Earth Systems, Environment and Society Program

Student Planning Guide

University of Illinois, Urbana-Champaign

Table of Contents

Welcome

Welcome to the Earth Systems, Environment and Society (ESES) student planning guide. It is our hope that this document will assist you in the navigation of our comprehensive interdisciplinary undergraduate program here at the University of Illinois in Urbana-Champaign.

Are you creative, innovative, inquisitive, a critical thinker, a leader, or a visionary? Do you want to make a difference in the world? If so, you have come to the right place! Interdisciplinary education programs like ESES are designed for self-motivated students like you who are seeking exposure to educational experiences not available in existing disciplinary programs. The ESES major is a program that allows you to engage with a diverse faculty and peer community interested in topics of the deepest importance for this and future generations.

Whether you are drawn to ESES by a concern about the environment, broader social issues, or a desire to understand the physical Earth, you will find that a multitude of options exist within and at the confluence of these areas. Whether your interests lie in the motivations, activities, and organization of environmental movements, a solid foundation in the science of the Earth system, or any other aspect of the Earth Systems, Environment and Society, you will find that many issues and topics exist beyond what you imagined prior to setting off on the journey through the program. We are aware of the scope of these topics, and recognize the benefits of assisting you with the planning of your curriculum as you traverse the fields of knowledge the ESES major seeks to integrate.

What Makes ESES Unique?

In traditional disciplinary programs, there are generally accepted intellectual foundations, usually laid out through a well-defined sequence of courses. The ESES major is built upon many established bases of knowledge, and allows flexibility in choosing pathways through introductory and upper level courses. ESES brings together basic knowledge areas within and across disciplinary borders, allowing new pathways to be forged by you, the student (with the help of your advisors), en route. This “outside the box” environment is unpaved and uncharted, allowing you to carve your own path through it. You can plan your curriculum to be rigorous by building upon the solid foundations existing in disciplinary fields, while still moving between and beyond them to focus on the relevant issues that are most important to you.

Unique Opportunities for Students

The breadth and flexibility of the ESES curriculum allows you to create your own program of study. The ESES major has been designed with this explicitly in mind. As you select courses that interest you and discover what topics and issues you care about and would like to contribute to, you have the opportunity to develop a curriculum that emphasizes the concepts and skills necessary to progress toward your individual academic and career goals. With this privilege comes the responsibility to build a solid knowledge set and skill base to move on to be successful in the next stages of your life. Let your advisors and this manual assist you in fulfilling this objective.

Finding Your Path

In traditional programs, advising is done by someone who is both familiar with the navigation through particular disciplinary and university requirements and with the focus areas and future directions available to students for their discipline. One function of this student guide will be to clarify the requirements for graduation (both general education requirements of the University of Illinois and the specific requirements of the ESES major) so that you have a common source of information that is self-contained and comprehensive. The advising challenge lies in the nature of ESES expanding beyond traditional disciplines, by default moving beyond the expertise of any single advisor. The means by which advising transcends the necessarily limited perspective of an individual advisor is a central focus of this manual for you to understand. This will help you make the most of the ESES experience by becoming aware of what your responsibilities are with regards to planning your curriculum with your advisor(s).

In the following pages, you will find a description of the ESES major that outlines the philosophy of the curriculum and the requirements for the two concentrations, Science of the Earth System (SES) and Society and the Environment (SAE). Within both of these tracks, you will find the flexibility to tailor your own course of study. You will also find a discussion of advising issues that may be helpful to you as you progress through your undergraduate experience. It is our goal to make this guide useful to you as a resource that provides guidelines and information about the ESES major.

ESES Overview

Description of ESES Program

The undergraduate major in Earth Systems, Environment and Society (ESES) is an innovative program that transcends traditional disciplinary boundaries to explore the complexities and interconnectedness of societies and the physical environment. The fundamental goal of the program is to facilitate a comprehensive interdisciplinary liberal arts education that provides you with the knowledge and skills to contribute to Earth System science, the capability to understand the interactions between society and the environment, and the foundation to make informed policy choices. To achieve this, the curriculum has been structured in order to balance a broad exposure to diverse disciplines at an introductory level with a more focused substantive course of study at the upper level.

The curriculum allows you to pursue one of two general concentrations: the Science of the Earth System (SES) Concentration and the Society and the Environment (SAE) Concentration. The first (SES) provides rigorous scientific training linking studies of the solid earth, atmosphere, oceans and biosphere into a holistic approach to the Earth system. Alternatively, the SAE specialization offers a similarly cross-disciplinary education in the social sciences and humanities, emphasizing the interplay between the cultural, socio-economic, and political dimensions that shape and are shaped by the physical environment.

