Senior Project (Not Required for students who are enrolled in 6-credit Business and Econ Honors Program)
- ECON-SHU 3   Microeconomics
- ECON-SHU 1   Macroeconomics

– 12 courses total.

Domain-Area Courses for Concentration in Genomics
- DATS-SHU 420   Data Science Senior Project
- BIOL-SHU 21   Foundations of Biology 1 and lab
- BIOL-SHU 22   Foundations of Biology 2 and lab
- BIOL-SHU 261   Bioinformatics

– Foundations of Biology 1 can count as core curriculum course.

– 12 courses total.

Domain-Area Courses for Concentration in Computer Science
- DATS-SHU 420   Data Science Senior Project

Two courses from:
- CENG-SHU 202   Computer Architecture ***OR***

    CSCI-UA 201   Computer Systems Organization
- CSCI-SHU 215   Operating Systems
- CSCI-SHU 2314   Discrete Mathematics
- CS-UY 2413/CSCI-UA 310/CSCI-SHU 220 Algorithms

– 12 courses total.

Domain-Area Courses for Concentration in Mathematics
- DATS-SHU 420   Data Science Senior Project

Two courses from:
- MATH-SHU 329   Honors Analysis II
- MATH-SHU 233   Theory of Probability
- MATH-SHU 234   The Mathematics of Statistics
- MATH-SHU 142   Honors Linear Algebra 2
- MATH-SHU 345   Introduction to Stochastic Process

– 12 courses total.

Domain-Area Courses for Concentration in Artificial Intelligence
- DATS-SHU 420   Data Science Senior Project

Two courses from:
- CSCI-UA 480   Natural Language Processing
- CSCI-SHU 372/CS-UY 4613 Artificial Intelligence
- CSCI-GA 2566   Foundations of Machine Learning
- DS-GA 1008/CSCI-GA 2572 Deep Learning
- DS-GA 1012   Natural Language Understanding and Computational Semantics
- DS-GA 1013   Mathematical Tools for Data Science
- CSCI-SHU 240   Introduction to Optimization and Mathematical Programming
- CSCI-SHU 235   Information Visualization
- CS-UY 2413/CSCI-UA 310/CSCI-SHU 220 Algorithms
- CSCI-SHU 375   Reinforcement Learning

– 12 courses total.

Domain-Area Courses for Concentration in Political Science
- DATS-SHU 420   Data Science Senior Project
- SOCS-SHU 150   Introduction to Comparative Politics
- SOCS-SHU 160   Introduction to International Politics

– 12 courses total.

Domain-Area Courses for Concentration in Psychology
- CSCI-SHU 420   Data Science Senior Project

Two Required Courses:
- SOCS-SHU 350   Empirical Research Practice
- SOCS-SHU 101   Introduction to Psychology

One course from:
- PSYC-SHU 234   Developmental Psychology
- PSYCH-UA 25   Cognitive Neuroscience
- PSYCH-UA 32   Social Psychology
- PSYCH-UA 30   Personality
- PSYCH-SHU 352   Psychology of Human Sexuality* *OR*
  PSYCH-UA 300   Human Sexuality
- SOCS-SHU 334   Legal Psychology

– 13 courses total.

Data Science Minor
- CSCI-SHU 101   Introduction to Computer Science
  (prereq: CSCI-SHU 11 Intro to Programming or placement exam)
- CSCI-SHU 210   Data Structures
- CSCI-SHU 360   Machine Learning
- ECON-SHU 301   Econometrics *OR*
  MATH-SHU 234   Introduction to Mathematical Statistics
- MATH-SHU 235   Probability and Statistics *OR*
  MATH-SHU 233   Theory of Probability

DATA SCIENCE
SAMPLE SCHEDULE 1

This is just one example of how a student could organize their courses if pursuing a DS major. It assumes a student begins taking DS major courses in the first year. Sample Schedule 2 offers an alternate plan that begins in the second year. Students may propose alternative schedules to their advisors as well.

Year 1

Fall Semester

| Global Perspectives on Society | Core Class (Calculus) | Core Class (Intro to Programming/Computer Science) | English, Chinese, Core, or General Elective |

Spring Semester

| Writing as Inquiry | Probability and Statistics or alternate courses | Intro to Computer Science or Data Structures | English, Chinese, Core, or General Elective |

Year 2

Fall Semester

| Perspectives on the Humanities | Data Structures or Domain-area class | Multivariable Calculus | Core, General Elective, or Chinese |

Spring Semester

| Linear Algebra | Machine Learning | Econometrics or The Mathematics of Statistics and Data Science | Core, General Elective, or Chinese |

Year 3

Fall Semester

| Core or General Elective | Databases | Domain-area Class | General Elective |

Spring Semester

| Core or General Elective | Core Class | Domain-area Class or General Elective | General Elective |

Year 4

Fall Semester

| Information Visualization | General Elective | General Elective | General Elective |

Spring Semester

| Senior Project | General Elective | General Elective | General Elective |

DATA SCIENCE
SAMPLE SCHEDULE 2

Year 1

Fall Semester

| Global Perspectives on Society | Core Class (Calculus) | Core class | English, Chinese, Core, or General Elective |

Spring Semester

| Writing as Inquiry | Core class | Core or General Elective | English, Chinese, Core, or General Elective |

Year 2

Fall Semester

| Perspectives on the Humanities | Core Class (Intro to Programming/Computer Science) | Multivariable Calculus | Core, General Elective, or Chinese |

Spring Semester

| Linear Algebra | Intro to Computer Science or Data Structures | Probability and Statistics or alternate courses, | Core, General Elective, or Chinese |

Year 3

Fall Semester

| Econometrics OR The Mathematics of Statistics and Data Science | Data Structures or Domain-area Class | Databases | General Elective |

Spring Semester

| Core class | Machine Learning | Domain-area class | General Elective |

Year 4

Fall Semester

| Information Visualization | General Elective | Domain-area class or General Elective | General Elective |

Spring Semester

| Senior Project | General Elective | General Elective | General Elective |

Electrical and Systems 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 smartphones in our pockets. But this process of innovation is never complete, and new challenges await tomorrow's electrical engineers.

The Electrical and Systems 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 state-of-the-art laboratories. In addition, the variety of specialized subjects students can investigate through elective coursework — from wireless communication to smart grid power systems — ensures a highly flexible education suited to individual interests.

ELECTRICAL AND SYSTEMS ENGINEERING

REQUIREMENTS FOR THE MAJOR

Note: To fulfill the Core Curriculum Science requirement, students must take: 1) PHYS-SHU 91 Foundations of Physics I Honors or PHYS-SHU 11 General Physics I; 2) PHYS-SHU 93 Foundations of Physics II Honors or PHYS-SHU 12 General Physics II; and 3) PHYS-SHU 94 Physics II Lab

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 NYU's global network with prior approval. 3-credit versions of courses can generally substitute for a full 4-credit course requirement. A 2-credit course with a similar title or content will not by itself meet the requirement of the named course.

GPA minimum requirement

Physics, Chemistry and Electrical Engineering majors' students must achieve and maintain a minimum 3.0 cumulative and major GPA in order to declare the major. Since they are required to study away in NY or AD for their junior year in order to complete major coursework offered at those campuses, they must complete all of the prerequisite courses at NYU Shanghai for the junior year major classes they need to take in New York or AD before they will be admitted to study away. If declared majors fail to maintain a 3.0 GPA or do not complete the required courses during study away, they may be required to declare a different major to be able to graduate.

Required Courses

•	CENG-SHU 201	Digital Logic
•	CSCI-SHU 11	Introduction to Programming *OR*
	CSCI-SHU 101	Introduction to Computer Science
•	EENG-SHU 2054	Signals and Systems
•	EENG-SHU 251	Circuits
•	EENG-SHU 304	Electromagnetic Fields and Waves
•	EENG-SHU 322	Electronics
•	EENG-SHU 400	Senior Capstone Design Project (4-credit project taken in the spring semester of senior year)
•	MATH-SHU 123	Multivariable Calculus
•	MATH-SHU 235	Probability and Statistics *OR*
	MATH-SHU 233	Theory of Probability
•	MATH-SHU 265	Linear Algebra and Differential Equations *OR*
	MATH-SHU 140	Linear Algebra *OR*
	MATH-SHU 160	Networks and Dynamics

Electives
Choose 2 from these 4 courses:

•	EENG-SHU 356	Communication Systems
•	EENG-SHU 364	Feedback Control
•	EE-UY 112/EE-UY 3124	Fundamentals of Electronics II (offered in New York)
•	EE-UY 3824	Electric Energy Conversion Systems (offered in New York)

Choose 2 more from the following list:

•	CENG-SHU 350	Embedded Computer Systems
•	CENG-SHU 351	Computer Networks
•	EENG-SHU 306	Instrumentation, Sensors and Actuators
•	EENG-SHU 3193	Very Large Scale Integrated (VLSI) Circuit Design
•	EENG-SHU 355	Digital Signal Processing
•	EENG-SHU 356	Communication Systems
•	EENG-SHU 375	Robotic Systems

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

Electrical and Systems Engineering Minor

•	CENG-SHU 201	Digital Logic
•	CSCI-SHU 11	Introduction to Programming *OR*
	INTM-SHU 101	Interaction Lab
•	EENG-SHU 251	Circuits
•	Electrical and Systems Engineering Elective	

ELECTRICAL AND SYSTEMS ENGINEERING
SAMPLE SCHEDULE 1

This is just one example of how a student could organize their courses if pursuing a ESE major. It assumes a student begins taking ESE major courses in the first year. Sample Schedule 2 offers an alternate plan that begins in the second year. Students may propose alternative schedules to their advisors as well.

Year 1

Fall Semester

| Global Perspectives on Society | Core Class (Calculus) | Intro to Programming/ Computer Science | English, Chinese, Core, or General Elective |

Spring Semester

| Writing as Inquiry | Multivariable Calculus | Linear Algebra and Differential Equations or alternate course | English, Chinese, Core, or General Elective |

Year 2

Fall Semester

| Perspectives on the Humanities | Physics I | Digital Logic | Core, General Elective, or Chinese |

Spring Semester

| Core or General Elective | Physics II & Lab | Circuits | Core , General Elective, or Chinese |

Year 3 (These classes are only offered in NY or AD)

Fall Semester

| Core or General Elective | Electronics | Electromagnetic Fields and Waves | Signals and Systems |

Spring Semester

| Electrical and Systems Engineering Elective | Electrical and Systems Engineering Elective | Electrical and Systems Engineering Elective | Electrical and Systems Engineering Elective |

Year 4

Fall Semester

| Probability and Statistics or Theory of Probability | General Elective | General Elective | General Elective |

Spring Semester

| Senior Capstone Design Project | General Elective | General Elective | General Elective |

ELECTRICAL AND SYSTEMS ENGINEERING
SAMPLE SCHEDULE 2

Year 1

Fall Semester

| Global Perspectives on Society | Core Class (Calculus) | Physics I | English, Chinese, Core, or General Elective |

Spring Semester

| Writing as Inquiry | Multivariable Calculus | Physics II & Lab | Intro to Programming/ Computer Science | 2-credit English or Chinese (if available) |

Year 2

Fall Semester

| Perspectives on the Humanities | Digital Logic | Core Class | Core Class |

Spring Semester

| Core or General Elective | Circuits | Linear Algebra and Differential Equations or alternate course | Core or General Elective |

Year 3

Fall Semester

| Electronics | Signals and Systems | Electromagnetic Fields and Waves | Electrical and Systems Engineering Elective |

Spring Semester

| Probability and Statistics or Theory of Probability | Electrical and Systems Engineering Elective | Electrical and Systems Engineering Elective | Electrical and Systems Engineering Elective |

Year 4

Fall Semester

| General Elective | General Elective | General Elective or Chinese | General Elective |

Spring Semester

| Senior Capstone Design Project | General Elective or Chinese | General Elective | General Elective |

SELF-DESIGNED HONORS MAJOR

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 advisors 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 NYU's global network , drawing on courses from any of the study away sites and degree-granting campuses. The honors major 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.

REQUIREMENTS FOR MINORS

The courses required for NYU Shanghai Minors are:

Biology Minor
A. Molecular and Cell Biology Minor
- BIOL-SHU 21   Foundations of Biology I
- BIOL-SHU 22   Foundations of Biology II
- BIOL-SHU 123   Foundations of Biology Lab
- BIOL-SHU 30 (Formerly 264) Genetics **OR**
  BIOL-SHU 263   Developmental Biology
- BIOL-UA 36   At the Bench: Applied Molecular Biology DNA Techniques **OR**
  BIOL-UA 37   At the Bench: Applied Cell Biology **OR**
                       One approved class to count towards this minor

B. Genomics and Bioinformatics Minor
- BIOL-SHU 21   Foundations of Biology I
- BIOL-SHU 22   Foundations of Biology II
- BIOL-SHU 123   Foundations of Biology Lab
- BIOL-SHU 261   Genomics and Bioinformatics
- BIOL-SHU 267   Microbiology and Microbial Genomics **OR**
  BIOL-GA 1128   Systems Biology **OR**
  BIOL-UA 58   Evolution

Business Minor
Required Courses
- BUSF-SHU 101   Statistics for Business and Economics
- BUSF-SHU 250   Principles of Financial Accounting
- ECON-SHU 3   Microeconomics
- ECON-SHU 251   Economics of Global Business (Students can take Intro to Macro
                       and Intermediate Macro to substitute EGB)
- MATH-SHU 121 or 131 Calculus

Choose One Elective Course
Please note that the business minor elective list below is complete, no courses outside of the list will be approved.
- BUSF-SHU 142   Information Technology in Business and Society
- BUSF-SHU 202   Foundations of Finance
- BUSF-SHU 210   Business Analytics
- BUSF-SHU 303   Corporate Finance
- BUSF-SHU 351   Competitive Advantage from Operations
- MGMT-SHU 301   Management and Organizations
- MKTG-SHU 1   Introduction to Marketing

Economics majors must complete two of the additional courses listed below to complete the minor within the double counting limits.

- BUSF-SHU 142   Information Technology in Business and Society
- BUSF-SHU 202   Foundations of Finance
- BUSF-SHU 210   Business Analytics
- BUSF-SHU 351   Competitive Advantage from Operations
- MGMT-SHU 301   Management and Organizations
- MKTG-SHU 1   Introduction to Marketing

Chemistry Minor
- CHEM-SHU 125   Foundations of Chemistry I
- CHEM-SHU 126   Foundations of Chemistry II
- CHEM-SHU 127   FoS Chemistry Laboratory
- CHEM-SHU 225   Organic Chemistry I + Organic Chemistry I Lab
- CHEM-SHU 226   Organic Chemistry II + Organic Chemistry II Lab

Chinese Minor
16 credits of Chinese language above Elementary II are required to complete the minor. Only 4 credits of those 16 can double-count with another degree requirement. Elementary I and II do not count toward fulfilling the requirements. Typical plan of study: Intermediate I, Intermediate II, Advanced I, and Advanced II.

A student who passes out of Intermediate I&II or Advanced I&II will have to replace the course(s) they placed out of with other Chinese language classes higher than the level(s) they placed out of. Only 4 credits of those 16 can double-count with another major or minor degree requirement.

Example 1:
GCS major who doesn't place out of Intermediate I must do the following for the Chinese minor:
- Intermediate I
- Intermediate II
- Advanced I and Advanced II (but can only count one towards the minor, because they are also required for GCS major.)
- Other course higher than Advanced II

Example 2:
Students who placed out of Advanced Chinese I and are taking Advanced Chinese II now are aiming for a Chinese minor. They can get a Chinese minor by taking:
- Advanced Chinese II (double counting one course between the major and the minor).
- 3 additional Chinese courses, such as Reading Chinese Newspapers, Interpreitng Modern China: Reading the Era of 1919-1949, and Chinese Business and Finance.

Computer Science Minor
- CENG-SHU 202   Computer Architecture
- CSCI-SHU 101   Introduction to Computer Science (prereq: CSCI-SHU 11
                                        Introduction to Computer Programming or placement exam)
- CSCI-SHU 210   Data Structures
- One computer science elective course

Computer Systems Engineering Minor
- CENG-SHU 201   Digital Logic
- CENG-SHU 202   Computer Architecture **OR**
   CENG-SHU 350   Embedded Computer Systems
- CSCI-SHU 11   Introduction to Programming **OR**
   INTM-SHU 101   Interaction Lab
- CSCI-SHU 101   Introduction to Computer Science
- EENG-SHU 251   Circuits

Creative Writing Minor
- WRIT-SHU 159   Introduction to Creative Writing (a prerequisite for the intermediate and advanced craft courses).
- Two intermediate/advanced creative writing workshops
- An additional intermediate/advanced creative writing workshop or a designated elective

Data Science Minor
- CSCI-SHU 101   Introduction to Computer Science (prereq: CSCI-SHU 11 Intro to Programming or placement exam)

- CSCI-SHU 210   Data Structures
- CSCI-SHU 360   Machine Learning
- ECON-SHU 301   Econometrics
- MATH-SHU 235   Probability and Statistics **OR**
  MATH-SHU 233   Theory of Probability **OR**
  BUSF-SHU 101   Statistics for Business and Economics **OR**
  BIOL-SHU 42   Biostatistics

Economics Minor
- BUSF-SHU 101   Statistics for Business and Economics **OR**
  MATH-SHU 235   Probability and Statistics **OR**
  MATH-SHU 233   Theory of Probability **OR**
  MATH-SHU 234   Mathematical Statistics
- ECON-SHU 1   Principles of Macroeconomics **OR**
  ECON-SHU 251   Economics of Global Business
- ECON-SHU 3   Microeconomics **OR**
  ECON-SHU 2   Principles of Microeconomics
- ECON-SHU 202   Intermediate Macroeconomics **OR**
  ECON-SHU 10   Intermediate Microeconomics
- Two additional 4-credit courses from the Economics elective list

Electrical and Systems Engineering Minor
- CENG-SHU 201   Digital Logic
- CSCI-SHU 11   Introduction to Programming **OR**
  INTM-SHU 101   Interaction Lab
- EENG-SHU 251   Circuits
- Electrical and Systems Engineering Elective

Global China Studies minor
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
Four classes from the required and elective list of Humanities major History courses.

Humanities Minor
Four classes from the required and elective list of Humanities major courses.

Interactive Media Arts Minor
- INTM-SHU 101   Interaction Lab
- INTM-SHU 120   Communications Lab
- 7-8 credits from the Interactive Media Arts Elective List

Literature Minor
Four classes from the required and elective list of Humanities major Literature courses.

Mathematics Minor
Four 4-credit mathematics courses at the Calculus level or higher. Of current math offerings, Mathematics for Economists and Mathematical Functions do not count for the minor.

Neural Science Minor
- BIOL-SHU 21   Foundations of Biology I
- BIOL-SHU 22   Foundations of Biology II
- BIOL-SHU 123   FoS Biology Laboratory
- NEUR-SHU 201   Introduction to Neural Science
- NEUR-SHU 251   Behavioral and Integrative Neuroscience **OR**

NEUR-SHU 301   Cellular and Molecular Neuroscience

Philosophy minor
Four classes from the required and elective list of Humanities major Philosophy courses.

Physics Minor
- PHYS-SHU 71   FoS Physics Laboratory
- PHYS-SHU 91   Foundations of Physics I Honors **OR**
  CCSC-SHU 50   Physics I
- PHYS-SHU 93   Foundations of Physics II Honors **OR**
  CCSC-SHU 51   Physics II
- PHYS-SHU 94   Physics II Laboratory
- Two Physics Elective Courses (Must bring total credits of the minor courses to 16 or more)

Social Science Minor
Students who wish to complete a minor in Social Science must complete one of the Methods courses from the list of approved Social Science Methods courses and three additional courses from the list of approved Social Science courses.

Global Network Minor
Students can complete a Global Network (GN) minor using classes from one or more of the eleven Study Away Sites in NYU's 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 progran taught at a study away site.

These minors serve students who can realize their interdisciplinary goals within the NYU's global network drawing on courses from any of the study away sites. Even if all of the classes are from a single department in one of the other degree-granting campuses or is identical to a minor offered on one of those campuses, the GN 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.

GN minors require at least 2 courses from global sites and may be completed using courses taken at the associated study away site or degree-granting campuses. Courses and therefore minor availability may vary by semester, students should see each academic center's website for specific classes, and plan with their academic advisor how to complete the minor. Pursing a GN minor does not guarantee acceptance to study at a study away site. A list of approved global network minors is available on the NYU Shanghai study away website. The courses that have been reviewed to count towards GN minors are also posted to the NYU Shanghai study away website. As students inquire about new courses, they are reviewed and added to the sheet.

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, which do not have analogous minors in Shanghai, will have them identified by name as a minor on the student transcript. Where there is an analogous minor student may use courses for the cross-school minor which are equivalent to courses required for the Shanghai minor to complete the Shanghai minor. For example, courses required for the Business Studies minor offered through Stern may count toward the Shanghai Business minor but not toward the cross-school minor.

{ Part VII}
Course Descriptions

ART-SHU 101
What is Art?- The Language of Art

In this course, students will develop the observational and language skills needed to write about art (Dance, Music, Theater and Visual Art) in various formats such as Research Papers, Critiques, Individual Statements and Project Proposals while experiment with making visual art to deepen their understanding. Students will analyze diverse artworks, exhibitions, and performances through objective and subjective writing activities and class discussion. They will then consider the meaning of these works and exhibitions and examine the differences between objective and subjective analysis. Students will approach this in a comprehensive manner, incorporating research, direct observation, theory, art history, and contemporary social, political, and economic frameworks in order to meaningfully situate their writing.

ART-SHU 105
Performance Art

In this course we will survey histories of performance as art from traditions ancient to modern through physical work, playwriting, and study of design. We'll work through repertoires and theatrical traditions of the Ancient Greeks alongside movements like Futurism, Dada, Surrealism, and the Bauhaus School. Using Kate Tempest's play Brand New Ancients with elements of spoken poetry and hip hop, we will workshop a new adaptation using students' original text and dramaturgy, ending the semester with a performance of our work. From Tempest's play: "The stories are here, the stories are you, and your fear and your hope is as old as the language of smoke, the language of blood, the language of languishing love."

ART-SHU 310 | 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-lifes, 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. Note that attendance in the first class meeting is mandatory, otherwise you will be dropped from the course.
Prerequisite: None

ART-SHU 222
Site and Situation: Social Space and Public Art

What is the relationship between "Site" and "Situation"? How do they influence and respond to one another in the context of social spaces? How do economic, political and global entities use social space as means of constructing collective identity and behavioural normativity? How can artists respond to these situations by making their own moves to interpret and re-situate site? Social spaces are designed and curated environments that reflect the attitudes and actions of community, manage human behaviours, and offer places of collective expression. They serve as a reflection of how we see and how we want to see the world and ourselves. Because they are sites which are closely tied to individual and collective identities, they are historically, also, sites which are managed by governing forces to foster narratives of collective identity. Public art is one aspect of how social spaces are defined and curated. However, what is "public art"? How is it interpreted and practised? How does public art situate site? How do curated social spaces provoke its inhabitants to reflect on their relationship to the city? And, how does this positioning situate our experiences of "Site"? Chinese artists are part of the global movement towards gaining more self-authorship and agency regarding the interpretation of sites. There is a growing focus on shifting emphasis to the concerns of local inhabitants, human interaction, and experiential needs – putting into question the historically monument-based approach to public art. Students will be introduced to those artists and their works in a global context. Prerequisites: None

ART-SHU 225A
Contemporary Dance

This course is an introduction to the fundamental and intermediary concepts of dance through learning a diversity of movement styles. Students will gain an appreciation for the expressive and dynamic capacity of the body, recognizing shared, unifying attributes as well as those that are unique and intrinsic to each style. The thorough warm up places an emphasis on breath, proper placement, and building stamina for general health. Short dances and sequences from Jazz, Hip Hop, Contemporary, and Modern Dance will be learned to sharpen kinesthetic memory, foster joy in movement, and express the timelessness of all dance. Students enrolling for 4 credits will learn the historical and cultural background behind the dances and 2 credits fulfill just the dance requirement. All levels are welcome. No previous experience is required. This class counts towards the Tisch School of the Arts Dance Minor.

ART-SHU 225B
Contemporary Dance

This course is an introduction to the fundamental and intermediary concepts of dance through learning a diversity of movement styles. Students will gain an appreciation for the expressive and dynamic capacity of the body, recognizing shared, unifying attributes as well as those that are unique and intrinsic to each style. The thorough warm up places an emphasis on breath, proper placement, and building stamina for general health. Short dances and sequences from Jazz, Hip Hop, Contemporary, and Modern Dance will be learned to sharpen kinesthetic

memory, foster joy in movement, and express the timelessness of all dance. Students enrolling for 4 credits will learn the historical and cultural background behind the dances and 2 credits fulfill just the dance requirement. All levels are welcome. No previous experience is required.
This class counts towards the Tisch School of the Arts Dance Minor.

ART-SHU 227
Theory and Practice of Acting

The class will introduce students to the fundamentals of acting for the stage by pairing some of theatre's foremost theorists with their contemporary practitioners. The methods of Constantin Stanislavs will be paired with the work of Anton Chekov; Cicely Berry's voice and text exercises will be paired with the plays of William Shakespeare, and the work of Anne Bogart will be studies alongside the plays of Charles L. Mee and Naomi Lizuka. Students will be exposed to physical movement. voice and text work, character and script analysis. monologue and scene study - all of which are intended to engage students in emboldening their imaginations while building a solid foundation in the skills and craft of acting.

ART-SHU 230
Ballet

This does not fulfill any major requirement. This course is an introduction to the fundamentals of classical ballet technique. A thorough warm-up will be given in each class to improve strength, balance, and coordination through various exercises. This class begins with barre, develops into stretch, adagio, and finishes with allegro and reverence. Throughout the semester, three major movement combinations will be taught and the student will be expected to demonstrate their mastery of those combinations. No prior dance experience is necessary. Prerequisites: None

ART-SHU 231
Introduction to Dance Technique & Movement

This technique class aims to help beginning level students learn about their body through anatomical knowledge, kinesthetic practices, and gain both the confidence and ability to execute and perform movement combinations in class. This class will refine psychomotor skills, increase self-awareness, and improve physical coordination. Pre-requisite for (1) Choreography & Performance and (2) Minority Dance of Southern China, (3) Minority Dance of Northern China

ART-SHU 239.2
Choreography & Performance

This does not fulfill any major requirement. The purpose of this 2-credit course is to enable the student to gain an appreciation and knowledge of team building skills, collaboration, and the creative process through movement exploration, choreography and performance. Through individual and collective participation in bodywork, contact improvisation, developing phrases, and playing an active role in the final performance, students are physically and conceptually challenged and informed. Through better understanding space, control, aesthetics, alignment, and musicality as well as practicing learning strategies within a duet/group context, the student gains an appreciation not only for self and collective discovery, but also for the creative process underlining and shaping personal, artistic expression. All levels are welcome. No previous experience is required.
This class counts towards the Tisch School of the Arts Dance Minor.

ART-SHU 239.4
Choreography & Performance

This does not fulfill any major requirement. The purpose of this 2-credit course is to enable the student to gain an appreciation and knowledge of team building skills, collaboration, and the creative process through movement exploration, choreography and performance. Through individual and collective participation in bodywork, contact improvisation, developing phrases, and playing an active role in the final performance, students are physically and conceptually challenged and informed. Through better understanding space, control, aesthetics, alignment, and musicality as well as practicing learning strategies within a duet/group context, the student gains an appreciation not only for self and collective discovery, but also for the creative process underlining and shaping personal, artistic expression. All levels are welcome. No previous experience is required.
This class counts towards the Tisch School of the Arts Dance Minor.

ART-SHU 242
Minority and Folk Dance (Southern China)

This course provides an introduction to minority and ethnic folk dances in southern China. It explores the forms of these dances as well as the culture, religion, history, and natural environments influencing the creation of these dance forms. The Spring 2020 semester the focus will be on Tibetan 藏族, Dai 傣族or Wa 佤族minorities. Students learn the legends, stories, and myths surrounding each dance form as well as the distinct movement beats, rhythms, and traditional combinations.
This course counts towards the Chinese Arts Minor (2020) and the Dance Minor.

ART-SHU 243
Minority and Folk Dance (Northern China)

This course provides an introduction to minority and ethnic folk dances in northern China It explores the forms of these dances as well as the culture, religion, history, and natural environments influencing the creation of these

dance forms. The Fall 2019 semester the focus will be on Yianbian Korean 朝鲜族, Uighur 维吾尔族 or Mongolian 蒙古族 minorities. Students learn the legends, stories, and myths surrounding each dance form as well as the distinct movement beats, rhythms, and traditional combinations. This course counts towards the Chinese Arts Minor (2020) and the Dance Minor.

ART-SHU 250
Visual Culture and Social Art Practice: Collaborations and Community Interactions

What role does art play in our contemporary society? Who is it for, what does it represent, and why? How can we, as visual culture participants and producers, ensure that we are relevant, engaged, engaging, and inclusive? How does locality and culture play a part in how we think about and present what we are making? The main purpose of this course is to integrate students into Shanghai through outreach and collaborative projects in order to give them the opportunity to interact artistically and directly with Chinese communities as well as consider themselves in relation to those communities. They will develop and realize projects specific to various communities in Shanghai. Students will learn to incorporate theory, studio, and social engagement practices (collaborative, workshopping, and interactive skills) in their understanding and making of art. They will consider notions of visibility, viewership, and authorship, in a global context, joining the dialogue regarding art practice shifting towards engaging communities outside of the specific art sphere. In the visual arts, conscious engagement with communities is both a way to open up new considerations and approaches to visual culture language as well as make spaces for autonomy and agency. Class fees: $25.00 per student. Prerequisites: None

ART-SHU 255
Printmaking in an Expanded Field

Printmaking in China has a long and varied history. Originally, stamps and official seals were carved out of stone, jade, and other hard materials. Eventually, softer wood was used as it was vastly easier to carve and more economical, thus establishing a tradition of Chinese relief printing on a vast scale. Despite originating in China, wood block prints are more often associated with Japan due, in part, to preferences held in the "eye of the beholder" rather than for any innate technical or artistic merit. In this comparative course students will consider complex issues such as appropriation versus translation; authenticity; and artistic cultural identity and ownership as they relate to art making and exhibition practices around the globe. Students will learn techniques, modes, forms, and applications of printmaking – monotypes (transfers and rubbings), relief prints (stamps and wood cuts), intaglio (dry point engraving), stencils, and mixed media technique – in a conceptual framework of global visual culture. Course fees: $70.00 per student. Prerequisite: None.

ART-SHU 275
Mark Making: From Basic Drawing Skills to Contemporary Approaches to Drawing

Drawing is one of the earliest ways humans attempted to understand the world, and it remains a remarkable tool for perceiving, recording, negotiating, and inventing our relationship with our surroundings. Drawing is not a privilege of the talented but a teachable skill acquired through the continued practice of specific techniques. In this class students will learn basic drawing methods such as contour, gesture, negative space, value and perspective, and will study why and how these techniques aid draughts persons in creating a three-dimensional illusion on a surface. Students will also examine contemporary drawing concerns and tackle two longer drawing projects centered around narrative and different materials and drawing methods. At the end of this course, students will have acquired basic drawing skills, learned some of the ways artists have practiced and conceptualized drawing and started to build their own personal visual vocabulary and approaches to the medium.
Prerequisite: None (This course is reserved for Shanghai students).

ART-SHU 301
Photography I

Introduction Photography I is a praxis course that provides students with an introduction to photography as an artistic medium in the field of Contemporary Art. The course will examine documentary, pictorial, and conceptual photographic works that are exhibited in museum and galleries starting from the post-war era and continuing to the present day. Students will learn to shoot, edit, and print digital photographs using professional photographic equipment and software. In the studio, students are required to critique the work of their peers, their own work, and work sourced from current contemporary art exhibitions. Outside the studio, students will examine major historical movements in photography. Work by artists are examined to provide the framework and vocabulary to articulate the students' own photographic investigations. Students are expected to do about 6-8 hours of course work per week outside of class. Note that attendance in the first class meeting is mandatory, otherwise you will be dropped from the course.

ART-SHU 302T
Photography II

Photography II is a praxis course that provides students with a critical examination of photography as a medium-specific discipline. Through the investigation of the intersection between photography and sculpture, the course will explore the materiality, physicality, and spatiality of the photographic object.

ART-SHU 306
Moving Images I

Moving Images is a praxis course that provides students with an introduction to time-based practices in the descipline of Visual Art and Film. The focus of the class is on the exploration of experimental film and video art in the context of museums, galleries, and art fairs, as well as independent film houses and film festivals. Students will

experiment with essayist, abstract, and narrative and non-narrative moving image practices in both single-channel and multi-channel formats, and learn to shoot and edit moving image works using professional equipment and software. In the studio, students are required to critique the work of their peers, their own work, and work sourced from current contemporary art exhibitions and film screenings. Outside the studio, students will examine major historical movements in contemporary moving image practices. Works of practicing artists are examined to provide the framework and vocabulary to articulate the students' own moving image investigations. Students are expected to do about 6-8 hours of course work per week outside of class. Note that attendance in the first class meeting is mandatory, otherwise you will be dropped from the course. Prerequisites: None.

ART-SHU 307T
Moving Images II

Moving Images II is a praxis course that provides students with a critical examination of moving image practices as a medium-specific descipline at the intersection of Visual Art and Experimental Film/ Avantgarde Cinema. Using Gilles Deleuze's Cinema 1 The Movement -Image as a theoretical foundation, the course examines the mobile camera and montage as two essential kinetic elements of time-based media.

ART-SHU 610
Art is a Hammer

"Art is not a mirror that reflects reality, but a hammer with which to shape it"- Bertolt Brecht, theater maker. Every artistic tradition was once an act of rebellion and discover how they shattered norms, affected their contemporaries, and changed how we look at art today. Students will explore theories from a wide range of global practices and respond with short essays and artistic projects, which they will use to propose their own manifestos to challenge modern customs, redefine what it means to be an artist, and shape new realities in their community. Prerequisites: None

ART-SHU 629
The Villain

What makes a villain and who decides? In this course, we will track the evolution of the villain across the globe and through the ages, exploring representations of evil in myth, literature, and art history, as well as on the stage and screen. We'll identify the origins of iconic imagery and characteristics, interrogate the scapegoating of certain characters or populations, and question our own perceptions of villainy. Our material will include sacred text, Shakespeare, Japanese Noh, political documents, psychological studies, horror films of early cinema, and relevant works of today from Disney to Black Panther. Assignments will take the form of textual analysis and research, as well as artistic responses in the form of performance, music, photography, and video, all seeking to understand new perspectives on those we label "villain." Prerequisites: None

ART-SHU 845
Comedy

In this course we will examine global histories and applications of comedy in performance and media as students from a company of actors, writers, and directors to produce dynamic new work. Students will explore comparative approaches to the technicalities of writing and performing comedic scenes and characters as we seek to understand the science of humor and find the purpose of comedy in our own communities. Each week we will seek inspiration from wide range of examples offered from the history of comedy, from the accients to modern sketch comedy. We'll finish the semester with a presentation of the original work we've created in the form of videos and live performance.

ART-SHU 1010
Making Theatre

In this course, we will explore the essential elements of collaboration and theater making, seeking to understand how the creation process works and how it can be applied across many disciplines. We will investigate groundbreaking theories from the history of performance, mine them for tools useful to our process, and then put them into action as a company of collaborators. As we move through foundational exercises, scene work, and devising methods, students will take on rotating roles of actor, director, writer, designer, and more. Working together, we will hone our craft and establish effective systems for creating and rehearsing new work. Our goal: to further develop our own artistic voices and discover how they can impact the world around us as we make theater. Prerequisites: None.

ART-SHU 1911 | 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, while using a unique integrated style of work. Students will examine the content of artwork, including ideas in contemporary and traditional art, and build various skills to translate ideas into reality. Class time will be devoted to individual projects and critiques, lectures, and group discussions. This course is open to students who have an art background and upon the approval of the professors. Note that attendance in the first class is mandatory, otherwise you will be dropped from the course. Prerequisite: Instructor Consent Required.

ART-SHU 9077
Contemporary Art & New Media

Over the past three decades, the contemporary art scene in China has expanded fast. The massive political, economic, and social changes the country has undergone since the end of the Cultural Revolution in 1976 have dramatically altered its cultural landscape. The course will survey the main development areas in Chinese contemporary art. 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.

MUS-SHU 56
Piano (Private Lessons) - 2 credits

For Non-Majors: Private instruction for all skill levels in the literature & techniques of playing piano. Designed to foster appreciation of music & an interest in piano repertoire, musical interpretation, & music notation. Prerequisite: 1 year of private study; Instructor Consent (Must have either rudimentary music skills and be able to play simple pieces, two hands together or successfully completed MUS-SHU 59 Group Piano; Prior training/permission of instructor is required).

MUS-SHU 56.2
Piano (Private Lessons) - 4 credits

For Non-Majors Private instruction for all skill levels in the literature & techniques of playing piano. Designed to foster appreciation of music & an interest in piano repertoire, musical interpretation, & music notation. Prerequisite: 1 year of private study; Instructor Consent (Must have either rudimentary music skills and be able to play simple pieces, two hands together or successfully completed MUS-SHU 59 Group Piano; Prior training/permission of instructor is required).

MUS-SHU 59
Group Piano for Beginners

For Non-Majors.

MUS-SHU 60
Group Piano for Intermediate Beginners

For Non-Majors.

MUS-SHU 61
Group Piano for Advanced

For Non-Majors.

MUS-SHU 105
Guqin: Beginner

Note: Introductory Chinese recommended. Some course instruction in Chinese.

MUS-SHU 150
Group Erhu: All Levels

Note: Introductory Chinese recommended. Some course instruction in Chinese.

MUS-SHU 151
Bamboo Flute: All Levels

Note: Introductory Chinese recommended. Some course instruction in Chinese.

MUS-SHU 205
Guqin: Intermediate

Note: Introductory Chinese recommended. Some course instruction in Chinese.

MUS-SHU 219
Music of Shanghai

Centered around attending a variety of musical performances in Shanghai, the course consists of lectures, readings, listening and discussions. Students work on refining critical listening skills and develop a greater knowledge of music as an integral part of society and in particular, Shanghai's past and present artistic community. Genres include: jazz, classical, indigenous, fusion, theatre music and contemporary pop/rock.
This course satisfies 2 credits of the Chinese Arts Core Curriculum. Prerequisites: None.

MUS-SHU 220
20th Century Music and Its Meaning

From Mamie Smith to Metallica, the musical soundscape of the 20th century was one of immense change,

innovation, and controversy. Jazz, rhythm and blues, and rock music arose amid massive demographic shifts, unprecedented wealth creation, global war, and advances in technology that made the world more immediate than ever before. In every genre, a burgeoning record industry turned stored sound into a lucrative commodity that permeated society, defining and challenging our individual and collective identities. This course examines how 20th-century music echoed and defined the social world that helped to produce it, the function of music in that world, and its impact on that world into the 21st century.

MUS-SHU 221
Songwriting

What's in a song? What are the qualities of an effective song, and what features do famous songs and songwriters share? In this course, students will learn the essential elements of songwriting—melody, harmony, form, lyrics, and more—via analysis of existing popular music in a variety of styles. Through popular music analysis, guided class work, and talks with guest composers, students will engage in the songwriting process toward presenting fully and partially realized original songs. Prerequisite: None. Some prior experience in music is recommended; students should contact instructor prior to registering

MUS-SHU 225
The Structure of Music

This course examines the basic components of sound (frequency, duration, amplitude, sequence, timbre, harmony) and how they are used as building blocks in creating recognized musical forms. By means of oral, aural, score study and written work/composition, students will be able to recognize these elements, how they function and are used in simple melody through more complex larger forms such as binary, ternary, rondo, variations, and sonata. Prior musical study is recommended, but not necessary.

MUS-SHU 1085
Choral Arts: NYU Shanghai Chorale

For Non-majors. The NYU Shanghai Chorale will explore all types of choral music - pop, jazz, classical etc., with a focus on singing and musicianship skills in a fun environment. Those taking the course for one or two credits will receive individual singing instruction outside of class at mutually convenient times throughout the semester. Sectional rehearsals may be called as needed.

