Environmental and Urban Studies

Department Website: http://environmentalstudies.uchicago.edu

Urban and environmental issues are interconnected. Urbanization, climate change, habitat loss, pollution, food and energy needs, and issues of social justice and economic stability are among the most pressing issues facing contemporary societies. Environmental and urban processes operate at multiple scales, involving natural and human consequences that cannot be addressed solely from within a single discipline. Students will gain an understanding of the interconnected natural and urban realms, building their understanding of what sustainable development means and how opportunities and challenges can be met. The major motivates a deeper theoretical understanding of urbanism and nature, as well as practical strength in addressing urban and environmental challenges. It brings a spatial and place-based perspective to the study of these challenges, using built form and environmental context as key, conceptual lenses to investigate the social, cultural, economic, and humanistic dimensions of urbanism.

Program of Study

The major and minor program in Environmental and Urban Studies encourages interdisciplinary approaches to the study of environment, geography, and urbanization grounded in theoretical frameworks and research methods from the social sciences and humanities, complemented by approaches from environmental sciences, urban planning and design, and urban science. The major fosters the interrogation of the limits and possibilities of inherited approaches to the study of society and environment across space and time, and to explore new epistemologies, conceptual frameworks, and research methods for the analysis of socio-environmental dynamics, especially in relation to the cascade of environmental emergencies that are reshaping the conditions for social existence across the planet.

Thematic Tracks

Students can choose between two thematic tracks: Environmental and Urban, with a strong foundational basis in the intersection of the two tracks through courses, electives, and research.

- The Environmental Track focuses on the study of human behavior and its relationship to environmental preservation and conservation, environmental social communication, and various connections between nature and modern humanity. This track offers emphasis in environmental social sciences and law, sustainable development, human ecology, environmental ethics and justice, and the social and humanistic study of climate change.

- The Urban Track of the major focuses on human interactions with the urban built and natural environment. This track emphasizes the human experience of cities through study of urban social sciences, urban form, urban design, urban planning, and emerging urban science.

BA Thesis/BA Capstone

All students majoring in ENST complete either a BA Thesis or BA Capstone in their fourth year. The BA Thesis is required for any student pursuing honors in the major, while all other students must complete either the BA Thesis or BA Capstone.

BA Thesis: The BA Thesis gives students a valuable opportunity to conduct extended research, writing, and analysis on a topic of particular significance to them. Frequently, undergraduates who write and reason well are nevertheless unaccustomed to directing their own academic inquiry from within by formulating and conducting a research project from start to finish. The program therefore offers significant guidance and support from faculty and preceptors in these independent projects. For this purpose, students choose expert advisers from across the University, receive mentorship from program faculty, and participate in a two-quarter BA Colloquium course sequence in their fourth year. Some theses are not only self-styled but may take students to far-off places, both geographically and intellectually. The results are often remarkable in their scope and creativity.

Any student majoring in ENST may choose to complete a BA Thesis, but it is required by those pursuing honors in the major. The BA Thesis is an extended piece of research, conducted independently by the student under advisement by a University of Chicago faculty member. While a long research paper (40–60 pages) is the traditional approach to the thesis, other formats involving alternative media or design will be considered if accompanied by a written text and are approved at the proposal stage by the Program on the Global Environment faculty.

Starting in 2022–23, in Spring Quarter of the third year, students will attend a BA information session and brainstorming workshop, and meet with a graduate student preceptor. Students wishing to complete a BA Thesis must submit a BA Thesis application with endorsement by a faculty adviser in Spring Quarter of their third year. If approved, students will attend Spring Quarter workshops to prepare a reading list and BA Thesis plan.
Students must enroll in ENST 29801 BA Colloquium I in Autumn Quarter and ENST 29802 BA Colloquium II in Winter Quarter of their fourth year. The final BA Thesis is due in third week of Spring Quarter, and a final presentation symposium is held shortly before graduation.

**BA Capstone:** The BA Capstone option is open to all students in the major but does not qualify any student for honors. In this track, students must complete one individual (not group-based) BA Capstone project as required within a designated Capstone course. While certain Capstone courses can be taken prior to the fourth year, they will only count towards the BA Capstone requirement if taken in the fourth year. The course-based BA Capstone project will be designed by the instructor for all students in the course, regardless of major or track. The project may be an extended research or policy paper (7,500–10,000 words), a series of writings for art or media (several 3,000–5,000 word articles), a design project in a studio course, a creative project (e.g., short film, artwork, creative writing, or podcast), or other type of project designed by the instructor. The BA Capstone project will be evaluated by the instructor and contribute to the final grade in the chosen Capstone course.

Students must present their BA Capstone project in the final symposium held in ninth week of Spring Quarter of their fourth year.

For further details and important dates and deadlines related to the BA Thesis and BA Capstone, please visit the Environmental and Urban Studies website (https://environmentalstudies.uchicago.edu/).

**ENST Honors:** In addition to a minimum GPA 3.25 overall, 3.7 in the major, students must complete the BA Thesis track and receive a grade of A in **ENST 29802 BA Colloquium II**, which includes the overall BA Thesis grade.