After completing an introductory sequence of courses and a two-semester, 200-level interdisciplinary colloquium on issues of the Earth System (ESES 200), you will select one of these concentrations to focus either in the sciences or the social sciences and humanities. You will be exposed to upper level courses from both areas so that your skills and knowledge base are broadened at both the introductory and upper levels of your coursework. The proposed curriculum also leaves open the opportunity for you to tailor your coursework into a more focused substantive specialization within either of the two tracks.

For more specific information about the program, please visit our website (www.eses.uiuc.edu) or the UIUC Programs of Study catalog (available on the web at http://www.uiuc.edu/academics/).

Discussion of Curriculum and Course Requirements

This section provides an overview of the general curriculum requirements that provide structure to the ESES major.

General requirements for a major in Earth Systems, Environment and Society

Consistent with the general requirements of the University and the guidelines for interdisciplinary programs within LAS, this program includes the following sets of requirements:

1. Introductory Core (All Majors)	4 courses (12-14 hours)
2. Technical Skills and Capstone Experience	3 courses (10 hours)
3. Introductory Coursework in Concentration	5 courses (15 hours)
4. Advanced Electives within Chosen Concentration	3 courses (9 hours)
5. Breadth Courses at the Advanced Level	1 course (3 hours)
Total	16 courses (49-50 hours)

Introductory core (all majors)

The curriculum requires students to take at least two courses each from approved lists of courses in the science (one physical science and one biological science) and social/human dimensions of the Earth System (approved courses can be found at the website: http://www.eses.uiuc.edu/academics/courses.php). The purpose of these introductory core classes is to provide all students with a broad survey of how issues of the Earth System and environment are approached in the social sciences, physical sciences, and humanities. Additionally, many upper-level courses of interest to our majors require at least one such introductory course (for more on prerequisites, see the discussion under Advising and the Noteworthy Precautions at the end of this section.) Note that these four courses are the minimum requirement; you are free to take more as your interests dictate, but keep in mind that these are survey courses that generally lack the substantive depth and skill building provided in upper-level courses.

In addition to these introductory courses, all majors are required to participate in an ESES colloquium, repeated in two different semesters for a total of 4 hours. The purpose and structure of the colloquium are detailed later in this volume.

General Education Courses

The University requires 33 credits of general education courses. These are individually selected by students and fall into several required categories. Fortunately for ESES students, a significant overlap exists between the required introductory course options and general education requirements, particularly related in the areas of social, behavioral, physical, and life sciences. See the ESES website for a list of what ESES courses fulfill particular General Education requirements. (Also, check out the section below for more specific information about Gen Eds.)

Technical Skills and ESES Capstone (All majors)

One of the emphases of this program is to train students in such practical skills as data analysis and representation. In addition to upper level course work emphasizing these skills, all majors are required to take ESES/GEOG 379, an introductory methods course in Geographic Information Systems, and at least one course in statistics. Additionally, all students are required to complete one of three options to fulfill a senior capstone requirement. These options are described in further detail in a later section.

Introductory Coursework within Concentrations

Students within the SES concentration are required to complete the following: 1) 1 semester of calculus; 2) 1 semester (plus lab) of chemistry; 3) 1 semester of statistics; and 4) one semester of physics. A semester of computer science is highly recommended for students within this concentration.

Students within the SAE concentration are expected to complete the following: 1) 3 semesters of introductory coursework in the social sciences/humanities from the list of approved courses; 2) 1 semester of introductory statistics; and 3) one semester of introductory economics.

Advanced Electives: Specialization and Breadth

At the advanced level (300-400), students are required to complete 3 courses within their chosen specialization and 1 breadth course in the opposite concentration. These courses must be at the 400-level (or from a list of approved 300-level courses) and completed on this campus. It is highly recommended, however, that students complete 15 hours (5 courses) at the advanced level within their concentration and 6 hours (2 courses) in the opposite concentration.

For the most recent list of approved courses in each of these categories, as well as recommendations for substantive tracks at the advanced level, please visit the ESES website at http://www.eses.uiuc.edu/.