MUS-SHU 1179.1
Chamber Ensemble: Orchestra

For Non-majors

MUS-SHU 1511
Vocal Training: Group - 2 credits

This course introduces the practice of singing by means of group and individual instruction. Students will learn two to three songs, most likely pop or musical style songs in a teamwork setting per semester. The objective of this course is to improve students' confidence in singing, and most importantly, having fun singing and performing together. Students may also have one or two field trip opportunities to watch performances in Shanghai.

MUS-SHU 1512
Private Voice Instruction - 2 credit

This does not fulfill any major requirement. 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 storytelling. Students may also have one or two field trip opportunities to watch performances in Shanghai. Prior trainning/permission of instructor required

MUS-SHU 1514
Private Voice Instruction - 4 credit

This does not fulfill any major requirement. 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 storytelling. Prior training/permission of instructor required

Biology

BIOL-SHU 1 | CCEX-SHU 1
Introduction to Biology | Principles of Life-Form Cells to Organisms

This course introduces about the principles and technologies of modern biology. It covers the cellular and molecular structure of organisms, how life works on energy and metabolism basis, how life reproduces on cell division and inheritance with an overview of the biological process from gene expression, epigenetic modification, cell cycle and differentiation, mutation and cancer, and the signaling pathways and mechanisms among the cells.

BIOL-SHU 3 | CCEX-SHU 3
Explore the Cell: From Gene to Protein

The laboratory course will teach students the skills needed in molecular biology research such as the hands-on techniques of sterile technique, genetic transformation, gene expression, gel electrophoresis, and nucleic acid quantification. The lab course will also emphasize literature search, scientific writing, lab notes taking, power point presentations, data analysis, and best practices in lab safety. The ED Biology 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 or discussion of the material. In the beginning of the class, there will be a 15 minutes presentation session from the students. The students can choose any topic of interest from classical to modern biology, from everyday life to cutting edge breakthroughs, to achieve an overview comprehension of biological science and classroom diversity.

BIOL-SHU 21
Foundations of Biology I

BIOL-SHU 22
Foundations of Biology II

Our objective is to provide a concrete foundation in the principles of modern molecular and cellular biology. These concepts form almost all basis for the great discoveries now being made in biology and the medical science. In this course, we will discuss how proteins and biomolecules are sorted in the cell, how cells maintain structural framework, how cells multiply, how cells regulate transport cross membranes, how cells interact with environment, and how cancer cells arise. In addition, we will discuss about principle experimental methods of modern cell biology. An emphasis is place on understanding molecular mechanism of essential process, but not memorizing details. In recitations, students will discuss modern research papers related to the topics that are covered in lecture. Students should be able to understand the biology of the paper and criticize its potential pitfall. Prerequisite: MATH-SHU 131 Calculus or MATH-SHU 201 Honors Calculus AND BIOL-SHU 21 Foundations of Biology I

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, or Foundations of Science III Biology, or Foundations of Biology II.

BIOL-SHU 30
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-22.

BIOL-SHU 31
Genetics Laboratory

Pre-req or co-req: BIOL-SH 30 Genetics or BIOL-UA 30 Genetics

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. Students will first learn these basic biological techniques in short experiment sets and then apply them as part of a Genetically-Modified Food project. 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. Prerequisite: MATH-SHU 131 Calculus or MATH-SHU 201 Honors Calculus AND BIOL-SHU 21 Foundations of Biology I

BIOL-SHU 250
Organismal Systems

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 or BIOL-SHU 21.

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, including human. Many medical and biological studies are being carried out on an unprecedented scale. The surge of biological data changes genomics and biology into one of the major research topics in data science. Familiarity with the fields of genomics and bioinformatics, which impact society on all levels, is vital for the next generation of scientists. The course of Genomics and Bioinformatics introduces to students a broad range of subjects in this field through lectures and hands-on exercises that use fundamental principles of biochemistry, computer science, and mathematics. Students are also expected to understand G&B applications such as how genomic analysis is used to facilitate precision medicine research, and how to study biology questions from a systemic perspective. Prerequisite: FoS Biology 1 AND Biostatistics or Statistics AND ICP, Introduction to computer programming.

BIOL-SHU 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, or Foundations of Science III Biology, or Foundations of Biology II.

BIOL-SHU 271
Cell Biology: Body's Battle with Cancer

This course is designed to provide comprehensive understanding of how cancer breaks our body's defense for its survival. Cancer is a devastating disease in a modern society and a plethora of efforts has been made to find its cure. In this course, students will learn how difficult fighting against cancer is in a molecular level. Furthermore, using cancer as an example, students will also learn how metazoan develops multiple defense mechanisms and survives in the hostile environment. Prerequisite: Foundations of Biology I (BIOL-SHU 21)

BIOL-SHU 314
Advanced Cell Biology Lab

The course takes an in depth look to understand the fundamental and advanced methods for growing and studying cells—the smallest units of life. This course introduces students the fundamentals of cell biology and the experimental approaches used in research to examine the cell structure and function. Topics cover cell lines culture, the structure and function of the cells, metabolic pathways, cell signaling pathways, and gene function investigation in vitro in cells. The laboratory course will teach students the skills needed in advanced cellular biology research such as the hands-on techniques of cryopreservation, transfection, realtime PCR, immunofluorescence, RNA isolation, cDNA construction, gene expression and regulation. The lab course will also emphasize literature search, scientific writing, lab notes taking, data analysis, and best practices in lab safety. The course is designed as an upper level 4-credit major elective course, for biology and neural science majors mainly, and open to other natural science majors who have taken Foundation of Biology I or II, or FoS Biology Lab.

BIOL-SHU 400
Independent Study - Biology Capstone

Students must conduct two semesters of research (8 credits) with a faculty member in NYU Shanghai Biology or another faculty member approved by the Biology Area Director. One semester of research can be conducted in NYU NY or NYU AD upon approval of Biology Area Director and NYU SH faculty advisor. The students must take the Undergraduate Research Thesis course in Shanghai in the last semester of senior year and prepare a written thesis of the research. The students must submit the research thesis for approval by two NYU Shanghai biology faculty members. Presentation of the thesis work at the NYU Shanghai Undergraduate Research Conference is required. Once a student completes all of the requirements for the honors program, there is a competitive selection process for determining which students receive the Major Honors recognition.

BIOL-SHU 997
Independent Study - Biology

Prerequisite: Foundations of Science I-III (or Physics I&II, Foundations of Chemistry I&II, Foundations of Biology I&II), and a minimum GPA of 3.0 overall and in all science and mathematics courses required for the major, permission of a

biology faculty member (at NYU-Shanghai, NYU-Abu Dhabi, or NYU-New York) who will act as a sponsor and mentor, and approval of Discipline Leader in Biology in Biology. The faculty mentor must be selected in consultation with the Discipline Leader in Biology. Offered in the Fall, Spring or Summer. 2 to 4 points per term for a maximum of 4 points. This course aims at engaging students in research. It is designed to offer students an opportunity to observe biological research up close and gain hands-on research experience by working as a member in an active research team. Independent Study I and II can be done with the same supervisor or two different supervisors. No lectures will be given. Student researchers are expected to attend and actively participate in lab/supervision meetings. A Proposal for Independent Study form must be filled out, signed by the Discipline Leader in Biology, and submitted to the student's academic advisor. Requires a written report on the research to be evaluated by the faculty sponsor, with a copy submitted to the Discipline Leader in Biology and a copy to the Dean of Arts & Sciences.

BIOL-SHU 998
Integrated Science Capstone

This course provides students with a completion of their undergraduate science education by applying the skills and knowledge they acquired over the course of their major to scientific problems across disciplines. Students will be paired with a faculty mentor to engage either in Independent Research or Literature Review to address a scientific question of the student's design, culminating in a written report. Students are encouraged to work with faculty mentors outside of their own field. Open only to Biology, Chemistry, and Physics majors in the senior year. Prereqs: students must have completed (or enrolled in) all remaining major requirements.

BIOL-SHU 999
Biology Undergraduate Research Thesis

Prerequisites: Independent Study (BIOL-SHU 997 or 998), a minimum GPA of 3.65 overall, a minimum GPA of 3.65 in all science and mathematics courses required for the major, and permission of a sponsor and the Dean of Arts & Sciences. Open to Biology majors only. The faculty mentor must be selected in consultation with the Dean of Arts & Sciences. May not be used for the major in biology. Offered in the fall, spring, and summer. 2 points. For biology majors who have completed at least one semester of laboratory research (BIOL-SHU 997 or 998) and are able to expand this work into a thesis. Requires writing a Thesis (i.e., a full literature search of the subject and a formal written report on the research in publication form), which is defended in front of a committee of three faculty (which includes the faculty sponsor), chosen by the student in consultation with the faculty mentor. (The defense may be a brief oral presentation followed by a question-and-answer session.) The Thesis and defense must be evaluated by the committee, with the cover page of the thesis signed by all committee members, with a copy of the Thesis submitted to the Dean of Arts & Sciences. (It is recommended that the student meet with the faculty committee at least once mid-semester to evaluate and guide the student's progress on the thesis work.)

BUSF-SHU 3
Business and Economics Honors Seminar

Prerequisite: Permission by the Coordinator of Business Honors Program.

BUSF-SHU 5
Principles of Finance for Non-majors

This course is for Non-Business and Non-Data Science with Finance Concentration students. It is a general elective course.

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 142
Information Technology in Business & Society

In Information Technology in Business and Society, students learn the fundamental concepts underlying current and future developments in computer-based information technology - including hardware, software, network and database-related technologies. They will also acquire proficiency in the essential tools used by today's knowledge workers and learn how these can be used to help solve problems of economic, social or personal nature. Throughout the course, they will be exposed to a range of more advanced topics which may include big data, information privacy, information security, digital piracy and digital music. Prerequisites: None.

BUSF-SHU 188
Chinese Business and Finance -- A Bilingual Introduction

The course is aimed to (1) enhance students' professional Chinese-English bilingual skills in the business context and (2) promote their understanding of the macro and micro business environment and culture in China and the larger world. Adopting a case-study oriented approach that emphasizes task-based language teaching, the course, by concentrating on five real-life cases from the business world, provides a bilingual introduction to such concepts and phenomenon as business globalization, international expansion and integration, mergers and acquisition, branding strategies, impact of "Made in China" on the Chinese global economy, antidumping, and government relations, etc. Along with the case study, some of the relevant Finance, Consulting, Marketing and Accounting knowledge will also be introduced bilingually. By the end of the semester, students are expected to be equipped with enhanced Chinese and English skills to function more comfortably and confidently in the transition toward pursuing a Business-Finance major as well as preparing for future internships or job interviews. This course will be mainly conducted in Chinese with a thorough introduction of Business and Finance terminologies and concepts in BOTH Chinese and English.

BUSF-SHU 200B
Topics in Business: Real Business Case Projects

The course enables students to apply tools and skills, learned in this and previous business courses, by undertaking projects focused on real business cases and provided by real companies. The cases are supplied by organizations expressly for this course and concern real opportunities and challenges facing them. Students will participate on teams of 4-5 people. Each team will have a different project. They will meet the organization for which they are undertaking the project to get insights into the problem being addressed and to present their results in the end. They will also meet regularly with the professor who will give lectures on problem-solving tools and skills as well act as a mentor when the projects are undertaken. They will also meet with outside mentors, brought in from the business world to review and offer comments / suggestions.

BUSF-SHU 200D
Business Consulting in China

This course provides a consultant's perspective on business consulting, particularly in China context. It introduces the principles, end-to-end processes, frameworks and best practices of business consulting. The course addresses how consulting firms work, what it is like working in a consulting firm and being on a consulting project. Students will form project teams and apply the principles and frameworks to real-life business consulting projects from mid-small companies in China. Prerequisites: Management and Organizations and/or Intro to Marketing, or upon approval by the instructor; requires Junior or Senior standing

BUSF-SHU 200F
Fixed Income Derivatives

This course satifies 2 credits of Business Finance Elective; Business and Marketing Major: Non-Marketing Elective; IMB Business Elective

BUSF-SHU 202
Foundations of Finance

This course is a rigorous, quantitative introduction to financial market structures and financial asset valuation. It has three goals: 1. To develop the concepts of arbitrage, the term structure of interest rates, diversification, the Capital Asset Pricing Model (CAPM), valuation of an individual firm, efficient and inefficient markets, performance evaluation of investment management , and valuation of derivative securities, particularly options. 2. To provide sufficient background knowledge about financial institutions and market conventions for students seeking an overview of capital markets as an introduction to advanced finance courses. 3. To introduce the principles of asset valuation from an applied perspective. The majority of the class is concerned with the valuation of financial securities. These valuation issues are heavily used in portfolio management and risk management applications. Throughout the course every effort will be made to relate the course material to current financial news. To take this course, students must be comfortable with statistics, linear algebra, calculus, and microeconomics. Prerequisites: BUSF-101 and ECON-3 or ECON-150

BUSF-SHU 206
Investing And Financing In And With 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 and 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 209T
Topics in Business: Senior Theses on Company Analysis and Case Study

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. A prior Statistics Course (BUSF-SHU 101)

BUSF-SHU 220F
Debt Instruments

This course satisfies 2 credits of Business Finance Elective; Business and Marketing Major: Non-Marketing Elective; IMB Business elective.

BUSF-SHU 221
Professional Responsibility & Leadership

Professional Responsibility and Leadership (PRL) is an interdisciplinary course designed to help students: Become more familiar with the variety of ethical dilemmas that can arise in the course of business practice & in one's personal life; Understand the different values and principles that can inform and guide decision-making in such ambiguous and difficult situations; Gain experience articulating and defending courses of action as future societal & business leaders; and Begin the process of developing professional ethics in harmony with their own personal values. The format of the course is a discussion seminar. Each class session may include a variety of activities, including: discussion, in-class reading and writing, role-playing, and other participatory exercises. These various activities will be designed and facilitated by the instructor to allow students to engage in a reflective dialogue. These discussions draw from three different sources: 1) the students' own personal experiences and values; 2) expert insights drawn from a variety of academic disciplines including philosophy, literature, history, and art, as well as the natural and social sciences; and 3) relevant business cases. In each class session, students consider a set of expert accounts identified by the instructor as starting points for discussion, and then they integrate their experiences with business cases that have personal relevance for them. The overarching themes of this dialogue include: 1) the relationship between business and society on a global, national and local basis; 2) the foundations of personal and professional business ethics; and 3) the exercise of leadership in organizations. These themes are developed in reference to a series of cases that have been either drawn from recent news reports on business practice or drafted specifically for this course by NYU Stern faculty. In this way, the PRL classroom is 'flipped' – the course focuses primarily on the students' own interests and refines them both through dialogue and in reference to expert sources. Rather than involving the one-way dispensation of 'content' from faculty to student, the course unfolds as a 'process' of students and faculty working together in response to open-ended, age-old questions. While there may be no 'right' answer to such questions in the way that mathematical problems may be solved, still there are answers that are better or worse for individuals, organizations and societies. In this light, students are encouraged to challenge

themselves and each other to make the world a better place, and to discover how they can thrive individually and collectively. Prerequisite: None. Satisfies 2 credits of Business Major Non-Finance/Non-Marketing elective.

BUSF-SHU 222
Risk Management in Financial Institutions

This course examines the management of risks in a wide range of financial activities, with a particular focus on market risk, credit risk, and liquidity risk. It uses quantitative models to estimate credit losses, economic capital and value at risk, and to perform stress tests and scenario analysis. The course also analyzes the consequences of technological change, globalization, monetary policy, and the entry of new types of institutions into existing financial markets. It emphasizes the importance of systemic risk, moral hazard, and new regulations in light of the recent financial crisis.

BUSF-SHU 225
Negotiation and Consensus Building

This course will teach you the science and practice of negotiation - creating agreements between two or more interdependent parties. We negotiate daily with potential employers, co-workers, landlords, merchants, service providers, significant others, family members, friends, roommates, and more. These negotiations often lead to outcomes that are less than they could be, and at times they also lead to conflict. Although we negotiate often, many of us know very little about the strategy and psychology of effective negotiation. The main objectives of this course are to understand the structure of negotiation as it is practiced in a variety of settings, and to help students feel more comfortable and confident with the negotiation process. We will discuss theories and principles to guide our negotiations (the science). And students will develop and sharpen their bargaining skills by actually negotiating with other students in experiential exercises (the practice). Prerequisites: None

BUSF-SHU 225.1
Negotiation and Consensus Building: Theoretic Foundations

This course will teach you the science of negotiation - creating agreements between two or more interdependent parties. We negotiate daily with potential employers, co-workers, landlords, merchants, service providers, significant others, family members, friends, roommates, and more. These negotiations often lead to outcomes that are less than they could be, and at times they also lead to conflict. Although we negotiate often, many of us know very little about the strategy and psychology of effective negotiation. The main objectives of this course are to help you understand the structure of negotiation as it is practiced in a variety of settings, and to help you feel more comfortable and confident with the negotiation process. We will discuss theories and principles to guide our negotiations. Prerequisites: None (It is not necessary to be enrolled in BUSF-SHU 225.2 to take this course). This course satisfies 2 credit of BUSF Non-Finance elective; BUSM Non-Marketing elective; IMB Business elective

BUSF-SHU 225.2
Negotiation and Consensus Building: Cases and Practices

This course will teach you the practice of negotiation - creating agreements between two or more interdependent parties. We negotiate daily with potential employers, co-workers, landlords, merchants, service providers, significant others, family members, friends, roommates, and more. These negotiations often lead to outcomes that are less than they could be, and at times they also lead to conflict. Although we negotiate often, many of us know very little about the strategy and psychology of effective negotiation. The main objectives of this course are to help you understand the structure of negotiation as it is practiced in a variety of settings, and to help you feel more comfortable and confident with the negotiation process. Students will develop and sharpen their bargaining skills by actually negotiating with other students in experiential exercises. Corequisites: BUSF-SHU 225.1. This course satisfies 2 credit of BUSF Non-Finance elective; BUSM Non-Marketing elective; IMB Business elective

BUSF-SHU 229
Behavioral Finance

This course uses human psychology and market frictions to shed light on asset returns, corporate finance patterns, and various Wall Street institutional practices. It starts with motivating evidence of return predictability in stock, bond, foreign exchange, and other markets. The course then proceeds to themes including the role of arbitrageurs in financial markets, the psychological and judgmental biases of average investors, and the financing patterns (such as capital structure and dividend policies) of firms that raise capital in inefficient securities markets and/or are led by irrational managers. Prerequisites: Corporate Finance.

BUSF-SHU 232
Entrepreneurship Explored

The main aim of this course is to probe into the core rationale behind entrepreneurship: taking initiatives to make changes. Lecturing only accounts for less than one-third of the course, and students are expected to exhibit a high level of self-motivation to critically examine established and emerging ideas that have been shaping and transforming the concept and practices of entrepreneurship, as exemplified in specific cases and current practices. Students will thus be prompted to think critically and creatively about how to respond to the complexities of changes. The course lays emphasis on creativity, ethics, and future-oriented vision. Prerequisite: None

BUSF-SHU 244
Portfolio Management

Portfolio management: The art and science of making decisions about investment mix and policy, matching

investments to objectives, asset allocation for individuals and institutions, and balancing risk against performance. (Investopedia) The primary objective of the course is to study the theory and empirical evidence relevant for investing, particularly in the context of portfolio management. The basic theoretical framework is standard modern portfolio theory, as developed in Foundations of Finance, and its extensions. "Modern portfolio theory" is a general approach for maximizing the expected return of a portfolio given a certain amount of risk. This approach is the basis of virtually all quant investing strategies and is widely used by traditional portfolio managers as well. There has been a proliferation of new products and strategies in the asset management space in recent years, e.g., smart beta, alternative beta, fundamental indexing, low volatility, and leveraged and inverse ETFs. This course applies portfolio theory to understand and evaluate these products and strategies in the context of the empirical evidence about return patterns across assets (i.e., the factors such as value/growth, momentum, and carry that drive returns) in multiple markets/asset classes (e.g., US and international equities and bonds, currencies, and commodities). Key questions include: • What factors drive asset returns? Is it risk or mispricing? • Can this structure of returns be used to construct better portfolios and products? • How should the performance of existing products be evaluated given the empirical evidence? The course will rely heavily on Excel modeling using real world data. The course also covers, to a lesser extent, the institutional landscape of the asset management business—the firms (e.g., Blackrock, Vanguard), the vehicles (e.g., mutual funds, ETFs, hedge funds), and the trends (e.g., active vs. passive, fee competition). Prerequisite: Foundations of Finance.

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. Prerequisite: Sophomore standing or higher.

BUSF-SHU 270
Financial Reporting & Disclosure

The prerequisite for this course is ACCT-UB 3, Financial Statement Analysis. Students learn the financial reporting rules associated with the concepts learned in FSA. The course emphasizes the relationship between financial statements and the reporting rules on which they are based. Prerequisite: Principles of Financial Accounting.

BUSF-SHU 271
Artificial Intelligence for Business

Artificial Intelligence (AI) is reshaping business processes, creating disruptive innovations that change established industries and markets beyond recognition. The emergence of powerful algorithms, combined with recent growth in computational power and availability of massive amounts of data, enable companies to operate faster, make better decisions, automate processes, maximize revenue and customer engagement, among many other advantages. In this 7-week course we will briefly discuss some of the core principles underlying AI and then focus on a few selected applications of AI in business, such as predictive analytics for maximizing marketing and financial strategies, pattern recognition to understand customer behavior, and conversational AI and chatbots to improve engagement and customer experience. Last, AI also possesses significant limitations and poses new challenges with respect to fairness, biases, and automated errors. The course will conclude with a discussion of the main ethical issues and risks associated with AI technology. Prerequisite: Calculus and ICP. Student must have junior or senior standing.

BUSF-SHU 286
Chinese Financial Markets

This course introduces the institutions, instruments, and empirical regularities of Chinese financial markets and the role these markets play in the broader Chinese economy. The goal of the course is to provide students with a comprehensive understanding of Chinese financial markets. It focuses on current issues and debates about Chinese financial markets, including the Chinese banking system, RMB exchange rates, Chinese stock markets and bond markets, mutual fund and hedge fund industry, Chinese derivative markets and other important topics. The similarities and differences between Chinese financial markets and more developed markets will be highlighted. Prerequisites: Foundations of Finance or Principles of Finance.

BUSF-SHU 288
Doing Business with China

The course is designed to help the students to better understand business practices, environment, and cultures in China. Special focus will be placed on the understanding of the political, institutional, and financial contexts within which business activities unfold. The course will also discuss the implications of regional and global factors in shaping opportunities and constraints on businesses in China as well as the impact of Chinese business on international markets. Learning goals of the course are to: 1. Become knowledgeable in select concepts of the businesses in China; 2. Obtain essential knowledge on the evolution and development of business in China; 3. Develop an awareness of the political, socioeconomic, and cultural aspects of life in China, including critiques of common intercultural stereotypes around values and assumptions related to Chinese society and business practices; 4. Gain practical experience in interacting with diverse Chinese business communities.

BUSF-SHU 303
Corporate Finance

This course analyzes the major financial decisions made by corporate managers. The major topics include the objective of the firm, investment valuation and capital budgeting, risk management, capital structure and dividend policy. Insights from behavioral corporate finance that help better understand corporate decisions in practice will also be discussed. There will be emphasis on both developing the tools and mindset of the financial practitioner as well as examining specific applications in the form of examples, case discussions, and classroom simulations. Prerequisite: BUSF-SHU 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-SHU 308
Hedge Fund Strategies

This course aims to provide an in-depth understanding of the strategies used by hedge funds, employing a hands-on approach based on case studies and real data. The hedge fund industry has grown rapidly over the last decade aided in part by the private nature of funds and light regulation that has enabled managers to employ strategies not available to traditional fund managers. The course examines critical aspects of hedge fund investment styles including the trading mechanism, risk-return profiles of investment styles, trading costs, risk management and performance measurement. Strategies covered include event driven strategies, equity, debt, FX, cross-market strategies, global macro and shareholder activism. Distinguished guest speakers will be invited to provide a real-life perspective and to discuss key issues. Prerequisites: Corporate Finance

BUSF-SHU 309
Financial Statement Analysis

The course analyzes how firms communicate through financial statements. Students use financial statement analysis as an integral part of the strategic analysis of firms, while understanding how accounting regulations and managerial discretion influence presented financial statements. Course modules include strategic analysis, risk and profitability analysis using ratios, accounting analysis, and prospective analysis. By the end of the course, students can interpret and analyze financial statements, analyze cash flows, make judgments about earnings quality, uncover hidden assets and liabilities, and use financial statement analysis prospectively to forecast and value firms using cash flow-based and accounting-based valuation methods. Students who wish to pursue careers in investment banking, investment management, consulting, and accounting are encouraged to take the course.

BUSF-SHU 310
Data Science for Social and Information Networks

The world we live in is built upon a myriad of networks: Human society is defined by our interpersonal relationships. Organizations are structured around interconnecting roles and lines of authority between workers, colleagues, and bosses. Global information is conveyed across a world-wide web of linked content. As we have witnessed recently, epidemics spread over a social network of contacts, in the same way in which we buy products as we are influenced by our peers. New sources of massive amounts of data fundamentally reflect interactions, and, in this context, networks are intuitive abstractions to model our social life, especially that mediated by technology. In networks, local interactions among members of small communities can often propagate and further affect the outcomes of an entire system. This course combines theories, models, and algorithms from computer science, economics, and the social sciences to analyze network data and find solutions to business problems. More information: https://shanghai.nyu.edu/is/course-spotlight-network-analytics Prerequisites: Introduction to Computer Programing (to manipulate network datasets), and Calculus.

BUSF-SHU 311
New Venture Strategy

This course introduces students to a new class of decision-making framework and tools for optimizing the most critical strategic choices faced by new ventures. The major topics include (1) identify and choose between alternative opportunities, (2) choose between different markets, technologies and business models, (3) formulate commercialization strategies, (4) evaluate the financial attractiveness of a business opportunity and different deal structures, and (5) form and manage diverse teams. This course will consist of theory-based lectures, case discussions, and guest presentations. It is suitable for students interested in founding or working in start-ups, as well as in related careers such as consulting and venture investing. Prerequisite: Sophomore standing or higher

BUSF-SHU 312
International Trade and Business

International trade has fostered global economic growth as it provides investment, jobs, and access to technology. It offers opportunities to millions of people and has helped them to get out of the poverty. An understanding of real-world international trade rules and business practices is key for students in today's interdependent world. This course introduces students to the theories, systems, and practices of international trade, with emphasis on empirical knowledge. Students will learn the fundamentals around international trade and gain a systematic understanding of why nations trade, what to trade, and especially how they trade. Students will learn principles of the multilateral trading system, international trade terminologies, operations/logistics, insurance, cross-border e-commerce; as well as technology and intellectual property rights and international commercial dispute settlement. Prerequisite: None.

BUSF-SHU 321
Equity Valuation

This course covers the valuation of stocks and businesses. Real life valuations of companies are an inherent part of the content. By the end of the course, students should be able to: (1) apply discounted cash flow analysis to find the intrinsic value of an asset; (2) define, describe, analyze, and apply any multiple (PE, Value/EBITDA, Price/Book Value, etc.) to find the relative value of an asset; (3) value any publicly traded firm, small or large, domestic or foreign, healthy or troubled; (4) value any private business for owners or investors (private equity, venture capital, IPO); and (5) separate fact from fiction, sense from nonsense, and real analysis from sales pitch in equity research reports, valuations, and general discourse. Prerequisites: Foundations of Finance AND Corporate Finance. This course satisfies Business & Finance Elective.

BUSF-SHU 334
Advanced Futures and Options

This course consists of three parts. The first section of the course is a detailed examination of the pricing and hedging of option contracts, with particular emphasis on the application of these concepts to the design of derivatives instruments and trading strategies. The first part of this section is a review and re-examination of materials covered in the basic course, but with greater rigor and depth of coverage. The emphasis in the second part of this first section is on trading applications and risk management. The second section of the course is designed to provide a broad exposure to the subject of interest rate derivative products, both swaps and options. The last section of the course deals with recent innovations in the derivatives markets such as exotic options, credit derivatives and catastrophe derivatives. In the first section of the course, the discussion of trading strategies is in the context of the management of the risk of a derivatives book. The topics covered in the second part of the course include the relationship of swaps to other fixed income contracts such as futures contracts and forward rate agreements, valuation and hedging of swaps, building the yield curve, and valuation and hedging of interest rate options, with particular reference to caps, floors and swaptions, and modeling the term structure of interest rates. The third section of the course deals with non-standard option contracts such as exotic options and options on new underlying instruments such as credit, weather and insurance derivatives. Prerequisites: Foundations of Finance

BUSF-SHU 350
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: Principles of Fin Accounting (BUSF-SHU 250).

BUSF-SHU 351
Operations Management

Operations Management (OM) plans and coordinates all activities in the process of producing and delivering products (goods and services). Effective operations management is a key ingredient of success in most industries. Achieving operations excellence is one of the most essential strategies to improve efficiency and to gain a competitive advantage. The goal of this course is to introduce students to the fundamental concepts, problems, and strategies in the operations function of a firm. This course will cover a mix of qualitative and quantitative methods that provide the necessary tools to make intelligent decisions in operations.
Prerequisites: Sophomore Standing.

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 441
Private Equity & Venture Capital in Asia and Emerging Markets

This course is focused on the industry of private equity and venture capital (PE/VC) with a focus on Asia and emerging markets. This is intended to provide students a good general understanding of the different dynamics of PE/VC and similarities and differences between the Asia/emerging markets and western markets. The entire PE/VC life cycle will be discussed from different perspectives.

BUSF-SHU 442
International Project and Structured Investing and Financing

This course is designed to prepare students to have a good general understanding of project and structured investing and finance especially with on international projects in the infrastructure, energy and transportation sectors. This will provide an overview of investments, financing, strategies and other elements in project and structured investing and finance both in China, Asia, and globally. The class format will include lectures, case studies, discussions, and guest speakers (time dependent). The course will require the student's active participation. Leading industry guest speakers may be arranged for further learning enhancement, schedules permitting. The course materials will draw heavily on the lecturer's experiences.

BUSF-SHU 997
Business Independent Study

Course repeatable for Credit. Prerequisite: Permission of Area Leader Required

MGMT-SHU 4
Global Strategy

The world is going through fundamental and structural changes. The Global Strategy course discusses the implications for business strategy and challenges and opportunities that companies face. As the process of globalization and digitization accelates, business organizations are exploring new ways to adapt and grow. The emphasis will be placed on how companies operate in different socio-economic, technological, and institutional environments and overcome these differences, what kind of analytical tools may be used to assess international market conditions, and the sources of competitive advantage in a dynamic global context. Students will learn methods to build strategic mindset and capabilities to navigate in a fast changing global environment. Prerequisite: Sophomore standing or above.

MGMT-SHU 7
Managing People & Teams at Work

This course combines skill building through experiential exercises and an understanding of the underlying theory to help you learn how to be an effective manager and team member in today's technology-enabled team context. Topics include issues such as managing collaboration in and across teams, motivating effort, performance, social judgment, and cross-cultural issues. Students learn how organizations can improve their effectiveness through better management of people and how individual managers can be more effective in working with and leading others

MGMT-SHU 18
Strategic Analysis

This course provides an introduction to the basic frameworks of modern strategy that aim to help firms establish and sustain competitive advantages. The objective of this course is to introduce students to the role of the "general manager," who is faced by core strategic choices that concern the long-term performance of the firm, and provide them with the necessary skills to formulate and implement effective strategies. This course is equally relevant for students who want to work with companies as consultants, attorneys or investors, helping clients understand and solve critical strategic issues. From this course, students will learn to think critically and analytically about competitive business situations. This course emphasizes the need to look outward to the environment and inward to a firm's resources and capabilities and operating policies. It describes a firm's strategy as the formulation of "competitive strategy", "corporate strategy", and "organizational strategy". Prerequisite: Sophomore standing or higher

MGMT-SHU 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 1
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: Sophomore standing or higher.

MKTG-SHU 2
Consumer Behavior

This course presents a comprehensive, systematic, and practical conceptual framework for understanding people as consumers—the basic subject matter of all marketing. It draws on the social sciences to evaluate the influence of both individual and ecological factors on market actions. Students discuss relevant psychological and sociological theories and study how they can be used to predict consumers' reactions to strategic marketing decisions. Basic methodologies for research in consumer behavior are developed and applied. Course emphasis is on developing applications of behavioral concepts and methods for marketing actions. Prerequisites: Intro to Marketing

MKTG-SHU 3
Advertising Management

This course provides students with a comprehensive framework and tools to understand the advertising process and to appreciate managerial and theoretical perspectives in advertising. It tackles the stages in developing an advertising plan- from analyzing the situation and defining clear advertising objectives to execution. Students learn tools related to various skill areas in advertising, including account planning, media planning and buying, and copywriting/art direction, while developing a broader appreciation of how each skill area fits into the overall structure of the advertising process. Coursework involves a comprehensive group project that utilizes learning in all functional areas of advertising, while simulating the development of an advertising campaign. Prerequisite: Intro to Marketing (MKTG-SHU 1)

MKTG-SHU 9
Research for Customer Insights

At the core of successful marketing is a deep understanding of the customer's perspective, one that is informed not only by intuition, but also by data. What are his or her pain points? How will he or she respond to my latest invention? This course provides students with the tools needed to conduct essential marketing research that can inform data-driven decision-making and strategy. These tools include imagery-guided interviews, surveys, focus groups, experiments, and applied statistical analyses (e.g. cross-tabulations, t-tests, regressions). This course also introduces fundamental methods that are critical for segmentation, identifying the right target market, brand positioning, and pricing various products and services. This course explores topics through a combination of business case studies and hands-on experience with an actual, "live" marketing research project. Prerequisite: Intro to Marketing (MKTG-SHU 1)

MKTG-SHU 57
Digital Marketing

Digital marketing has experienced tremendous growth and attention over the last few years, thanks to technological innovation and rapid changes in online social networks and digital consumer behavior. This course tackles the latest topics in digital marketing (e.g. digital platforms, online reviews, mobile marketing, influencers), through a combination of business case studies reflecting recent frameworks in the field, in-class exercises on metrics and methods for evaluating the success of digital marketing, and coverage of the latest news and innovation in digital marketing. This course also provides in depth exposure to the psychology of virality and social influence in digital contexts, which is critical for understanding both social media marketing and broader cultural trends. Prerequisite: Intro to Marketing (MKTG-SHU 1)

MKTG-SHU 64
Global Marketing Strategy

Examines the specific issues involved in entering international markets and in conducting marketing operations on an international scale. Attention is focused on problems such as identifying and evaluating opportunities worldwide, developing and adapting market strategies in relation to specific national market needs and constraints, and coordinating global marketing and branding strategies. Emphasis is on strategic issues relating to international operations rather than on technical aspects of exporting and importing. Prerequisites: Introduction to Marketing

MKTG-SHU 110
Topics: Practicum on Innovation and Branding

Innovation is the process by which an organization generates creative new ideas and converts them into viable commercial products. Branding, on the other hand, is the process of creating a unique image for the product in the consumers' mind. This perception reflects on the organization as a whole. Moreover, branding aims to establish a differentiated presence in the marketplace to attract and retain loyal customers. Thus, innovation and branding are inextricably linked for organizational success, or survival, in today's hyper-competitive business landscape. This course aims to equip students with knowledge in both the innovation and branding processes. By participating in the International L'Oreal Brandstorm Competition, students will gain practical experience in formulating an idea, develop branding around said idea, and then pitching said idea (innovation and branding) in a competitive forum. Students will also develop an understanding of the role of design and innovation as a collaborative, multidisciplinary group activity; and improve writing and presentation skills. The course incorporates multiple ways of learning including: lectures, case studies, ethnographic research, industry expert feedback on projects and guest presentations, and design activities in the interactive media lab. In essence, the course integrates a project-based learning approach. Prerequisites: None. Satisfies IMB Major, and Business Major - Marketing Elective if Intro to Marketing has been taken, otherwise Non-finance/Non-marketing Elective)

MKTG-SHU 154
Digital Marketing Analytics

Demand for advanced digital marketing professionals is rapidly increasing due to (1) the explosion of consumer data created by the digitization of commerce and (2) methodological advances in data science and engineering supported by decreased data storage and processing cost. This course provides an introduction to a comprehensive set of models that marketing analytics professionals – data scientists, managers, and executives – will encounter in applied business contexts. Additionally, this course will cover related topics on successfully integrating marketing analytics into broader organizational functions: data acquisition and analysis environments, stakeholder scoping and communication, and product integration. The class is mix of lecture and programming exercises intended to give students hands-on experience executing marketing analytics projects based on experiences from the instructor's prior roles as a former McKinsey & Company analytics consultant and founder of an analytics consulting firm.

MKTG-SHU 200
Strategic Marketing in China: Live Projects and Case Studies

For most marketers, China is probably one of the most dynamic markets to do business in today. It offers unlimited new opportunities and endless challenges. The purpose of this course is to provide students with first-hand experience in dealing with some of the marketing practices and issues particular to China. The course consists of a combination of live projects, case analyses, lectures, guest talks by industry experts and company visits.
The course provides students with a framework for researching and developing a strategic marketing plan, as grounded in theory and industry practice. Student teams will apply structured problem-solving approaches in an iterative and competitive process. They will gain a holistic understanding of the challenges of doing marketing in China. Prerequisites: Introduction to Marketing, requires junior or senior standing.

MKTG-SHU 228
Strategic Marketing in China: Live Projects and Case Studies

For most marketers, China is probably one of the most dynamic markets to do business in today. It offers unlimited new opportunities and endless challenges. The purpose of this course is to provide students with first-hand experience in dealing with some of the marketing practices and issues particular to China. The course consists of a combination of live projects, case analyses, lectures, guest talks by industry experts and company visits. The course provides students with a framework for researching and developing a strategic marketing plan, as grounded in theory and industry practice. Student teams will apply structured problem-solving approaches in an iterative and competitive process. They will gain a holistic understanding of the challenges of doing marketing in China. Pre-requisites: Intro to Marketing and Junior/Senior Level Standing

MKTG-SHU 229
Luxury and Luxury Marketing

The Luxury and Luxury Marketing course will provide fundamentally new insightsinto the seemingly elusive concept of luxury using examples from real life and precise luxury brand cases. In this course, students will be guided to explore fundamental concepts, theories, and frameworks of luxury and luxury marketing. Furthermore, through videos, cases, articles, and personal challenges, students will gain knowledge of the evolution process and motivations of luxury products, consumer tastes, creativity and innovation, and luxury goods companies' strategies through time. This course will also demonstrate the state of the luxury industry today and the core of luxury and luxury branding. To bridge theory and practice, the course interweaves lectures, case discussions, field trip and project presentation. Open to Sophomore and above students.

SOIM-SHU 6
Law, Business & Society

This course challenges undergraduate students to think deeply about legal systems and the continual evolution of business practice and business law. This process is multidimensional and involves social, political, ethical, and technological factors. In the course, students examine how key areas of business law influence the structure of societal and business relationships, while honing their analytical, communication, and writing skills. While focusing on the American legal tradition, the course taught in Shanghai Spring 2016 will involve select points of comparison with legal and business practice in China. Stephen Harder is the managing partner of the China practice of the international law firm Clifford Chance. He is based in Shanghai where his practice focuses on cross border project transactions of Chinese institutions. When based previously in Europe and New York, he acted as counsel for the Russian and Polish privatization programs and the Polish sovereign debt restructuring. He has written on "China's Sovereign Wealth Fund: The Need for Caution" in the International Financial Law Review, and spoken recently at Harvard and Columbia on "China Ventures Forth - Advising China on Foreign Investments" and "China in the Balance: Needed Reforms, Vested Interests and the Choices Facing China's New Leaders". He has also written on "Political Finance in the Liberal Republic" in the Annals of the American Academy of Political and Social Sciences. He received his undergraduate degree in Chinese Studies from Princeton and his MBA and JD degrees from Columbia. Open to all Seniors, Juniors, with preference to Stern program students. Interested sophomores need to request permission from the instructor.