**ENVIRONMENTAL AND URBAN STUDIES MAJOR REQUIREMENTS (1300 UNITS)**

All students must take the Environmental and Urban Studies foundational courses:

- ENST 21201 Human Impact on the Global Environment
- ENST 20150 Sustainable Urban Development
- STAT 22000 Statistical Methods and Applications (or equivalent)

One of the following (or equivalent):

- ENST 28702 Introduction to GIS and Spatial Analysis
- ENST 23517 Introduction to Critical Spatial Media: Visualizing Urban, Environmental, and Planetary Change

Internship/field studies experience

Total Units 400

Students may use a maximum of 100 units of supervised individual reading and research credit toward their primary track requirements in the major.

All courses counting towards major requirements must be taken for a quality grade.

**THEMATIC TRACK REQUIREMENTS**

**ENVIRONMENTAL TRACK**

All students in the Environmental Track must take the additional foundational course ENST 21301 Making the Natural World: Foundations of Human Ecology. In addition, students take three or four elective courses from an approved list of Environmental Track courses, one elective course from an approved list of Urban Track courses, and two courses in environmental sciences. Approved courses for each requirement can be found on the ENST-approved course list. (https://docs.google.com/spreadsheets/d/1WDeRgwY498DxKg2lNhqfr-W95pGVpDG3_Myr4VuLDck/edit?#gid=0)

**Environmental Thesis Requirements**

Foundational Requirements (above) 400

- ENST 21301 Making the Natural World: Foundations of Human Ecology 100
- 3 Environmental Track electives from ENST-approved course list 300
- 1 Urban Track elective from ENST-approved course list 100
- 2 environmental sciences courses from ENST-approved course list 200
- ENST 29801 BA Colloquium I 100
- ENST 29802 BA Colloquium II 100
Internship/field studies experience

Total Units
1300

Environmental Capstone Requirements

Foundation Requirements (above)
400
ENST 21301 Making the Natural World: Foundations of Human Ecology
100
4 Environmental Track electives from ENST-approved course list
400
1 Urban Track elective from ENST-approved course list
100
2 environmental sciences courses from ENST-approved course list
200
1 Capstone elective from ENST-approved course list (must be taken in fourth year)
100

Total Units
1300

Urban Track

All students in the Urban Track must take two courses from the approved list of Urban Social Science courses, three or four elective courses from the approved list of Urban Track courses, and two elective courses from the ENST approved course list. (https://docs.google.com/spreadsheets/u/1/d/1WDErGwY498DXKgzNihqfr-W95pGVpDG3_Mvr4VulDck/edit/#gid=0)

Urban Thesis Requirements

Foundation Requirements (above)
400
2 Urban Social Science courses from ENST-approved course list (additional ones can be taken as Urban Track electives)
200
4 Urban Track electives from ENST-approved course list
400
1 Environmental Track elective from ENST-approved course list
100
ENST 29801 BA Colloquium I
100
ENST 29802 BA Colloquium II
100

Total Units
1300

Urban Capstone Requirements

Foundation Requirements (above)
400
2 Urban Social Science courses from ENST-approved course list (additional ones can be taken as Urban Track electives)
200
5 Urban Track electives from ENST-approved course list
500
1 Environmental Track elective from ENST-approved course list
100
1 Capstone elective from ENST-approved course list (must be taken in fourth year)
100

Total Units
1300

All elective courses must come from approved courses, found on the ENST-approved course list (https://docs.google.com/spreadsheets/d/1WDErGwY498DXKgzNihqfr-W95pGVpDG3_Mvr4VulDck/edit/#gid=0) or by approval by petition.

Geographical Sciences Majors

Starting in 2022–23, the Geographical Sciences major and associated courses (GEOG) will be embedded with the Environmental and Urban Studies (ENST) major and minor program. Students interested in the previous Geographical Sciences major are encouraged to declare the ENST major. Students interested in the minor program in Geographic Information Science (GISC) should refer to the minor program page in the College Catalog (http://collegecatalog.uchicago.edu/thecollege/geographicalstudies/).

Major Declaration

Students may begin a major at any time (including their first quarter). However, the deadline to declare the Environmental and Urban Studies major is fourth week of Spring Quarter in the third year. Students must meet with the ENST Program Administrator or Program Director when declaring their major.

Internship or Field Studies Program

Students are required to participate in an internship, field study, or research assistantship with significant links to their program of study. Activities that fulfill the internship requirement include summer or academic year internships of varying lengths, research assistantships, fellowships or field studies with faculty or other academic staff, participation in working groups, completion of a Chicago Studies Quarter or the ENST Calumet Quarter, or other sustained engagements relating to the ENST program. Participation in recognized student organizations, while encouraged, does not count towards the internship requirement.
Students must complete the Internship Evaluation Form (https://humanities-web.s3-us-east-2.amazonaws.com/college/environmentalstudies-uat/s3fs-public/2019-11/ENST%20Internship%20Placement%20Form.pdf) prior to the second week of Spring Quarter in the year they plan to graduate.