Meeting General Education Requirements

In order to graduate you will need to satisfy the university-wide requirements of all undergraduate students known as General Education Requirements. The specific requirements you must satisfy depend on the year you are admitted to the university, because the requirements change over time. The current requirements can be found online at http://www.courses.uiuc.edu/gened. At the time of writing this manual, the requirements are as follows:

- Composition I (3/6 hours)
- Advanced Composition (3 hours)
- Cultural Studies: Non-Western/US Minority Cultures (3 hours)
- Cultural Studies: Western/Comparative Cultures (3 hours)

- Language (Completion of a third semester college-level course in a language other than the student's primary language)
- Humanities/Arts (6 hours)
- Natural Sciences/Technology (6 hours)
- Social/Behavioral Sciences (6 hours)
- Quantitative Reasoning I (3 hours)
- Quantitative Reasoning II (3 hours)

The purpose of having these general requirements is to ensure that all students graduating from the University of Illinois have demonstrated basic reasoning skills, been exposed to a variety of viewpoints through cultural studies, and are proficient at the necessary basic communication skills to succeed in the post-graduate world.

As you plan your schedule, you will want to keep in mind these requirements. The language requirement in particular requires you to take several courses in a language other than your primary language. You may want to begin working on this requirement very early on in your undergraduate career so that it is not a concern as you near completion and want to move on to other things like jobs and graduate school.

Noteworthy Advice #1: *Gen. Ed. Requirements and ESES*

If you compare the list of required Gen. Ed. courses with the list of courses to select from for the ESES major, you will see that there is substantial overlap. This allows you to "double dip" and satisfy multiple requirements simultaneously. It can also help reduce the total number of hours of required courses, letting you focus on the classes that interest you most. A broad course of study can be combined with an in-depth exploration of a favored discipline. And if you want to prepare for graduate study in the physical or social sciences, you will be able to take the necessary courses without overloading your class schedule.

Selecting a Specialization: SAE or SES?

Two tracks are available in the ESES major for students to select from. **Society and the Environment (SAE)** emphasizes social issues and their connections to the natural world. **Science of the Earth System (SES)** emphasizes the geosciences as they relate to environmental issues and the activities of humans. Each track has a unique curriculum with some common (and some different) requirements for graduation. Within 1 semester of declaring a major in ESES, it will be necessary to express your choice of specialization.

Students in the SES track should be prepared to take at minimum a required sequence of introductory coursework, including calculus, physics, chemistry, and statistics.

The introductory coursework in the SAE concentration is more open, requiring that students and their advisors meet early to put together a coherent plan of study focusing on the areas of human and social dimensions pertaining to the environment that interest you.

Choice of a specialization should depend not only on specific substantive interests, but also the types of career options for which a student is preparing. For further discussion of these considerations, see the section below on career options.

Noteworthy Advice #2: *Getting Focused*

Interdisciplinary programs allow students to explore ideas by crossing the often confining boundaries of individual disciplines. However, without careful planning it is possible in the loose framework of an interdisciplinary program to spread your attention too broadly and leave the program without a clear identity or trajectory. This can be easily avoided with the help of faculty and advisors through the selection of lower and upper level courses that are complementary and combine into a substantively coherent and developed curriculum. Let this manual and your advisor help you create a marketable set of skills along with a sense of direction along your career path.

Noteworthy Advice #3: *Observing Prerequisites*

The list of available courses satisfying the ESES major is quite extensive and spans across many disciplines. Most upper level courses have requirements that must be taken first. These courses required prior to enrollment in the desired course are called *prerequisites*. Similarly, some courses require that you be enrolled concurrently in another course to supplement the work in a given class; these less common requirements are referred to as *co-requisites.* When planning your schedule, be sure to consult the UIUC Course Catalog (available online at http://www.uiuc.edu/usergroups/students.html) to identify pre- or co-requisites of any course you plan to take. This will help you stay on track and avoid unpleasant surprises.

Despite the considerable freedom you have in selecting courses through the ESES major, there is still a need for care in observing prerequisites. This is particularly true with the science courses at the upper level, where many (mainly physical science) courses require a more extensive comprehension of calculus in order to be able to work through the material. Other types of requirements also exist, so you may want to look at upper level course prerequisites while selecting your introductory core courses to make sure you are prepared for the courses of most interest to you.

Noteworthy Advice #4: *Contacting Instructors*

Popular classes fill up – but you needn't miss out on taking a potentially interesting class just because the roster is at capacity. Contact the instructor and tell them that you want to be part of their class. Although there are no guarantees, the instructor will often find a way to enroll genuinely interested students. In many instances, instructors have students

sit in on the class during the first week so they can be added to the enrollment list when another student drops. In other cases the instructor will be able to add a student to the course immediately. Don't be afraid to show your enthusiasm!