SOIM-SHU 65
Organizational Communication and Its Social Context

Students learn how organizations communicate with multiple types of audiences, focusing on the interconnections between business and society. The course uses the stakeholder model of the corporation to introduce the strategic implications of communication for modern organizations. Students focus on strategic and tactical aspects of corporate communication to study and practice the ways in which organizations communicate to their varied

internal and external stakeholders. Assignments develop students? abilities in speaking and writing to these varied audiences, both to inform and to persuade. The course emphasizes bridging theoretical fundamentals, and action learning is stressed, which includes applying communication strategy to the following: oral and written business assignments; presentation delivery techniques; visual communication analysis and practice; team communication. Prerequisites: None, but priority to business majors; not open to freshmen.

SOIM-SHU 165
Advanced Organizational Communication

Advanced Organizational Communication builds upon the oral and written communication skills developed in its prerequisite course, Organizational Communication & its Social Context. This advanced course provides opportunities for students to continue developing their communication skills in a variety of contexts while working and presenting to multiple audiences. In this course, students will have the opportunity to persuade real life stakeholders to take action; such activities include making a stock pitch to a financial expert, speaking to a large audience of peers / professors at an NYUSH Student-run Speaker Series, and developing a social impact plan for an actual corporate client. Presentations will vary in size and delivery method (virtual, in-person, board-room style, auditorium style, etc.). In some cases, you will work to adapt the same presentation into multiple formats. Additionally, we will incorporate role-plays, impromptus, team communication (running meetings, supportive communication, consensus building), and group discussions throughout the course. Two writing assignments will reflect content from the oral presentations in typical business document format. The course will be highly participative, real world, and interactive. The professor will do everything he can to engage real-life audience members and facilitate practical, experiential learning. Participation, taking risks, and working beyond one's comfort zone are essentials for success in this class. Prerequisite: Organizational Communication & its Social Context OR Instructor permission.

SOIM-SHU 9006
Law, Business, & Society

This course challenges undergraduate students to think deeply about legal systems and the continual evolution of business practice and business law. This process is multidimensional and involves social, political, ethical, and technological factors. In the course, students examine how key areas of business law influence the structure of societal and business relationships, while honing their analytical, communication, and writing skills. Prerequisite: None.

CHEM-SHU 125
Foundations of Chemistry I

This course constitutes an introduction to general aspects of chemistry for science, engineering and math majors. Topics include the theories of atomic structure, stoichiometry, properties of gases, kinetic molecular theory, thermodynamics, quantum mechanics, electronic structure of atoms, periodicity of the elements, chemical bonding, and molecular structure. A particular emphasis is placed on developing physical and chemical intuition through problem solving. Pre-req or co-req: MATH-SHU 131 (Calculus) or MATH-SHU 201 (Honors Calculus)

CHEM-SHU 126
Foundations of Chemistry II

This course is a continuation of Foundations of Chemistry I. Topics covered include the theories of intermolecular interactions, molecular orbital theory, reaction kinetics, chemical equilibria, acid-base reactions, properties of solutions, properties of solids, phase changes, transition-metal chemistry, coordination chemistry, electrochemistry, and nuclear chemistry. Students will reinforce and refine their physical and chemical intuition with a problems-based approach. Prereq: CHEM-SHU 125 Foundations of Chemistry I AND pre-req or cor-eq: MATH-SHU 131 Calculus or MATH-SHU 201 Honors Calculus

CHEM-SHU 127
FoS Chemistry Laboratory

In this laboratory course, students will be familiarized with various techniques, equipment, data analysis skills, best practices in lab safety and ideas common to chemistry laboratories and experimental research. The lab will both introduce and reinforce principles covered in the Foundations of Chemistry Lectures by providing practical applications of chemical theories, including acid-base chemistry, thermodynamics, spectroscopy, chemical kinetics, and buffer solutions, and applying quantitative data analysis in the chemistry lab. In addition, the laboratory will emphasize scientific communication, including scientific writing. As part of the course, students will work on a multi-week project, comparable to a graduate level independent-research project. Previous activities have included studying crystal growth and DNA thermodynamic parameters. With the help of their instructors and peers, students will learn the skills of modern scientific research: proposing a hypothesis, developing a proposal to test the hypothesis, collecting and analyzing data, writing a report, and presenting the findings to the public as a poster or an oral presentation. These skills will help students to develop and build their careers regardless of the major or discipline of study they are seeking. Prereq or coreq: MATH-SHU 131 Calculus (or MATH-SHU 201 Honors Calculus) AND CHEM-SHU 126 Foundations of Chemistry II

CHEM-SHU 128
FoS Chemistry II Laboratory

CHEM-SHU 225
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 109 or CHEM-SHU 126. This course satisfies: Chemistry Major: Additional Required Courses

CHEM-SHU 225L
Organic Chemistry I Lab

This Organic Chemistry I Laboratory course is intended to introduce students to major concepts and techniques in organic chemistry through laboratory experiments. The course will provide training in the techniques of the organic chemistry laboratory, such as carrying out chemical reactions and purification of chemical mixtures. Purification methods such as recrystallization, extraction, distillation, and column chromatography will be utilized. Chemical identification and purity will be determined by methods such as chemical tests, melting point, boiling point, thin-layer chromatography (TLC), gas chromatography (GC) and spectroscopy: infrared (IR), ultraviolet (UV) and visible light. Expanding students knowledge base and critical thinking skills will help students to prepare for a wide array of potential future challenges, including the upper level courses, organic requirements for medical schools, and independent research. This course satisfies: Chemistry Major: Additional Required Courses. Prereq or coreq: Organic Chem I (CHEM-SHU 225)

CHEM-SHU 226
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-SHU 201(225). This course satisfies: Chemistry Major: Additional Required Courses.

CHEM-SHU 226L
Organic Chemistry II Lab

This Organic Chemistry II Laboratory course is a continuation of the Organic Chemistry I Laboratory course. Students who complete the course are able to correlate, for the different functional groups studied, the molecular structure with common chemical and physical properties (such as solubility, reactivity, boiling and melting points). Students are able to characterize and elucidate structures using chemical and spectroscopic techniques. Students are able to characterize organic compounds based on physical and chemical properties (such as polarimetry, FT-IR spectroscopy, 1H FT-NMR and other spectroscopic data) and purify organic compounds by physical methods such as chromatography, recrystallization, solvent extraction, sublimation, distillation, etc. This course satisfies: Chemistry Major: Additional Required Courses.

CHEM-SHU 312
Analytical Chemistry

Analytical Chemistry uses qualitative and quantitative analytical tools for ascertaining the chemical composition of a substance. In this course, students will be introduced to instrumental methods, including titrations, spectroscopy (UV-Vis, FTIR, NMR, Mass Spectroscopy, Atomic Absorption Spectroscopy) and chromatography. Quantitative measurement methods will be introduced along with the statistical concepts and tools of estimation, confidence, accuracy and precision. Students will learn the theoretical and practical aspects of Analytical Chemistry through lectures and laboratory demonstrations. Prerequisites: Foundations of Chemistry II and FoS of Chemistry Laboratory.

CHEM-SHU 652
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. Prereqs: CHEM-SHU 126 Foundations of Chemistry II and PHYS-SHU 93 Foundations of Physics II Honors/CCSC-SHU 51 Physics II. Multivariable Calculus is strongly recommended. Linear Algebra and Differential Equations is also recommended.

CHEM-SHU 881
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. Prereq: CHEM-SHU 226 (Organic Chemistry II). This satisfies an Elective Course of the Chemistry Major.

CHEM-SHU 882
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. Prereq: CHEM-SHU 881 Biochemistry I. This satisfies an Elective Course of the Chemistry Major.

CHEM-SHU 997
Independent Study – Chemistry

Prerequisite: Foundations of Science I-III (or Physics I&II, Foundations of Chemistry I&II, Foundations of Biology I&II), and a minimum GPA of 3.0 overall and in all science and mathematics courses required for the major, permission of a chemistry faculty member (at NYU-Shanghai, NYU-Abu Dhabi, or NYU-New York) who will act as a sponsor and mentor, and approval of the Director of Undergraduate Studies (DUS) in Chemistry. The faculty mentor must be selected in consultation with the DUS. Offered in the Fall, Spring or Summer. 2 to 4 points per term for a maximum of 4 points. This course aims at engaging students in research. It is designed to offer students an opportunity to observe chemistry research up close and gain hands-on research experience by working as a member in an active research team. Independent Study I and II can be done with the same supervisor or two different supervisors. No lectures will be given. Student researchers are expected to attend and actively participate in lab/supervision meetings. A Proposal for Independent Study form must be filled out, signed by the DUS, and submitted to the Registrar. Requires a written report on the research to be evaluated by the faculty sponsor, with a copy submitted to the DUS and a copy to the Dean of Arts & Sciences.

CHEM-SHU 999
Chemistry Undergraduate Research Thesis

Prerequisites: Independent Study (CHEM-SHU 997 or 998), a minimum GPA of 3.65 overall, a minimum GPA of 3.65 in all science and mathematics courses required for the major, and permission of a faculty sponsor and the Dean of Arts & Sciences. Open to Chemistry majors only. The faculty mentor must be selected in consultation with the Dean of Arts & Sciences. May not be used for the major in chemistry. Offered in the fall, spring, and summer. 2 points. For chemistry majors who have completed at least one semester of laboratory research (CHEM-SHU 997 or 998) and

are able to expand this work into a thesis. Requires writing a Thesis (i.e., a full literature search of the subject and a formal written report on the research in publication form), which is defended in front of a committee of three faculty (which includes the faculty sponsor), chosen by the student in consultation with the faculty mentor. (The defense may be a brief oral presentation followed by a question-and-answer session.) The Thesis and defense must be evaluated by the committee, with the cover page of the thesis signed by all committee members, with a copy of the Thesis submitted to the Dean of Arts & Sciences. (It is recommended that the student meet with the faculty committee at least once mid-semester to evaluate and guide the student's progress on the thesis work.)

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. This course satisfies: Core Curriculum: Programming and Computational Thinking. Note: Students who have taken ICS in NY, Abu Dhabi, and Shanghai cannot take ICP. Prerequisite: Either placed into Calculus or at least a C in Pre-Calculus.

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: Introduction to Computer Programming or placement exam. Equivalency: This course counts for CSCI-UA 101.

CSCI-SHU 188
Introduction to Computer Music

Computers are used to process signals, compose music, and perform with humans. Personal computers have replaced studios full of sound recording and processing equipment, completing a revolution that began with recording and electronics. In this course, students will learn the fundamentals of digital audio, basic sound synthesis algorithms, techniques for human-computer music interaction, and machine learning algorithms for media generation. In a final project, students will demonstrate their mastery of tools and techniques through a publicly performed music composition. Prerequisites: ICP OR ICS (best to have some experience in Music, or check with the instructor before enrolling)

CSCI-SHU 210
Data Structures

Data structures are fundamental programming constructs which organize information in computer memory to solve challenging real-world problems. Data structures such as stacks, queues, linked lists, and binary trees, therefore constitute building blocks that can be reused, extended, and combined in order to make powerful programs. This course teaches how to implement them in a high-level language, how to analyze their effect on algorithm efficiency, and how to modify them to write computer programs that solve complex problems in a most efficient way. Programming assignments. Prerequisite: ICS or A- in ICP. Equivalency: This course counts for CSCI-UA 102 Data Structures (NY). This course satisfies: Core Curriculum: Programming and Computational Thinking; Major: CS Required, Data Science Required, CE Required.

CSCI-SHU 213
Databases

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.

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: Data Structures; Computer Architecture or Computer Systems Organization.

CSCI-SHU 220
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: Data Structures and Discrete Math and Calculus. This course satisfies: Major: NS Electives, CS Required, Data Science Concentration in Computer Science.

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: Data Structures OR CS-UY 2134 (Data Structures and Algorithms) OR ICS with Instructor Permission.

CSCI-SHU 235
Information Visualization

Information visualization is the graphical representation of data to aid understanding, and is the key to analyzing massive amounts of data for fields such as science, engineering, medicine, and the humanities. This is an introductory undergraduate course on Information Visualization based on a modern and cohesive view of the area. Topics include techniques such as visual design principles, layout algorithms, and interactions as well as their applications of representing various types of data such as networks and documents. Overviews and examples from state-of-the-art research will be provided. The course is designed as a first course in information visualization for students both intending to specialize in visualization as well as students who are interested in understanding and applying visualization principles and existing techniques. This course satisfies: Major: CS Electives, Data Science Data Analysis Required. Prerequisite: Data Structures. Students must be CS or DS major and have junor or senior standing.

CSCI-SHU 240
Introduction to Optimization and Mathematical Programming

This is an introductory course to introduce the model building and mathematical programming for the infrastructure systems optimization. This course prepares students with the systems-level approach to the analysis, design, operation and management of civil infrastructure systems. Topics include model building, linear programming, nonlinear programming, integer programming, network optimization models and the use of algebraic modeling languages for describing and solving large-scale optimization models. Prerequisites: ICP; AND Calculus (MATH-SHU 121) or Honor Calc (MATH-SHU 201); AND Prob and Stats (MATH-SHU 235) or Stats for Bus and Econ (BUSF-SHU 101) or Theory of Probability (MATH-SHU 233).

CSCI-SHU 254
Distributed Systems

This course offers a solid grounding in the basic issues and techniques of parallel and distributed computing. The material covers the spectrum from theoretical models of parallel and distributed systems to actual programming assignments. Pre-requisite: Data Structures and Operating Systems.

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 or 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-101 or placement test. This course satisfies: Major: CS Electives, EE Additional Electives.

CSCI-SHU 311
Functional Programming

Functional Programming is a very powerful and expressive style of programming which has become extremely popular in the recent years, both in academia and in the software industry. There are good reasons for this success: functional programs are modular by design, and interact through expressive and cleanly specified interfaces, using static typing and pattern matching. As a result, functional programs are generally simpler to reason about, to maintain and to execute in parallel than imperative or object-oriented programs. The purpose of the course will be to provide an advanced introduction to Haskell, a purely functional language used today in the software industry for real-world applications. The language comes with a rigorous semantics and everything one could expect of a functional programming language: static type inference, lazy evaluation, type classes, explicit handling of effects using monads, and concurrency primitives and abstractions. We will take the opportunity of this course on Haskell to cover elements of formal language theory, with the implementation in Haskell of a parser, pretty-printer and interpreter for a small imperative language. Prereq: CSCI-SHU 2314 Discrete Math and CSCI-SHU 210 Data Structures

CSCI-SHU 350
Embedded Computer Systems

An embedded system is a computer system with a dedicated function within a larger mechanical or electrical system, often with real-time computing constraints. It is embedded as part of a complete device often including hardware and mechanical parts. Embedded systems control many devices in common use today. Topics covered include 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: (CSCI-SHU 11 or CSCI-SHU 101) AND CENG-202 or CENG-SHU 201. This course satisfies: Major: CE Required, EE Additional Electives.

CSCI-SHU 360
Machine Learning

In this class, students will learn about the theoretical foundations of machine learning and how to apply these to solve real-world data-driven problems. We will apply machine learning to numerical, textual, and image data. Topics will be drawn from perceptron algorithm, regression, gradient descent and stochastic gradient descent, support vector machines, kernels for support vector machines, recommendation systems, decision trees and random forests, maximum likelihood, estimation, logistic regression, neural networks and the back propagation algorithm, convolutional neural networks, recurrent neural networks, Bayesian analysis and naive Bayes, clustering, latent Dirichlet allocation (LDA), sentiment analysis, dimensionality reduction and principle component analysis, reinforcement learning. Prerequisite: CSCI-101 OR CSCI-11 OR placement test; MATH-131 OR MATH-SHU 201 or placement test. This course satisfies: Major: NS Electives, CS Electives, Data Science Data Analysis Required.

CSCI-SHU 375
Reinforcement Learning

Reinforcement Learning (RL), a form of machine learning and a branch of Artificial Intelligence, enables an agent to learn in an interactive environment by trial and error using feedback from its own actions and experiences. RL seeks to learn a good policy for taking actions, using rewards and penalties as signals for positive and negative behavior. Modern RL problems are formulated as Markov decision processes with unknown environments. There are two major sub-branches of reinforcement learning: tabular reinforcement learning for relatively small state spaces; and deep reinforcement learning, which combines deep learning and reinforcement learning, and is appropriate for environments with large (including continuous) state and action spaces. The course will cover both tabular and deep reinforcement learning. Probability theory and algorithms will be used throughout the course. Assignments will involve both mathematical derivations and programming assignments. Prerequisites: Machine Learning and Honors Theory of Probability.

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: ICS or calculus or honors calculus (best to have basic background in discrete mathematics including probability, or check with the instructor before enrolling). This course satisfies: Major: CS Electives.

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: Intro to Computer Science. This course satisfies: Major: CS Electives.

CSCI-SHU 420
Computer Science Senior Project

The purpose of the Senior Project is for the students to apply the theoretical knowledge they acquired during the Computer Science program to a concrete project in a realistic setting. During the semester, students engage in the entire process of solving a real-world computer science project. It requires students to pursue a long-term, mentored learning experience that culminates in a piece of original work. At the end of the semester, the proposed work comes to fruition in the form of a working software prototype, a written technical report, and an oral presentation at a capstone project symposium. This course satisfies: Major: CS Required.

CSCI-SHU 997
Independent Study

Prerequisite: permission of the department. Does not satisfy the major elective requirement. 2-4 credits Students majoring in computer science are permitted to work on an individual basis under the supervision of a full-time faculty member in the department if they have maintained an overall GPA of 3.0 and a GPA of 3.5 in computer science and have a study proposal that is approved by a computer science professor. Students are expected to spend about two to three hours a week per credit (a 4-credit IS would involve about ten to twelve hours a week) on their project.

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. Co-requisite OR Prerequisite: Grade C or better in either MATH-SHU 131 (Calculus) or MATH-SHU 201 (Honors Calculus). This course satisfies: Major: Honors MATH Mathematics Electives, MATH Mathematics Electives, CS Required, Data Science Concentration in CS, CE Required.

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: Intro to Programming or Intro to Computer Science or placement test or interaction lab. This course satisfies: Core Curriculum: Programming and Computational Thinking; Major: CS Electives, CE Required, EE Required.

CENG-SHU 202
Computer Architecture

The main ambition of this course is to teach you how a modern computer works, starting from its most elementary components (transistors, resistors, capacitors) and then climbing up the ladder of abstraction to reach a high-level programming language like C and its compilation in machine code. In this excursion, we will learn (among other things) how to turn electrons into digital logic, how to make machine instructions execute faster through pipelining and prediction, and how to organize memory in hierarchies in order to make it more efficient. Since the only way to learn computer architecture is by practicing it, we will design a register transfer level (RTL) implementation of a MIPS-like processor in Verilog, and implement a simulator of the very same architecture in C. Preliminary syllabus of the course. General introduction to the course Dataflow and parallelism From silicon to transistors The digital abstraction Number systems Programming in C: basic types and control flow Programming in C: arrays, strings and functions Programming in C: pointers, structures and unions Programming in C: linked lists and beyond Programming in C: the Unix System interface Boolean logic Karnaugh maps Latches and flip-flops Finite state machines Binary and Synchronous Decision Diagrams Programming and simulating in Verilog [part I] Programming and simulating in Verilog [part II] Digital building blocks Compilation from C to MIPS Single-cycle microarchitectures Multi-cycle microarchitectures Pipelining and dependence hazards Out-of-order execution Memory hierarchies and cache Virtual memory Memory models and multiprocessor programming Equivalency: This course counts for CSCI-UA 201 Computer Systems Organization. Prerequisite: Intro to Programming or Intro to Computer Science. This course satisfies: Major: CS Required, Data Science Concentration in CS, CE Required.

CENG-SHU 352
Emerging Technologies for Smart Cities

Nowadays, many smart cities are being developed around the world. This is an undergraduate-level course to introduce a series of emerging technologies for smart cities. This course offers students fresh materials and case studies to expand their horizon on smart cities; helps them understand the functions and identify the limitations of various emerging technologies used in the smart city; and explore a set of analysis techniques on analyzing the smart city systems. Topics involve electric vehicles, connected and autonomous vehicles, ride-sourcing services, car-sharing services, bike-sharing services, on-demand services, advanced parking management, smart traffic signals, and smart grids.

Computer Systems Engineering

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. This application will both reveal how central nature is to our ideological understanding of culture and trouble our notion of what is natural. Continuing Writing as Inquiry's line of instruction, this Perspective on Humanities course will cover principles of rhetoric and argumentation—such as problematization, invention (thesis discovery and execution), research methods, and strategies for unity and cohesion—principles that the student will find applicable in a range of academic disciplines and rhetorical situations.

CCCF-SHU 101W3
Perspectives on Humanities: Tales of Gender and Power

This course will explore how the expression, exercise and experience of power, as it interacts with gender, impacts human relationships. We will start the semester in the realm of the sacred with an examination of various ancient cosmogonies' gender dynamics—the Greek, Chinese and Judeo-Christian. As we move across millennia, we will engage a variety of great works of different cultures, such as The Epic of Gilgamesh, The Arabian Nights, Mary Shelly's Frankenstein and the films Raise the Red Lantern and The Truman Show. Our main area of inquiry will be the primary relational constellations among humans: couples involved in lover-spouse intimacies and families shaped by father-mother-son-daughter allegiances. Gender figures significantly in the dynamics of these relationships, impacting the lives of individuals and families as well as informing the expression of social groups and cultural traditions. As we gain a deeper understanding of the subtle yet complex plays of power involved in certain gender relations, our inquiry will also bring us close to other crucial human issues, such as: the quest for knowledge, the uncertainties of identity and self, the creative need for love and community, the fear of/attraction to death, and the longing for transformation and transcendence, amongst others. Drawing on literary texts ranging from ancient to contemporary times—myth, epic, novel, film, drama, poetry—as well as products of visual culture and the performance arts, this course will examine how each articulates and resolves (or not) the above complex relationships and issues. To gain perspective, we will apply a variety of critical lenses to our close readings of texts, including the works of psychological and philosophical theorists such as Freud, Luce Irigaray, and Judith Butler. One required class attendance at an evening theatre performance will occur. This course will extend writing skills and concepts learned in Writing as Inquiry, 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 101W9
Perspectives on Humanities: Literature and Its Critic

Although the concept of literature referring to written works of an imaginative nature is fairly recent, the phenomenon of literature as a type of verbal expression deemed to have aesthetic value has been around for thousands of years. What is literature? How is it valuable? What are the conditions in which it can become a positive force in the world we live in? This course aims to explore such questions via a consideration of the classical debates surrounding the nature and value of literature raised by prominent Western thinkers such as Plato and Rousseau. We will then look to ancient China for possible answers to these questions and challenges through a study of a few excellent specimens from its classical poetic tradition. Finally, moving into the modern period, we will examine several canonical works of fiction as test cases to rethink the questions introduced earlier. What new answers do we need in order to address the changed conditions of modernity? Students will write two major essays that allow them to practise modes of inquiry and writing habits central to the humanities while refining the skills first introduced in Writing as Inquiry.

CCCF-SHU 101W11
Perspectives on the Humanities: American Superheros

This course organizes student writing and research around the study of American superheroes in comics, film, and television. Born in a low-prestige, disposable medium, superhero narratives now drive franchise production at some of the world's largest media conglomerates, which make, distribute, and license content for audiences worldwide. The course aims to introduce students to three interpretative approaches. First, the formal study of texts: Scott McCloud's Understanding Comics offers a point of entry to the study of comics as a narrative art form, which we can then apply to Alan Moore and Dave Gibbons's Watchmen. Second, the historicist study of genre: students will learn about the industrial and commercial forces that converted the superhero from newsstand kid stuff to the subject of negotiations between Hollywood and Wall Street. Third, the political economy of commercial media: we will look at how Hollywood exploits superheroes as intellectual property, and who benefits from that exploitation. We will also look at how studios have navigated the political demands of their largest new market: the People's Republic of China.

CCCF-SHU 101W16
Perspectives on the Humanities: Brutes, Monsters, Ghosts, and Other Troubling Creatures

This course will focus on representations of the "other"—creatures we define as fundamentally different from ourselves. We will examine why we create boundaries between the human and the nonhuman and how writers, artists, and filmmakers throw in question these divisions. How do animals, objects, monsters, ghosts, and other

phantasmagoric, hybrid creatures in the texts we will study both reflect and subvert existing power structures? We will examine how these "troubling creatures" speak to societal anxieties about gender, sexuality, class, race, and culture. We will also explore how these creatures, by speaking unexpectedly and out-of-turn, challenge power hierarchies. Course materials include fiction, comic books, films, and theoretical texts and will provide an introduction to literary analysis, film studies, gender studies, and philosophical debates about the division between the human and the nonhuman. "Monsters" we will study may include Honoré de Balzac's castrato in "Sarrasine," the Yeti in Hergé's Tintin in Tibet, the poltergeist in Sarah Waters's The Little Stranger, and the shape-shifting animals in Angela Carter's fairy tales. Primary assignments for this course will be analytical essays, including one with a research component, and a final presentation.

CCCF-SHU 101W17
Perspectives on the Humanities: Go West!

Name the country: armies, exiles, settlers and traders leave behind a crowded eastern seaboard and set forth into a vast western highlands peopled by starkly different cultures, building a nation and spinning its legends under an endless sky. Like NYU Shanghai itself, this familiar story is one shared—at least in its grandest outlines—by both the United States and China. Both nations' centuries-long projects of western expansion have given rise to literature, poetry, film and even computer games that have helped to define each nation's hopes, fears and dreams. While the U.S. tales of cowboys and Indians became famous around the globe, China's lesser-known stories of conquest and nation-building are no less crucial to its national identity. In this course we will explore where these stories overlap, where they diverge, and where they point us in a post-frontier world. This course will extend writing skills and concepts learned in Writing as Inquiry, focusing on critical theory, research, and academic writing and expression in the humanities. The primary assignments will be analytical essays.

CCCF-SHU 101W19
Perspectives on the Humanities: The Truth is out There?

How do we represent history? How do we narrate the past? In this Perspectives on the Humanities course, we consider how various actors—in particular, historians, journalists, artists, memoirists, documentarians, and filmmakers—create texts which contribute to public discourse about our past histories, our present societies, and our shared future. We will examine the ways these visual and written texts shape the contours of our collective memories, giving voice to the underrepresented, establishing (or challenging) authoritative narratives, recasting history to serve the agendas of the present and, at times, eclipsing other possible truths with their evocative power. The goal of our inquiry is not to separate "true" histories from "false" ones. But we will be cautious about these texts' potential power, undertaking a comparative analysis of how they are constructed and how they work--and work on us. We will continue to build upon the skills of writing and inquiry introduced in Writing as Inquiry. The course will emphasize close reading of visual and narrative texts; the analysis of these texts in the context of relevant theoretical perspectives; and developing an inquiry through research essays. The primary assignments are research essays. In some of our case studies, we will encounter traumatic moments in world history; the texts which represent these events may include painful content.

CCCF-SHU 101W20
Perspectives on the Humanities: The Question of the Anthropocene

In 2016, a group of scientists formally declared that the planet Earth recently entered a new geological epoch: the Anthropocene. Though broad scientific consensus on the matter has yet to be reached, the very concept of the Anthropocene — the idea that we humans have fundamentally altered our planet at such a deep level that it registers in the permanent geological record — has not only caught on with scientists, but also philosophers, artists, writers, and filmmakers concerned about the future of life on our planet. In this class, students will explore a range of texts across several genres that take up the question of the Anthropocene while developing and practicing a range of skills central to critical analysis and academic writing.

CCCF-SHU 101W21
Perspectives on the Humanities: Sino-Western Literary Exchanges

This course aims to explore the major literary linkages between China and the West in the modern period broadly understood. We will trace the historical contours of that great encounter, but the main goal is to study its cultural impact. We will examine the images and representations that one culture constructs about the other and probe into the issues and problems that arise in the process, such as intercultural misunderstanding, adaptation and appropriation, translation and interpretation, Orientalism and literary modernization. After a preliminary discussion of the theoretical and politico-ideological issues involved, we will proceed to study several culturally significant cases in the history of contacts between China and the West: Voltaire's rewriting of traditional Chinese drama, Ezra Pound's translations and his peculiar understanding of the Chinese language, literature, history, and culture, and Lu Xun's accommodation and appropriation of Western literary themes and methods in his now classic short stories. These clusters of texts will provide insights and impart lessons that you can then apply in investigating problems of your own in contemporary cultural exchanges. This course will extend writing skills and concepts learned in Writing as Inquiry, focusing on critical theory, research, and academic writing in the humanities. The primary assignments will be reflective, analytical, and exploratory essays.

CCCF-SHU 101W22
Perspectives on the Humanities: Networked Bodies: Exhibits, Organ Donations, and Alternate States of Ability

This course will organize student writing and research around the different ways our bodies are, or can be, constructed. We will consider how recent scholarship in disability studies have challenged popular conceptions of health and able-bodiedness, and examine the controversy surrounding international exhibits of deceased human

bodies. We will also read fictional narratives of mechanically enhanced human bodies and cyborgs, and discuss the ethics of human organ donation. The boundaries of our bodies are much more porous than we may think, challenging the very concept of what constitutes the human. We will explore various humanities fields to guide this investigation. Much of the work we do will take the form of writing and research, extending writing skills and concepts learned in Writing as Inquiry. Our discussions, textual engagement, and scholarly research will enable us to consider how the ways in which bodies are connected are much more varied than we may have thought.

CCCF-SHU 101W23
Perspectives on the Humanities: Sexual Cultures of Modernity

Sexuality is often seen as an innate part of our most intimate selves. We tend to think of it as a personal and intractable force, one beyond the touch of time and place. In the last few decades, however, scholars of sexuality have argued the opposite. Sexuality, they claim, is not simply a matter of biology but of history and culture. In this course, we'll turn our attention to sexual modernity in order to understand and assess these ideas about sexuality's contingency. Taking a comparative approach, we'll read a variety of writers, from disciplines such as history, philosophy, and literary studies, who address questions of international sexual modernity. We'll also engage with primary texts such as novels and films that represent LGBTQ identities and women's sexuality. Students will learn to use various perspectives to reflect on these cultural productions and think critically about the meaning of modernity and the globalization of sexuality. The course will extend writing skills and concepts learned in Writing as Inquiry, focusing on critical theory, research, and academic writing and expression in the humanities. The primary assignments will be analytical essays and an independent research project.

CCCF-SHU 101W24
Perspectives on the Humanities: Medicine and Disease in the Humanities

This Perspectives on the Humanities course will explore the medical humanities, drawing upon literature, art, history, and anthropology to examine the culturally situated experiences of being ill and treating illness. While the importance of the medical humanities is most often stressed in the context of educating future doctors, the field is relevant to all of us: as Susan Sontag writes, "Everyone who is born holds dual citizenship, in the kingdom of the well and in the kingdom of the sick…sooner or later each of us is obliged, at least for a spell, to identify ourselves as citizens of that other place." Readings will encompass memoirs by patients and physicians, historical and contemporary case studies, and works by medical anthropologists, including an ethnographic study of healthcare in Shanghai. In discussing these texts, we will consider how social and cultural factors shape perceptions of wellness and disease, with particular attention to the role of language. How objective is "scientific" communication and what experiences might it fail to capture? How does the language used to talk about a disease affect our perception of those who have it? Why do memoirs of illness have such strong appeal to many readers? Key authors include Susan Sontag, Barbara Ehrenreich, Oliver Sacks, and Anne Fadiman. This course will build upon skills and concepts introduced in Writing as Inquiry, such as evaluative reading and writing techniques, rhetorical organization, and strategies for effective research. Primary writing assignments will be analytical essays, at least one of which will involve a research element.

CCCF-SHU 101W25
Perspectives on the Humanities: Everything You Know About Science Is Wrong

What is science? Who has the authority to determine what qualifies as science? Is scientific knowledge inherently political? This class will focus on the human dimensions of science. We will examine a number of case studies, ranging from nineteenth-century scientific racism in the US to "traditional Chinese medicine" in the early PRC to contemporary global climate change discourse. Drawing from work such as Kapil Raj's Relocating Modern Science, the class will explore debates about the origins and circulation of scientific modernity. Did "modern science" originate in the West and spread "like a virus"? We will focus especially on questions of identity and representation in the making of scientific cultures. For instance, how have different ideas about gender shaped historical and present-day scientific cultures? Our readings will include primary sources, graphic novels, and science fiction. Building on skills and concepts from Writing as Inquiry, we will emphasize issues of argument, evidence, and structure in analytical writing. Paper assignments for the course will include analytical essays in several genres, including a research paper.

CCCF-SHU 101W26
Perspectives on the Humanities: Comparative Islamic Feminisms in World Literature

This course extends writing skills and concepts learned in Writing as Inquiry, focusing on a literary, cultural, historical and theoretical understanding of Muslim women's experiences in a transnational and global network of societies and politics. We will examine Muslim women's relationships with Islam—Islamic practice, habits, rituals, culture and customs— in postcolonial fiction. Within a broad regional and thematic foci we will emphasize the transnational nature of Muslim women's engagements with Islam as protagonists in this fiction travel outside their homelands and reside in diasporic communities. We will analyze the negotiations of gender roles, gender constructions and gender consciousness in a variety of situations in foreign cultures with their personal faith; aspects of the foreign culture they are able to reconcile with and ones they find difficult to adapt to, among other questions that help us understand Muslim women's spiritual experiences transnationally.

CCCF-SHU 101W27
Perspectives on the Humanities: Memory, Identity, and Resistance in a Global Context

This course explores how and why 20th and 21st century authors, from across the globe and writing in different genres, depict, re-imagine, and problematize individual, familial, and group identities through tapping into memory. In the process, they offer nuanced representations of their nations. Yet, as the business of representing involves inscriptions and erasures, narratives rarely achieve consensus: some are disapproved by the author's ethnic group,

others dismissed by the dominant culture or banned by a despotic regime. Thematically dynamic and often formally innovative, some of these writings invite fascinating questions which the course aspires to investigate and will have students engage through writing responses and research projects. Some of the larger questions that we will unpack may include the following: Is there a close relation between national myths formation and othering of minorities? Is the imagined group identity fictitious or real? What role does remembering play in unveiling or perpetuating injustices? What solutions do some of the writers suggest to help communities heal or move forward in spite of the trauma? Why do certain women writers reclaim lived traditions and invoke indigeneity, orality, and matrilineal ancestral history? And can we, readers, serve as witnesses to the horrors revisited in a literary text? The course will continue to build upon the writing and critical thinking skills introduced in Writing as Inquiry. Students will be introduced to theoretical perspectives and will sample texts from different literary genres. They are required to produce close readings, analytical pieces, and research projects.

CCCF-SHU 101W28
PoH: Why Beauty?

"Death is the mother of beauty," Wallace Stevens writes in his poem "Sunday Morning." A century earlier, twenty-four-year old John Keats, facing his own imminent death from tuberculosis, wrote: "Beauty is truth, truth beauty – that is all/Ye know on earth, and all ye need to know." What is beauty? What is its role in our human lives? Who decides what is a thing of beauty? What is it about beauty that makes us relentlessly desire and seek it? Why do we link, perceptively and persistently, beauty and goodness and therefore ascribe power to beauty itself? And can beauty, as in the view of theorist Elaine Scarry, inspire a greater concern for justice? This Perspectives on the Humanities course will emphasize close reading and analysis of a variety of texts in both the Eastern and Western traditions, focusing on critical theory, research and academic writing in the humanities. We will continue to build on the writing and analytical skills introduced in Writing as Inquiry. The primary assignments will be analytical essays

CCCF-SHU 101W29
Perspectives on the Humanities: Eating Your Words- The Rhetoric of Food

How do we translate the rich taste of a wine into words? Does the language we use to describe food affect its taste? Has your grandmother ever told you she loved you by cooking a special meal? When you buy street foods, which languages do you hear being spoken around you? Most of the time, our encounters with food focus on eating, but food is deeply enmeshed with language—what Plato called a "feast of discourse." This course will give you a taste of how language and food intersect. It will investigate the ways that we speak about food; the ways that we communicate through food; and the ways that languages come into contact in food places. Our readings will include fiction, non-fiction, cookbooks, menus and proverbs. We will watch films, look at still-life painting, and examine commercials, posters, and ads. At the same time, we will further develop your analytical and writing skills.

CCCF-SHU 101W30
Perspectives on the Humanities: Global China Fiction

Nations defend fixed boundaries; stories go where they please. This section of Perspectives on the Humanities will take NYU Shanghai's embrace of a 'Global China' as directive for a semester of reading and writing across a broadly defined Chinese diaspora of searchers, emigrants, rebels, and yes, global citizens, to map the blurred edges of culture, language, blood and home. From Sui Sin Far in 1890s Montreal to Sanmao in 1970s Sahara, from Frank Chin's Chinatown cowboys to a current boom of young writers flying and clubbing between Beijing and New York, we'll close-read and write our way into ever-evolving conversations over nationalism, assimilation, and cultural differences. In the light of both China's rise to superpower and a troubling rise of ethnonationalism around the world, we'll follow these wandering stories to wonder: can any place, or any people, or any one person, become global? And if so, what along the way must be learned, forgotten, held tight, or set free?

CCCF-SHU 101W31
Perspectives on the Humanities: Race/Class/Borders

With each reprinting of Citizen (Graywolf Press), a hybrid poetry/essay/art collection, Claudia Rankine adds to page 134, a textual monument listing the names of African-American victims of police brutality. And, in her episodic book-length essay, Tell Me How It Ends (Coffee House Press), Valeria Luiselli documents and laments her experiences working with migrant children in the United States. Lastly, in her science fiction novel, Dawn (Grand Central Publishing), Octavia Butler describes a character's adjustment to an alien invasion. By investigating the formal, sociological, and ethical questions within these contemporary works of literature, students will develop their critical thinking and writing skills. We will employ excerpts of literary and critical theory texts to aid this inquiry with the goal of applying these ideas to contemporary phenomena. Students will ultimately use this material to drive the practical work of the class: to continue to refine their skills primarily as writers, but also as researchers, thinkers, and leaders. The primary assignments will be a series of short analytical essays, one longer researched analysis, and a collaborative service project: the creation of new Wikipedia pages to bring attention to unacknowledged and/or underreported issues, literature, and people in the People's Republic of China.

CCCF-SHU 101W32
Perspectives on the Humanities: Art Histories

In 2017, three archaeologists came across a depiction of a hunt painted on a Sulawesian cave wall. Having established that the painting was 44,000 years old, the researchers debunked the long-standing notion that cave painting originated in Europe. This ascertainment has two important implications. First, it emphasizes the universality of art as a form of human expression. Second, some scholars surmise that similarities between the cave paintings in Indonesia and Europe indicate the existence of earlier prototypes in Africa, where humanity originated. That is, while each Indonesian and European cave painting is unique unto itself and thus an exemplar of the particular, each simultaneously reflects something fundamental about the archetypes on which they were modeled,

an essentiality that represents the universal. In this way, the Indonesian and European cave paintings embody the concept of the Urphänomen introduced by the German writer Johann Wolfgang von Goethe. In this course, we'll explore art as a medium of thought and emotion common to all civilizations while evaluating Goethe's idea of the Urphänomen. Using the resources of Shanghai's art museums as our foundational "texts," we will comparatively examine works on exhibition at these institutions. After exploring the significance of these pieces as they've been informed by the aesthetic and broader cultural traditions to which they respectively belong, we will contemplate these objects as artefacts and/or as archetypal representations in light of how they are situated within other contexts beyond China's borders. In so doing, we'll gain an understanding of the cultural significance of these works and/or their motifs across various disciplines, cultures and eras while ascertaining the extent to which they testify to the Urphänomen's existence. Building upon what students learned in Writing as Inquiry, this course will further develop their analytical, creative and research skills through analytical essays and a digital research project.

CCCF-SHU 101W33
Perspectives on the Humanities: World-Building

This course will explore Margaret Atwood's idea of creating an "Ustopia." We will imagine building a better world—the roles governance, science, and the arts would take. Instead of relying on science fiction as escapism or impossible fantasy, Atwood describes her speculative fiction as exploring Ustopias: the liminal space between utopia and dystopia. Literary theorist Kenneth Burke argues that story features characters with a purpose (goal) encountering passion (trouble) and achieving perception (epiphany). Might we apply that story arc to our own human experiences, and by extension to social evolution? How might scientific advancements impact our efforts to build an ideal society? How do politics and law weigh personal freedoms against societal needs? How might globalization and translingualism shape an Ustopia? This course will extend writing skills and concepts learned in Writing as Inquiry by focusing on critical theory (including gender and critical race theory), close readings, and analytical essays. Texts will include fiction, film, and art to analyze how Ustopias are translated across genres. A capstone project asks writers to explore humanity's potential via a research-based creative project.

CCCF-SHU 101W34
Perspectives on the Humanities: (Mis)Adventures in Language

We have created texts all our lives. You may have written down a grocery list for yourself, sent a brief text message to a friend, posted a WeChat moment, revised a draft of an academic essay, written a scientific lab report with data and figures, or edited your resume for a job application. When someone says, "I'm not a writer," they usually mean that they don't write novels or movie scripts or academic journal articles. But we are all writers. Given a broad definition of what a text can be, we will empower ourselves to analyze the texts that we encounter and create in the world around us. To discuss any text is an act of translation, an interpretation from one way of communicating to another—from one language, dialect, discourse community, rhetorical situation, or set of genre conventions to another. As a research and writing community, we will build a shared language for discussing language itself across contexts. We will become familiar with several foundational concepts in the fields of rhetoric, composition studies, sociolinguistics, and translation studies. For example, we will introduce the concepts mentioned above, alongside the concepts of dialect, language variation, linguistic prescriptivism and descriptivism, and standardized ways of communicating. We will explore language explicitly by way of one special theme each week. Such weekly themes might include cultural identity, gender, sexuality, crime, religion, offensive language, journalism, scientific communication, figures of speech, historical narratives, literature, censorship, and comedy. Your assignments will primarily be academic essays, and will culminate in a final project in which you create and analyze a multimodal text with a specific goal, audience, and genre of your choice.

CCCF-SHU 128
Contemporary Art & New Media

Over the past three decades, the contemporary art scene in China has expanded fast. The massive political, economic, and social changes the country has undergone since the end of the Cultural Revolution in 1976 have dramatically altered its cultural landscape. The course will survey the main development areas in Chinese contemporary art. 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

CCEX-SHU 203
Energy and the Environment

This course explores the scientific foundations of current environmental issues and their implications for public policy. The syllabus is divided into sections that each examines a current environmental theme in depth. The first sections investigate the composition of the atmosphere and the chemical processes that cause air pollution, ozone depletion, and global warming. Moving to the study of water, the course explores the properties of this unique solvent and the effect of various aqueous pollutants. The course also includes an investigation of energy from chemical reactions, our continuing reliance on fossil fuels, and the potential of alternative energy sources. The laboratory experiments are closely integrated with the lecture topics and provide hands-on explorations of central course themes. Throughout the course we also will examine how scientific studies of the environment are intimately connected with political, economic and policy concerns.

CCEX-SHU 136
Human Genetics: Genes in Human Health & Disease

The goal of the first half of the course is to build a basic understanding of how information about traits is encoded in our genes, how this "blueprint" is interpreted by cellular machinery to build a complex human being, and how our heredity has resulted in our evolution. In the second half of the course, we will continue the exploration of how environment, experience and random errors affect the process of building our traits, what happens when these processes fail, and the promise and possible peril of genetic technologies for human life.

CCEX-SHU 137
Human Genetics: Genes in Human Health & Disease Lab

The Human Genetics: Genes in Human Health & Disease Lab is a laboratory course corresponding to the Human Genetics: Genes in Human Health & Disease lecture. The lecture is the pre- or co-requisite course for the lab. The overall aim of this course is to provide a basic understanding, geared especially to non-biologists, about the biological mechanisms of genetics. In particular, this lab course focuses on the "hands-on", active learning opportunities provided by the laboratory component. There are two main purposes of the lab: (1) to enhance and reinforce understanding of the concepts presented in the lectures and (2) to further develop problem-solving and critical-thinking skills. The labs generally use tactile, hands-on experiences to provide additional means toward learning concepts.

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 132
Topics: Creativity Considered

We hear every day about the importance of creativity in our lives, careers, and societies --- its importance for personal development, for the generation of new ideas, forms, and expressions, for the work of organizations, large or small in scale, science and technology or arts and culture-focused, in the private or public sector. And yet, it is important to ask: Can creativity be usefully studied or is it, in fact, something best left to life, luck, or other factors that may determine one's abilities and opportunities in this area? The premise of this course is that, while not taking away from what can be called the magical aspect of creativity, we can benefit from considering creativity in some detail. Another premise of the course is that there is merit in considering creativity across very different areas of human enterprise --- science, art, business, government, and more. Implicit in this premise is the assumption that while creativity is manifested in many different ways, there are some common characteristics of creative work which we can identify and put into practice. A detailed consideration of creativity across various areas of human enterprise is the subject matter of this course. Pre-requisties: None.

CCST-SHU 133
Water Energy Food Nexus

Billions of people on earth lack adequate access to water, food, and energy. What might be gained by recognizing the interdependencies that exist between these resources? It is well known that water is fundamental to agriculture and to the entire agro-food supply chain. Moreover, it is clear that energy is required to produce and distribute water and food: to pump water, to power irrigation machinery, and to process and transport agricultural goods. But a global society requires industry and policymakers to take even broader views. For instance, how are water security, energy security, and food security linked, so that actions in one area will likely have impacts in one or both of the others? How will population growth, economic development, and climate change affect international efforts to eradicate poverty? Additionally, what roles might renewable energy technologies play in providing access to cost-effective, secure, and sustainable energy supplies? Students will approach these questions through multidisciplinary lenses and cultivate the skills required to address the social, economic, and environmental challenges posed by the water-energy-food nexus.

CCST-SHU 142
Environment Connections: Water, Waste, and Wellness

This course provides a unique opportunity for students to make connections from their lives to the environment, focusing on the human relation to the natural world. The goal of this class is to escort the engaging student through their individual path connecting popular environmental topics with how they affect their lives and others. Everyone has heard the environmental rhetoric, but what does it really mean to each of us and how is it connected to what has occurred in the past and our future. Specific, contextual examples will be explored including connections between Henry David Thoreau's Walden to contemporary novelist. Learners will overlay these literary connections with actual environmental projects. This class encourages students to make connections between science, technology and society (STS) outside of the classroom and their natural world. The primary method for discovery will be the science process skills, where students will research, propose, design, and troubleshoot their own environmental stewardship models. Topics include groundwater flow models, sampling and analysis, chemical and biological data interpretation as well as contaminant remediation designs. Assignments will include formal and informal writing and presentations, as well as a critical thinking activity and project-based learning. This learner-centered experience utilizes active learning methodology to assist participants in making connections between societal attributes, informal education and the natural world. The approach is conceptually-based and subsequently process driven, engaging learners to observe, communicate, classify, infer and predict. A learning environment will facilitate learners to build on their prior knowledge and value of education expanding into models of learning, critical thinking and methods of teaching. Participants will ultimately deliberate the attributes of 'environmentally friendly' or green companies, buildings, fuel and the philosophy of green." Prerequisite: None.

CCSF-SHU 101L
Global Perspectives on Society

In this course, we will explore a set of timeless questions about how society is, or should be, organized, based on close examinations of diverse thinkers and writers from different times and different cultures. The questions raised in this course will engage the moral, social, and political foundations of human relationships, the principles according to which people assemble into societies of different scales, and the bases for interaction among societies in a world of accelerating interdependence. By engaging texts that explore these questions from multiple perspectives, students reflect on several overarching issues, including how different societies have organized their economic and political institutions, how those societies fashion both shared identities and hierarchies of difference, how people experience themselves as "individuals" or as members of a collectivity, how they experience both time and space, and how they engage with others both locally and globally. Over the semester, students develop skills that are central to a liberal arts education, including reading carefully and thoughtfully, considering questions from more than one perspective, participating in respectful and serious intellectual explorations of difficult topics, developing oral presentation skills, and writing essays that make effective and appropriate use of the ideas of others as they present the students' own ideas to different audiences of readers. Each week, students will meet twice as an entire class for lectures and once in smaller recitation sections led by one of New York University Shanghai's Global Postdoctoral Fellows. Students receive 4 credits for the lecture and recitation. Prerequisite for CCSF-101: None.

CCSF-SHU 123
Contemporary Chinese Political Thought

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.

JOUR-SHU 9202
Methods and Practice: Journalism

It 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.

SCA-SHU 9634
Global Connections: Shanghai

Any writing on Shanghai today seems to run out of superlatives to describe the city's dazzling transformation, spectacular architecture, and booming economy. But is it really the Global City it strives to be? In this course we will explore this question by looking into the urban development of the city from its status as a relatively unimportant trading town to the world metropolis of today. Besides regular seminar classes, the course involves field trips and guest lectures, and each student has to do their own semester-long research project.

ECON-SHU 1
Principles to 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 role of government policy; and international trade. Prerequisite: None.

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. Prerequisite: MATH-SHU 131 or 201.

ECON-SHU 3
Microeconomics

Economics studies how agents make decisions under conditions of scarcity and uncertainty. This course provides a rigorous introduction to economics, with special emphasis on microeconomics. It will introduce you to economics as a discipline and as a way of thinking. It will also provide you with a set of tools, which will be very useful in other economics courses. We will first study the behavior of individual consumers and firms. Then we will give you some insight into how markets work and whether market outcomes are desirable. We will also look at situations in which the firm is a monopolist, or competes with a limited number of rivals. Some key concepts we will introduce include economic incentives, marginal analysis, opportunity cost (which costs matter), market efficiency (what does it mean for a market to work) and strategic behavior (how to predict and respond to your rivals' decisions). The tools that you will be acquainted with in this class are fundamental for most upper division courses of the Economics major as well as classes in Finance, Accounting and Marketing. Prerequisites: Calculus (MATH-SHU 121or 201)

ECON-SHU 5
Math for Econ 1: Optimization (formerly Math for Economists)

Elements of calculus and linear algebra are important to the study of economics. This class is designed to provide the appropriate tools to complement study of intermediate and advanced economic theory. Examples and motivation are drawn from important topics in economics. Topics covered include derivatives of functions of one and several variables; interpretations of the derivatives; convexity; constrained and unconstrained optimization; series, including geometric and Taylor series; matrix algebra; and (possibly) eigenvalues.

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.

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-131.

ECON-SHU 202
Intermediate Microeconomics

The course will cover a broad range of topics in macroeconomic theory, empirics and policy. Among the issues to be discussed are the business cycle theory, economic crises, economic growth, IS-LM model, open economy, inflation and unemployment, dynamic model of aggregate demand and supply, stabilization policy, government debt and budget deficits, money supply, central banking. The banking system: competition and stability, banking growth nexus, prudential regulation and the role of the financial sector in the macroeconomics model. Prerequisites: ECON-1 or Economics of Global Business (ECON major).

ECON-SHU 210
Topics in Macroeconomics: Market Design

The course is about design of markets, not only in the sense of auctions and matching markets, but also in the broader sense of designing allocation rules in general. We aim to understand why some markets needs to be designed, and what important design elements are. This is particularly relevant for the digital economy where market design is often programed into smart contracts, and market participants may be computational agents. The course includes a series of assignments that builds towards writing a short research paper for the course. The topic

of the research paper should be related to the material presented in the course, but must go into more depth with selected issues.

ECON-SHU 216
Introduction to Game Theory

This course introduces students to the basic concepts and tools of game theory and their applications to real-life situations. It starts with basic terms such as strategies, payoffs, and equilibrium, and then goes through different types of games, such as extensive form games, normal form games, dynamic games and games with incomplete information. The second half of the course covers a selection of topics closely related to the real world, such as cold war, voting, bargaining and auction. Students will be able to analyze the situation, frame it in terms of the tools discussed, and understand the strategies used in the interaction. Prerequisites: Calc (MATH-SHU 121 OR 201)

ECON-SHU 225
Advanced Economic Theory

Designed to introduce students to some of the main model-building techniques that have been developed by microeconomists. Intended for advanced undergraduates who have taken the necessary preparatory courses in economics and mathematics. Any of the following three basic topics may be covered. The first topic is the static theory of consumer behavior both in a certain world and in an uncertain world, including game theory. The second topic is the theory of general equilibrium. The third topic is the theory of dynamic optimization. In addition to the coverage of the economics, the advanced mathematical techniques that are needed to understand the material are reviewed. Prerequisites: Intermediate Micro AND (Math for Econ 1 OR Multivariate Calculus).

ECON-SHU 238
History of Modern Economic Growth: Exploring China From a Comparative Perspective

This course has two goals: 1) to provide understanding of economic development with applications to Chinese economy and Chinese institutions, and (2) to learn how to analyze major policies in China's economic development in both oral and written form. Since the economic reform in 1978 from a planned economy toward a market-oriented economy, China has experienced rapid institutional changes and achieved high growth rates. We will start with the historical background of this transition process. We will then cover post-reform topics such as economic reform, the One Child Policy, political economy, media and internet control, labor market, migration and discrimination, environment and China in the global economy. Our collection of readings are from the exciting yet still growing literature on economic development of China. In particular, you will learn what's possible, interesting and convincing in empirical research on China. Prerequisite: ECON-SHU 3.

ECON-SHU 251
Economics of Global Business

The objective of this course is to provide future decision-makers with a systematic understanding of critical aspects of economic development and the global business environment. We will examine the basic workings of the national economies (macroeconomics) and then explain the role of international trade and international finance. We show how the forces of globalization affect international business, down to the impact on the future careers of NYU students. The challenges presented by tepid economic growth in Europe, a soft landing in China, and the changing dynamics in the US, and the long run prospects for global economic growth and development are discussed.

ECON-SHU 260
International Trade

This course will cover the basics of international trade theory and policy. It will introduce students to the main theoretical concepts in international trade, ranging from the Ricardian comparative advantage theory to the new trade theory under imperfect competition. Using the tools of microeconomic analysis, this course will explore the patterns of trade among countries, policies that impede or promote free trade as well as their welfare and distributional implications. Prerequisite: Introductory Microeconomics.

ECON-SHU 301
Econometrics

The course examines a number of important areas of econometrics. The topics covered include regression analysis with cross-sectional data; classical linear regression model and extensions; model specification, estimation and inference; regression with qualitative variables; heteroskedasticity and GLS; serial correlation and heteroskedasticity in time series regression. In addition to covering the relevant theoretical issues, the course includes the application of these methods to economic data. Prerequisite: Statistics (BUSF-SHU 101 OR MATH-SHU 235 OR MATH-SHU 233 OR ECON-UA 18 OR STAT-UB 103 OR STAT-UB 1 OR MATH-GA 2901 OR SOCSC-UH 1010Q OR ECON-UA 20).

ECON-SHU 315
Competitive Analysis

This course offers an economics approach to analyzing the way firms make marketing decisions and interact strategically with each other in the marketplace. The main goal of the course is to develop the basic intuition for pricing and other forms of strategic behavior on the part of firms. Prerequisites: Principles of Microeconomics or Microeconomics.

ECON-SHU 317

The Economics of Discrimination

This research-focused seminar course will first cover applied microeconometrics with a strongly applied and empirical focus, and then introduce important theoretical and empirical papers analyzing and documenting different mechanisms of gender inequality. Topics covered will include micro-econometric research designs, theory and evidence about gender wage gaps, female educational attainment and human capital and family economics. If there is time, topics in gender and preferences will also be covered. This course is most appropriate for those with a strong grasp of microeconomics and econometrics, and with an interest in pursuing more advanced social science research projects on topics related to labor economics, inequality, and development economics. Economics majors and data science majors with a concentration in economics are particularly encouraged to enroll. Prerequisites: Econometrics (ECON-SHU 301) AND Microeconomics (ECON SHU 2 or 3 or 150).

ECON-SHU 342
Behavioral Economics

This course explores the effects of psychological factors on economic behavior. We will analyze the observations from the real world that cannot be well explained by classical economic models, and enrich the standard model by incorporating psychological phenomena, such as bounded rationality, loss aversion, time inconsistency and social preferences. We will present both theoretical models and empirical evidence from experiments or real world data. Applications include marketing, asset pricing, game theory, consumption and savings, and public policy. Prerequisites: Microeconomics courses: ECON-SHU 3 and Statistics courses: BUSF-SHU 101 or MATH-SHU 20 or MATH-SHU 235 or MATH-SHU 170 or BIOL-SHU 42 or other equivalent courses in statistics.

ECON-SHU 360
Experimental Economics

Predicated on the belief that economics, like other sciences, can be a laboratory science where economic theories are tested, rejected, and revised. Reviews the methodology of such laboratory experiments and investigates the use of experiments in a wide variety of fields. These include competitive markets, auctions, public goods theory, labor economics, game theory, and individual choice theory. Prerequisite: ECON-SHU 10 OR ECON-SHU 3.

ECON-SHU 400
Economics Capstone Seminar

Open to Senior Economics Majors Only.

ECON-SHU 416
Game Theory: Advanced Applications

This course introduces games of incomplete information and the applications. The first half of the course will review the basic theories, including normal form games, extensive form games, iterated dominance, and Nash equilibrium, with a focus on games with incomplete information. The second half will go through different topics and case studies of incomplete information, e.g. contract theory, auction, social learning, matching, etc. Students will acquire the basic concepts of these theories, and be able to model real-world situations with the language of game theory. Prerequisites: ECON-SHU 10 Intermediate Microeconomics (or students who took ECON-SHU 216, Introduction to Game Theory, may be admitted upon consultation with the instructor).

BPEP-SHU 9042
The Political Economy of East Asia

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: Upperclass standing, with priority to Stern BPE Students.

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-131 or MATH- 201.

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.

Electrical and Systems Engineering

EAP-SHU 100A
English for Academic Purposes: Science in the Public Sphere

The freshman English for Academic Purposes (EAP) course is designed to help you develop the high-level language, communication, and critical thinking skills you need to be successful in an English-speaking university. While the primary emphasis is on speaking and listening, you will also practice reading and writing. You will engage with content individually and in groups. During the semester, you will complete a variety of communicative tasks, reflective writing assignments and an experiential learning project outside the walls of the university. The course is designed to help you acquire skills that also can be transferred to your future professional and personal lives. The thematic, content-based EAP seminar also aims to help you cultivate an interest in issues that cross disciplines, an important part of a well-rounded, liberal arts education. These course outcomes will be met through engagement with authentic readings and videos on the ways in which the public engages with science and the role of scientists in society. You can expect to enhance your understanding and appreciation of the ways in which the public receives and influences scientific research and discovery.

EAP-SHU 100H
English for Academic Purposes: Smart Cities/Smart Lifestyles

The freshman English for Academic Purposes (EAP) course is designed to help you develop the high-level language, communication, and critical thinking skills you need to be successful in an English-speaking university. While the primary emphasis is on speaking and listening, you will also practice reading and writing. You will engage with content individually and in groups, complete a variety of communicative tasks, reflective writing assignments and an experiential learning project outside the walls of the university. The courses are designed to help you acquire skills that can be also be transferred to your future professional and personal lives, and to help you cultivate an interest in issues that cross disciplines, an important part of a well-rounded, liberal arts education. Specifically, this course will investigate the concept and framework of smart cities we are now living in and explore how smart cities come to change our lifestyles. Through a five-pronged framework that includes 1) technology, 2) people, 3) institutions, 4) energy, and 5) data management, learners will examine many aspects of smart cities. These will include the way smart cities are conceptualized, core factors for a successful initiative, and the ways in which a smart city promotes life quality via intensive uses of information and communication technologies. Students will be encouraged to link their own living experiences of, for example, transportation (e.g., ride sharing), healthcare (e.g., mobile clinic), education (e.g., online learning), publiundersc safety (e.g., body and dashboard cameras), and housing (e.g., Airbnb), with the issues discussed in the course. Connections will be made to real-world examples of smart cities, such as Shanghai, New York City, Dubai, London, etc. Overall, through this course, learners will broaden their understanding of areas of the urban experience central to their lives and develop the tools and skills to critically think about this nexus of ideas.

EAP-SHU 100I
English for Academic Purposes: Understanding the News

The freshman English for Academic Purposes (EAP) course is designed to help you develop the high-level language, communication, and critical thinking skills you need to be successful in an English-speaking university. While the primary emphasis is on speaking and listening, you will also practice reading and writing. You will engage with content individually and in groups, complete a variety of communicative tasks, reflective writing assignments and an experiential learning project outside the walls of the university. The courses are designed to help you acquire skills that can be also be transferred to your future professional and personal lives, and to help you cultivate an interest in issues that cross disciplines, an important part of a well-rounded, liberal arts education. Specifically, this course will explore how the news media affects our perceptions of the world around us. We are all daily consumers of the news, either through more traditional news outlets or via social media feeds, and this consumption has far-reaching effects on our local and global societies. We will consider what is news and newsworthy and how information is created and manipulated in our modern world. We will debate the "truthfulness" of various news sources, read academic criticism of the world of reporting, and draw our own conclusions on how we interpret the news. As you engage with this content individually and in small groups, you will develop the academic literacy required for the university setting. It is recognized that these skills can also be transferred to your future professional and personal lives. Overall, through this course, learners will broaden their understanding of the news media and develop the tools and skills to critically think about this from a variety of interdisciplinary perspectives.

EAP-SHU 100J
English for Academic Purposes: What's So Funny? Taking Humor Seriously

The freshman English for Academic Purposes (EAP) course is designed to help you develop the high-level language, communication, and critical thinking skills you need to be successful in an English-speaking university. While the primary emphasis is on speaking and listening, you will also practice reading and writing. You will engage with content individually and in groups, complete a variety of communicative tasks, reflective writing assignments and an experiential learning project outside the walls of the university. The courses are designed to help you acquire skills that can be also be transferred to your future professional and personal lives, and to help you cultivate an interest in issues that cross disciplines, an important part of a well-rounded, liberal arts education. Specifically, this course will investigate topics such as what makes a particular incident funny, why we laugh at some remarks but not others, what is happening in the brain when we laugh, and whether or not there a way to predict what people will find comical. Attempts to answer these surprisingly complex questions have given rise to the rapidly expanding interdisciplinary field of humor studies. We will test various theories of humor to see how well they hold up; take a close look at different genres of humor such as jokes, puns, teasing, irony, parody, dark humor, visual humor, and the absurd; explore the cognitive and social processes involved in the perception and production of humor; try to understand when and why humor does or does not translate well across cultures; study some applications of humor in advertising, education, medicine, business management, and other fields; and consider which factors can render humor ineffective, unintentional, or unethical. Overall, through this course, students will examine the major findings

of humor research to date and investigate some of the many mysteries that remain.

EAP-SHU 100K
English for Academic Purposes: Cultivating Minds

The freshman English for Academic Purposes (EAP) course is designed to help you develop the high-level language, communication, and critical thinking skills you need to be successful in an English-speaking university. While the primary emphasis is on speaking and listening, you will also practice reading and writing. You will engage with content individually and in groups, complete a variety of communicative tasks, reflective writing assignments and an experiential learning project outside the walls of the university. The courses are designed to help you acquire skills that can also be transferred to your future professional and personal lives, and to help you cultivate an interest in issues that cross disciplines, an important part of a well-rounded, liberal arts education. Specifically, this course will explore learning and the contexts in which learners are situated as they strive to get an education. A closer look at learning theories and motivation will be the perfect starting point for the semester-long experiential learning project which requires students to engage with a local learning organization, Stepping Stones, both as volunteer English teachers and observers. Students in the course will be presented with a variety of videos and short excerpts of readings on learners, learning, and education in order both to help them become better learners themselves and to evaluate the learning experiences of others. Moreover, they will have a chance to become volunteer teachers themselves, applying what they learn to design learning experiences for others. This will require a time commitment of at least 10 hours of teaching or the observation of teaching over the semester.

EAP-SHU 100L
English for Academic Purposes: Utopias in Society

The freshman English for Academic Purposes (EAP) course is designed to help you develop the high-level language , communication and critical thinking skills you need to be successful in an English-speaking university. While the primary emphasis is on speaking and listening, you will also practice reading and writing. You will engage with content individually and in groups, complete a variety of communicative taks, reflective writing assignments, and an experiential learning project outside the walls of the university. This course is designed to help you acquire skills that can also be transferred to your future professional and personal lives, and to helo you cultivate an interest in issues that cross disciplines, an important part of a well-rounded, liberal arts education. Specifically, this course will explore the concept of utopia, or the perfect society, using historical examples. We will examine these attempts, most of which failed, to create the perfect society through the lens of sociological theory. We will consider how societies are initially conceived by their creators, and the factors that determine a society's success. In order to compare our findings to present-day societies, we will also be engaging with and analyzing the not-for-profit and charity organizations operating in Shanghai today. Through this experience outside the walls of the university, you will consider further how societies can work toward equity among its citizens. A major component of this course will be a group project that will ask you to design a utopia based on ideas addressed in class.

EAP-SHU 100M
English for Academic Purposes: Hacking Happiness: Positive Psychology and Its Critics

The freshman English for Academic Purposes (EAP) course is designed to help you develop the high-level language, communication, and critical thinking skills you need to be successful in an English-speaking university. While the primary emphasis is on speaking and listening, you will also practice reading and writing. You will engage with content individually and in groups, complete a variety of communicative tasks, reflective writing assignments, and an experiential learning project outside the walls of the university. This course is designed to help you acquire skills that can be also be transferred to your future professional and personal lives, and to help you cultivate an interest in issues that cross disciplines, an important part of a well-rounded, liberal arts education. Specifically, this course will investigate what it means to be happy. When asked what they want most in life, a majority of people will respond, "To be happy." The founding document of the United States even lists "the pursuit of happiness" as one of the three most basic human rights. But what, exactly, is happiness? Is it a temporary state, a predisposition, or even a skill? Is contentment something we can actively pursue, a condition to be achieved through the help of specific habits and practices? Yes, claim the advocates of the positive psychology movement, with ample research findings to support their conclusions. In this course, we will try out some of their recommended techniques and document the results. We will also examine the growing body of criticism that questions the premises of this field. Is a sense of well-being and fulfillment really something that can be chosen or engineered? Are there more meaningful and satisfying long-term life goals than happiness? What are some of the unintended consequences of treating happiness as a character virtue or an end-state, and whose interests are being served when your distress and alienation are blamed on your own private personality flaws? Positive psychology is only 23 years old, but religious and philosophical traditions around the world have been producing what we would today call "self-help" teachings and manuals at least since the Axial Age. Join us to explore what happens when we put ancient advice into dialogue with a modern (and not so modern) complaint.

EAP-SHU 100N
English for Academic Purposes: Fashion Consciousness

The freshman English for Academic Purposes (EAP) course is designed to help you develop the high-level language, communication, and critical thinking skills you need to be successful in an English-speaking university. While the primary emphasis is on speaking and listening, you will also practice reading and writing. In this course, you will engage with content relevant to fashion and fashion industry individually and in groups, completing a variety of communicative tasks and an experimental learning project outside the walls of the university. This course is designed to help you acquire skills that can be also be transferred to your future professional and personal lives, and to help you cultivate an interest in issues that cross disciplines, an important part of a well-rounded, liberal arts education. Specifically, this course will investigate the complex world of fashion. Fashion is everywhere. It is one of the main ways in which we present ourselves to others, signaling what we want to communicate about our cultural

and subcultural allegiances, our mood and thinking, professionalism, and even wealth, sexuality, and political allegiances. It is also a global industry with huge economic, cultural, and political impact on the lives of all of us who make, sell, wear or even just watch fashion. The aim throughout is to present a comprehensive but also accessible and provocative analysis on many different aspects of fashion. These include, for example, the major events in the history of fashion, how arts and popular culture influence fashion and how fashion shapes global culture and arts, how clothes mean different things in different parts of the world, the links between media promotion and mainstream fashion retail, the power of cosmetics, the rise of celebrity branding, the cult of thinness, and age, gender and national factors in fashion consumptions. Through studying authentic lectures, participating in the discussions, and conducting the project around these topics, you will acquire academic skills that can be transferred to your future professional and personal lives and develop interest in issues that cross disciplines.

EAP-SHU 100P
English for Academic Purposes: Artificial Intelligence: Exploring Opportunity, Assessing Risk

The freshman English for Academic Purposes (EAP) course is designed to help you develop the high-level language, communication, and critical thinking skills you need to be successful in an English-speaking university. While the primary emphasis is on speaking and listening, you will also practice reading and writing. You will engage with content individually and in groups, complete a variety of communicative tasks, reflective writing assignments and an experiential learning project outside the walls of the university. The courses are designed to help you acquire skills that can be also be transferred to your future professional and personal lives, and to help you cultivate an interest in issues that cross disciplines, an important part of a well-rounded, liberal arts education. Specifically, this course will investigate Artificial Intelligence (AI); its origins, types and applications together with its current and future impact on humanity. The course will be divided into 5 modules addressing education, work, health, the media and the future implications of a digitized planet. Students will also conduct research into the specific ways in which AI is changing the nature of society and the associated ethical implications

EAP-SHU 100Q
English for Academic Purposes: Digital Identities

The freshman English for Academic Purposes (EAP) course is designed to help you develop the high-level language, communication, and critical thinking skills you need to be successful in an English-speaking university. While the primary emphasis is on speaking and listening, you will also practice reading and writing. You will engage with content individually and in groups, complete a variety of communicative tasks, reflective writing assignments and an experiential learning project outside the walls of the university. The courses are designed to help you acquire skills that can be also be transferred to your future professional and personal lives, and to help you cultivate an interest in issues that cross disciplines, an important part of a well-rounded, liberal arts education. The pervasiveness of our ever-changing media and communication landscapes offer both innovation and complication for the content and interpretation of our messages. Using the framework of the "public sphere", virtual realms of social life where society's problems are open for discussion, we will consider how various digital platforms (news feeds, blogs, chat groups, social media platforms, etc.) control our worldview and influence our evolving selves. Additionally, we will examine how distinctive identities (gender, social class, race, nationality, sexuality) are formed, developed, and expressed via networks (online and in person). Across the semester, you will conduct an investigation of how the concepts of identity (personal) and community (collective) are integrated into the digitally mediated culture. After being introduced to rhetorical theories and concepts, you will be asked to apply them to the analysis and exploration of a variety of online platforms, technologies, and communities. Overall, through this course, learners will gain a better understanding of the power of mass digital communication and how to use it while navigating through various networks.

EAP-SHU 100R
English for Academic Purposes: (Un)Sustainability

The freshman English for Academic Purposes (EAP) course is designed to help you develop the high-level language, communication, and critical thinking skills you need to be successful in an English-speaking university. While the primary emphasis is on speaking and listening, you will also practice reading and writing. You will engage with content individually and in groups, complete a variety of communicative tasks, reflective writing assignments and an experiential learning project outside the walls of the university. The courses are designed to help you acquire skills that can be also be transferred to your future professional and personal lives, and to help you cultivate an interest in issues that cross disciplines, an important part of a well-rounded, liberal arts education. We will inquire into the multidimensional aspects of sustainable development, focusing on the tools, metrics and practical pathways the world is currently exploring. In addition, we will investigate various success indicators for sustainable development. (Un)Sustainability views sustainable development solutions in the context of a range of subfields in addition to sustainability itself, including climate change and political action, and will afford learners the opportunity to carry out a team-based project in relation to the issues posed by this rich interdisciplinary terrain. This course encourages you to consider your role as a responsible 21st century global citizen and promotes analytical and reflective thinking on this role as it relates to global sustainability, including the United Nations' Sustainable Development Goals (SDGs) set in 2015. The SDG's are a collection of 17 global goals covering social and economic development issues including poverty, hunger, health, education, climate change, gender, equality, water, sanitation, energy, urbanization, environment and social justice. Through active participation in educational programs and experiential learning, students will increase their knowledge and understanding of the societal issues that EAP 100 strives to address. Therefore, this course includes a 4-5 hour integrated volunteering experience within the local non-profit community and 2-hours of attendance at an NYUSH student club community engagement event. EAP 100 works closely with the Shanghai Service Corp and NYUSH student clubs to provide a variety of charities and community groups to join. The Service Corps provides needed support to nonprofit agencies serving the environment, at-risk youth, and underserved communities for youth and the elderly. Student clubs and organizations are driven by student leaders pursuing personal and professional passions, polishing transferable skills, and promoting learning, diversity, and community.

EAP-SHU 100S4
English for Academic Purposes: The Greater Good for FoS students

The freshman English for Academic Purposes (EAP) course is designed to help you develop the high-level language, communication, and critical thinking skills you need to be successful in an English-speaking university. While the primary emphasis is on speaking and listening, you will also practice reading and writing. You will engage with content individually and in groups, complete a variety of communicative tasks, reflective writing assignments and an experiential learning project outside the walls of the university. The courses are designed to help you acquire skills that can also be transferred to your future professional and personal lives, and to help you cultivate an interest in issues that cross disciplines, an important part of a well-rounded, liberal arts education. Specifically, this course will explore contemporary issues in global public health through a central theme of 'the greater good', a concern for the collective, in issues such as climate change, food security, and population control. It is easy for such challenges to remain abstract, and to imagine teams of experts in far-away places working to address them, and this distance tends to blur the role of the individual. We will examine the tension between individual choice and collective good, between local action and global impact, which runs through a number of global public health topics and manifests across the world in different ways. Additionally, the course will ask you to view these topics with a critical eye through an interdisciplinary lens, applying insights from environmental science, public policy, business, and health. Overall, learners will consider questions such as who stands to benefit from global health policies and initiatives, what is at stake in specific global health issues, and how such issues are being explored globally and locally, just beyond the walls of the classroom in Shanghai.

EAP-SHU 100T
English for Academic Purposes: The Greater Good

The freshman English for Academic Purposes (EAP) course is designed to help you develop the high-level language, communication, and critical thinking skills you need to be successful in an English-speaking university. While the primary emphasis is on speaking and listening, you will also practice reading and writing. You will engage with content individually and in groups, complete a variety of communicative tasks, reflective writing assignments and an experiential learning project outside the walls of the university. The courses are designed to help you acquire skills that can also be transferred to your future professional and personal lives, and to help you cultivate an interest in issues that cross disciplines, an important part of a well-rounded, liberal arts education. Specifically, this course will explore contemporary issues in global public health through a central theme of 'the greater good', a concern for the collective, in issues such as climate change, food security, and population control. It is easy for such challenges to remain abstract, and to imagine teams of experts in far-away places working to address them, and this distance tends to blur the role of the individual. We will examine the tension between individual choice and collective good, between local action and global impact, which runs through a number of global public health topics and manifests across the world in different ways. Additionally, the course will ask you to view these topics with a critical eye through an interdisciplinary lens, applying insights from environmental science, public policy, business, and health. Overall, learners will consider questions such as who stands to benefit from global health policies and initiatives, what is at stake in specific global health issues, and how such issues are being explored globally and locally, just beyond the walls of the classroom in Shanghai.

EAP-SHU 100U
English for Academic Purposes: Money Stuff

The freshman English for Academic Purposes (EAP) course is designed to help you develop the high-level language, communication, and critical thinking skills you need to be successful in an English-speaking university. While the primary emphasis is on speaking and listening, you will also practice reading and writing. You will engage with content individually and in groups, complete a variety of communicative tasks, reflective writing assignments and an experiential learning project outside the walls of the university. The courses are designed to help you acquire skills that can be also be transferred to your future professional and personal lives, and to help you cultivate an interest in issues that cross disciplines, an important part of a well-rounded, liberal arts education. Specifically, this course will investigate the world of money and the ideas and practices of the global financial system. Using a daily financial column, as well as other videos, talks, lectures, podcasts, and readings, we will examine what money is and explore current issues in the financial world. Specifically, this course will investigate the historical uses and roles of money in a macro sense; the roles technology has played and will play in the financial world; and what the roles and purposes of the financial sector are, and how we evaluate and regulate what it does and how it affects our world. Concurrent with our study of the hows and whys of finance, we will also critically address moral and ethical issues around global finance, and how it affects the people and societies of the world. Overall, through this course, learners will broaden their understanding of finance and develop the tools and skills to critically think about and evaluate money stuff in the world.

EAP-SHU 100V
English for Academic Purposes: The Science of Friendship

The freshman English for Academic Purposes (EAP) course is designed to help you develop the high-level language, communication, and critical thinking skills you need to be successful in an English-speaking university. This course will be a discussion-based seminar. As such, you will be required to read and prepare for class in advance—with the intention to actively listen and participate in group and class discussions. You should be prepared to think critically about the topics by applying, critiquing, analyzing, and synthesizing information. In addition, you will be conducting a project outside of class that is designed to foster engagement with the larger Shanghai community. The course is designed to help you acquire skills that can be transferred to your future professional and personal lives, and to help you cultivate an interest in issues that cross disciplines, an important part of a well-rounded, liberal arts education. Specifically, in this course, we shall examine a relatively new area of scientific inquiry: friendship. Neglected in favor of studies of familial relationships and sexual relationships, scientists are now looking to better define and explore the science of friendship. During the recent global pandemic and social distancing

efforts, the psychological and physical effects of loneliness—perhaps the opposite of friendship—have been felt worldwide further highlighting the importance of understanding the connection between friendship and our overall well-being. Technology such as WeChat, Zoom, and FaceTime has allowed us to stay connected, but has also altered the definition and structure of friendship. This course will be truly interdisciplinary in nature examining friendship through the lenses of biology, sociology, and psychology, as well as looking at the impact of technology on how we define and perform friendship. You will be asked to take the role of a scientist examining your personal connections and the environment around you to collect data, explore the elements that determine who you are friends with and why, and, hopefully, to create stronger, more rewarding social bonds.

EAP-SHU 101C
English for Academic Purposes: Negotiating Self and Other – Advanced

The freshman English for Academic Purposes (EAP) course is designed to help you develop the high-level language, communication, and critical thinking skills you need to be successful in an English-speaking university. While the primary emphasis is on speaking and listening, you will also practice reading and writing. You will engage with content individually and in groups, complete a variety of communicative tasks, reflective writing assignments and an experiential learning project outside the walls of the university. The courses are designed to help you acquire skills that can be also be transferred to your future professional and personal lives, and to help you cultivate an interest in issues that cross disciplines, an important part of a well-rounded, liberal arts education. 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, and material and consumer identities.

EAP-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. As students engage with this content, they will practice high-level language, communication, and discourse skills required for the university setting, with an emphasis on speaking and listening. The 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.

EAP-SHU 101Q
English for Academic Purposes: Digital Identities in Modern Public Spheres

This 101-level English for Academic Purposes (EAP) course is designed to help you continue to develop the high-level language, communication, and critical thinking skills you need to be successful in an English-speaking university. At the 101 level students are encouraged to gain control over facilitation of group discussions as well as the other academic communicative skills introduced at the 100-level. These academic skills can also be transferred to future professional and personal endeavors. As in the 100-level course, the thematic, content-based EAP seminar, aims to help you cultivate an interest in issues that cross disciplines, an important part of a well-rounded, liberal arts education. The pervasiveness of our ever-changing media and communication landscapes offer both innovation and complication for the content and interpretation of our messages. Using the framework of the "public sphere", virtual realms of social life where society's problems are open for discussion, we will consider how various digital platforms (news feeds, blogs, chat groups, social media platforms, etc.) control our worldview and influence our evolving selves. Additionally, we will examine how distinctive identities (gender, social class, race, nationality, sexuality) are formed, developed, and expressed via networks (online and in person). Across the semester, you will conduct an investigation of how the concepts of identity (personal) and community (collective) are integrated into the digitally mediated culture. After being introduced to rhetorical theories and concepts, you will be asked to apply them to the analysis and exploration of a variety of online platforms, technologies, and communities. Overall, through this course, learners will gain a better understanding of the power of mass digital communication and how to use it while navigating through various networks. Prerequisites: EAP-SHU 100 (cannot take same topic/instructor as 100).