Role of Colloquium and Capstone Experience

The University of Illinois is a big place. With more than 29,000 undergraduate students enrolled in over 150 majors across our 1,458 acre campus, it is all too easy to get lost in the crowd. We understand the importance of having a sense of community during your undergraduate experience and realize that interdisciplinary programs, lacking in some of the "cohort building" experiences through required course sequences during their first years, have the potential drawback of spreading students across many different introductory courses without providing a sense of cohesion. Combined with this is the potential for you to take a variety of courses in different disciplines without ever getting exposed to the big picture of how all of the important topics you are exposed to are related to each other. We have designed in the structure of the ESES curriculum two opportunities for creating a sense of community and allowing you to discover how everything you are learning fits together.

The first is the colloquium course that you are required to take twice during your studies. This course will be run on a three-week rotation. During the first two weeks, speakers from two different disciplinary perspectives will address a substantive topic related to the Earth System. The course administrator will facilitate the third week's session as an open discussion of the issues and perspectives presented. Topics will change throughout the semester so that you will be exposed to a multitude of perspectives from many different fields of study regarding a broad range of topics related to the Earth systems. The colloquium is intended to fulfill both objectives by bringing ESES students together into one classroom to encourage the growth of a community, as well as to offer you an overview of how different disciplinary perspectives on specific issues intersect, allowing you to discover those approaches that interest you most and how they fit into the larger multidisciplinary picture.

The second opportunity can be found through the senior capstone experience. The capstone is meant to provide an integrative culmination to your ESES education with a multidisciplinary project that draws upon both the breadth and depth of what you have learned through a practical application of your knowledge and skills. You have three options to choose to fulfill the capstone requirement: 1) a team-based, project-oriented course, 2) a faculty supervised independent study project, or 3) a relevant internship experience. All three of these options offer you the chance to integrate what you have learned into a focused project to further develop your skills and to apply yourself to a real problem to discover ways to solve it. Furthermore, if you select the capstone course, you will have the additional opportunity to reunite with other ESES students and share knowledge and experiences you have each gained from your independent paths through the program. This reinforces the sense of community with your peers.

Choosing the Right Capstone Option

Below are some benefits and limitations of each option for you to consider when selecting between the three available capstone choices.

Team-Project Course

Several courses are currently available as capstone options, with more to be developed as program enrollment increases (see the ESES website [www.eses.uiuc.edu] for the most current list of approved capstone courses). The fundamental aim of the course is to couple the natural and social/human dimensions of a significant Earth System problem, with a special emphasis on critical thinking, problem solving, and data analysis and representation. Choosing to fulfill your capstone requirement with a course allows you to interact directly with other students in the ESES program. You will have the opportunity to work in a group on a project that draws on the unique interests and skills of each member to address a real-world problem of environmental and social significance. In the process, you will learn from your classmates who have taken different paths through the ESES curriculum and were exposed to things you may not have seen. This opportunity to communicate with others from different backgrounds is an excellent way to practice sharing ideas across disciplines. Additionally, you will gain experience at working in groups. Essentially no significant work is done in isolation any more, so the better you can cooperate, communicate, and effectively navigate group partnerships, the more successful you will be in your future career.

One limitation of selecting the course as your capstone option is that you may not get to apply your skills directly to a project designed with your specific background and interests in mind, as you would with an independent study project. Another limitation is that you may not have research or work experience, so you should consider seeking summer research and internship opportunities separately to give yourself some experience in a professional setting.

Independent Study Project

One of the great benefits for undergraduate students at a major research university is the exposure to cutting edge research, data, and technological resources. Given the interdisciplinary nature of the ESES program, it is important that a capstone research experience be similarly integrative, requiring students and their advisory faculty to consider a broad range of issues and perspectives within the projects. The independent study option gives students the opportunity to develop their own research project, with the help of at least one faculty member, which serves as a synthesis of their educational experience within the program. Although focused within the student's particular substantive specialization, all research projects considered for fulfilling the capstone requirement must incorporate both social and physical dimensions of the particular issue or research topic.

It can be very exciting to come up with an idea and develop it into a unique project that has not been done before. Choosing an independent study project to satisfy your

capstone requirement gives you this kind of opportunity. Many benefits come from doing your own project, including building expertise through the process of inquiry, tailoring the project to your specific interests, and exploring the particular topics that interest you most.