EAP-SHU 101R
English for Academic Purposes: (Un)Sustainability

This 101-level English for Academic Purposes (EAP) course is designed to help you continue to develop the high-level language, communication, and critical thinking skills you need to be successful in an English-speaking

university. At the 101 level students are encouraged to gain control over facilitation of group discussions as well as the other academic communicative skills introduced at the 100-level. These skills can also be transferred to future professional and personal endeavors. As in the 100-level course, the thematic, content-based EAP seminar, aims to help you cultivate an interest in issues that cross disciplines, an important part of a well-rounded, liberal arts education. We will inquire into the multidimensional aspects of sustainable development, focusing on the tools, metrics and practical pathways the world is currently exploring. In addition, we will investigate various success indicators for sustainable development. (Un)Sustainability views sustainable development solutions in the context of a range of subfields in addition to sustainability itself, including climate change and political action, and will afford learners the opportunity to carry out a team-based project in relation to the issues posed by this rich interdisciplinary terrain. This course encourages you to consider your role as a responsible 21st century global citizen and promotes analytical and reflective thinking on this role as it relates to global sustainability, including the United Nations' Sustainable Development Goals (SDGs) set in 2015. The SDG's are a collection of 17 global goals covering social and economic development issues including poverty, hunger, health, education, climate change, gender, equality, water, sanitation, energy, urbanization, environment and social justice. Prerequisite: EAP-SHU 100 (cannot take same topic/instructor as 100)

EAP-SHU 101T
English for Academic Purposes: The Greater Good

This 101-level English for Academic Purposes (EAP) course is designed to help you continue to develop the high-level language, communication, and critical thinking skills you need to be successful in an English-speaking university. At the 101 level students are encouraged to gain control over facilitation of group discussions as well as the other academic communicative skills introduced at the 100-level. These academic skills can also be transferred to future professional and personal endeavors. As in the 100-level course, the thematic, content-based EAP seminar, aims to help you cultivate an interest in issues that cross disciplines, an important part of a well-rounded, liberal arts education. Specifically, this course will explore contemporary issues in global public health through a central theme of 'the greater good', a concern for the collective, in issues such as climate change, food security, and population control. It is easy for such challenges to remain abstract, and to imagine teams of experts in far-away places working to address them, and this distance tends to blur the role of the individual. We will examine the tension between individual choice and collective good, between local action and global impact, which runs through a number of global public health topics and manifests across the world in different ways. Additionally, the course will ask you to view these topics with a critical eye through an interdisciplinary lens, applying insights from environmental science, public policy, business, and health. Overall, learners will consider questions such as who stands to benefit from global health policies and initiatives, what is at stake in specific global health issues, and how such issues are being explored globally and locally, just beyond the walls of the classroom in Shanghai. Prerequisite: EAP-SHU 100 (cannot take same topic/instructor as 100).

EAP-SHU 101U
English for Academic Purposes: Money Stuff

This 101-level English for Academic Purposes (EAP) course is designed to help you continue to develop the high-level language, communication, and critical thinking skills you need to be successful in an English-speaking university. At the 101 level students are encouraged to gain control over facilitation of group discussions as well as the other academic communicative skills introduced at the 100-level. These academic skills can also be transferred to future professional and personal endeavors. As in the 100-level course, the thematic, content-based EAP seminar, aims to help you cultivate an interest in issues that cross disciplines, an important part of a well-rounded, liberal arts education. Specifically, this course will investigate the world of money and the ideas and practices of the global financial system. Using a daily financial column, as well as other videos, talks, lectures, podcasts, and readings, we will examine what money is and explore current issues in the financial world. Specifically, this course will investigate the historical uses and roles of money in a macro sense; the roles technology has played and will play in the financial world; and what the roles and purposes of the financial sector are, and how we evaluate and regulate what it does and how it affects our world. Concurrent with our study of the hows and whys of finance, we will also critically address moral and ethical issues around global finance, and how it affects the people and societies of the world. Overall, through this course, learners will broaden their understanding of finance and develop the tools and skills to critically think about and evaluate money stuff in the world. Prerequisite: EAP-SHU 100 (cannot take same topic/instructor as 100).

EAP-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.

EAP-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.

CRWR-SHU 159
Introduction to Creative Writing

This workshop course offers a broad introduction to the art of capturing the world around you in your own original fiction and poetry. Through close readings of classic and contemporary examples, intensive in-class workshops, and vigorous revision, students will learn to make their stories and poems live on the page through attention to plot, character, dialogue, language, heartbreaking images and the mystery of the perfect line break. Prerequisites: None. Equivalency: This course counts for CRWRI-UA 815 Creative Writing: Introduction to Fiction and Poetry. Introduction to Creative Writing is a requirement for all intermediate/advanced workshop classes.

CRWR-SHU 175
Storytelling Strategies

The ability to understand "what makes a good story well told" is a critical skill for the visual storyteller. Storytelling Strategies considers dramatic narrative through an examination of the structural and mythic elements first established by the ancient Greek playwrights and recognized by Aristotle in his "Poetics" thousands of years ago. The course continues this examination up to and including the current Hollywood paradigm, "the three-act structure." We will seek to identify those principles that form the backbone of successful narrative screenplays and contribute to a film's ability to resonate with an audience. The lecture is for analysis. The recitations are for applying what you have learned, through writing exercises leading towards a completed short screenplay.
Prerequisites: none.

CRWR-SHU 176
Collaborative Writing and the Dynamics of Power (Television & Film Writing)

A collaborative writing course where students work in groups to create polished television (or film) scripts and learn the fundamentals of dramatic writing. Creativity and the group dynamic is explored. This course is appropriate for both beginning and advanced writers. This course covers the material of a traditional narrative writing class and also puts into action theories of Organizational Behavioral Management such as: communication, motivation, conflict resolution, emotional intelligence, group dynamic, stress, and the influences of gender, race, age, and class on power within a group. Interpersonal skills and the ability to navigate the group dynamic are, perhaps, 75% of what it takes to be a working writer. But they also can be applied to ANY FIELD and any work environment.

CRWR-SHU 201T
Topics in Creative Writing: Creative Writing, Creative Translation: The Art of Literary Translation

What can close attention to literary translation teach you about your own writing? How can close reading and creative translation among and between languages sharpen your skills as a creative writer and critical reader? And isn't all reading and writing fundamentally an act of creative translation, even within familiar languages? In this class, students will explore literary translation as a practice that goes far beyond simply translating a text from one language into another. Working individually and in groups, students will not only translate classic and contemporary literary texts between Chinese and English, English and Chinese, but will also be invited to write creatively in whatever languages they bring to the class and then work collaboratively to produce translations into English and/or Chinese. We will also explore texts that introduce key concepts from the philosophy of language, from the discipline of translation studies, and from related fields including history, cultural studies, and linguistics to help us think more deeply about the practice and challenges of literary translation. For a final project, we will work to produce an anthology of student work — both original creative writing and collaboratively produced creative translations into English and Chinese from the languages that students bring to the class and write in. Prerequisite: Introduction to Creative Writing, or junior/senior standing Intermediate Workshop for Creative Writing minors; Humanities Advanced course

CRWR-SHU 202T
Writing the Novella

Too long to be a short story and too short to be a novel, the novella has been described by Stephen King as a country with "ill-defined" borders situated between "two more orderly regions." The novella's intermediary length can make it less palatable to magazine editors and book publishers alike, but in spite of its perceived lack of commercial viability many of our most enduring stories are novellas—Heart of Darkness, The Turn of the Screw, The Metamorphosis, Animal Farm, and A Christmas Carol, to name just a few. In this course, geared toward intermediate and advanced fiction writers, we explore the exciting possibilities of the form through our readings and work on novellas of our own. By the end of the course, students will have read a wide range of novellas by international authors such as Saul Bellow, Robert Bolaño, Eileen Chang, Anton Chekhov, Elena Ferrante, Neil Gaimin, Yasunari Kawabata, and Alice Munro. They will also have completed a significant portion of their own novellas, gaining a deeper understanding of what Ian McEwan calls "the modern and post-modern form par excellence." Prerequisite: Introduction to Creative Writing, or junior or senior standing Intermediate Workshop for Creative Writing minors; Humanities Advanced course

CRWR-SHU 209
The Art of the Personal Narrative

In this intermediate creative writing workshop, students will explore how writers articulate a unique "I," drawing directly from personal experience. Students will write their own narratives across several genres and in several modes, working at times from immediate observation, at others from memory, sometimes drawing upon research, and often using techniques of fiction and poetry to inspire creative writing that can push the personal essay and

memoir in the direction of inspired fiction, poetry, and cross-genre experimentation. In addition to developing their own writing projects, students will read and analyze a range of exemplary texts in which writers use the "I" as point of departure for writing about the world--moving beyond narrow exploration of the "self" into dynamic engagement with others and with the environment, with history, the city, travel--and anything and everything else a great writer can make us care about. Students must have completed Introduction to Creative Writing or be of junior or senior standing to enroll in this course.

CRWR-SHU 219
Out of the Whirlwind: Studies in Narrative Perspective

In the Book of Job, the voice of God speaks out of the whirlwind. The voice of The Hunger Games is Katniss Everdeen herself. Oscar Wao is not the narrator of his brief and wondrous life: Yunior is. In this intermediate craft course, we will investigate how the teller shapes and powers the story. Along with critical texts, we will read fiction told in a variety of perspectives, including stories that aren't easily categorized. How does a narrator reveal herself? How is narrative perspective developed, maintained, and broken? When is intimacy created with the reader, or distance from him, and why? Students will write their own stories in an experimental array of perspectives--from the third-person omniscient we associate with Dickens, to the unreliable first-person beloved by fans of J.D. Salinger, to the less traditional second person found in Lorrie Moore's work. Alongside discussions of narration, we will continue to practice additional craft elements: plot, characterization, and imagery, among others. Students will be required to complete a substantial fiction project, but may also experiment with other or hybrid genres as part of their work for the course. This is a course for students who love to read, who are committed to the practice of writing creatively, and who aim to become better creators and analyzers of stories. This is also a workshop, and we will share our creative work and respond to the work of others in a writing workshop setting. This course is open to juniors and seniors and to those who have completed the introductory creative writing course.

CRWR-SHU 220
Intermediate Creative Writing Craft Course

In this intermediate craft course, we will investigate how the teller shapes and powers the story. Along with critical texts, we will read fiction told in a variety of perspectives, including stories that aren't easily categorized. How does a narrator reveal herself? How is narrative perspective developed, maintained, and broken? When is intimacy created with the reader, or distance from him, and why? Students will write their own stories in an experimental array of perspectives--from the third-person omniscient we associate with Dickens, to the unreliable first-person beloved by fans of J.D. Salinger, to the less traditional second person found in Lorrie Moore's work. Alongside discussions of narration, we will continue to practice additional craft elements: plot, characterization, imagery, among others. Students will be required to complete a substantial fiction project, but may also experiment with other or hybrid genres as part of their work for the course. This is a course for students who love to read, who are committed to the practice of writing creatively, and who aim to become better creators and analyzers of stories. This is also workshop, and we will share our creative work and respond to the work of others in a writing workshop setting. This course is open to juniors and seniors and to those who have completed the introductory creative writing course.

CRWR-SHU 221
Intermediate Poetry Workshop

In this intermediate creative writing workshop, students will explore the possibilities of poetry by writing and sharing their own work while also engaging with exemplary works by great poets from a range of traditions, background and times, with a practical emphasis on contemporary poetry and its many vibrant modes and methods. At times, students will experiment with age-old forms such as the sonnet, haiku and sestina; at other times students will pursue the possibilities of contemporary performance poetry and spoken word, Modernist collage and pastiche, postmodern hybrid poetries, and emergent digital poetics. The goal for each student will be to create a body of work that draws on knowledge of traditional forms while also speaking directly to the unique circumstances of our times -- and each individual poet's experience. Prerequisites: Students must have either 1) completed an Introduction to Creative Writing Course or 2) be of junior or senior standing.

CRWR-SHU 243
Intermediate Workshop: Eighty Pages to Midnight: Writing Your Life in Autofiction and Essay

Karl Ove Knausgaard's My Struggle, Book 1 famously devotes over eighty pages following the author's teenage self hunting down a high school New Year's Eve party in 1980s suburban Norway. The acclaimed bestseller (followed by five more volumes!) rides a recent wave of so-called 'autofiction,' in which novelists lift hyperreal stories directly from their own quotidian lives, hunting for truth among memories once thought too ordinary even for memoir. In this intermediate workshop class, we will use Knausgaard's long lame night of the soul as an entry point into autobiographical writing in the Selfie Age. Through reading, discussions, and extensive in-class workshops, students will experiment with both the weird freedom of autofiction (there's no way Knausgaard remembers 1984 that clearly) and the inspired fidelity of creative nonfiction (tell all the truth, as the poet said, but tell it slant.) With contemporary guides from both sides of the aisle, including Ta-Nehisi Coates, Jenny Offill, Leslie Jamison and others, students will practice writing the self as a character, framing a narrative in scenes, and digging for those tricky moments of revelation that raise our private scribbles to the gift of art. By semester's end students will produce one lengthy polished piece in each genre--two beautiful, stapled packets of proof that good writing, even about yourself, make us all less alone. The course fulfills an intermediate workshop requirement for the Creative Writing Minor or a Humanities Focus requirement and is open to juniors, seniors, and those who have already completed Introduction to Creative Writing (OR instructor permission only).

CRWR-SHU 245
Speculative Fictions

Science fiction, fantasy, horror, weird fiction, alternative histories—all fall under the heading of speculative fiction. This class has three basic components: 1) reading and discussing a focused set of works of speculative fiction (and watching a few films), framed by a set of critical texts; 2) research; and 3) frequent writing exercises and assignments, culminating in a semester project. Students will read and discuss to understand better how speculative fiction works, both in terms of basic narrative techniques common to all fiction as well as with regard to challenges, such as worldbuilding, that may be considered unique to speculative fiction. Students will conduct research necessary to both better understand those texts and their authors' techniques and thinking, and to do work necessary to support their own creative experiments in writing their own speculative fiction and/or critical work (research is a big part of the successful speculative fiction writer's practice). All students will begin their writing process by generating a range of story ideas by way of writing experiments and assignments before committing to a semester project. Once students have settled their semester projects, they will conduct research alongside the drafting of scenes for their final project, with the research helping them understand and begin to build a speculative world. Students will write a focused research paper as well as a creative work — most likely a short story, perhaps an episode of a larger envisioned project — informed and shaped by the research they conduct. Students are welcome to work to incorporate the work they do in this class into IMA or creative writing projects that exceed the scope of this class (so, for instance, IMA students might work to integrate their work for this class into their interactive projects).

CRWR-SHU 246
Illuminating "Life's Foolscap": Intermediate Creative Writing

This workshop, designed for intermediate writers, explores the art of creative nonfiction with emphasis on the memoir and personal essay. In Speak, Memory, Vladimir Nabokov observed that the "unique design" pressed upon his life "becomes visible when the lamp of art is made to shine through life's foolscap." In this course, we will be shining the lamp of art on our own lives, finding their unique, meaningful patterns as we strive to convey the complexity and truth of our experiences. Students will encounter a wide range of voices and literary techniques by noted practitioners of the genre such as James Baldwin, Joan Didion, Susanna Kaysen, Maxine Hong Kingston, and Virginia Woolf. From our perspective as working writers, we will examine how these authors construct their texts and learn elements of craft through close reading and imitation. In our class discussions and workshop, students will be asked to develop and articulate their aesthetic judgments and to give constructive feedback on their peers' manuscripts. Our ultimate aim is to write daring, poignant, powerful narratives, working hard to transform our original drafts into memorable and engaging works of art. Prerequisites: Students must have completed Introduction to Creative Writing or be of junior or senior standing.

WRIT-SHU 101
Writing as Inquiry: WI

Critical inquiry is the heart of a liberal arts education, and writing is this inquiry manifested on the page. In NYU Shanghai's first-year writing course, students will read texts and respond by writing their own. In doing so, they will add their critical perspectives to ongoing academic and public conversations. Students will work to write sophisticated and cogent prose, and learn to effectively incorporate written texts in the development of their own arguments. Class discussions will include strategies for every step of the writing process--from invention and organization to research and revision. In a workshop setting, students will analyze the work of their peers and respond to feedback on their own writing. By the end of the course, students should be able to dissect difficult textual material, recognize rhetorical strategies and genre conventions, and build clear and convincing arguments that matter both within and beyond academic contexts. In WI, we will spend additional time focusing on areas of rhetoric, grammar, and style that are relevant to second language writers.

WRIT-SHU 102
Writing as Inquiry: WII

Critical inquiry is the heart of a liberal arts education, and writing is this inquiry manifested on the page. In NYU Shanghai's first-year writing course, students will read texts and respond by writing their own. In doing so, they will add their critical perspectives to ongoing academic and public conversations. Students will work to write sophisticated and cogent prose, and learn to effectively incorporate written texts in the development of their own arguments. Class discussions will include strategies for every step of the writing process--from invention and organization to research and revision. In a workshop setting, students will analyze the work of their peers and respond to feedback on their own writing. By the end of the course, students should be able to dissect difficult textual material, recognize rhetorical strategies and genre conventions, and build clear and convincing arguments that matter both within and beyond academic contexts.

GCHN-SHU 110
The Concept of China

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. Prerequisite: None. (This may be used as a survey course in the Humanities.)

GCHN-SHU 156
History of Chinese Art

This course surveys art, visual culture, and material culture in China from the Neolithic to the end of the 19th century. Approximately one-third of the lectures will be organized based on the different mediums used in art, such as ceramics, jades, bronzes, and sculptures. Some lectures are designed to contextualize art into separate functions, such as for funerary and Buddhist rituals. The rest classes stress the difference in patronage, such as imperial art and literati art. Particular attention will be paid to understanding objects within their original social and cultural contexts. We will also relate individual artworks to a broad cultural background, highlighting the influence of various religions, philosophies, and politics. The goal of this course is to familiarize students with the diverse body of artwork produced in premodern China, as well as to consider the role art has played in representing or negotiating identities, religions, history, and politics. Students will be trained in various art historical methodologies and will deepen their knowledge about one aspect of Chinese art history through a group curatorial project.This course satisfies CORE CA/HPC; GCS Chinese Media, Arts and Literature; Old Humanities Major Requirements: Survey Course; New Humanities Major Requirements: Introductory Course.

GCHN-SHU 164
The History of the Silk Road

The Silk Road has been a museum exhibition sensation as well as inspiration for Indiana-Jones-type of adventures, ever since the name was coined in 1877. As appealing as the name is in all kinds of media, it is never quite clear what the Silk Road actually entails. What does it mean to you, for instance? Searching for an answer, you will encounter numerous websites, books, scholarly and popular articles, or TV documentations that seek to unravel its many mysteries and even travel agencies that aim at revealing its myths. By consulting archaeological as well as written sources this course is going to evaluate all aspects of early Silk Road history – trade, travel, war, religion, ideologies, and cultural exchange – from its earliest age through the Mongolian Era (13th century). The main goal is, however, not to look at every aspect in isolation as it is often done, but to bring them all together. This way it will become clear that actual reality was considerably more complex than is generally claimed. Only the interplay of several factors allowed The Silk Road to become a pre-modern 'success story' probably only rivaled by the internet.
Prerequisites: None.(This may be used as a Survey course in the Humanities OR Global China Studies Geographies.)

GCHN-SHU 165
China and the Islamic World, c. 600AD-Present

One of the most significant geopolitical shifts of recent years has been China's increased interest and involvement in the Islamic world, from Afghanistan to Africa. However, although such connections are not new, scholars have rarely examined the long history of contacts between the Sinic and the Islamic worlds comprehensively and systematically. Assembling a wide array of primary and secondary sources on different forms of Sino-Islamic encounters, this course introduces the major events, issues, and peoples that are involved in the complex relations between them. In-depth discussions of these topics will not only provide students with new perspectives on the histories of the Islamic world and China respectively, but also historical insights to gain a deeper understanding of the newly revived Sino-Islamic relations and the emerging China-US-Middle East triangular relationship in the twenty-first century. This course welcomes all students interested in histories of the Islamic world and China. No special background is required, though of course some knowledge of the history of China and/or the Islamic world will be a plus. Although it is a seminar course (we meet once weekly), a fifteen-minute mini-lecture in each class will provide students with basic background knowledge and set the context for the following week. We will then devote ourselves to discussion of the assigned readings. Pre-requisites: None(This may be used as a topic course in the Humanities.)

GCHN-SHU 200
Topics in Global China Studies

Check Albert for various relevant topics each semester.

GCHN-SHU 233
Foreign Societies in Classical Chinese Writing

This is a Classical Chinese class that covers writings on foreign societies in history. In this class, we will see how people used Classical Chinese to make records of foreign societies, descriptively or imaginarily. We will follow pilgrimages to India as well as adventures in Vietnam; we will encounter child-eating Dutch cannibals as well as people from the Country of Dogs. Beneath this exotic surface, we will examine the underlying schemes and

tropes that are often used to describe foreign people and polities in Classical Chinese writing. In this way, we will know what to expect when we read a text of similar genre. Because this is a Classical Chinese class, we will learn how to use grammar and context to parse difficult passages: we will learn basic tactics to unpack sentences when their structures are unclear or the words' meanings are opaque. These tactics are especially crucial when one encounters an unfamiliar text without any outside help. Prerequisite: CHIN-SHU 402 (Classical Chinese II) or equivalent; OR Instructor Permission (contact Professor Zhao Lu, lz69@nyu.edu)

GCHN-SHU 243
Chinese Environmental Studies

 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.

GCHN-SHU 255
Eat, Pray Ponder: Chinese Intellectual Culture through the Age

This is a class about what Chinese people think and believe, and how they perceive the society to which they belong. The class will cover a wide range of material from Shang oracle bones, Confucianism, Legalism, Taoism, Buddhism, and various folk religions, to 20th-century debates on Western thought and Communism. This class highlights three general concerns: 1) although we will cover the main categories of Chinese thought (e. g. Confucianism, Taoism and Buddhism), we will emphasize the diversity of thought both within and outside those larger categories; 2) we will make clear that people's beliefs and thought changed frequently over time and space, and 3) we will examine how socio-economic conditions and the media used to convey ideas affect people's intellectual world and vice versa. No Chinese is required. 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. (This may be used as a topic course or literary interpretation in the Humanities.) Prerequisite: None.

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-SHU 264
Chinese Migrant and Diasporic Networks

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. (This may be used as a topic course in the Humanities.)

GCHN-SHU 267
The Cultivated City

This class examines the idea and practices of 'cultivation' in relation to the challenging environment of the 21st century city. Through field trips, readings and discussions, the class explores the concept of cultivation, and how it can be used as a basis for researching the urban ecology of Shanghai, both as a past and future city. The class incorporates a major project in the digital humanities, in which students use the tools of interactive media (audio, video and cartographic technologies) to research, map and narrativize the ways in which architects, designers, artists and intellectuals engage with the traditions of cultivation in order to imagine and recreate the future metropolis.

GCHN-SHU 275
Memory Politics in China

From historical television series, to claims of a "5000 year-old culture," to arguments bolstering territorial claims, in China history seems ubiquitous in contemporary life. In this class, explore the present-day politics of the past in China through film, fiction, music, food, urban sites, and contemporary controversies in the news. Analyze "memory politics" using major theoretical approaches to memory and history: collective memory, psychoanalysis, trauma, nostalgia, and consumption. Place China in global context through case studies on colonialism, world war, and international espionage. Visit and interpret three Shanghai sites: the new Municipal History Museum, an Anti-Japan War memorial park, and a Cultural Revolution restaurant. Produce a portfolio of writing on sites and objects that invoke memory in China and beyond. Prerequisite: None.

GCHN-SHU 283
Reading and Viewing Modern China

This is a bilingual and multimedia course designed to help students in reading, translating and critiquing primary source-based cases in modern Chinese history. For this, several sets of original documents covering different periods and events and reflecting different perspectives will be selected, and related documentary films will be shown and discussed in class. High competence in Chinese and instructor permission are required to take the course. Prerequisites: Advanced level of Chinese language; Instructor consent required.

GCHN-SHU 290
Topics in Global China Studies

Specific topics vary from semester to semester. Prerequisite: None

GCHN-SHU 397
Independent Studies

GCHN-SHU 400
Global China Studies Senior Capstone Seminar I

Fall Semester: Methodologies in China Studies; Spring Semester: Research Project Seminar. The first semester of this two-semester capstone course will focus on examining the importance and shortcomings of Chinese primary sources and data, familiarizing with and learning how to access and use key archives, museums, libraries, research tools, databases, and digital websites, and analyzing some of the pivotal books and articles on China. Students will also draft a research proposal, with a preliminary bibliography, and identify a faculty mentor for the second semester of the capstone course. During the second semester, students will work primarily with their respective mentors, but are required to also participate and make presentations at a weekly research seminar. Those opting for Advanced GCS major must demonstrate competency in reading and analyzing Chinese language sources. Prerequisite: Senior Standing GCS Major

GCHN-SHU 401
Global China Studies Senior Capstone Seminar II

Fall Semester: Methodologies in China Studies; Spring Semester: Research Project Seminar. The first semester of this two-semester capstone course will focus on examining the importance and shortcomings of Chinese primary sources and data, familiarizing with and learning how to access and use key archives, museums, libraries, research tools, databases, and digital websites, and analyzing some of the pivotal books and articles on China. Students will also draft a research proposal, with a preliminary bibliography, and identify a faculty mentor for the second semester of the capstone course. During the second semester, students will work primarily with their respective mentors, but are required to also participate and make presentations at a weekly research seminar. Those opting for Advanced GCS major must demonstrate competency in reading and analyzing Chinese language sources. Prerequisite: Senior Standing GCS Major AND completion of GCHN-SHU 400.

GCHN-SHU 997
Global China Studies Independent Study

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. Please note if you miss the first class of the term, you will need to contact the instructor to determine if you can still remain enrolled in the course.

HUMN-SHU 168
Penning the Self(ie): Orality, Literacy, Digitality, and the Literary Subject

Phone in hand, questions loom in our head: is digital technology destroying memory, communication, and interpersonal relationships? Will our kids read and write cursive? Is print media disappearing? The notion of writing as a technology seems far removed from our fast-paced, digital world; but it was not so long ago that writing constituted a technological advance that permeated Western societies. This course examines key moments in writing's history in order to understand its role in shaping the literary subject. We trace the shift from oral to written traditions in romance and courtly literature, then turn to the printing press, copyright and intellectual property, and conclude by examining how our relationship to writing in the past can inform our relationship to digital media in the present. Throughout the semester, students engage in an experiential learning project where they create a hero/ine whose story evolves from oral tradition, to written romance, to social media subject. Prerequisite: None

HUMN-SHU 185
Gender and Migration in Islam

This course provides an introduction to the development of gender in Islam as it relates to women's migration and movement across regions. We will analyze fiction narratives, poetry and plays that thematize the experiences of Muslim women as migrants. The migrant condition of women lends deeper insights into historical conditions such as imperialism, globalization, connected with themes like religion and religious beliefs. Prerequisite: GPS or lower-level Humanities Course

HUMN-SHU 205T
French Cinema: The Birth of the Seventh Art

In 1895, when Auguste and Louis Lumière held their first private film screening in Paris, they could not have foreseen the pervasive role that cinema would one day play in our homes and our hearts. This introduction to French cinema traces the seventh art from its inception to the present day, focusing on pioneers of French cinema, surrealist film, the influential New Wave movement, and contemporary filmmakers. In addition to the films that you will watch in and out of class, you will explore a variety of theoretical approaches to cinema and develop skills in film analysis through readings and class discussions. Films will be screened in French with English subtitles. Coursework will include several short writing assignments and film analysis projects.

HUMN-SHU 206T
Topics in Humanities: International Cinema History After 1990

Arguably, there have been more—and greater—changes to every practice and institution of cinema since 1990 than in the 95 previous years of film history. Central to any examination would be the emergence of digital technology, which has transformed the production, distribution and exhibition of cinema. Yet other aesthetic, social and economic forces have also led to what seems to be an ongoing evolution of the medium. Using a broad range of examples from all over the world, this course will explore major developments in how films are made, and their impact on audiences. Topics will include postmodernism, changing notions of national cinema, contemporary uses of genre, and new forms of cinematic storytelling.

HUMN-SHU 207
Bible as Literature

This course will serve as an introduction to literary approaches to the Bible. Using religious and critical approaches to the Bible as a backdrop, this course will explore what can be gained from focusing instead on what makes the Bible a great work of literature. Through close reading of biblical texts such as Genesis, Leviticus, Samuel, Esther, the Gospels, and poetic texts we will examine how a variety of modern literary theories can be used to explain the richness of the biblical text as a work of literature rather than a historical, religious, or sacred text. Some of the methodologies and topics that will be explored are Mythology, Formalism/Structuralism, Gender and Sexuality, Translation, and Law as Literature.

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 231
Contemporary Art and Theory in North America and Europe

This course traces movements in North American and European art from 1945 to the present. Through a study of primary and secondary texts, artwork examples, and historic context students will explore how artists went beyond primarily object-based art and how institutional frameworks, media, politics, and social relations, informed contemporary art practice. The different ways artists engage with notions of space will also be

examined. At the end of this course, students should be able to identify contemporary art movements, key artists, and relevant artworks. They should also be able to articulate the conceptual and visual strategies employed in these works and have a basic knowledge of the milieu in which they were produced.

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 271
Humanities Research Lab: Study Immigrant Cities

HUMN-SHU 366 (formerly 266)
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.

HUMN-SHU 397
Humanities- Independent Study

HUMN-SHU 400A
Humanities Capstone Seminar I

Fall Semester - Part I: Students design and conduct an independent research project in their area of focus using the theories and methods with which they have become familiar over the course of completing the major. Open only to Humanities majors in the senior year.

HUMN-SHU 401
Humanities Capstone Seminar

 Students design and conduct an independent research project in their area of focus using the theories and methods with which they have become familiar over the course of completing the major. Open only to Humanities majors in the senior year.

HUMN-SHU 997
Independent Study I - Humanities

Students are permitted to work on an individual basis under the supervision of a full-time faculty member in the Humanities discipline if they have maintained an overall GPA of 3.0 and have a study proposal that is approved by a Humanities professor. Students are expected to spend about ten to twelve hours a week on their project for 4 credits.

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 130
Foundations: What is History?

This course provides an introduction to a range of theoretical frameworks and methodologies that have influenced the academic study of history, including microhistory, global history, histories of gender and race, and subaltern/post-colonial historical studies. We will interrogate the key categories of historical temporality and geography

by questioning how historians impose temporal and spatial boundaries around their research, as well as ways to expand or dissolve those boundaries. We will also examine how historians construct historiographical debates around particular research themes, such as the changing meaning of national histories. The aim is to acquire knowledge of a variety of historical approaches at work when reading both historical scholarship and historical source materials. Prerequisites: None.

HIST-SHU 145
Food & Drugs in Chinese History

The goal of this course is to examine Chinese society and culture through the lens of the consumption of food and drugs and to elucidate the central role played at different times by food and drugs in Chinese culture and its representations. We examine the role of food and drugs in Chinese social, cultural, economic, and political history, with an emphasis on the pre-modern period. Topics may include the relationship of health and diet; food in religious and ritual practice, gastronomy, consumption and the material culture of food and drugs, restaurants and catering; famine; imperial dining practices; tobacco smoking; opium smoking, cultivation, and elimination; the Opium Wars; and food, drugs, and identity, including the global association of China with food and with opium.

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 179
History of Modern China in a Global Context

This course situates changes in China since the 1800s in a world and global context. Through reading primary texts and secondary studies, students will explore how the process of empire-making, global capitalist expansion and anti-capitalist revolutions, and liberalization shaped the social, cultural and political changes in modern China since the 1800s. This course is also designed to help develop skills including identification of primary and secondary sources and critical analysis and evaluation of primary and secondary sources. This is a writing and reading intensive course. Students are expected to learn through careful reading, engaged discussion, and writing/testing assignments. All the readings are in English, and the course presumes no previous knowledge of China. (fulfills NYU Shanghai SSPC Core Curriculum).

HIST-SHU 208
War and Peace: Europe Since 1900

This course will provide a broad introduction to the political, social and cultural history of Europe since 1900. The location of the most violent conflict in human history during the first half of the twentieth century, Europe's postwar development was based on a principle of peace through prosperity and the political ideal of an 'ever closer union'. In recent years, however, the combined economic and migrant crises have put this postwar consensus to a test. Taking the continent's delicate union as its central concern, the seminar will familiarize students with key themes, methods and problems in Modern European History. Structured chronologically, individual sessions will examine European modernity and fin-de-siècle culture; empires and colonialism; the causes, experiences and effects of the First and Second World Wars; the Holocaust; Europe's role in the Global Cold War; the crisis-ridden 1970s; and the crucial question of whether a distinctive European identity has developed over time.

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, UFOs and alleged alien encounters,as well as providing an introduction to the historical origins of techno-nationalism, from the Cold War to today's Space Race in Asia. This is an advanced undergraduate seminar open to juniors and seniors. Participants should have taken at least one history class and have written a research paper with bibliographical references.

HIST-SHU 226
5000 Years of Chinese History: Fact or Fiction?

Nowadays, the notion that China looks back on 5,000 years of history seems to be common knowledge. At first one might wonder: what is so special about that? There have been many advanced civilizations in ancient antiquity: Egypt, Babylonia, Greece, the Roman and Aztec empires are but a few examples that immediately spring to mind. On closer inspection, though, it is quite obvious that all of these civilizations have one thing in common: they no

longer exist! China and Chinese culture, on the other hand, is still alive and kicking. It is the only civilization on the planet that claims to have developed for five millennia without interruption. But, is this really true? And, more importantly, where exactly does such an assertion come from? These are but two question this course is going to address. Some readers might dismiss them as quixotic musings of an early China specialist. They would be utterly wrong, however, to assume that these issues have no relevance for modern-day China. Precisely because Chinese culture survived for such a long time many contemporary habits are firmly rooted in ancient traditions, whether we are aware of it or not. Since most of us are largely ignorant of the actual repercussions of China's enduring history, this course ultimately aims at disclosing them. This means that we are going to analyze historiographical records and compare them with archeological evidence. In order to get a sense how history was perceived at various historical stages, we are also going to spend some time with commentators of early Chinese texts. Finally, we will, of course, try to figure out how the practice of historiography and archeology influences the China we all live in – for the moment at least – today.

HIST-SHU 250
China at the Center? An Exploration of Chinese Foreign Relations

China at the Center? An Exploration of Chinese Foreign Relations from Pre-imperial to Late Imperial Times The main title of this course is an allusion to a book authored by Mark Mancall in 1984. However, there are some crucial differences between his approach to Chinese foreign relations and the subject of this course. Mancall has claimed – as have so many scholars before and after him – that Chinese interactions with the outside world were dictated by an ideology that saw China's culture as superior to the surrounding 'barbarians.' This concept is now widely known as the so-called 'tributary system.' We are going to explore whether such assertions indeed have any merit. One little hint: things might not have been as easy as they appear at first glance. Over the course of the semester we will be tracing Chinese foreign relations from roughly the 6th century BCE (was there even a 'China' that could set itself apart from the 'other'?) through the 19th century CE, that is to say the period when the Qing dynasty (1644-1911) was forced to interact with western powers such as the British Empire. Even today when there seems to be an abundance of media coverage, the meanings of bilateral or multilateral exchanges take quite some effort to deduce; too many details remain hidden from the public eye. The (ancient) past, of course, is even less generous with data. Nevertheless, there is plenty of information to be had; we just have to look for it. Thus, participants in this course will have the opportunity to immerse themselves in various kinds of sources: historiographical records, material culture, or personal diaries to name but a few. In doing so, our main objective will be that we develop a critical, analytical attitude toward said sources that will ultimately lead us to a more nuanced understanding of Chinese dealings with the outside world.

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. The course focuses on the cross-currents of China's encounters with the world, from the late 16th to the early 21st century. It proceeds from two assumptions: first, that China has long been engaged with the rest of the world rather than ever having been "closed", as some would have it; and second, that impact and influence flow in multiple directions: into, through, and out of China, whether intentionally or involuntarily. Through a combination of lecture, discussion, and student research projects we will explore China's encounters with the world chronologically and thematically, covering such broad topics as religion and philosophy; diplomacy; law; trade; war; revolution; political systems, and "soft power." Prerequisites: None.

HIST-SHU 313

China Goes Global

The course, combining question-oriented lectures, seminar-style discussions, and interactive reading, examines China's "prolonged rise" by putting it into the larger context of its 20th-century "going global" experience characterized by crises, wars, revolutions and, finally, unprecedented reforms. The course will highlight the tortuous trajectory of the most important bilateral relations of our age—Chinese-American relations—and how and why it has been profoundly related to China's going global experience. It will also explore what driving forces and dynamics has generated China's rise, why it has to be looked upon as a complicated and prolonged process, and what opportunities and challenges it has presented to both China and the 21st-century world, and how they might be dealt with. Prerequisites: None

HIST-SHU 329
Futures of the Twentieth Century

The present is only one possible outcome of the many ways in which it has been imagined in the past. While historians usually do not aim to predict the future, they have become increasingly interested in how societies and cultures projected their development in the past. While such scenarios are often fascinating in themselves, they are of particular historical interest as gauges and indicators of how societies understood themselves and evaluated their then present conditions. Largely chronologically organized, this course explores the future's multifaceted history in twentieth-century Europe and the United States, from the emergence of 'scientifiction' in the 1920s to the 'end of utopia' during the crisis-ridden 1970s. Particular attention will be paid to 'enhancements' of the human body, futuristic technologies (flying cars, time machines, computers) and human habitats (the classless city of tomorrow, underwater settlements, space colonies).

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 101
Foundations: What is Literature?

This course provides an introduction to literary theories and methodologies. We will analyze such different approaches to literary expressions as classical, modern, structuralist, post-structuralist approaches; Marxist, colonial and post-colonial approaches, including feminist and post-human methodologies for different literatures. The course will emphasize the shifts and turns in these approaches. The aim is to acquire knowledge of a variety of literary approaches at work when reading literature and of the relationships between text, author, writing and audience.Prerequisites: None.

LIT-SHU 200
Topics in Literature

Check Albert for various relevant topics each semester.

LIT-SHU 226
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. (This may be used as a survey course in the Humanities.)

LIT-SHU 246
Introduction to Gender and Feminism in African Literature

This course introduces students to gender, sexuality and feminism in African literatures. It examines literary expressions of women's social, economic and spiritual experiences in both local and transnational contexts in Africa. Through close readings and literary analyses of a geographically and linguistically diverse selection of established and emergent African fiction, students comparatively analyze literary examples of women's experiences. These experiences are read in light of theoretical concepts on feminism and gender in Africa to understand the

intersection of women's experiences with such broader historical and geographical phenomena as imperialism or colonialism and postcolonialism, transnationalism and globalization.

LIT-SHU 253
Comparative Islamic Feminisms

This course provides an advanced understanding of Muslim women's experiences in a transnational and global network of societies and politics. We will examine Muslim women's relationship with Islam—Islamic practice, habits, rituals, culture and customs— in postcolonial fiction. Within a broad regional and thematic foci we will emphasize the transnational nature of Muslim women's engagement with Islam as protagonists in this fiction travel outside their homelands and reside in diasporic communities. We will examine their negotiations of a variety of situations in foreign cultures with their personal faith; aspects of the foreign culture they are able to reconcile with and ones they find difficult to adapt to, among other questions that help us understand Muslim women's spiritual experiences transnationally. Prerequisites: Successful completion of Perspectives on the Humanities.

PHIL-SHU 40
Ethics

Examines fundamental questions of moral philosophy: What are our most basic values, and which of them are specifically moral values? What are the ethical principles, if any, by which we should judge our actions, ourselves, and our lives?

PHIL-SHU 70
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 76
Epistemology

Considers questions such as the following: Can I have knowledge of anything outside my own mind—for example, physical objects or other minds? Or is the skeptic's attack on my commonplace claims to know unanswerable? What is knowledge, and how does it differ from belief? Prerequisite: None.