A potential drawback of selecting an independent study project is that you do not get the opportunity to work in a group and share ideas collectively with people from diverse backgrounds during the process. You will have the chance to interact with your project advisor, as well as share what you are doing with family and friends, but it is also important to gain experience working in groups. However, you may find that other opportunities to work in groups have already come your way through previous classes, so this is your chance to do some solo work and see how you feel about it before considering things like grad school.

Internship Experience

It is always a good idea to get some experience in a professional environment before graduation. If the right opportunity comes along, you may be able to do this while simultaneously satisfying your capstone requirement. The benefits of doing an internship stem from getting actual work experience, including making professional contacts (possibly securing a job or graduate position later) and getting exposure to what the work environment will be like (helping you decide if this is what you want to do).

One limitation of doing an internship as your capstone option is that it does not allow you to interact with your fellow ESES classmates at the senior level. This may not be a concern if you have already made solid contacts with people during earlier classes, but it is also rewarding to connect with new people in the group project of the capstone course. Another limitation is that you will not be likely to lead a project at an internship, something you would get to do with an independent study project or possibly as the leader of the team project in the capstone course. Another consideration is to do an internship (or multiple internships!) separately and fulfill your capstone requirement with one of the other two options.

Regardless of which option you choose for your capstone experience, the pros are greater than the cons. Just choose the option that best reflects your interests, personality, and future plans. And if you're feeling ambitious, you can even choose to do more than one!

Suggestions for Some Specialization Areas

There is no exhaustive list in existence of specialization areas for the ESES major. As new challenges arise in the future, students will recognize new avenues to explore as they deem appropriate. In this section, we provide a selection of options drawing upon general areas of faculty interest that push across disciplinary boundaries. You may find that your interests fit in well with something on this list, or perhaps you will see that a combination of these (or something else entirely) best suits your fancy.

Society and the Environment Track (SAE)

If you have chosen the SAE track, these options may be of interest to you:

- Environmental Policy
- Environmental Economics
- Studies in Science and Technology
- Social Valuation of Environmental Systems
- Social Studies of the Physical Environment
- Environmental History
- Social Movements and the Environment
- Perceptions of Environmental Risk
- Environmental Ethics

Science of the Earth System Track (SES)

If you have chosen the SES track, these options may be of interest to you:

- Water/Hydrology
- Ecology and Ecosystems
- Data and Modeling
- Engineering and Management Practices
- Climate and Global Change
- Biogeochemical Cycles
- Remote Sensing
- Types of Pollution and Their Sources

Career Counseling

ESES graduates understand how the natural world and human society interact, and they can use that knowledge to build a career in environmental and related fields. If such a career is your goal, we'll help you achieve it. Not only do ESES majors develop the hallmark skills of a liberal arts and sciences degree – critical thinking, the ability to communicate information and ideas, the technical skills to interpret data and solve problems – they also have a high level of understanding and experience in their specialty. ESES majors possess a degree that has the academic rigor, course flexibility, and real-world experience that they need to flourish after graduation. Furthermore, in the ESES you're not alone in your quest to join the workplace: our counselors will help get you there.

The ESES major is flexible. Although some students have a career goal from the first day they start college, most aren't so sure. The breadth of the ESES program means that you're not locked in a particular path early – you'll have time to decide what direction your degree leads you in. You don't need to guess what field of study will be your passion in advance – an ESES degree gives you the chance to find the discipline that you will excel in. Select a career that fits with your enthusiasm and energy!

The ESES major provides many opportunities for the student to get real world experience. Undertaking internships and independent research imparts an understanding of how problems get solved in the workplace. An internship can both tell you if the career

is the right one, and also can provide the resume enhancing experience that lands you the first job after graduation. At ESES, we not only help you get this experience, we *require* it as part of our capstone course offering. The school is also committed to helping its students enhance their college experience with workshops, fellowships, foreign study, and summer internships.

The ESES major is academically rigorous. This provides the foundation to continue on to an advanced degree if your interest – or career path – requires it. Advanced degrees provide the knowledge and accreditation that you might need to make your mark on the world. If, for example, you plan to become an environmental consultant, a university professor, an environmental lawyer, or a research scientist, you'll need to go on to further study. All of these graduate options – and many more - are possible for ESES graduates. Discuss your goals with our course advisors and we can structure your classes to prepare you for the graduate program that you'll need to succeed.