PHIL-SHU 80
Philosophy of Science

Examination of the relationship between the mind and the brain, of the nature of the mental, and of personal identity. Can consciousness be reconciled with a scientific view of the world?

PHIL-SHU 91
Philosophy of Biology

This class is an introduction to philosophy of biology focussing on issues connected with the nature and scope of biological explanations. How much does natural selection explain about evolution, and how does it explain? How much do genes explain about development, and how do they explain? No prior philosophy of science or biology will be assumed.

PHIL-SHU 105
Introduction to Chinese Philosophy

This course is an introduction to classical Chinese philosophy. We will focus on three major philosophy traditions in the pre-Qin period China: Confucianism, Mohism, and Daoism. Many of the ideas in these three traditions have shaped the last two thousand years of Chinese—and to a large extent, Eastern Asian—culture. We will read primary texts as well as some secondary literature. The primary texts include: The Analects, Mengzi, and Xunzi from the Confucian tradition, Mozi from the Mohist tradition, and The Daodejing and Zhuangzi from the Daoist tradition. We will discuss issues in ethics, political philosophy, epistemology, and metaphysics in classical Chinese philosophy. We will also discuss the relevance of classical Chinese philosophy to contemporary philosophy and psychology. Prerequisites: None

PHIL-SHU 130
Philosophy of Technology: Thinking Machines

This course aims to train students to think philosophically about our rapidly changing—and ever more intimate— relationship with machines. We focus in particular on the following subjects: artificial intelligence, robots, cyborgs, automation and science fiction speculation. Prerequisite: Students must have completed one full year of study.

PHIL-SHU 150 (formerly HUMN- SHU 203)
Central Problems in Philosophy

Albert: 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.

PHIL-SHU 200
Topics in Epistemology

Check Albert for various relevant topics each semester.

IMBX-SHU 101
Life Design

This course is about designing your life. What if you used the same innovation principles that startups use and applied them to your own lives? Students are introduced to design thinking as a framework to process their college experience and explore life after graduation. This course will use rapid prototyping methods to test out career interests, engage in behavior design, and ideate on multiple futures. The course will be delivered in a studio setup with in-class design workshops, group discussions, personal reflection, individual coaching and field trips.

IMBX-SHU 102
Global Experience Design

This course is about designing your global experiences. Students are introduced to design thinking as a practical tool to make the most out of their NYUSH experience and prototype opportunities offered by NYU's Global Network. This course will use rapid prototyping methods to test out academic and career interests, visit global organizations in Shanghai, and meet with leaders with multinational experience. The course will be delivered in a studio setup with in-class design workshops that explore topics such as the purpose of college, educational wayfinding, global perspectives, and innovating on career paradigms.

IMBX-SHU 103
Understanding Financial Technology

"How would you like to pay?" A simple question may provoke diversified answers in the digital age. The financial applications of digital technologies, or so-called fintechs have engendered many alternative forms such as QR codes, mobile apps, and Bitcoin for financial activities including payment, loans, and investment. What technologies make these innovations possible? What are the aesthetic norms embedded in fin-tech app designs? How do the fin-tech companies interact with banks, policy-makers, and regulators? While Ant Financial and Tencent Finance make China the leader of fin-tech innovation, how does the global map of fin-tech innovation look like? After all, how have fin-techs re-shaped people's everyday life, and perhaps will reform human being? Through a weekly three-hour meeting, this course is to make sense of fin-techs from a wide variety of perspectives. Integrating lectures with workshops and company visits, this course will equip students with critical thinking and practical skills that allow them to dialogue with various actors, such as computer programmers, project managers, investors, as well as academic intellectuals.

IMBX-SHU 211
Design Thinking (Formerly BUSF-SHU 211)

Design Thinking is a theoretical, methodological and practical framework that has the potential of bringing about socially responsible innovation. This course will introduce the core concepts and toolkits of design thinking as the foundation of innovative thinking and practices. It requires you to step out of your comfort zone and to examine and challenge your own assumptions. Critical thinking, teamwork, and empathy are the three pillars of this course. Prerequisite: None

IMBX-SHU 232
Entrepreneurship Explored (Formerly 232)

The main aim of this course is to probe into the core rationale behind entrepreneurship: taking initiatives to make changes. Lecturing only accounts for less than one-third of the course, and students are expected to exhibit a high level of self-motivation to critically examine established and emerging ideas that have been shaping and transforming the concept and practices of entrepreneurship, as exemplified in specific cases and current practices. Students will thus be prompted to think critically and creatively about how to respond to the complexities of changes. The course lays emphasis on creativity, ethics, and future-oriented vision. Prerequisite: None

INTM-SHU 101
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 human body, the body's capacity for gesture, as well as the relationship between the body and its environment. Students will learn the fundamentals of electronics and programming as they build projects using the Arduino microcontroller platform. Arduino is 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. The fundamentals of programming: variables, conditionals, iteration, functions, arrays and objects, will be explored using the Processing programming language. Processing has a simplified syntax and approachable computer graphics programming model, making it an ideal platform for first-time programmers. 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 has been provided to them. Additional topics will include algorithmic drawing and animation techniques, digital modeling and fabrication, data exchange, manipulation, and presentation, as well as control of images, audio and video, including computer vision techniques. Structured weekly exercises are aimed at building specific skills, however students are free to pursue their own diverse interests in their midterm and final projects. Prerequisite: None

INTM-SHU 103
Creative Coding Lab

In this foundation course students will learn the fundamentals of computation, software design, and web technologies, through a series of creative projects. The course is intended to equip students with the skills to develop artistic and business projects that include a siginifiant computational component. Topics such as variables, functions, components, and functional and reactive programming will be brought together to create interactive applications, generative art, data visualization, and other domains. Within the framework of these creative projects students will develop a greater understanding of how computer programs operate, be exposed to various concepts used to create experiences and interactions, and become more familiar with some of the technologies that constitute the internet. This course is intended for students with no prior programming background.

INTM-SHU 110
Application Lab

In this project-based foundation course where students explore current challenges and opportunities at the intersections of emerging media and innovation, investigate, test solutions and develop prototypes in service of answering questions. The course is designed to take maximum advantage of NYU Shanghai's small class sizes, transnational community, and the opportunities resulting from students and faculty working and learning together to deliver innovations that push against the frontiers of the recently possible. The course also seeks to help students acknowledge, criticize and enhance the often mundane, but equally important human and social forms of incremental innovation that helps sustain the world of ideas and creativity. This includes a thorough and critical review of the historical and contextual backdrops that we associate with innovation and a willingness to learn rapid digital prototyping methods, research techniques and presentation skills.

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, 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. Students will learn the principles of digital imaging, recording and editing audio and video, and the basics of fundamental web languages HTML, CSS and JavaScript, in order to establish a diverse digital toolkit. Both traditional and experimental outputs, including online and interactive media platforms, will be explored. Weekly assignments, group and independent projects, as well as project reports and documentation will be assigned in each of the core areas of study. Prerequisite: None

INTM-SHU 130
Working with Electrons

This class focuses on the curiosity behind the greatest discoveries of electromagnetism. By replicating experiments both with magnetic and electrical field, we will explore the major breakthroughs that enabled us to power up devices, connect people and store information.During the course we will have seminar discussions analyzing texts that contextualize the lab experiments and we will work toward conclusions on the implications of these discoveries. We will analyze different perspectives that led to develop theories about the electromagnetic field, the way radio waves transmission and the quantum properties of electrons.Students will propose their own creative experiments, linking their own interests with how electrons behave. Through the course they will acquire a working knowledge of components like capacitors, lasers, antenna and circuit prototyping tools. As part of their final project report, they will submit a white paper describing the technical methodology, critical framework and results of their experiment. Prerequisites: None

INTM-SHU 134
Movement Practices and Computing

People use their bodies in the workplace whether they are dancers or athletes, managers or engineers. Physical wellbeing, social teamwork, and cognition may be affected by our movement practices. How do people use physicality and motion to think? What is the interaction between body, motion, place, and goals? We will explore these questions by building physical-computing-based systems that encourage us to bring movement into new times and places in daily life, that coach users and develop learning environments for movement practices, and that test our understanding of ways that we "think with the body". In this course we will bring practices such as fitness, dance, sports, and martial arts into a series of interactive installations, movement learning projects, and workspace modifications built on computing, sensing and actuator technologies. In this course we will also explore these questions through review of existing creative projects in this area, readings, presentations, and knowledge-sharing sessions. Prerequisites: Programming experience or Application Lab or Interaction Lab, or Communication Lab

INTM-SHU 138T
Extended Perception

Utilizing technological and scientific research / case studies / artifacts, this class introduces students to the topic of enhanced / extended perception and how technological augmentation allow us to sense and perceive alternative layers of our surrounding world, reconfiguring our understanding of what reality really is. Students will be asked to develop their own prototypes that demonstrate a conceptual or functional outcome on how perception can be extended, enhanced, or even hacked. Satisfies IMA/IMB elective.

INTM-SHU 150
Storytelling in Mixed Reality

Students will explore and build experiences that communicate stories through a combination of art and accessible augmented reality technologies. Topics include the history of storytelling through mediums and modes and technologies of expression, development and design for mixed reality devices, reality reconstruction techniques, applications of computer vision, volumetric video production, motion capture and spatial audio.

INTM-SHU 151T
Learning with Turtles

We will explore a range of programming languages, systems, and activities designed to help learners acquire computational skills and become creative problem solvers and project designers, including arts and interactive projects. We will create projects in turtle geometry, animation, and programmable embroidery (Snap!, Turtle Geometry, TurtleArt, and TurtleStitch), and in simulation systems which model complex systems in the life and social sciences in order to acquire a deeper understanding of their underlying phenomena (NetLogo). The course is fundamentally about ideas, and how some powerful ideas from computation can empower a learner to be a better creator and problem solver, acquire a deeper understanding of social and scientific phenomena, and become a self-directed learner. We will identify these ideas and actively engage with the pedagogical theories that underlie embodying them by creating with systems designed for children, beginners, or people coming from disciplines which traditionally had less emphasis on computing-based tools. We will emphasize reflection on our own learning within the course." Pre-requisite: None. This course satisfies IMA/IMB elective

INTM-SHU 194T
Global Media Cultures

This course surveys the implications of globalization for the production, circulation, and consumption of media. In this course, we will look across both analog and digital media (radio, TV, film, video, pop music, podcast, etc) in relation to a series of questions: How do media (and media industry) represents localities for a global audience? How can media practices create a feeling of belonging to the world/community? How may global media tell us about different material infrastructure, social imagination, and political desires? Students will explore media phenomena and critically examine media texts often beyond North American experiences. By the end of the class, students will be able to articulate how media connects to global flow of finance, cultural product, labor, and social aspirations. Pre-requisite: None. This course satisfies IMA/IMB elective; HUMN Digital Approaches.

INTM-SHU 195
After Us: Post-human Media

What is the place of human creativity, agency and intelligence in complex technical networks? This class aims to build a foundation for studying how automation, artificial intelligence, robotics, digital image production, predictive software, and eco-technologies signal the ascent of a posthuman society. It provides a selection of texts and case studies that introduce basic philosophical and sociological questions about posthuman technologies and support creators, writers and thinkers in conceptualizing the posthuman nature of new media. The class is a combination of lectures and writing workshops. Pre-requisite: None. This course satisfies IMA/IMB elective; HUMN Digital Approaches.

INTM-SHU 201T
Construction of Authenticity in Contemporary Art

The possibility of truth telling has been challenged and debated throughout the history of art and across various genres. What does it mean to tell the truth in art? How does art cross the boundaries between the real and the fake, truthfulness and misrepresentation? This course will examine social engagement in art and the construction of authenticity in creating works based on trust rather than the truth and will investigate a variety of artistic sources and genres including, but not limited to, propaganda, documentary, video art, public art, and installation art. Students are expected to develop projects demonstrating a comprehensive understanding of the subject. Prerequisite: Interactive Lab, Communication Lab, Application Lab or permission of instructor.

INTM-SHU 202
Media Architecture

Architecture has always been considered as an immediate extension of the human civilization, and its connection with state-of-the-art technologies has always been essential. In our current highly mediated and augmented environments, architecture shifts from static, solid, and predefined, to a fluid, interactive, and ever-changing. Computational, interactive, and media technologies challenge our understanding of what architecture is, redefining our engagement with exterior and interior spaces. The course investigates the area of media architecture from a contextual and critical perspective, examining and implementing in theoretical and practical scenarios current emerging trends. Students are expected to develop a comprehensive understanding of media architecture, to thoroughly investigate the media cityscape (including motivations, social implications, technological requirements), and to develop installation work that utilizes contemporary media development practices and demonstrates artistic, technological, and scientific rigor. Prerequisite: Interaction Lab, Communications Lab, Creative Coding Lab, Application Lab or What is New Media This course satisfies IMA/IMB elective.

INTM-SHU 204
Critical Data and Visualization

Data is at the heart of the increasing role technology has in our lives. Data collection and algorithmic processing are not only central to recent technical breakthroughs such as in AI and automation but have created new economic paradigms where data equals value and shape political approaches to power and control. Decisions based on algorithms affect society at large whether it's changing the way we transport and distribute goods, or influencing the things we buy, the news we read or even the people we date. The world that algorithms see is data. For the average person, however, data is seldom more than an abstract idea. So what exactly is data? How is value extracted from it? And why should we care? How can we ethically balance the positive uses of data-driven systems with the threats they pose to discriminate and infringe basic human rights? This class seeks to untangle some of these issues practically and theoretically.Prerequisites: Communication Lab or Application Lab

INTM-SHU 205
What is New Media?

This course will explore the fundamentals of new media scholarship. Together, we will review and engage with different theories of emerging media in its social, cultural, political, and historical contexts. Students will be able to research, think and write critically about some of the central debates in media studies, including new media forms and aesthetics, issues of gender, race, and labor, platforms, infrastructure and various emerging paradigms. Classes consist of theoretical readings, media example discussion, and writing workshops. Prerequisites of Course: Writing as Inquiry This course satisfies IMA/IMB Foundational course; HUMN Digital Approaches.

INTM-SHU 205T
The Artificial: Programming and Planetarity

This seminar will introduce students to contemporary theories of digital culture. It presents computational media less as a unique kind of device than as pervasive global infrastructure, and considers "programming" not only as software but also as designating how complex systems interact. For example. the Stack model argues that we can understand planetary-scale computation as comprised by modular layers (Earth, Cloud, City, Address, Interface, User) together forming a coherent whole: an accidental megastructure. We will consider the challenge to computational Art and Design through the lens of "the artificial," defined as all the ways that the world might be deliberately composed, including ourselves. Like an astronaut on a space walk, we are in always entangled with tethering prosthetics that make human life possible. The seminar will trace the interwoven history of "artificial intelligence" as both a philosophical thought experiment and as a foundational technology, and will explore alternatives to anthropomorphic models of AI. We will consider existing and potential forms of human-AI interaction design, such as voice and search. We will consider the history and contemporary state of artificial sensing media, such as machine vision. The seminar will also map how modern urban systems may be evolve in relation to pervasive automation and distributed computational interaction. Finally we will consider what the emergence of planetary-scale computation reveals about the limits of the human condition in the Anthropocene. We will consider how it may simultaneously threaten the material ecological substrate on which it (and we) depend and also make possible a necessary composability of our shared planetary perch. This unique course is designed for students with an interest in combining advanced theoretical understanding of contemporary digital culture with applied and speculative design research. It will combine in-person lectures and discussions, online sessions and field research. It will meet for extended seminar and field sessions during the first three weeks of the term (3 Thursday seminar and weekend field research sessions) followed by online sessions and further in-person meetings. Course requirements include assigned readings and discussion, written midterm exam and final project/ paper based on topics agreed upon in consultation with the Professor. Prerequisite: Writing as Inquiry.

INTM-SHU 205
What is New Media?

This course will explore the fundamentals of new media scholarship. Together, we will review and engage with different theories of emerging media in its social, cultural, political, corporeal, and artistic contexts. By course's end, students will be able to research, think and write critically about some of the central issues in media theory. Prerequisite: Writing as Inquiry.

INTM-SHU 206T
Media Past and Future

An attempt to better understand and participate in the communications revolution we are undergoing through an

investigation of the nature and consequences of previous communications revolutions. Using readings ranging from Plato to Sontag to Kundera, the course will look closely at the history of spoken language, images, writing, printing, photography, film, radio and television. How were they understood? How were they initially used or misused? What were their effects upon social patterns, politics and thought? How did innovations occur? What can that tell us about the potential and potential influence of digital communication? Students will be asked to undertake innovative experiments of their own in forms of new media. Prerequisites: None. Satisfies IMA/IMB elective.

INTM-SHU 207T
AI and Culture: Paths and Definition, Paths of Development

As no two cultures define "artificial" the same way, and no two define "intelligence" the same way, so too they will not define and imagine "artificial intelligence" in the same way. As China and the West engage in what is sometimes called a new scientific and technological race, the fundamental terms of a shared conversation across cultures may be missing or contested. As planetary-scale economies shift toward increasing automation, AI moves out of the laboratory and into the fabric of supply-chains, urban infrastructures, and everyday life. This research seminar will allow students to explore different ways that different cultural connotations of "face", "city", and "governance", for example, imply different paths for the development of this fundamental technology. NYU Shanghai will host an international conference in the Spring 2020 that examine these same topics. Prerequisites: Interaction Lab / Application Lab / Communication Lab / What's New Media. Satisfies IMA/IMB elective

INTM-SHU 214
User Experience Design

User Experience Design (UXD) is a design process focused on producing interactive products and systems that provide a high level of satisfaction to users through concern for human factors such as ergonomics, accessibility, and usability. User experiences unfold over time, and can be crafted to an extent, however a user's will and other unpredictable circumstances together shape the final outcome. Students in this class will critique existing projects, products, and services, and learn to create more successful user experiences based on real-world development processes, in addition to the application of industry standard techniques and tools. Students will create design concepts and mockups, develop user personas, wireframes, user experience sketches and flows, and ultimately video prototypes. While UXD principles are most often used to create commercial products such as hardware devices and software applications, the concepts and skills prove equally useful in the development of participatory art and performance projects.

INTM-SHU 215
Machine Learning for New Interfaces

Machine Learning for New Interfaces is an introductory course with the goal of teaching machine learning concepts in an approachable way to students with no prior knowledge. We will explore diverse and experimental methods in Machine Learning such as classification, recognition, movement prediction and image style translation. By the end of the course, students will be able to create their own interfaces or applications for the web. They will be able to apply fundamental concepts of Machine Learning, recognize Machine Learning models in the world and make Machine Learning projects applicable to everyday life. Prereq: Interactive Lab, Communication Lab, or Application Lab. This course satisfies IMA elective; IMB Interactive Media elective.

INTM-SHU 217T
Make Believe

We live in an era of information where the information can be written, accessed, shared, and also eliminated with a single stroke. As a result, the objective "truth" is brought to a question. In the last decade, artists have been experimenting with the fakeness of the truth and the truthfulness of the fake by creating fake documents, staged marriages, an arguably authentic artifact, imaginary advertisements both historical and contemporary. What does it mean to tell the truth in the context of art? How does art cross the boundaries between the real and the fake, truthfulness and misrepresentation? This course will examine social engagement of art and how "truth" is treated, interpreted, and presented. The class will take a field trip to a propaganda museum, have readings and discussions, and analyze artists working with fiction as a medium in art making. Students will work on projects to construct believable reality through object making (3D fabrication) and narrative construction (audiovisual material). Prerequisites: Interaction Lab or Communication Lab or Application Lab. Satisfies IMA/IMB elective.

INTM-SHU 222
Introduction to Robotics

Since the beginning of civilization people have fantasized about intelligent machines sensing and acting autonomously. In this course we 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, as well as design and build 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, domotics 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 teamwork, the objective of this course is to share in the excitement of robotics by enabling students to make their own creations. By the end of the course, students will present a short research paper and documentation about their robotic explorations. Prerequisites of Course: Co/pre-requisite of Interaction Lab, Creative Coding Lab, or Application Lab (or by waiver from the instructor) This course satisfies CORE ED; IMA elective; IMB Interactive Media elective.

INTM-SHU 223
Programming Design Systems

Programming Design Systems is a course focused on the intersection between graphic design and code. Class time is divided between design topics like form, color, grid systems, and typography, and more computational topics like randomization, repetition, transformation and generative form. The students work to write software that abstract design theories into the code, and show the work in class for design critique. Weekly readings include relevant writings from the history of graphic design, articles from the history of computation, and everything in between. The class aims not only to teach the students how to create designs via code, but also to have something interesting to say about it. The course is based on the Programming Design Systems book, and more background info can be found in the book's introduction. Prerequisite: Communications Lab.

INTM-SHU 226
Artificial Intelligence Arts

Artificial Intelligence Arts is an intermediate class that broadly explores issues in the applications of AI to arts and creativity. This class looks at generative Machine Learning algorithms for creation of new media, arts and design. In addition to covering the technical advances, the class also addresses the ethical concerns ranging from the use of data set, the necessarily of AI generative capacity to our proper attitudes towards AI aesthetics and creativity. Students will apply a practical and conceptual understanding of AI both as technology and artistic medium to their creative practices. Prereq: Interaction Lab, Communications Lab, or Creative Coding Lab This course satisfies IMA elective; IMB Interactive Media elective.

INTM-SHU 227T
ABC Browser Circus

Welcome to the ABC Browser Circus (ABC), where acrobats juggle with hyperlinks, dance across scrolling grids and jump through open server ports. This course introduces the students to the history of the internet, the World Wide Web, and specifically to the browser as a cultural object and its role in (net)art; in parallel, students are guided to creative uses of the web. In three consecutive modules, the browser is interpreted as a blank canvas, a susceptible agent and as a window to other realities respectively. Technologies used in the ABC Browser Circus are advanced HTML, CSS and JavaScript as well as Node for server-side programming. Participants must have completed either Communications Lab or Creative Coding Lab (IMA Foundation Classes). Students are expected to comfortably apply fundamental programming concepts to solve problems. Prerequisites of Course: Communications Lab, Application Lab or Creative Coding Lab This course satisfies IMA/IMB elective.

INTM-SHU 228T
Digital + Sculpture

This course investigates and illuminates the concepts and the aesthetics of kinetic sculpture and installation art in various forms from creative and historical perspectives. Students will learn to regard sound and performance as part of a sculptural form and learn to work with space. Students will gain woodworking and digital fabrication skills to expand on their physical computing skills to create moving sculpture and installation. The course consists of lectures, readings, and hands-on studio work. Prerequisites of Course: Interaction Lab This course satisfies IMA/IMB elective.

INTM-SHU 236T
Art of Dissent

Students in this class will be asked to embrace Theodor Adorno's notion that, "All art is an uncommitted crime." First, we will explore the vibrant history of dissent in art, comics, design, film, literature, music, and emerging media through the consideration of work by artist dissidents such as Ai Weiwei, Cindy Sherman, Henry David Thoreau, Henry Rollins, Howard Cruse, Jenny Holtzer, Maya Angelou, Michael Moore, Václav Havel, and more. The work of these people is aimed at raising awareness, at disrupting the status quo, and at holding people, organizations, nations, and / or society itself accountable for wrongs committed. Next, students will individually create bold responses to something of concern for them by adopting the methods of a dissident from history or contemporary practice. Finally, we will form an artist collective and create a campaign of dissent aimed at creating positive change within the organization that we are all part of. This course satisfies IMA/IMB elective.

INTM-SHU 238
Toy Design and Prototyping

The emphasis of this class is on designing toys for play and entertainment, however toys are not only for kids. Toys are part of our culture, and an important medium to develop essential skills like creativity, problem-solving and socialization. They can also be a great contribution in education, medicine, and business and can improve the quality of life for children and adults alike. Students will be introduced to the essential concepts in designing toys and they will create their own by utilizing hand-making craft skills and new technologies. This course will equip students with a basic knowledge about various design topics, including: brainstorming; sketching; graphic design; concept development; mechanisms; 3D modeling; rendering and rapid prototyping. This is a hands on class, and students are required to bring their imagination in addition to a willingness to experiment and explore creative solutions for class assignments. Prerequisite or Corequisite: Interaction Lab

INTM-SHU 241
Creative Learning Design

In this course, students will work in teams to design digital learning resources and experience designs at the

intersection of music, coding, arts, and technology. The course will begin with an introduction to emerging trends in learner engagement and design-based research, especially related to web- and mobile-based musical experiences and principles of making music with new media. Innovations in and applications of musical creativity, interactive technologies, user-centered design & engagement, scaffolded learning, creative learning, pedagogies of play and making, and educational entrepreneurship in Chinese contexts will also be explored. The market for creative educational experiences in afterschool settings for youth in China is exploding. For-profit educational service companies are competing and searching for differentiated, learning experiences in music, coding, and creative project based learning that will attract high-paying parents looking for the best supplemental education for their children. This practical, hands-on course will explore questions such as: How can we design engaging, creative learning experiences that are relevant to the cultural goals and needs of today's youth in China, while laying the foundation for creative learning for the workforce of tomorrow? What are engaging, effective creative learning resources, and how are they best implemented in Chinese learning settings? How can we take advantage of young people's near ubiquitous love of music and technology to facilitate creative learning? Students will work together in teams and paired with a partner audience of learners and teachers in Shanghai drawn from local and regional international schools (e.g. Alibaba's Cloud Valley), local afterschool programs (e.g., Music Lab), and cultural partners (e.g., Shanghai Symphony). Together they will assess the needs and opportunities of partner students and teachers, and engage in a two-stage iterative and reflective co-design process prototyping custom learning resources and experience designs with their partner end users. At the end of the course, students will present and demo their learning resources as part of a public showcase to an external audience of partners, educators, technologists, musicians, entrepreneurs, and experience designers in Shanghai. Prerequisites: None. This course satisfies BUSF Non-Finance elective; BUSM Non-Marketing elective; IMA/IMB elective.

INTM-SHU 242
Exhibition: Next

Exhibition: Next class is an exploration and observation of the fields of exhibition design and museum studies. This class will explore how emerging and interactive technologies can be applied to museum and exhibition design to enhance visitors' experiences. What is an exhibition in a museum of today and how should it be experienced? What is the role of a museum in contemporary society? How does it engage the audiences of tomorrow? The class discusses curatorial practices, various exhibition concepts and forms, museum visitor experience, and exhibitions' social values. Students will visit and immerse themselves in many museums and exhibitions as a professional observer who will be asked to write reflections of their observations as an essay for each museum visit. Students will choose a research topic at the beginning of the class and they will start collecting materials, building objects, designing experiences, and writing a statement for their final exhibition based on this topic. Students' design work will be frequently reviewed and given feedback by the instructor, classmates, and guest speakers/critics. After the midterm, the instructor will initiate a collaboration with a local museum or art space. Based on the specific circumstances, students will face a design challenge to propose an exhibition proposal or provide a creative solution to the partner organization. By the end of the course, students will install and present their work as a group art show in the student art gallery. Prerequisites: Interaction Lab or Communication Lab. Satisfies IMA/IMB elective.

INTM-SHU 243
Introduction to Animation

Tangible heritage (site, object, and structure) and intangible heritage (motif, icon, character, textile, wardrobe, music, performance, language and ritual) are unseparated parts of the cultural heritage. The narrative and messaging of cultural heritage can be preserved by moving sequences, motion design and animation. The richness of heritage contents can be further disseminated and known by the dynamic media. This course aims to utilize animation and motion media to depict and preserve the richness of cultural heritage contents. 3D animation and motion graphics techniques will be addressed and applied to the storytelling. Students will be guided to research the Asian cultural heritage contents including the tangible and intangible heritage. They will further explore the visual design and production pipeline of animation. Visiting expert of interactive media design and intangible heritage performance will get involved to share the insights to the students. Prerequisites of Course: None. This course satisfies IMA/IMB elective.

INTM-SHU 247
Creative Game Design and Development

Many of us have played and enjoyed games. Have you ever wondered how people actually design and develop them? Can a games as a profession and practice be described? What are the basic theories, structures and skills involved in game development? How do game designers create compelling interactive experiences for the player? How do they respond to feedback, prototype and improve these experiences? This course explores these questions and others through playing, analyzing and making games over 14 weeks. Students will understand games not only as entertainment, production and business models, but as a form of mass interactive media and culture. Students will be introduced to game design concepts, emphasizing all stages of game development: paper and digital prototyping, iteration, interactive narrative design, object-oriented game programming, 3D/2D game art creation, sound effects composition and user testing. For the course project, students will work in teams and create games in multiple projects, from simple board games to a digital game with original game art, mechanics and other design elements. This course leverages multiple tools for game prototyping and design, but will focus on Unity, a game engine that uses C# based programming language, for game build-up. Pre- requisite: Application Lab, Interaction Lab, Communications Lab or Creative Coding Lab. This course satisfies IMA/IMB elective.

INTM-SHU 248
Introduction to Assistive Technology

Assistive technology is a term that includes a wide variety of technologies for people with disabilities. This two-point survey course is designed to provide students with an overview of the field of assistive technology. Field trips, readings, and guest speakers will provide students with an understanding of current research and development as

well as processes used in determining appropriate technologies. Weekly assignments and a final research project. Elective Category: Art & Design. Prerequisite: None

INTM-SHU 252
The Minimum Viable Product

Increasing possibilities brought about by emerging forms of technology and decreasing costs of connecting people to things have not only enabled innovative human-centered design, but also opened the door to new business models and products. Experimentation and calculated risk taking are keys to successfully harnessing the possibilities of today's most cutting-edge technologies and innovative methods to first build, understand and then redefine how humans and products interact. In this 7 week course, student 'co-founders' will conceive of and produce a new media, physical or technology product designed to delight their customers while also allowing them to accelerate and validate a business model. Students will 'get out of the classroom' and put these products into potential customers' hands. The course will touch upon topics such as how to design a minimum viable product, design a business model, talk and work with customers, and develop a product community. Prerequisite: None

INTM-SHU 254
Nature of Code

The Nature of Code is an intermediate course based on Daniel Shiffman's The Nature of Code course at NYU ITP and was adjusted for undergraduate students. This course explores the fundamentals of programming, such as Object-Oriented Programming, and the application of simple principles of mathematics and physics in order to recreate natural behaviors in a digital environment. Prerequisites: This class uses p5(p5js.org) and requires Interaction Lab, Communication Lab, Application Lab, or similar programming background. Knowledge of other languages, such as Processing, three.js and OpenFrameworks, is also encouraged. Satisfies IMA/IMB elective.

INTM-SHU 266
Digital Heritage

This course investigates and explores the integration between cultural heritage and digital conservation (de-noise through digital sculpting, laser scanning, photogrammetry, infographics,…etc.), specifically towards the objects, deities, and sites of China. Through the reflection of Chinese cultural heritages under technical perspective, the course raises the awareness of heritage conservation and critical heritage studies.
Prerequisite: None

INTM-SHU 267
The Cultivated City

This class examines the religious and philosophical idea and practices of cultivation. It does so by investigating a range of material, including the urban garden traditions of the Jiangnan region, the Buddhascapes of the modern city, Taoist inner alchemy and new Confucian thought. This conceptual analysis is then used as a basis for researching the urban ecology of Shanghai, both as a past and future city.
Cultivated City aims to interrogate the nature-culture split. The idea that nature (including human nature) is improved or enhanced by cultivation challenges an entrenched dichotomy, which views nature in its ideal state as wild and unspoilt, and existing in opposition to 'cultural construction'. Instead, the class explores novel ways of integrating the 'natural' and 'urban' environment. Cultivated City combines theory with practice. It uses the tools of interactive media (audio, video and cartographic technologies) to research, map and narrativize the ways in which architects, designers, artists and intellectuals engage with the traditional art and practices of cultivation in order to imagine and recreate the future metropolis. Prerequisite: None.

INTM-SHU 268
Acoustic Ethnography of the Yangtze River Delta

We live in a world immersed in sound yet we rarely attend to how sound can reflect our social structure or reveal cultural meaning. This course introduces students to acoustic ethnography, soundscape studies and narrative, non-narrative audio storytelling. We will gather and analyze the acoustic environment of China, using them to create ethnography through text and sound. Ethnography (literally, "culture-writing") is both the act of gathering data about culture through observation and interviews as well as the practice of writing analytically about cultural difference. Visual ethnography incorporates the analysis of visual and material aspects of our social environment into creative, multimedia rich projects. With an ethnographic approach to sound, we will document the rich tapestry of sounds around us, in the context of the Yangtze River Delta region and think about how this conveys China's culture, society and history. Through lectures, discussion, readings, listening assignments, field studies and projects, we will re-learn how to listen, observe and record the sounds in our environment. We will study Chinese sound art and Chinese cultural productions in music, film, television and multimedia installation. We will contextualize Chinese sound art against major theoretical approaches to sound including archives and preservation, form vs. content, and social studies of science. Students will work collaboratively or individually on a final project that combines sound recording and production, to create an ethnographic analysis of an aspect of social and cultural life in the Yangtze River Delta region. Students will gain experience in gathering ethnographic data and transform it into an analytical or creative project integrating, sound art and text. Prior knowledge to sound editing and Chinese language is not required. Prerequisite: None.

INTM-SHU 271
Remade in China

Re-make: make (something) again or differently. In this class students will investigate why China became the world's largest importer of waste. They will study local communities in China, how they manage their waste, and explore innovative ways to transform discarded materials or products around us into something new and precious in areas

such as art, graphic and industrial design, architecture, fashion, textiles, etc,. Through research and development, students will learn how traditional techniques and new technologies among the sustainable design philosophy can be utilized as powerful tools for addressing social and environmental problems. Prerequisites of Course: None. This course satisfies IMA elective; IMB Interactive Media elective.

INTM-SHU 280C
VR/AR Fundamentals

Virtual Reality and Augmented Reality represent visions of "immersion" through the use of various channels such as visual, audio, haptic, and even smell and taste (and maybe mind). These visions are not new, but new technologies have made it possible to produce experiences unlike anything before, particularly through the use of headsets, spatial audio, touch sensors, and custom "location-based" installations. These new technologies are becoming small, powerful, and inexpensive, and as a result we are witnessing the birth of a powerful new medium, new artform, and new industry - all very quickly. The speed of VR and AR growth has created both opportunity and confusion. "VR / AR Fundamentals" takes a long, deep perspectives. We will overview such basic elements resolution and fidelity; spatiality and immersion; extra senses such as touch, smell, taste (and even mind); input and interactivity; and live and social. We'll look at distinctions such as cinema versus games, movies versus models, public versus personal, real world versus fantasy worlds, linear versus interactive, and narrative versus ambient. These elements and distinctions will be presented partially as technical but in an understandable way for general liberal arts students, and will rely heavily on experiencing content and keeping up with current events. In addition to "big ideas," VR / AR Fundamentals aims to contribute to "a practical guide" by collectively producing a series of timely and relevant "studies," all short, entertaining, and useful to others exploring the world of VR / AR. Prerequisite: None.

INTM-SHU 280D
Realtime Audiovisual Performance Systems

From the history of visual music and abstract film to the contemporary notion of live cinema, this course will be an exploration of the synesthetic relationship between sound and visuals in a realtime performance setting. Dating back as far as the 18th century, systems have been invented to produce images alongside music linking the two through formalized arrangements. Current media technologies make developing such systems both more approachable and more expansive in their scope. Through readings, viewings, and case studies students will gain an understanding of the history and theory of live audiovisuals. During the course students will team up to develop and master a real-time audiovisual system of their own invention. The class will culminate in a show in which they will present their work through a live performance. Prereq: Interaction Lab, Communications Lab or Creative Coding Lab This course satisfies IMA/IMB elective.

INTM-SHU 280E
Topics in New Media & Entertainment: Aesthetics for New Realities

A workshop course in which teams of students will develop new works by exploring how new forms of media such as virtual, augmented and mixed reality are platforms for new aesthetic possibilities. Digital cinema, computer games, virtual reality and augmented reality share many common methods in the production of their content, with default assumptions about how they differ from each other. Approaching this as a range of expressive possibility gives a basis for more original and thoughtful approaches, including those that are less defined by existing categories as well as those that are more innovative within categorical norms. New ways of making cinema should lead to new kinds of expressions, while the emergence of virtual reality needs aesthetics that evoke more of its possibilities than the recapitulation of cinematic story-telling or video game interactivity. This class will use an iterative process of ideation and prototyping as it engages and develops the methods of narrative, interactivity, immersion, experience, imagination, spatiality and temporality. Readings and lectures will provide context with the history of art, literature, music. Prerequisite: App Lab, Comm Lab, Inter Lab, Creating Immersive Worlds or AR/VR Fundamentals.

INTM-SHU 283
Locative Media

With the rise of mobile computing platforms such as smart phones and tablets, location has suddenly become a key element in the production and consumption of media. In this online course, designed for NYU Shanghai Interactive Media Arts majors studying abroad, students will be encouraged to simultaneously explore their unique study away site, as well as to consume, research, critique, and create location-based media for mobile devices. Students will be introduced to GPS (Global Positioning System) technologies through activities such as geocaching and GPS drawing. We will next investigate geocoding, geotagging, and geofencing through the application of JavaScript mapping platforms CartoDB and Google Maps. Students will then explore an emerging technology known as Bluetooth Beacons, which can be used to create custom positioning systems and to facilitate location awareness in mobile devices. Students will be asked to then produce, as a final project, a game that engages participants in a location or locations, as well as in locative media in any number of forms. Note: This is an online course featuring both synchronous and asynchronous learning opportunities. Registration is limited to IMA/IMB Majors studying at NYU's global sites other than New York or Abu Dhabi. Please email ima@nyu.edu for the permission of department consent.

INTM-SHU 284
Digital Sculpting for Facial Animation

This course emphasizes on the 3D animation through digital modeling / sculpting techniques, keyframe and blend-shape animation . The course breaks down into 4 stages : 1. basic topology of head model, 2. high-poly sculpting and projection texturing, 3. Keyframe and blend-shapes animation, 4. 3D animation final project. In the final project, students get to choose either lip-sync animation or conceptual piece utilizing the created head models. An overview of digital editing / compositing and sound design will also be introduced to assist with students' final project at the

end of the semester. Prerequisites of Course: None. This course satisfies IMA/IMB elective.

INTM-SHU 289
Exploring & Creating Sonic Environments

Sound is all around us. The way we perceive or experience these sounds are largely dependent upon their environments, whether artificially constructed or naturally present. In this studio-based course, students will learn about the development of sound art through readings and listenings by artists, musicians and designers who investigate our sonic environment through sound sculptures, multi-channel immersive installations, soundscapes, audio tours, podcasts and field recordings. The course will begin with an introduction into the physics of sound with time for deep listening exercises. We will read selected texts and listen to pieces by those working in the field of Acoustic Ecology, an interdisciplinary field that employs ethnographic practices to create sound studies or art. We will look at artists who employ narrative techniques to engage the audience. We will study musicians such as Alvin Lucier and John Cage and the history of experimental music that takes into consideration the physical space its recorded or played in. There will be weekly exercises that will help develop the student's spatial awareness of sound and music. We will take listening and recording trips into the field to understand the acoustic urban environment. We will use different types of microphones such as hydrophones and binaural mics. Students will learn how to build their own contact microphones. Students will have the opportunity to create works for multi-channel speakers. The final project can take on any form within the realm of sound art--multimedia, narrative, non-narrative, music, installation. Pre-requisite: Communications Lab or Interaction Lab. This course satisfies IMA/IMB elective.

INTM-SHU 296
The Planetary: Computation in the Anthropocene

"This course will examine the relationship between planetary-scale computation and the development of planetarity. We take as starting points that (1) the very notion of climate change is an epistemological accomplishment of planetary-scale sensing, modeling and computation systems and (2) the ecological costs of computation are on an unsustainable trajectory. The seminar will ask: what are alternative futures for computation as human and ecological infrastructure? The primary subject of research is the transition from computation as a digital media object to computation as continental scale infrastructure. The scope and significance of this shift are fundamental for the development of interactive art and design that seeks to explore critical alternatives to extant models for this. What we call planetary-scale computation takes different forms at different scales—from energy and mineral sourcing and subterranean cloud infrastructure to urban software and massive universal addressing systems; from interfaces drawn by the augmentation of the hand and eye to users identified by self—quantification and the arrival of legions of sensors, algorithms, and robots. Each of these may represent a direct harm upon effected ecosystems and/or a means for and informed viable administration of those same systems. The course is primarily geared to advanced IMA students but is open to students from any major who are interested in engaging with contemporary issues of computation, society and ecology. Final projects will combine original written work and speculative design that can draw on diverse student core skill sets." Prerequisites of Course: Interaction Lab, Communications Lab, Creative Coding Lab, Application Lab or What is New Media. This course satisfies IMA/IMB elective; HUMN Digital Approaches.