What kinds of jobs can you expect to get with the ESES degree? In addition to the other career paths open to UI graduates in the liberal arts and sciences, an ESES major prepares students for a variety of environmental, scientific, and societal careers, such as:

- Local and state agencies (such as the Department of Natural Resources or Urban Planning unit)
    - Monitoring environmental conditions
    - Gathering and processing data
    - Performing outreach tasks in education
- Work for a federal agency (like the EPA, NASA or USDA)
    - Same as for state agencies
    - Report to policy makers
    - Foreign diplomacy through the state department
- Computer programming, network administration, and software development
- Education
    - Teaching
    - State and federal programs for environmental literacy (NASA)
- Consulting
    - Environmental practices
    - Corporate activities and investments
    - Social practices and impacts
- Advocacy
    - Non-government organizations
    - Environmental advocacy groups
    - Congressional Lobbying

There are many careers open to students who move on to graduate study._Students interested in pursuing an advanced degree in science have many disciplines to consider with a bachelors degree in ESES: atmospheric science, ecology, forestry, geology, hydrology, and physical geography are all accessible with sufficient math and physics electives. The graduate school requirements for sociology, history, philosophy, communications, rhetoric, public policy, and international studies will be fulfilled by

students in the SES track. In either case, the ESES degree also uniquely prepares students for interdisciplinary programs focusing on natural resources, Earth system science, sustainability, crop sciences, food, health, and natural disasters.

ESES Major Progress Worksheet: SES Concentration

Name: _____
Projected Graduation Date: _____
Advisor(s): _____

Please indicate the course number taken to satisfy the requirements below and the semester completed. NOTE: This does not include general education requirements- please see separate General Education Worksheet.

Core Requirements (All Majors)
ESES Colloquium: Semester 1_____ Semester 2 _____
Introduction to Earth's Physical Systems:
1) _____
Introduction to Earth's Biological Systems:
1) _____
Introduction to Society and the Environment
1) _____
2) _____
Skills Requirement (ESES/GEOG 379): _____
ESES Capstone: _____

SES Introductory Core
Math 220: _____
Chem 102/103: _____
Statistics: _____
Physics: _____
Computer Science (Recommended): _____

SES Advanced Coureswork
Approved SES Courses:
_____
_____
_____

Approved SAE Courses:
_____

ESES Major Progress Sheet: SAE Concentration

Name: _____
Projected Graduation Date: _____
Advisor(s): _____

Please indicate the course number taken to satisfy the requirements below and the semester completed. NOTE: This does not include general education requirements- please see separate General Education Worksheet.

Core Requirements (All Majors)
ESES Colloquium: Semester 1_____ Semester 2 _____
Introduction to Earth's Physical Systems:
1) _____
Introduction to Earth's Biological Systems:
2) _____
Introduction to Society and the Environment
3) _____
4) _____
Skills Requirement (ESES/GEOG 379): _____
ESES Capstone: _____

SAE Introductory Core
Economics: _____
Intro Social Science/Humanities
1) _____
2) _____
3) _____
Statistics: _____

SAE Advanced Coureswork
Approved SAE Courses:
_____
_____
_____

Approved SES Courses:
_____

LAS General Education Requirement Worksheet

COLUMN I: A total of five courses from the approved list must be completed to fulfill the requirement for column I. Students must complete one course (maximum of two) from each of the five subcategories. Courses on the Cultural Studies lists may also satisfy a General Education Requirement in another subcategory under column I.

COLUMN II: A total of five courses from the approved list must be completed to fulfill the requirement for column II. Students must complete one course from each of the five subcategories.* Courses on the Quantitative Reasoning II list may also satisfy a General Education Requirement in another subcategory under column II.

	COLUMN I **Minimum 5 courses required**	**COLUMN II** **Minimum 5 courses required**
Humanities and the Arts	Literature and the Arts 1-2 courses Historical and Philosophical Perspectives 1-2 courses	
Social and Behavioral Sciences	Social Sciences 1-2 courses	Behavioral Sciences 1-2 courses
Natural Sciences and Technology		Physical Sciences 1-2 courses Life Sciences 1-2 courses
Quantitative Reasoning		Quantitative Reasoning I 1-2 courses Quantitative Reasoning II * 1-2 courses
Cultural Studies	Non-Western Cultures or U.S. Minority Cultures 1-2 courses Western Cultures 1-2 courses	-

Column 1 (Must have 5):

1) Literature and the Arts: _____
2) Historical and Philosophical Perspectives: _____
3) Social Sciences: _____
4) Non-Western or US Minority Cultures: _____
5) Western Cultures: _____

Column 2:

1) Behavioral Sciences: _____
2) Physical Sciences: _____
3) Life Sciences: _____

4) Quant 1: ____

5) Qunat 2: ____