INTM-SHU 400
Capstone Studio I - Interactive Media Arts

Capstone 1 is the first of two classes that give students the opportunity to research, design, make and test an individual interactive media project. Students will work independently (with faculty guidance) to research and write the first half of a Project Proposal to contextualise their ideas. In addition to this, students will also develop a functional proof of concept of their final project that will be tested with participants and also presented to a group of peers and faculty. Prerequisite: Senior Standing

INTM-SHU 401
Capstone Studio II - Interactive Media Arts

Capstone II is the the second of two classes that give students the opportunity to research, design, make and test an individual interactive media project. Students will work independently (with faculty guidance) to research and write the final half of a Project Proposal. In addition students will build on their existing projects from Capstone I to further develop their work into a final project that will be tested with participants and presented to a group of faculty and peers. Prerequisite: Senior Standing, Completion of Capstone I (INTM-SHU 400)

Mathematics

MATH-SHU 5
Chance

Chance is a common word whose meaning can vary, but which generally applies to situations involving a certain amount of unpredictability. How does it differ from fortune – or luck? Is it synonymous with randomness? We all try to increase our chances of success; how do such efforts involve taking or minimizing certain risks? If philosophical discussions about chance can be traced back to antiquity, probabilistic and statistical concepts appeared more recently in mathematics. Starting with gambling strategies, the theory now applies to the core of almost all scientific and technical fields, including statistical and quantum mechanics, chaotic dynamics, phylogenetics, sociology, economics, risk management, and quality control. Bringing together materials and questions from philosophy, mathematics, and other disciplines, this course provides a journey in the history of ideas. Students will investigate key concepts (including independence, expectation, confidence intervals, or tests), consider their applications to specific fields of science, and illustrate them by co

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 are also covered. Prerequisite: None

MATH-SHU 10
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, proofs, 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 131
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: Pre-placement by faculty based on high-school grades, or NYUSH "Calculus and Linear Algebra" placement exam, or grade C or better in MATH-SHU 9 (Precalculus). Anti-requisite: MATH-SHU 201 (Honors Calculus).

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, eigevectors 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: Pre-placement by faculty based on high-school grades, or NYUSH "Calculus and Linear Algebra" placement exam, or grade C or better in MATH-SHU 9 (Precalculus). Anti-requisite: MATH-SHU 141 (Honors Linear Algebra I).

MATH-SHU 141
Honors 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: Pre-placement by Faculty based on high-school grades, or NYUSH "Honors Calculus and Honors Linear Algebra" placement exam, or authorization of the instructor.

MATH-SHU 142
Honors 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, psuedoinverses, 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 C or better in either MATH-SHU 131 (Calculus) or MATH-SHU 201(Honors

Calculus), And Grade C or better in MATH-SHU 141 (Honors Linear Algebra I), or grade C or better in MATH-SHU 140 (Linear Algebra) and grade C or better in MATH-SHU 143 (Foundations of Mathematical Methods), or authorization of the instructor.

MATH-SHU 143
Foundations of Mathematical Methods

This course is an introduction to the tools of mathematical reasoning, which serves as a solid basis for advanced courses emphasizing proofs and abstraction. Topics include formal logic, sets, relations, and functions, proof techniques, cardinality, complex numbers, combinatorics, discrete probability. Prerequisite: Grade C or better in MATH-SHU 131 (Calculus), and grade C or better in either MATH-SHU 140 (Linear Algebra) or MATH-SHU 141 (Honors Linear Algebra I). Anti-requisite: MATH-SHU 201 (Honors Calculus).

MATH-SHU 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 C or better in either MATH-SHU 131 (Calculus) or MATH-SHU 201 (Honors Calculus). Anti-requisite: MATH-SHU 329 (Honors Analysis II).

MATH-SHU 160
Networks and Dynamics

Today, networks and dynamics play fundamental roles throughout science, engineering and the social sciences. This is a post-calculus mathematics course that is designed to prepare students to understand the mathematical behavior of networks and dynamics as the students enter a broad set of majors -- from mathematics, the natural sciences and engineering through the social sciences such as economics and finance. The preliminary goal is to address the following challenge: today's science and society at large requires us to understand complex networks (be it genetic network that makes us who we are, neural network underlying our brain functions, social network of friends through Facebook or WeChat) and how the behavior of such a complex network evolves in time. The language for providing a scientific understanding of such systems is the mathematics of network theory and dynamical systems theory. This course will introduce analytical methods and mathematical models from network and dynamical systems theory toward understanding dynamical network behavior. Prerequisite: Grade C or better in either MATH-SHU 131 (Calculus) or MATH-SHU 201 (Honors Calculus), and grade C or better in either MATH-SHU 140 (Linear Algebra) or MATH-SHU 141 (Honors Linear Algebra I).

MATH-SHU 201
Honors Calculus

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: Pre-placement by Faculty based on high-school grades, or NYUSH "Honors Calculus and Honors Linear Algebra" placement exam, or grade A- or better in MATH-SHU 131 (Calculus), or authorization of the instructor. Anti-requisite: MATH-SHU 143 (Foundations of Mathematical Methods)

MATH-SHU 226
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-SHU 141 and MATH-SHU-G 2430 OR 339.

MATH-SHU 227T
Introduction to Functional Analysis

This course introduces the main notions and concepts of functional analysis. It gives special emphasis to function spaces used in practice, including Hilbert, Hardy, and Sobolev spaces.

MATH-SHU 233
Honors 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 approximations, random variables, probability distributions, generating functions, and Markov chains and their applications. Prerequisite: Grade C or better in either MATH-SHU 151 (Multivariable Calculus) or MATH-SHU 329 (Honors Analysis II), and grade C or better in either MATH-SHU 140 (Linear Algebra) or MATH-SHU 141 (Honors Linear Algebra I)

MATH-SHU 234
Mathematics of Statistics

This course offers an introduction to mathematical statistics. It covers the essential topics of statistics including point estimation, interval estimation, Bayesian inference, hypothesis testing, and linear and logistic regression. This class requires a good prior understanding of probability theory, calculus, and linear algebra.Prerequisite: Grade C or better in either MATH-SHU 140 (Linear Algebra) or MATH-SHU 141 (Honors Linear Algebra I), and grade C or better in either MATH-SHU 235 (Probability and Statistics) or MATH-SHU 233 (Theory of Probability).

MATH-SHU 235
Probability and Statistics

This course comprises a combination of the theory of probability 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 C or better in either MATH-SHU 131 (Calculus) or MATH-SHU 201 (Honors Calculus). Anti-requisite: MATH-SHU 233 (Theory of Probability).

MATH-SHU 236
The Mathematics of Statistics and Data Science and Machine Learning

This is an advanced topic course for undergraduate students interested in the modern mathematics of data science and machine learning. Tentative topics include dimension reduction and data visualization, the geometry of high dimensional data, and optimization-based data analysis. Topics may change every year to reflect the current research trends. The course requires an excellent understanding of advanced calculus, linear algebra, and probability theory. Programming skills and knowledge in optimization are strongly recommended but not required. Prerequisite: Grade C or better in either MATH-SHU 140 (Linear Algebra) or MATH-SHU 141 (Honors Linear Algebra I), and grade C or better in either MATH-SHU 151 (Multivariable Calculus) or MATH-SHU 329 (Honors Analysis II), and grade B or better in either MATH-SHU 233 (Theory of Probability) or MATH-SHU 234 (Mathematical Statistics), or authorization of the instructor.

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 C or better in either MATH-SHU 131 (Calculus) or MATH-SHU 201 (Honors Calculus).

MATH-SHU 250
Mathematics of Finance

This course is an introduction to the mathematics of finance. Topics: linear programming with application to pricing. Interest rates and present value. Basic probability, random walks, central limit theorem, Brownian motion, log-normal model of stock prices. Black-Scholes theory of options. Dynamic programming with application to portfolio optimization. Prerequisite: Grade C or better in either MATH-SHU 151 (Multivariable Calculus) or MATH-SHU 329 (Honors Analysis II), and grade C or better in either MATH-SHU 235 (Probability and Statistics) or MATH-SHU 233 (Theory of Probability).

MATH-SHU 251
Introduction to Math Modeling

Formulation and analysis of mathematical models. Mathematical tools include dimensional analysis, optimization, simulation, probability, and elementary differential equations. Applications to biology, economics, other areas of science. The necessary mathematical and scientific background is developed as needed. Students participate in formulating models as well as in analyzing them. Prerequisites: Grade C or better in either MATH-SHU 151 (Multivariable Calculus) or MATH-SHU 201 (Honors Calculus), and grade C or better in either MATH-SHU 140 (Linear Algebra) or MATH-SHU 141 (Honors Linear Algebra I).

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 C or better in either MATH-SHU 131 (Calculus) or MATH-SHU 201 (Honors Calculus,) and grade C or better in either MATH-SHU 140 (Linear Algebra) or MATH-SHU 141 (Honors Linear Algebra I). Note: A previous knowledge of mathematical logic is recommended, for instance at the level of MATH-SHU 143 (Foundations of Mathematical Methods) or MATH-SHU 201 (Honors Calculus).

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 C or better in either MATH-SHU 131 (Calculus) or MATH-SHU 201 (Honors Calculus), and grade C or better in either MATH-SHU 140 (Linear Algebra) or MATH-SHU 141 (Honors Linear Algebra I). Anti-requisite: MATH-SHU 362 (Honors Ordinary Differential Equations).

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 C or better in either MATH-SHU 262 (Ordinary Differential Equations) or MATH-SHU 362 (Honors Differential Equations), and grade C or better in either MATH-SHU 151 (Multivariable Calculus) or MATH-SHU 329 (Honors Analysis II).

MATH-SHU 265
Linear Algebra and Differential Equations

This course is an introduction to linear algebra and ordinary differential equations. Topics covered include the fundamental concepts of linear algebra such as matrix theory, determinants, vector spaces, subspaces, basis, linear transformations, eigenvectors, eigenvalues and the inner product spaces, as well as the fundamental techniques of ordinary differential equations such as first order differential equations, linear differential equations and systems. Prerequisites: Grade C or better in either MATH-SHU 131 (Calculus) or MATH-SHU 201 (Honors Calculus). Anti-requisite: MATH-SHU 140 (Linear Algebra); MATH-SHU 141 (Honors Linear Algebra I); MATH-SHU 262 (Ordinary Differential Equations); MATH-SHU 362 (Honors Ordinary Differential Equations).

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 continuations, and applications to fluid flow. Prerequisite: Grade C or better in either MATH-SHU 151 (Multivariable Calculus) or MATH-SHU 329 (Honors Analysis II), and grade C or better in either MATH-SHU 140 (Linear Algebra) or MATH-SHU 141 (Honors Linear Algebra I).

MATH-SHU 328
Honors Analysis I

This course is a continuation of Honors Calculus. 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 C or better in MATH-SHU 201 (Honors Calculus), or grade A- or better in MATH-SHU 131 (Calculus) and A- or better in MATH-SHU 143 (Foundations of Mathematical Methods), or authorization of the instructor.

MATH-SHU 329
Honors 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 C or better in MATH-SHU 328 (Honors Analysis I), and Grade C or better in MATH-SHU 141 (Honors Linear Algebra I), or authorization of the instructor.

MATH-SHU 339
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, Lp and Hilbert spaces, the Riesz representation theorem, and Fourier series. Prerequisite: MATH-SHU 328 Honors Analysis I or MATH-SHU 329 Honors Analysis II. Honors Analysis II is preferred. This is a high level course in analysis which requires a very good background in proving theorems. Students who did not have a high grade in Honors Analysis I or Honors Analysis II are strongly encouraged to consult the course instructor to see whether they have enough background. Prerequisite: Grade C or better in MATH-SHU 328 (Honors Analysis I).

MATH-SHU 345
Introduction to Stochastic Processes

This is an introductory course in stochastic processes. Stochastic processes are widely used as modeling tools in many fields of application, including finance, physics, biology and engineering. The course will include an

introduction to measure theory, the basic theory of discrete and continuous time Markov chains, branching processes, Poisson point processes Brownian motion and martingales. In the final part of the course, more advanced topics such as stochastic integrals, free fields, Markov loops and Ising model may be included as time permits and according to the background of the students. Prerequisites: Grade C or better in either MATH-SHU 140 (Linear algebra) or MATH-SHU 141 (Honors Linear Algebra I), and grade C or better in either MATH-SHU 235 (Probability and Statistics) or MATH-SHU 233 (Theory of Probability).

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. Prerequisites: Grade of C or better in MATH-SHU 151(Multivariable Calculus) and MATH-SHU 140 (Linear Algebra), or MATH-SHU 141 (Honors Linear Algebra) and MATH-SHU 329 (Honors Analysis II).

MATH-SHU 349
Abstract Algebra I

This introduction to abstract algebra introduces the notions of group, ring, and field. Topics covered include symmetric and linear groups, the Sylow theorems, polynomial and quotient rings, ideals, unique factorization, the Nullstellensatz, field extensions and finite fields. Prerequisite: Grade C or better in MATH-SHU 141 (Honors Linear Algebra I), or grade B or better in MATH-SHU 140 (Linear algebra) and grade C or better in either MATH-SHU 201 (Honors Calculus) or MATH-SHU 143 (Foundations of Mathematical Methods), or authorization of the instructor.

MATH-SHU 350 | 350T
Probability Limit Theorems

The goal of this course is to introduce the main ideas of advanced probability: rigorous treatment of conditional expectation and martingales, weak convergence, strong law of large numbers, central limit theorem, convergence to infinitely divisible distributions, law of iterated logarithm, Markov Chains, stationary stochastic processes, ergodic theorems.

MATH-SHU 351T
Mathematical Models in Biology and Finance

This is a two part course that will expose students to current mathematical models based on stochastic differential equations, both from the mathematical and numerical points of view. Students will learn the notion of stochastic differential equation and study different equations proposed to describe biological phenomenon and the evolution of financial markets. Students will compare different methods to integrate numerically these equations and illustrate them in some concrete applications.

MATH-SHU 362
Honors Ordinary Differential Equations

This course introduces the main ideas of ordinary differential equations, with a particular emphasis on proofs, in comparison with the course MATH-SHU 262. It will cover vector fields, proof of local existence and uniqueness of solutions of first-order differential equations by Picard's fixed point iteration, stability, higher order linear differential equations and their set of fundamental solutions (with proof of characterization by the Wronskian), Series Solutions of second order linear differential equations (ordinary points, proof of Fuchs Theorem, regular singular points and indicial equation), Laplace transform and numerical methods, nonlinear systems, boundary value problems. Prerequisite: Grade C or better in MATH-SHU 201 (Honors Calculus), or MATH-SHU 131 (Calculus) and MATH-SHU 143 (Foundations of Mathematical Methods), and grade C or better in either MATH-SHU 140 (Linear Algebra) or MATH-SHU 141 (honors Linear Algebra I).

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: Grade C or better in MATH-SHU 328 (Honors Analysis I).

MATH-SHU 377
Differential Geometry

This course investigates the differential properties of curves and surfaces. Topics covered include differential manifolds and Riemannian geometry. Prerequisite: Grade C or better in MATH-SHU 329 (Honors Analysis II), or authorization of the instructor.

MATH-SHU 997
Independent Study

Mathematics Students majoring in mathematics are permitted to work on an individual basis under the supervision of a full-time or visiting faculty member in the department if they have maintained an overall GPA of 3.0 and a GPA of 3.5 in mathematics and have a study proposal that is approved by a mathematics professor. Students are expected to spend

about two to three hours a week per credit (a 4-credit IS would involve about ten to twelve hours a week) on their project.

MATH-SHU-G 2550
Functional Analysis

Prerequisite: Grade C or better in MATH-SHU 339 (Real variables), or authorization of the instructor

NEUR-SHU 10
Free Will and the Brain

"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 100
Math Tools for Life Sciences

This course will provide a broad introduction to basic mathematical and statistical tools for a quantitative analysis in the life sciences. It will cover a broad range of topics, including introduction to linear algebra, probability, linear regression, and statistical tests. We will use the mathematical programming language MATLAB for in-class demonstrations, computer lab during recitations and homework assignments. Prerequisite:Foundations of Biology I and/or Foundations of Biology II (or permission by the instructor)

NEUR-SHU 170 | NEUR-SHU 999.1
Introduction to Theoretical Neuroscience

This course will provide a broad introduction to basic mathematical and statistical tools for a quantitative analysis in the life sciences. It will cover a broad range of topics, including introduction to linear algebra, probability, linear regression, and statistical tests. We will use the mathematical programming language MATLAB for in-class demonstrations, computer lab during recitations and homework assignments. Prerequisite:Foundations of Biology I and/or Foundations of Biology II (or permission by the instructor)

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: BIOL-SHU 21 BIOL-SHU 22 Foundations of Biology II

NEUR-SHU 210
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.

NEUR-SHU 222
Perception

How do humans and other animals obtain knowledge about the world? It is easy to take perception for granted, but complex processes (only partly understood) underlie our ability to understand the world by seeing, hearing, feeling, tasting, and smelling it. Perception has fascinated philosophers, physicists, and physiologists for centuries. Currently, perception is a central topic not only in neuroscience, but also in psychology, cognitive science, and computer science. How do scientists approach perception? We seek to discover lawful relations between perceptual experiences and the physical world and to develop models of the processes and mechanisms that produce these connections. To accomplish this, we need accounts of the information, the computational processes, and the neural mechanisms involved in perception. In this course, we will discuss fundamental problems in perception (primarily vision), and learn about techniques that are applied in attempts to solve these problems. The learning outcomes of this course include a better understanding of human perception and critical thinking skills for the analysis and interpretation of the related research reports. PREREQUISITE COURSES Introduction to Neural Science or Introduction to Psychology. The prerequisite can be waived based on the student's background. Contact the course instructor directly for this request.

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-SHU 201 (Introduction to Neural Science).

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 development language disorders, including aphasias, 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 270
Introduction to Theoretical Neuroscience

This course introduces students in neuroscience and mathematics to theoretical studies of neural systems. The course material is models of the nervous system at many different levels, including the biophysical, the circuit and the systems levels for biological sensing, motor control, perception, and learning. We will follow the classic textbook, "Theoretical neuroscience" by Dayan and Abbott.
This broad introduction of topics in computational neuroscience aims to provide initial guidance for students to choose the computational approach to describe and analyze the data. The students will be encouraged to read the references and utilize the online materials before the lectures so that the students can participate in the discussion during the class. Mathematical tools in probability and differential equations and programming in Matlab will be introduced as needed within the course. Prerequisite: Undergraduates: Mathematical Tools for Life Sciences (NEUR-SHU 100 1) or permission by the instructor. Graduates: Mathematical Tools for Neural and Cognitive Science (NEURL-GA.2201), or permission by the instructor.

NEUR-SHU 305
Special Topics: The Meaning of Natural Language. Perspectives from Linguistics, Cognitive Neuroscience, and Computer Science

Humans are animals of meaning. Among all kinds of interpretive activities – from recognizing bird songs and dog barks to appreciating impressionist artwork, the most human-specific is the use of language: with a limited number of symbols, humans can encode and convey an unlimited number of ideas with varying complexities, from concrete entities as simple as red boat to hypothesized models as intricate as artificial neural networks.How do we describe and analyze natural language meaning? How does our brain support the processing of natural language meaning? How can we make machines understand natural language meaning? This course seeks to provide a general introduction to current research on (the representation and/or processing of) natural language meaning, drawing on and bridging three different disciplines: formal linguistics, cognitive neuroscience, and computer science. Lectures cover (i) the modeling of natural language meaning in formal linguistics, (ii) hypothesized brain mechanisms underlying the processing of natural language meaning, (iii) main computational techniques that perform natural language understanding tasks, (iv) and cutting-edge research on bringing together interdisciplinary views. Prerequisites: Students are expected to have taken core courses in the first two years of NYU Shanghai curriculum, including Introduction to Neuroscience. Otherwise, students should first ask for the instructor's permission. (contract Professor Linmin Zhang - linmin.zhang@nyu.edu)

NEUR-SHU 401
Neural Science Honors Seminar

Students attend regular meetings to learn research basics and discuss recent advances in neuroscience and research related issues. Prerequisite: Students must have completed (or enrolled in) all remaining major requirements. Open only to students qualified and having been recommended by the Director of Undergraduate Studies for Neural Science.

NEUR-SHU 997
Independent Study I - Neural Science Capstone

Prerequisite: All Neural Science Major Required Courses (Introduction to Neural Science, Cellular and Molecular Neuroscience, Behavioral and Integrative Neuroscience, Math Tools for Behavioral Science), permission of a neural science faculty member (at NYU-Shanghai, NYU-Abu Dhabi, or NYU-New York) who will act as a sponsor and mentor, and approval of the Director of Undergraduate Studies for Neural Science. The faculty mentor must be selected in consultation with the Director of Undergraduate Studies for Neural Science. Offered in Fall or Spring. Can be repeated once. 2 to 4 credits per term for a maximum of 8 credits. Minimum 4 credits are required to fulfill the capstone course requirement.
This course aims at engaging students in research. Taking the course for 4 credits requires 10-12 hours spent on conducting research per week (2 credits requires 5-6 hours per week). It is designed to offer students an opportunity to observe neuroscience research up close and gain hands-on research experience by working as a member in an active research team. Independent Study I and II can be done with the same supervisor or two different supervisors. No lectures will be given. Student researchers are expected to attend and actively participate in lab/supervision meetings.

NEUR-SHU 998
Independent Study II - Neural Science

Prerequisite: All Neural Science Major Required Courses (Introduction to Neural Science, Cellular and Molecular Neuroscience, Behavioral and Integrative Neuroscience, Math Tools for Behavioral Science), permission of a neural science faculty member (at NYU-Shanghai, NYU-Abu Dhabi, or NYU-New York) who will act as a sponsor and mentor, and approval of the Director of Undergraduate Studies for Neural Science. The faculty mentor must be selected in consultation with the Director of Undergraduate Studies for Neural Science. Offered in Fall or Spring. Can be

repeated once. 2 to 4 credits per term for a maximum of 8 credits. Minimum 4 credits are required to fulfill the capstone course requirement.

This course aims at engaging students in research. Taking the course for 4 credits requires 10-12 hours spent on conducting research per week (2 credits requires 5-6 hours per week). It is designed to offer students an opportunity to observe neuroscience research up close and gain hands-on research experience by working as a member in an active research team. Independent Study I and II can be done with the same supervisor or two different supervisors. No lectures will be given. Student researchers are expected to attend and actively participate in lab/supervision meetings.

PHYS-SHU 11
General Physics I

This is an introductory physics course covering primarily mechanics and thermodynamics. The mechanics component will cover Motion along a Straight Line, Motion in Two and Three Dimensions, Newton's laws of motion, Forces, Kinetic Energy and Work, Potential Energy and Conservation of Energy, Center of Mass and Linear Momentum. The thermodynamics component will cover Temperature, Heat, and the First Law of Thermodynamics, The Kinetic Theory of Gases, Entropy and the Second Law of Thermodynamics. In addition, some introduction to the foundations of physics such as vectors and measurement will be given. In addition to the course material, the students will do open-ended research projects that encourage creative applications of physics concepts. Prerequisite OR Co-requisite: MATH-SHU 131 or MATH-SHU 201

PHYS-SHU 12
General Physics II

This course is an introduction to electricity and magnetism, light, geometrical and wave optics. Many concepts from General Physics I will be used in this course such as velocity, acceleration, force, Newton's laws of motion, work and energy. The course uses high school algebra, geometry and trigonometry, vectors and vector arithmetic, and some basic calculus. The algebra, geometry, and trig are essential. The course has lecture, homework and laboratory components. Prerequisite: PHYS-SHU 11

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. Prerequisite OR Co-requisite: Physics I OR Found of Physics Honors I.

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, Equilibrium, Stability, Elasticity, Oscillations and Harmonic Motion, Special Relativity. Prerequisite OR Co-requisite: MATH-SHU 131 or MATH-SHU 201.

PHYS-SHU 93
Foundations of Physics II Honors

Continuation of Foundation of Physics I. Topics include electric charge and electric field, electric potential, Gauss's law, capacitor, current, circuits, magnetic fields, induction, electromagnetic waves, and Maxwell's equations (in an integral form). This is the second semester of a four-semester calculus-based introduction to Physics, and is intended for physics majors and other interested students. Prerequisite: Foundation of Physics I Honors (PHYS-SHU 91), Freshman Math (including linear algebra, vectors, linear vector spaces and matrices, functions of several variables, partial derivatives, multiple integrals).

PHYS-SHU 94
Physics II Lab

 This laboratory course is to accompany Physics II lecture PHYS-SHU 12. Experiments in electricity and magnetism, and optics are chosen to illustrate the experimental foundations of physics presented in the lecture courses. The laboratory will also emphasize scientific writing. Prerequisite: Foundation of Physics I Laboratory (PHYS-SHU 71)

PHYS-SHU 95
Foundations of Physics III Honors

Continuation of Foundation of Physics II. Topics include thermodynamics, kinetic theory, statistical physics, wave motion, sound, reflection, refraction, interference, diffraction, polarization of light. This is the third semester of a four-semester calculus-based introduction to Physics, and is intended for physics majors and other interested students. The lectures serve as an introduction, and the real work of learning starts when you do the homework and recitation. The lectures will be most useful to you if you ask questions when there is something you do not understand. Do not imagine that you are the only person in the room who does not understand something. The most important part of the class is the homework you do. You learn more physics by doing the homework and recitation than from the lecture. I encourage you to work together with one or more friends on the homework assignments. It is more enjoyable that way, and you learn by explaining things to each other. Prerequisite: Physics I OR Found of Physics Honors I

PHYS-SHU 96
Foundations of Physics IV Honors

Continuation of Foundation of Physics III. Topics include Relativity, Photon, Quantum Mechanics, Molecules and Condensed Matter, Nuclear Physics, Particle Physics and Cosmology. This is the fourth semester of a four-semester calculus-based introduction to Physics, and is intended for physics majors and other interested students. Prerequisite: PHYS-SHU 95.

PHYS-SHU 106
Mathematical Physics

Mathematics is the language of physics. In this course, students will understand the advanced mathematical methods most widely used in physics and extend their skills by practice. On completion, successful students will be able to understand and proficiently use (1) vector and matrix algebra, (2) ordinary and partial differential equations, and (3) functions of complex variables. The lectures serve as an introduction, and the real work of learning starts when you do the homework. The lectures will be most useful to you if you ask questions when there is something you do not understand. Do not imagine that you are the only person in the room who does not understand something. The most important part of the class is the homework you do. You learn more physics by doing the homework than from the lecture. I encourage you to work together with one or more friends on the homework assignments. It is more enjoyable that way, and you learn by explaining things to each other. 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. Prerequisite: MATH-SHU 265

PHYS-SHU 200
Optical Imaging: Applications in Biology and Engineering

Optics and imaging technology play very important roles in science and engineering. For example, the images collected by the Hubble Telescope, since year 1990, have revolutionized modern astronomy. In biology, the use of two-photon excitation microscopy has significantly advanced neuroscience, as we are now able to track the intracellular development at sub-micron resolutions. A typical course in optics offered at any university often focuses on the fundamental aspects of light but much less on its vast applications in the real world. This short course will exemplify the power and usefulness of optics in current sciences and technology, especially in biology and engineering. Prerequisites: Physics 2 or Physics 2 for Honors.

PHYS-SHU 201
Topics in Introduction to Quantum Mechanics and Quantum Technology

Quantum mechanics is the theory that tells us how everything we see around us - from atoms, light, electrons, to materials - behaves at the microscopic level. Starting from its abstract beginnings in the early 20th century, in the 21st century we are entering a new age where we can control individual atoms and create quantum systems for new technologies. This course gives a simplified introduction to quantum theory, for students who wish to understand quantum mechanics only to a basic level to see some of its applications. The first part of the course introduces the key aspects of quantum mechanics. In the second part we apply these ideas to technological applications such as quantum teleportation, quantum computing, and cryptography. Prerequisite: MATH-SHU 131 or MATH-SHU 201

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. Prerequisites:PHYS-SHU 95 Foundations of Physics III Honors and PHYS-SHU 106 Mathematical Physics.

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: Foundation of Physics III Honors (PHYS-SHU 95) in SH or Physics III (PHYS-UA 95) in NY as the pre-req of PHYS-SHU 302 Statistical Mechanics

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: Physics II

PHYS-SHU 997
Independent Study – Physics

Prerequisite: Foundations of Science I-III (or Physics I&II, Foundations of Chemistry I&II, Foundations of Biology I&II), and a minimum GPA of 3.0 overall and in all science and mathematics courses required for the major, permission of a physics faculty member (at NYU-Shanghai, NYU-Abu Dhabi, or NYU-New York) who will act as a sponsor and mentor, and approval of the Director of Undergraduate Studies (DUS) in Physics. The faculty mentor must be selected in consultation with the DUS. Offered in the Fall, Spring or Summer. 2 to 4 points per term for a maximum of 4 points. This course aims at engaging students in research. It is designed to offer students an opportunity to observe physics research up close and gain hands-on research experience by working as a member in an active research team. Independent Study I and II can be done with the same supervisor or two different supervisors. No lectures will be given. Student researchers are expected to attend and actively participate in lab/supervision meetings. A Proposal for Independent Study form must be filled out, signed by the DUS, and submitted to the Registrar. Requires a

written report on the research to be evaluated by the faculty sponsor, with a copy submitted to the DUS and a copy to the Dean of Arts & Sciences.

PHYS-SHU 998
Integrated Science Capstone

This course provides students with a completion of their undergraduate science education by applying the skills and knowledge they acquired over the course of their major to scientific problems across disciplines. Students will be paired with a faculty mentor to engage either in Independent Research or Literature Review to address a scientific question of the student's design, culminating in a written report. Students are encouraged to work with faculty mentors outside of their own field. Open only to Biology, Chemistry, and Physics majors in the senior year. Prerequisite: students must have completed (or enrolled in) all remaining major requirements.

PHYS-SHU 999
Physics Research in Shanghai.

PHYS-SHU 1999.1
Physics Research in Shanghai.

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, the arts, and a wide range of other fields. It is designed for symbolic as well as numerical calculations, and for visualization of technical information. Mathematica can change forever both what we teach and learn in the classroom, and how we teach and learn it. To provide students with the very best education possible, we need to bring it into our classrooms. The goal of this course is to empower students in the sciences, engineering, economics, finance, and even in the arts and humanities, to use symbolic and numeric computation, and thereby give them a tool (and a leg up) that they can use throughout their whole professional carrier. The course will include the following topics: A brief introduction to computer science and numerical methods, Mathematica as a sophisticated symbolic and numeric calculator, Wolfram Alpha – a computational database, programming in Mathematica and the concepts behind the language. Procedural programming, functional programming and rule based programming, parallel computing using multiple cores, dynamic interfaces (animation), precision and accuracy, working with units, vectors, matrices, calculus, differential equations, difference (recurrence) equations, optimization methods, image and video processing, audio processing, finance and economics applications, and software development. Students will complete a project that they will choose from within their own areas of interest.

SOCS-SHU 133
Urbanization in China

This course introduces urbanization in China in the context of the East Asian region and globalization. By examination of the development of selected cities and discussion of experimental urban themes, this course aims to depict prevalent patterns of urbanization at appropriate levels, such as neighborhood types, metropolitan areas, and regional urban agglomeration. We examine traditional forms of settlement and place more recent urban phenomena in a broader historical perspective. We explore relevant political traditions and forms of planning administration to reveal underlying social, economic, cultural and environmental circumstances at work, while learning tools and methods of spatial analysis that can be applied to the study of cities all over the world.

SOCS-SHU 135
Environment and Society

Topics examined include environmental history and concepts of nature and the environment; the rise of environmentalism; environmental skepticism; anthropogenic global change; population and consumption, ecological footprint analysis, and other environmental indicators; environmental justice; public goods and collective action problems; regulatory regimes; environmental politics; environmental values; environmental movements, protest, and disobedience; and the future of environmentalism.

SOCS-SHU 136
Human Society and Culture

In this course we examine contemporary cultural, social, and political issues through the lens of socio-cultural anthropology. We approach the discipline through a historical examination of how anthropologists have studied rituals and beliefs, family and kinship, sex and gender, systems of exchange, bodies and selves, race, nationalism, globalization, power and human agency. Students become familiar with ethnography, the study of cultural and social systems through long-term fieldwork and observation. In addition to introducing students to the history of anthropological thought, we study contemporary ethnographies that explore border-crossing and migration, media and digital social lives, infrastructure and state-making, and faith and development. Prerequisite: None.

SOCS-SHU 141
Methods of Social Research

This course serves as an introduction to the broad range of methodologies used to produce knowledge in the social sciences, including political science, economics, anthropology, psychology, and sociology. Students will learn how to effectively pose questions about social phenomena, how to design a research project, and how to identify and work with data. Readings also expose students to prominent examples of how both quantitative and qualitative methods are chosen and applied in the social sciences, to serve as a basis for students to choose methods in which they want to train further in their subsequent study. The focus of the lectures and discussions is thus on understanding the various methods and how they affect the design of a research project rather than actually applying them; the final project will require students to design a proposal for an independent research project of their choosing. Prerequisite: None.

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 questioning 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 170
Introduction to Global Health

This course provides an introduction to current challenges in global public health. The central concepts and tools will be introduced, and health policies and health systems will be analyzed in different environments. We will discuss the role of demographics, geography, and socio-economic factors like income, resources and infrastructures disparities. We will discuss in depth a few important case studies, such as the rise of life expectancy and the epidemiological transition, and aging and global health, underline the role of environmental factors in global health, and discuss the new trends of global health for the immediate future. Prerequisite: None.

SOCS-SHU 201
Planning Global Cities: Urban Form and Spatial Transformation

This course takes an interpretative look at the spatial conditions of our rapidly urbanizing world. It focuses on comparisons and contrasts between urban development patterns of global cities, such as New York City, Shanghai, Abu Dhabi, and Mumbai. By introducing multiple scales (neighborhood, city, and regional) of urban growth, the course seeks to foster an understanding of the socio-economic processes, physical planning and design practices, cultural influences, and policy interventions that influence urban design and planning. While introducing the basic analytic skills necessary for spatial interpretation, the course addresses the challenges and opportunities of future smart cities in the era of urban big data. Pre-requisite: SOCS-SHU 133 Urbanization in China is recommended but not required

SOCS-SHU 210
Statistics for The Behavioral Sciences

Students gain familiarity with data description, variance and variability, significance tests, confidence bounds, and linear regression, among other topics. Students work on social science data sets, learn approaches to statistical prediction, and learn to interpret results from randomized experiments. Prerequisite: None.

SOCS-SHU 220
Law and Society in the US

This course is an introduction to law and its role in society in the US from a practical and a critical standpoint. In the first part of the course we engage in legal analysis and writing about cases in contracts, torts, criminal and constitutional law. This part of the course is an introduction to "how lawyers think" and how lawyers and judges write about legal issues. Students learn to "brief" and debate several cases each week. In the second part of the course we take a wider and more critical view of the civil litigation and criminal justice systems in practice. We look at instances where law has changed society and where society has changed the law, especially in the area of economic class and race and women's rights. We consider classic questions in the philosophy of law as well as contemporary radical critiques of the American legal system. We conclude the course with a moot court on a case currently before the US Supreme Court. Pre-requisite: None.

SOCS-SHU 228
Merchant, Chiefs, and Spirits

Brokers and intermediaries bring people together for material or symbolic rewards, often overcoming a lack of trust or information between strangers. Brokers have been viewed, over time, with endearment as well as with suspicion, more recently viewed as superfluous middle-men in a supposedly "friction-free" world. Despite several predictions about the end of brokers, they are still present and thriving in different forms and scales. How do we think of brokers in an increasingly (inter)networked, digitized, and automated world? We explore the role of brokers and intermediaries across a range of social, cultural, and political relations and institutions, including gender, media, political rule, public health, infrastructure, and religion. Course readings are drawn from various disciplines and fields, including anthropology, sociology, political science, economics, and history, and we consider how inter-disciplinary discussions and debates have approached the concept of mediation over time

SOCS-SHU 229
Capitalism, Socialism, Communism: Theory and Practice

The ideological clash between capitalist and communist regimes shaped much of the politics of the 20th century, and continues to frame the discourse of world politics with the rise of China as a global power. In this course, we study the varieties of capitalism, socialism, and communism envisioned by theorists and put into practice by nations. We examine the economic and political aspects of these regime types in their imagined and existing forms to develop a taxonomy with which to classify and evaluate contemporary regimes. Course case studies include the U.S., Sweden, and China, and students complete a case study of another regime as a final project. Prerequisite: Successful completion of GPS, or instructor's permission.

SOCS-SHU 230
Science in Environmental Policy

Science plays a fundamental role in environmental policy. It can put an issue on the political agenda, it often guides and underpins rationales for policy, while enabling us to monitor implementation. In short, science can provide a reason for humankind to act on environmental problems, while policy enables us to do so. Therefore, understanding how science translates into policy – from a theoretical, historical and practical perspective – and the role scientists play in doing so, is critical to understanding environmental governance. This course explores how the scientific process, as well as scientists themselves, influence environmental policy – from agenda setting, to legislation and implementation. In order to ground the discussion, the course will focus on specific issues (i.e., stratospheric ozone

depletion, climate change, wilderness protection, etc.) as well as cover broad principles that are applicable to a wide range of issues (i.e., quantitative risk assessment, cost-benefit analysis, environmental impacts assessments, etc.). Assignments, readings, and in-class discussions will allow students to better understand the dynamics and challenges of the science-policy relationship.

SOCS-SHU 232
International Law and Institutions

How does the application of international law by international institutions, and through treaties among states, contribute to the peace and well-being of the peoples of the world? What are the sources of international law? Who says what international law is, and who may compel obedience? What areas of human life does international law address? What are the legal, political and moral foundations of international institutions such as the United Nations and the UN Security Council, the International Monetary Fund and the World Bank, the International Court of Justice and the International Criminal Court? In this course we examine core concepts in international law and crucial players in its formation and enforcement, and consider compelling critiques of its moral force and efficacy, focusing throughout the course on several international crises in recent history, to better understand these questions Prerequisite: SOCS-SHU 150 or 160.

SOCS-SHU 234
Image as Evidence

Images surround us; we think through images, they shape our words and our worlds. Images entertain us, define us, haunt us. For all these reasons, images present a persistent problem for the social sciences––namely how to tame the force of images to provide evidence about the various worlds in which we as humans live, and in doing so, to push our methods and analyses beyond solely discursive modes of working and thinking. Through key readings and films, Image as Evidence explores the ways social scientists and others have wrestled with the image as a form of evidence in order to make otherwise hidden and invisible phenomena visible, to grasp nature, the senses, cognition, human suffering, and the movement of time. The course explores how images can be manipulated, meanings twisted, and truth (despite much aversion to the word) unmade. The effort of scholars to constantly renew their relationships to images challenges us to "look" differently, and in looking, helps us to consider our ethical and critical relation to the world. Prerequisite: None.

SOCS-SHU 235
Global Perspectives on Migration and Ethnicity

Migration, both internationally and internally, has continually shaped notions of ethnicity in nearly every context in the world. Focusing on contemporary migration in China and immigration post-1960s in the US, as well as education as a facet of social mobility, this course serves as an introduction to different theoretical and empirical scholarship on migration and ethnicity. Topics include migrant adaptation/assimilation, social mobility, and the shifting construction of racial and ethnic categories.

SOCS-SHU 236
The Chinese Family

The family, one of the key social units, has changed significantly over time around the globe. While traditional Chinese families were governed by Confucian ethics, Chinese families in the 20th century have also been shaped by state policies, modernization, and globalization. This course introduces students to family values and practices around marriage, reproduction, parenting, and intergenerational care in Chinese societies, especially in their modern history. It also contextualizes family values and practices and their transitions within broader demographic, social, and cultural changes in the Chinese and international settings. In this course, students engage with historical and modern cultural artifacts as well as scholarly work on Chinese families, and reflect on their own experiences with, observations of, and beliefs about Chinese families. In this way, students develop a nuanced way of understanding and analyzing family-related issues in the Chinese and global contexts.

SOCS-SHU 241
Cultures of Business and Work

Anthropologists often study the unfamiliar cultural practices of marginalized people in faraway corners of the world. But what happens if we turn an analytical eye to powerful corporations, small businesses, and the workaday world of middle-income people as well? In this course we examine cultures of business – the norms, values, and unwritten rules of workplaces. We explore why factory floors in China are laid out how they are, why Japanese businessmen have to sing karaoke after work to get promoted, and why Silicon Valley success stories follow familiar narratives. In order to understand these diverse business settings, we examine major analytical approaches to business and work that focus on political economy, race, ethnicity, and gender. Throughout the class, we discuss what "corporate culture" and "office culture" mean, and consider the implications of this for anthropology's longstanding investigation into "culture" more broadly. Through seminar discussions, current event presentations, and a final case study paper, students develop their own analytical perspectives on business and work. Prerequisite: None.

SOCS-SHU 245
Ethnographic Thinking

While ethnography––literally "to write" (grapho) "people" (ethnos)––has become synonymous with anthropology, it signifies a range of research methodologies widely used within the social sciences. The course considers discussions and debates about ethnographic research, ethics, and representation within the social sciences and beyond. The readings survey ethnographic theory and practice through a number of conceptual and methodological domains, including the problems they raise. Course topics are: objectivity, critiques of representation, participant-observation,

cultural relativism, ethno-history, archives, conflict, interpretation and discourse analysis, verifiability, and life histories. Prerequisite: None.

SOCS-SHU 254
Ethnographies of Change in China

China's economic rise and shifting politics are shaping the world today, but how do these rapid changes affect daily life for the country's 1.4 billion people? In this class we focus on diverse daily experiences of work, family, gender and sexuality, poverty and wealth, ethnic difference, religion, political engagement, illness and wellness, and environment for people in contemporary China. We examine these topics through ethnography – cultural analysis based on close observation and interaction, presented in writing and film. We examine how Chinese reformers and revolutionaries aspired to change Chinese culture in the Republican Period and Mao years, as well as how foreign and native scholars have grappled with the overwhelming changes in everyday life since Reform and Opening Up. Students in this class develop an understanding of what cultural change means to Chinese people today

SOCS-SHU 260
Contemporary Challenges in Global Health

This course is centered on current and future challenges pertaining to global public health in the areas of environmental and planetary health, girls' and women's health, and aging. Some topics covered during Introduction to Global Health will be revisited more in depth. This course encourages students to develop their critical and original thinking, their curiosity, creativity, collaboration, rigor, communication, and empathy.

SOCS-SHU 275
US-China Relations

This course examines the complexities of the bilateral relationship between the People's Republic of China (China) and the United States (US), focusing on their historical rapport, major debates, and current relations. Topics include Sino-US economic relations, media reporting, variation in political systems, global politics, climate/energy issues, military affairs, and contested territories. Prerequisite: SOCS-SHU 160 is recommended, but not required.

SOCS-SHU 306
Pestilence: Critical Perspectives in Global Health

The course introduces students to problems of epidemic disease and disorder worldwide, and considers various efforts to define and address these problems. The course is designed to offer students a robust survey of literature (both classic and contemporary) concerned with threats to human health––and in doing so, engages an array of social science research perspectives and practices. The course considers the actors, institutions, and forms of knowledge at work in addressing epidemic disease and making "global health" today. By exploring the cultural, environmental, social, political, and epidemiological factors that shape patterns of disease and disorder across and between societies, the course allows students to analyze the systems and values that reinforce specific paradigms of global health policy and science, historically as well as in our present moment. Prerequisites: None.

SOCS-SHU 318
Ethnographic Methods

This course is a practicum-based seminar in methods of ethnographic fieldwork and anthropological inquiry and writing. The course explores the conceptual and critical basis of ethnography through fieldwork assignments and readings. The approach of the course is both experiential and experimental––how do we build theories about the world and our place in it? How does anthropology secure evidence and meaning in ways that are empirical, comparative, and deeply theoretical? The course offers students the opportunity for creative and rigorous training in ethnographic methods as well as a chance to produce a piece of ethnographic work. Prerequisites: None.

SOCS-SHU 319
Visual Anthropology

This seminar introduces students to the field of visual anthropology via both theoretical and practical approaches. Students gain basic skills of analyzing and producing visual ethnography to enhance their social science research toolbox. Class readings and discussions begin with foundational issues of the intricate relationship between visuality, epistemology, and politics, and then extend into reflections over the crucial ethical questions about the author's authority as well as reciprocity with the subjects. Through close readings of landmark film works in the field we delve into analysis of formalistic elements that are used to construct ethnographic films, in addition to getting a historical overview of their evolution. Students develop the skills necessary to engage in discussions of critical theoretical issues in the field, and work in groups to produce a short ethnographic film as a final project. Sophomore standing required. SOCS-SHU 136 Human Society and Culture or SOCS-SHU 245 Ethnographic Thinking or SOCS-SHU 234 Image as Evidence or SOCS-SHU 318 Ethnographic Methods is recommended but not required.

SOCS-SHU 333
Global Environmental Politics

This course examines the ethics, law, politics, and policy of global environmental issues. It provides a broad overview of the key concepts, debates, actors, and issues in global environmental politics. The course reviews the development of global environmental regimes in areas ranging from climate change to waste management. It equips students with conceptual depth and empirical breadth to critically examine the state of the global environment. Prerequisite: It is recommended, but not required, that students take SOCS-SHU 135 Environment and Society prior to enrolling in this course.

SOCS-SHU 334
Legal Psychology

The course provides an overview of research in legal psychology and how it can be used to improve criminal investigations, legal processes, and judicial decision-making. For example, we consider factors that negatively affect the reliability of witness statements and what can be done to improve them, issues related to child witnesses and criminal investigations involving children, and criminal profiling and dangerousness assessment of offenders. The course adopts an interdisciplinary approach, examining the influence of organizational, societal and cultural factors on legal practices and procedures. The course ends with a mock trial, based on materials created from real criminal cases, in which students adopt the role of either a psychological expert or a lawyer. Prerequisite: PSYC-SHU 101 Introduction to Psychology is a prerequisite for the course. This can be waived by the instructor for individual students based on background and preparation.

SOCS-SHU 340
Comparative Constitutions

How have the peoples of Germany, Iran and South Africa constituted their governments? What were the historical, political, and social constitutional moments (of revolution and war) that gave birth in these countries to written constitutions? We examine key provisions of these constitutions to understand what values they claim to impose on future generations. We ask why present generations should be constrained by the constitutional choices of a prior society. We look at constitutional practice, especially as it relates to: social-economic rights to education, housing or income; political association and speech; minority groups; the rights of women; and super-dominant political or religious or ethnic parties. Throughout, we ask how an "ideal constitutional citizen" of each country could decide whether an act of state power or a claim of right by a citizen is consistent with constitutional justice. We examine key constitutional language and important court decisions, particularly about human rights. And we look beyond the law--especially to film, but also to journalism and scholarly writing on politics and history--to seek the constitutional spirit of each country. Prerequisite: SOCS-SHU 160 (Introduction to International Politics) or SOCS-SHU 150 (Introduction to Comparative Politics) or SOCS-SHU 272 (US Constitution--Is It Relevant to China?), or comparable courses relating to law or politics at other NYU sites, or equivalent preparation, or with instructor's permission.

SOCS-SHU 341
Cross-Strait Relations

The relationship across the Taiwan Strait has been a source of tension in East Asia for decades, not only between Taiwan and mainland China, but also as a potential flashpoint in the relationship between China and the United States. Furthermore, Taiwan's geostrategic position and territorial claims make it of interest to other states in the region. This course aims to introduce students to the complex sources of these tensions and the dynamics of these relationships, all of which are rooted in the two sides' closely linked histories. Students in this course develop a strong grasp of the dynamics of the cross-Strait relationship, including the role of the U.S., while honing their critical thinking and analytical skills through focused discussions of the readings and an independent final paper project. Prerequisites: SOCS-SHU 150 Introduction to Comparative Politics or SOCS-SHU 160 Introduction to International Politics or GCHN-SHU 110 The Concept of China.

SOCS-SHU 350
Empirical Research Practice

This is a hands-on course in conducting empirical research in behavioral and social sciences with a focus on quantitative methods. The course consists of two major components: First, students work in teams to address a research question provided by the instructor. The teams then plan a small-scale research project, collect empirical data, analyse the data and present the results in a Poster Session. Research projects can involve an experiment, a survey, an observational study or content analysis of empirical materials. The use of the internet as a data collection venue and source of raw materials to analyse is especially encouraged. Second, students write an individual research plan on a topic of their choosing. In some cases, the research plan can be further developed into a Capstone project. The teams are encouraged to make frequent use of instructor office hours for individual consultations. Prerequisites: Intro to Psych OR Environment & Society OR Intro to Comparative Politics OR Intro to International Politics (Intro to Psych recommended).

SOCS-SHU 370 | 302T
China's Foreign Policy | Topics in Politics: Chinese Foreign Policy

This seminar examines China's foreign policy from the end of the imperial era in the late 19th century, through the Republican period, and into the contemporary People's Republic. It aims to introduce students to broad theoretical perspectives on foreign policy from international relations scholarship, while also interrogating how well China's historical foreign policy behavior fits those general theories. Students in this course will engage with a number of questions about China in international affairs. For example, how important are local officials in China's foreign policy decision-making processes? Is China really a uniquely peaceful nation as its leaders often claim, or do existing theories sufficiently explain China's historical use of military force? What is different about the rise of China to great power status compared to the rise of other great powers? Should there be a "Chinese theory of international relations" Students in this course will examine these and other questions about China's place in the world while developing an independent final paper project focused on analyzing the course readings.

SOCS-SHU 401
Social Science Capstone Seminar (4 credits)

Students design and conduct an independent research project in their area of focus using the theories, methods, and data with which they have become familiar over the course of completing the major. Open only to Social

Science majors in the senior year.

SOCS-SHU 410
Social Science Capstone Honors Seminar (2 credits)

This seminar prepares candidates for major honors in Social Science to enroll in the Honors Independent Study in the spring semester of the senior year. In this seminar, students develop a research question, select a methodological approach, assemble a working bibliography, and identify a faculty supervisor for the spring semester independent study. Open only to seniors who have been admitted to honors candidacy in Social Science.

SOCS-SHU 411
Social Science Honors Independent Study

Candidates for major honors conduct independent research under the supervision of a faculty member in the Social Sciences. Open only to seniors who have been admitted to honors candidacy in Social Science. Prerequisite: SOCS-SHU 410, Social Science Capstone Honors Seminar.

SOCS-SHU 426
Poverty and Inequality Around the Globe

This seminar examines the causes and consequences of poverty and rising inequality around the globe. Students will study the ways in which poverty and inequality are shaped by multifaceted contexts; understand the theories underlying strategies and programs which address key poverty and inequality issues faced by many developed, developing and least developed countries; and learn about different countries' experiences addressing their own poverty and inequality issues. We consider philosophies of global justice and the ethics of global citizenship, and students are expected to critically reflect upon their own engagements with poverty relief activities and aspirations for social changes. Students should be prepared to tackle advanced social science readings, analysis, and writing. Open to seniors, and to other students with instructor's permission. There are no prerequisites for the class although students should be prepared to tackle advanced social science readings and analysis.

SOCS-SHU 430
Capstone Seminar: China and Politics

This seminar supports students in pursuing substantial, independent research projects focusing on China and its politics, broadly defined. Over the course of the semester, students formulate research questions, review relevant literature, gather data, and write and revise research papers, all in intensive individual consultation with the instructor. Seminar discussions in the first half of the semester, while students are formulating their projects and gathering data, focus on short readings and examples exploring different ways to approach the study of China. In the second half of the semester, students present preliminary findings and drafts for feedback from their peers and the instructor. Department Consent Required.

SOCS-SHU 431
Capstone Seminar: Politics, Political Economy, and International Relations

In this seminar students design and conduct independent research projects with a focus on international political economy, international relations, and the intersection of global, regional, and domestic politics. Each project, tailored by individual students with the input from the instructor, will include a well-formulated research question, literature review, theoretical framing, methodological design, and analysis of information relevant to the research question. Topics generally will fall within the scope of international and comparative politics and political economy in the context of cross-disciplinary studies in Social Science. Department Consent Required.

SOCS-SHU 432
Capstone Seminar: Psychology and Global Health

Students design and conduct an independent research project in psychology or global health using the theories and methods with which they have become familiar over the course of completing the major. Department Consent Required.

SOCS-SHU 445
Topics in Society, Health & Medicine

Check Albert for various relevant topics each semester.

SOCS-SHU 460
Topics in Urban Studies

Check Albert for various relevant topics each semester.

SOCS-SHU 997
Independent Study

Check Albert for instructions.

PSYC-SHU 101
Introduction to Psychology

This course highlights the fundamental principles and interesting experiments within the field of psychology, aiming to help students understand mind and behavior of themselves and others. It provides a comprehensive overview of scientific study of thought and behavior, covering a wide range of topics such as the biological and evolutionary bases of behavior, sensation and perception, learning, memory, intelligence and thinking, lifespan development, emotion and motivation, social behavior, human personality, social behavior, behavioral disorders, and psychological treatment of disorders. Opportunities to apply knowledge gained in class are available through various in-class and out-of-class activities. By the end of this course you will have gained a much better understanding and appreciation of who you are and how you work. Prerequisite: None.

PSYC-SHU 201
Social Psychology

Social psychology is about how our thoughts, feelings, and behaviors are influenced by the real or imagined presence of others. The class introduces social psychological theories and research and covers topics such as perception of others and the self, attraction, altruism and helping, aggression, moral thought and action, stereotypes, attitudes, and social influence. We learn about each topic by linking it to everyday life, as well as by seeing how researchers take a scientific approach to studying it. Prerequisite: PSYC-SHU 101 Introduction to Psychology

PSYC-SHU 238
Abnormal Psychology

This course focuses on the definition, history, and scope of abnormal psychology, with an emphasis on the psychological factors that control the origins, maintenance, and modification of behavioral disorders. The primary goal of this course is for students to become familiar with up-to-date research in the field but also to critically evaluate how we think about mental illness using theory, research findings, logic, and applied knowledge. A secondary goal is for students to become educated consumers of mental health information to be able to predict the factors that increase the risks for a given disorder and discriminate between treatment types based on efficacy demonstrated in the research literature.

PSYC-SHU 349
Cultures of Psychology

The purpose of this course is to critically examine the ways that culture--with regard to race/ethnicity, gender, and social class--has shaped major theoretical perspectives in psychology, and to familiarize students with the impact of cultural factors on the evolution of various psychological constructs. Students will explore the multifaceted nature of their own cultural backgrounds and apply it to the establishment of their worldviews. Critical examination of the process of psychological research and scholarship will be emphasized. Prerequisite: PSYC-SHU 101.

PSYC-SHU 352
Psychology of Human Sexuality

The course provides an overview of empirical research into the psychology of human sexuality. The course surveys findings from basic research, theories regarding human sexuality, sexual functioning and its psychological correlates, and clinical research into sexual problems and their treatment. Topics covered include psychological aspects related to sexual and gender minorities, including affirmative counseling approaches for LGBTQ individuals; current scientific understanding of sexual variations as well as sexual harassment and coercion; sex as a commodity; and psychological aspects related to HIV/AIDS and its prevention. The study of human sexuality is inherently multidisciplinary as sexuality is a biopsychosocial phenomenon. Even though the course focuses on the psychological level of analysis, cultural, societal and legal aspects related to sexuality in a global context are relevant to many of the topics covered. As an example, we explore the topic of sexual racism/racial fetishism as well as legislation related to sexuality in different societies. Prerequisite: PSYC-SHU 101.

CHIN-SHU 10
Chinese Bridge Online-Elementary Level

This Chinese Bridge online- Elementary level is designed for NYU Shanghai students who are currently studying away. This ten-week non-credit internet-based Chinese language study will provide language materials based on Elementary level vocabulary and grammars to help students to review and maintain the language proficiency and help prepare students for the intermediate level study while being absent from the target language environment. This online study will be held twice a week, with one recorded video and one live session online. By completing the study with the Chinese Bridge Online, students will not only review the most of the important vocabulary and grammars from Elementary level in new topics, but also have opportunity to learn new useful words and phrases in authentic context and therefore students will be ready for moving on to next Intermediate level.

CHIN-SHU 20
Chinese Bridge Online-Intermediate level

This Chinese Bridge Online-Intermediate level is designed for NYU Shanghai students who are currently studying away. Students who have finished Intermediate Chinese II or Advanced Chinese I are all welcomed to enroll. This ten-week non-credit internet-based online study will provide language materials based on Intermediate level topics, vocabulary and grammars to help students to review and maintain the language proficiency while being absent from the target language environment. In addition, this online study will cover part of HSK level 4 vocabulary and others that are needed for preparation of Advanced level Chinese. This online study will be held twice a week, with one recorded class and one live session online (students can choose one from the two live sessions offered per week to take part it). By successfully completing this level of Chinese Bridge Online immediately before the semester you intend to enroll in Advanced Chinese I in Shanghai, students will receive a recommendation from the instructor to be exempted from the placement test to pursue advanced level courses if students fulfill the attendance requirement and homework requirement.

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 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 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.

World Language

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 I for Advanced Beginners

This course is intended for students who can converse in Mandarin Chinese about matters related to everyday life situations but cannot read and write at the same level. 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: N/A. This course is followed by Intermediate for Advanced Beginners.

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 201A
Intermediate Chinese I - Accelerated

This accelerated course is the first part of a one-semester 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 or 102A; Co-requisite: CHIN-SHU 202A.

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 (8) to continue being acquainted with aspects of Chinese culture and society related to the course materials. Prerequisite: CHIN-201.

CHIN-SHU 202A
Intermediate Chinese II - Accelerated

This accelerated course is the second part of a one-semester 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 (8) to continue being acquainted with aspects of Chinese culture and society related to the course materials. Co-requisite CHIN-201A.

CHIN-SHU 211
Intermediate Chinese I for Advanced Beginners

This course is designed for students with near-standard pronunciation and without major grammatical errors, conversational Chinese related to daily life situations and simple sociocultural topics. The objectives are: 1) to be able to obtain information from extended written passages; 2) to both express and expound on, in relative length, feelings and opinions on common social and cultural topics; 3) to expand vocabulary and learn to decipher the meaning of compound words; 4) to develop reading comprehension of extended expository and simple argumentative passages; 5) to solve non-complex textual problems with the aid of dictionaries; 6) 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; 7) to continue to become acquainted with aspects of Chinese culture and society related to the course materials. Prerequisite: CHIN-111 Elementary Chinese for Advanced Beginners. This course is followed by Advanced Chinese I.

CHIN-SHU 221
Chinese Immersion Program: Intermediate I

For the first time ever, NYU Shanghai is delighted to offer the new Chinese Language Immersion program during Summer 2017. Students can enroll in the program and complete Intermediate I and Intermediate II level, or Advanced I and Advanced II level. Students must already be placed at an Intermediate I or Advanced I level. The NYU Shanghai Chinese Language Program is a 9 week summer program intended to enable students who are serious about studying Chinese language in a total immersion environment to cover a semester's worth of material and to earn four NYU Shanghai credits. This rigorous, demanding, and rewarding language program allows students to have first-hand experience in using Chinese in real world situations as well as studying and practicing it in the classroom.To ensure more effective teaching and learning, classes are capped at 10 students. In the afternoons during weekdays, students can participate in extracurricular activities such as series talks, local visits, Chinese cultural classes, movie evenings, Tai Chi, Chinese calligraphy, Chinese cooking, etc. Students participate in these activities based on their preferences and time schedules or requirements. For more details, please visit the Chinese Immersion Program website. Shanghai students will not need to formally apply but an interview with a Chinese language instructor and selection to participate will be required. There are two tracks, Intermediate or Advanced. Co-requisite: CHIN-SHU 222.

CHIN-SHU 222
Chinese Immersion Program: Intermediate II

For the first time ever, NYU Shanghai is delighted to offer the new Chinese Language Immersion program during Summer 2017. Students can enroll in the program and complete Intermediate I and Intermediate II level, or Advanced I and Advanced II level. Students must already be placed at an Intermediate I or Advanced I level. The NYU Shanghai Chinese Language Program is a 9 week summer program intended to enable students who are serious about studying Chinese language in a total immersion environment to cover a semester's worth of material and to earn four NYU Shanghai credits. This rigorous, demanding, and rewarding language program allows students to have first-hand experience in using Chinese in real world situations as well as studying and practicing it in the classroom.To ensure more effective teaching and learning, classes are capped at 10 students. In the afternoons during weekdays, students can participate in extracurricular activities such as series talks, local visits, Chinese cultural classes, movie evenings Tai Chi, Chinese calligraphy, Chinese cooking, etc. Students participate in these activities based on their preferences and time schedules or requirements. For more details, please visit the Chinese Immersion Program website. Shanghai students will not need to formally apply but an interview with a Chinese language instructor and selection to participate will be required. There are two tracks, Intermediate or Advanced. Co-requisite: CHIN-SHU 221.

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: In addition to CHIN-202 OR CHIN-211.

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 321
Chinese Immersion Program: Advanced I

For the first time ever, NYU Shanghai is delighted to offer the new Chinese Language Immersion program during Summer 2017. Students can enroll in the program and complete Intermediate I and Intermediate II level, or Advanced I and Advanced II level. Students must already be placed at an Intermediate I or Advanced I level. The NYU Shanghai Chinese Language Program is a 9 week summer program intended to enable students who are serious about studying Chinese language in a total immersion environment to cover a semester's worth of material and to earn four NYU Shanghai credits. This rigorous, demanding, and rewarding language program allows students to have first-hand experience in using Chinese in real world situations as well as studying and practicing it in the classroom. To ensure more effective teaching and learning, classes are capped at 10 students. In the afternoons during weekdays, students can participate in extracurricular activities such as Tai Chi, Chinese calligraphy, Chinese cooking, etc. Students participate in these activities based on their preferences and time schedules. For more details, please visit the Chinese Immersion Program website. Shanghai students will not need to formally apply but an interview with a Chinese language instructor and selection to participate will be required. There are two tracks, Intermediate or Advanced. Co-requisite: CHIN-SHU 322.

CHIN-SHU 322
Chinese Immersion Program: Advanced II

For the first time ever, NYU Shanghai is delighted to offer the new Chinese Language Immersion program during Summer 2017. Students can enroll in the program and complete Intermediate I and Intermediate II level, or Advanced I and Advanced II level. Students must already be placed at an Intermediate I or Advanced I level. The NYU Shanghai Chinese Language Program is a 9 week summer program intended to enable students who are serious about studying Chinese language in a total immersion environment to cover a semester's worth of material and to earn four NYU Shanghai credits. This rigorous, demanding, and rewarding language program allows students to have first-hand experience in using Chinese in real world situations as well as studying and practicing it in the classroom. To ensure more effective teaching and learning, classes are capped at 10 students. In the afternoons during weekdays, students can participate in extracurricular activities such as Tai Chi, Chinese calligraphy, Chinese cooking, etc. Students participate in these activities based on their preferences and time schedules. For more details, please visit the Chinese Immersion Program website. Shanghai students will not need to formally apply but an interview with a Chinese language instructor and selection to participate will be required. There are two tracks, Intermediate or Advanced. Co-requisite: CHIN-SHU 321.

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

Chinese language at fourth-year level. Designed to enhance Chinese proficiency through studying authentic materials rich in cultural connotations, focusing primarily on reading and writing. Objectives are: to develop language skills needed for semi-formal and formal presentation on academic topics; to further improve reading comprehension and develop skills needed to conduct textual analysis of passages with sophisticated syntax and semantic nuance; to develop responsiveness to and ability to interpret stylized usage; to advance strategies for autonomous learning of Chinese language from an analytical perspective. For the first part of this year-long sequence, reading materials will generally be selected from China's modern period (1919–1949).

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. Continuation of Chinese language at fourth-year level, with reading materials generally selected from contemporary sources. Prerequisite: CHIN-302.

CHIN-SHU 405
Reading Chinese Newspapers

This 4-credit course is a post-advanced Chinese language course, which meets twice a week, 90 minutes for each meeting and is designed for students who have completed Advanced Chinese II(CHIN-SHU-302, or EAST-UA-206) or the equivalent. This course, through intensive and extensive readings of authentic materials selected from major Chinese newspapers and periodicals in China and abroad and robust in and out-of-class exercises and assignments, intends to help students further enhance their language skills with special focus on reading and writing competence, further enrich their knowledge about China society and Chinese culture, and further improve their abilities in conducting in-depth analysis, discussion, debate, comparison, contrast and conclusion orally and in written mode in Chinese language. The articles will be selected from the latest issues in newspapers and periodicals with topics ranging from culture inheritance, social entertainment to economics, technology, new lifestyle, etc., which provide different perspectives for students to observe and study phenomena (including their origins and evolutions) in modern Chinese society and Chinese culture. The course also focuses on language learning, aiming at helping students accumulate more formal written-style vocabulary and getting acquaintance with the modes, structures and characteristics of Chinese formal news reports. Prerequisites: Advanced Chinese II or the equivalent.

CHIN-SHU 411
Introduction to Business Chinese and Culture

This course is designed for those who have studied Mandarin to the advanced level (or equivalent). It aims to continuously improve 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. To address this trend, authentic Chinese sources will be introduced in class to enhance students' professional Chinese and their understanding of China's macro and micro business environments as well as the past, present, and future of China and its role in the global economy. 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." 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-301 and Instructor's permission 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 components 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. Non-Native Chinese speakers need 2 advanced level courses.

CHIN-SHU 416
Introduction to Contemporary China II

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 components 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 Chinese science and technology, Chinese beliefs and

religions, Chinese marriage, environment protection, Chinese media to Chinese floating population. Prerequisite: CHIN-302. This course fulfills GCS Elective for Non-native Chinese Speaker.

CHIN-SHU 429
Chinese Business and Finance -- A Bilingual Introduction

The course is aimed to (1) enhance students' professional Chinese-English bilingual skills in the business context and (2) promote their understanding of the macro and micro business environment and culture in China and the larger world. Adopting a case-study oriented approach that emphasizes task-based language teaching, the course, by concentrating on five real-life cases from the business world, provides a bilingual introduction to such concepts and phenomenon as business globalization, international expansion and integration, mergers and acquisition, branding strategies, impact of "Made in China" on the Chinese global economy, antidumping, and government relations, etc. Along with the case study, some of the relevant Finance, Consulting, Marketing and Accounting knowledge will also be introduced bilingually. By the end of the semester, students are expected to be equipped with enhanced Chinese and English skills to function more comfortably and confidently in the transition toward pursuing a Business-Finance major as well as preparing for future internships or job interviews. This course will be mainly conducted in Chinese with a thorough introduction of Business and Finance terminologies and concepts in BOTH Chinese and English. Prerequisite: Instructor Consent Required

CHIN-SHU 430
Discovering Contemporary China through Documentary Films

This course is a 4-credit post-advanced course open to students who have completed Advanced Chinese II or the equivalent. This course is designed to increase oral and written proficiency, with a focus on relevant vocabulary and grammatical structures used to discuss contemporary issues, through the exploration of documentary film. Through in-class discussions and debates, film transcriptions, as well as external field trips and community-engaged projects, the course will enhance students' understanding about the latest and most pressing social issues in contemporary China through a series of insightful and in-depth Chinese documentaries as case studies, as well as meaningful interactions in the target language. The course intends to provide a multi-dimensional learning experience where students use language in context to understand and explore contemporary issues.

CHIN-SHU 9000
Introduction to Conversational Chinese

This two-credit language course introduces students to Chinese language and culture. It is aimed at students with no prior knowledge of Chinese. The language component of the course runs for 14 weeks and focuses on the development of competence in verbal communication and communication structures which can be used in daily life in China. The culture component includes excursions that are closely tied to the language topics being studied. This course does NOT cover Elementary I. It is designed for students who do not need to complete Elementary I for their major, or have already completed the language requirement for their major, and/or students who have been to two other global sites Students cannot take this class if they have already: Passed Elementary Chinese 1 or the equivalent or higher; Are a native Chinese speaker. Note: Students enrolled in this 2-credit course must also be enrolled in a four-credit China-focused content course in order to meet the Global Programs study away language requirement. The course must be taken for a letter grade and is not open to students who place at a higher level than Elementary I Chinese.

CHIN-SHU 9002
Introduction to Conversational Chinese--4 Credits

This four-credit language course for Study Away Students only introduces students to Chinese language and culture. It is aimed at students with no prior knowledge of Chinese. The language component of the course runs for 14 weeks and focuses on the development of competence in verbal communication and communication structures which can be used in daily life in China. The culture component includes excursions that are closely tied to the language topics being studied. Compared to the 2-credit Intro to Conversation Chinese, this 4-credit course will have a wider coverage of topics, vocabulary and grammar, more activities and field trips, and meet 4 days a week of in-class instructions over the 14 weeks. This course does NOT cover Elementary I. It is designed for students who do not need to complete Elementary I for their major, or have already completed the language requirement for their major, and/or students who have been to two other global sites. Students cannot take this class if they have already: Passed Elementary Chinese 1 or the equivalent or higher; native Chinese speaker

FREN-SHU 10
Intensive Elementary French

Open to students with no previous training in French and to others on assignment by placement test. Completes the equivalent of a year's elementary level in one semester. Offered every semester. 6 points.

FREN-SHU 20
Intensive Intermediate French

Completes the equivalent of a year's intermediate level in one semester. Offered every semester. 6 points. PREREQS: Intensive Elementary French or Instructor Permission

FREN-SHU 30
French Grammar and Composition

Systematizes and reinforces the language skills presented in earlier-level courses through an intensive review of grammar, written exercises, an introduction to composition, lexical enrichment, and literary analysis.

FREN-SHU 40
Advanced French I

Advanced French I

FREN-SHU 110
Business French

Designed for students who wish to learn the specialized language used in French business. Emphasis on oral and written communication and the acquisition of a business and commercial vocabulary dealing with the varied activities of a commercial firm (e.g., advertising, transportation, banking). Stresses group work in simulated business situations and exposure to authentic spoken materials.

JAPN-SHU 5
Elementary Japanese I

Introductory course in modern spoken and written Japanese, designed to develop fundamental skills in areas of speaking, listening, reading, and writing. Gives contextualized instructions to develop both communicative and cultural competency. Systematically introduces the Japanese writing system (Hiragana, Katakana, and Kanji). Open to students with no previous training in Japanese and to others on assignment by placement test.

JAPN-SHU 10
Elementary Japanese II

Designed for students continuing their introduction to modern spoken and written Japanese, designed to further develop fundamental skills in areas of speaking, listening, reading, and writing. Open to students who have completed JAPN-SHU 5 or the equivalent (EAST-UA 247) and to others on assignment by placement test.

JAPN-SHU 15
Intermediate Japanese I

Intermediate Japanese I

SPAN-SHU 10
Intensive Elementary Spanish

This is a one-semester intensive course that covers the equivalent of one year of elementary Spanish in one semester. 6 points. Open to students with no previous training in Spanish and to others on assignment by placement test.

SPAN-SHU 20
Intensive Intermediate Spanish

Promotes proficiency in reading and writing as well as oral performance. This course is an intensive intermediate course that covers the equivalent of one year of intermediate Spanish (SPAN-UA 3 and SPAN-UA 4) in one semester. Prerequisites: Intensive Elementary Spanish or Instructor Permission

SPAN-SHU 30
Advanced Spanish Grammar and Composition

Expands and consolidates students' lexical and grammatical understanding of the language and introduces them to the fundamental principles of expository writing as they apply to Spanish. Utilizes exercises, readings, and intensive practice of various prose techniques and styles. Prerequisite: Intermediate Spanish II (SPAN 4), Intensive Intermediate Spanish (SPAN 20), or assignment by placement test, or permission of the director of language programs. For non-native speakers only. Equivalent courses: SPAN-UA 100 (NY), SPAN-UA 9100 (Madrid & Buenos Aires)

SPAN-SHU 110
Techniques of Translation

This course will explore the principles and problems of translation through readings and in-class workshops. The theory will concentrate on ideas and issues about translation from the 20th and 21st centuries.
Students will develop their skills in Spanish to English and English to Spanish translation by working with different types of genre, such as poetry, short story, film, advertisements, academic articles, and technical documents. Theoretical questions and problems will be addressed in the readings and discussed in class as they arise within the translation exercises. Reading assignments are in Spanish and in English, but the discussions will be conducted entirely in Spanish. In-class workshops will focus on practice that highlights the difficulties of translating from one language into another. Special attention will be paid to the structural differences between English and Spanish; the significance of tone and style; the author's "voice" and the translator's "ear"; and the on-going issues of fidelity, literalness, and freedom. Prerequisite: SPAN-SHU 30 (SPAN-UA 100) Advanced Grammar and Composition, or permission of the instructor.

CEL-SHU 10
Community Development & Service-Learning

This zero-credit course is a required component of NYU Shanghai's Dean's Service Scholars program. This course serves as an introduction to issues related to social/community development and community service, and includes a practical community service experience, which will involve visiting one of five service sites during Spring Break (April 2 - 10), and assisting with the work of selected non-governmental organizations (NGOs). Taking a "service-learning" approach, this course integrates the study of topics and concepts with the development of skills relevant to social/community development through practical community service experience and critical reflection on this experience.

CEL-SHU 101
Topics in Service Learning: Migrant Families, Children and Youth in Shanghai

This course is taught in conjunction with students' participation in a weekly service experience (2 hours a week and at least 20 hours in total of service at the site) working with migrant children and their families. The overarching goal of service learning is the integration of service activity that meets community needs with academic material and critical reflection. As such, this course will assist students in understanding the individuals with whom they are working and the social/environmental contexts in which they live through course content and personal reflection on service. Students will learn about internal migration and urbanization in China and resettling migrants in the city of Shanghai. The course will touch on the fundamentals of engaging individuals in a helping situation; theories related to child development; implications of gender, culture and migration; impacts of multiple social contexts: the family, peers, school, social agencies and community; understanding the effects of social oppression on people's lives: poverty, sexism, classism, etc. Students will be expected to do journal writing and will have opportunities in class to share their experience. Class will meet weekly on campus for 75 minutes and students will be required to work for 2 hours/week at a local volunteer center that serves youth from migrant families. Prerequisites: None
he overall theme of the summer camp based on what they learn and design curriculum suited to the local context.

CEL-SHU 101C
Topics in Service Learning: Assistive Technology

This interdisciplinary project-based class focuses on the design, development, and use of technology that increases the quality of life of individuals with disabilities. Students will be introduced to various assistive technologies and strategies, including no-tech and low-tech as well as software and web-based practices. This class features lectures, discussions, guest lectures, field trips, and project presentations by students. Software programming, physical computing, machine learning, and 3D fabrication will be introduced for constructing a prototype assistive device. Field trips to local facilities will be scheduled which provide an off-campus real-world learning experience as well as an opportunity for students to interact with users of assistive technology in the local community. Students will participate in a team-based design project that identifies challenges that an individual with disabilities lives with and then create a novel and useful assistive device to meet their needs. Prerequisites or Co-Requisite: INTM-SHU 101 Interaction Lab.

CEL-SHU 101D
Topics in Service Learning: Language and Power

Linguist James Paul Gee has described English language teachers as standing "at the heart of the most crucial educational, cultural, and political issues of our time." This Deans' Service Scholars course places students at the intersection of service learning, English language teaching, and critical applied linguistics. It is designed to integrate experiential learning with an exploration of the broader forces which influence educational settings. The course is both a study and application of service-learning, a pedagogy combining academic inquiry and engagement with a community outside the university.
In the fall semester, with the support of their faculty and in partnership with a local volunteer organization, Scholars will teach English at a local school for migrant communities in Shanghai. At the same time, through discussion seminars, readings, and reflective writing, Scholars will explore the social, cultural, and political factors which often intersect with language teaching, and consider how these factors operate in the context of their service learning project. Seminar topics will include linguistic imperialism, language stigma and status, English as a lingua franca, and the recent rise of global Englishes.
In the spring semester, Scholars will organize a community engagement project which is based on their experiential and course learning in the fall. Through coursework, volunteer teaching, and community engagement, Scholars will also gain experience in the pedagogical and service approaches of Project-Based Learning (PBL) and Participatory Action Research (PAR). No prerequisites.

CEL-SHU 101E
Topics in Service Learning: Public Science Education in China

Science classes were first introduced for primary school education in China when the subject "Nature" was changed to "Science" as part of a curriculum reform in 2001. In February 2017, China's Ministry of Education issued a new guideline for science education, requiring elementary schools to make science a compulsory subject for first-grade students. This move showed the authorities' determination to improve children's scientific literacy. Many scholars point out that studying science can help children grow curiosity and boost their abilities of innovation. Therefore, it is necessary to cultivate children's interest in science and help them better understand the relationship between nature and mankind. However, rural students or children from poor families in China continue to experience the entrenched disadvantages in curriculum, instruction and school staffing, compared with their peers. Currently, there are still many problems due to the disregard of the "deputy subjects" and the lack of resources. How can we make fundamental science education more effective? How can we engage children's interest in science subjects?

How can we better use the scientific knowledge we learned to serve the community? This Deans' Service Scholars course will give NYU Shanghai students the platform to reflect on fundamental science education, participate in science curriculum design and find a way to better serve the community. The project will be conducted in two semesters. In the fall semester, Scholars will participate in weekly seminar/discussion sessions to prepare them with necessary skills for science curriculum design and effective teaching. Topics will include but are not limited to communication, teaching methodology, leadership, and child psychology and development. Scholars are also expected to do field research to identify some current obstacles and/or challenges in fundamental science education in China, and develop an after-school science series for primary school students to supplement their science education. In the spring semester, Scholars will implement what they have developed in the community service through an onsite teaching project. The teaching project will be partnered with our third-party community partner and the teaching audience will be primary school students from low-income families. No prerequisites.

EXLI-SHU 9301
City as Text

"City as Text" is a rigorous, 4-credit seminar designed to introduce students to the study away environment through an intensive academic program of cultural preparation and local immersion. Through scholarly and journalistic readings from interdisciplinary perspectives, students develop a nuanced understanding of the local, regional, national, and global forces that bring shape to the character of the city. Multiple class sessions take place in locations around the city, such as ports, markets, industrial centers, parks, pedestrian zones, and other points of interest, where students apply direct observation to examine critically formed questions of place, space and identity. Students draw on the city as a primary resource for academic research and critical inquiry and they produce innovative research projects (digital or print) that reflect on the city at the crossroads of local and global identity.

EXLI-SHU 9302
Experiential Learning II

This is a 2nd- semester course aiming to complement and enhance the internship experience. Students will learn to critically examine their fieldwork in order to reflect upon what their particular, concrete experience reveals about life in contemporary Shanghai. Prerequisite: Experiential Learning I

SAS-SHU 100
China in the Headlines

Choosing and interpreting relevant information from the myriad global and local news is always difficult. It is especially daunting in a foreign country where one typically lacks the necessary historical and cultural context. Students come to China with at best an incomplete knowledge of Chinese history, culture, politics, environmental concerns, economy, etc., exacerbated by the challenge of identifying reliable sources of information on many of these topics. The course will address that through readings and lectures as well as documentary and popular films on a variety of topics. Each lecture, discussion, or film will provide relevant information and background on a significant issue for China. Topics will range from business to politics, the environment to the economy, history to current films. Students will be required to attend a dozen of the more than twenty talks and films and write two short reflection papers, one on a topic from the first half of the semester and a second on a topic from the second half of the semester. Prerequisites: There are no prerequisites for the course but enrollment is limited to study away students.

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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