EXPERIENTIAL LEARNING OPPORTUNITIES

The Environmental and Urban Studies major offers experiential learning opportunities as designated on the list of ENST-approved courses (https://docs.google.com/spreadsheets/d/1WDErGwY498DXKg2Nh6qr-W9sGVpDG3_Mvr4VuLDCk/edit?gid=0) by "EL", the Chicago Studies Quarter, and the Chicago Studies Certificate Program. Students are encouraged to enroll in these programs, which offer immersion in the academic, experiential, interdisciplinary study of Chicago and its region. For more information about these programs, please see the Chicago Studies page in this Catalog (http://collegecatalog.uchicago.edu/thecollege/chicagostudies/) or visit chicagostudies.uchicago.edu (http://chicagostudies.uchicago.edu/).

CHICAGO STUDIES QUARTER: CALUMET

Since 2009, the Calumet Quarter has offered a one-quarter, intensive, experience-based program focused on human land use in the Calumet Region just south and east of the city. As of 2017–18, it has merged with the Chicago Studies Quarter and is officially known as the Chicago Studies Quarter: Calumet. It features integrated courses, projects, field trips, guest lectures, and presentations, and integrates perspectives from the sciences, humanities, and social sciences in the study of local environments and communities.

Chicago Studies Quarter: Calumet is offered every other year. The next offering will be in Spring Quarter 2024. Courses taken as part of this program can be used to satisfy requirements in all three tracks of the major.

ENVIRONMENTAL AND URBAN STUDIES MINOR PROGRAM REQUIREMENTS

Students who elect the minor program in Environmental and Urban Studies should meet with the program director before the end of Spring Quarter of their third year to declare their intention to complete the minor and select appropriate courses. The approval of the program director for the minor program should be submitted to a student’s College adviser by the deadline above on the Consent to Complete a Minor Program (https://cpb-us-w2.wpmudcdn.com/voices.uchicago.edu/dist/a/1176/files/2019/04/Consent_Minor_Program-26nrq41.pdf) form, available online or from the College adviser.

Courses in the minor (1) may not be double counted with the student’s major(s) or with other minors and (2) may not be counted toward general education requirements. Courses in the minor must be taken for quality grades, and at least half of the requirements for the minor must be met by registering for courses bearing University of Chicago course numbers.

ENST MINOR REQUIREMENTS (600 UNITS)

Requirements for Both Minor Tracks (2 courses)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENST 21201</td>
<td>Human Impact on the Global Environment</td>
<td>100</td>
</tr>
<tr>
<td>ENST 20150</td>
<td>Sustainable Urban Development</td>
<td>100</td>
</tr>
<tr>
<td>Total Units</td>
<td></td>
<td>200</td>
</tr>
</tbody>
</table>

Additional Requirements for Minor Environmental Track (4 additional courses)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENST 21301</td>
<td>Making the Natural World: Foundations of Human Ecology</td>
<td>100</td>
</tr>
<tr>
<td>Total Units</td>
<td>CENST 3 Environmental Track electives from ENST-approved course list</td>
<td>300</td>
</tr>
</tbody>
</table>

Total Units | 400   |

Additional Requirements for Minor Urban Track (4 additional courses)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban Social Science courses from ENST-approved course list (additional ones can be taken as Urban Track electives)</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>Total Units</td>
<td>400</td>
</tr>
</tbody>
</table>

Courses in the minor (1) may not be double counted with the student’s major(s) or with other minors and (2) may not be counted toward general education requirements. Courses in the minor must be taken for quality grades, and at least half of the requirements for the minor must be met by registering for courses bearing University of Chicago course numbers.

PETITION PROCESS AND DEADLINES

Students majoring/minoring in Environmental and Urban Studies must complete all program requirements. Exceptions will be made only in extenuating circumstances and must be requested via the College’s General Petition (https://college.uchicago.edu/advising/tools-forms/) form.

All petitions related to ENST requirements must be submitted via the website submission portal (https://docs.google.com/forms/d/e/1FAIpQLSeihqXb0_nfuMBrHjK1VXha-WOlw29Zpz-7EqLXJNivtZsA/viewform?usp=sf_link). They will only be reviewed during two quarterly windows and will be returned within one week.
The deadlines for all program petition submissions each quarter are:

- Friday of second week by 11:59 p.m. CT
- Friday of eighth week by 11:59 p.m. CT

No petitions will be reviewed outside of this window.

EMAIL LIST

Students majoring, minoring, or interested in Environmental and Urban Studies should subscribe to our email list (http://eepurl.com/gLQL49/) to receive announcements concerning courses, internships, fellowships, and other information connected with the major.

IMPORTANT DATES AND DEADLINES

Winter 2023
Week 3
Third-years: Finalize your course of study form (https://environmentalstudies.uchicago.edu/program-forms/) and meet with your preceptor

Week 8
Third-years: Attend BA Thesis/Capstone information session

Spring 2023
Week 2

Week 3
Fourth-years: BA Thesis due for evaluation

Week 5

Week 6
Third-years: BA Thesis brainstorm session

Week 7
Fourth-years: Final BA Thesis due

End of Spring Quarter
Students present at the BA Thesis Symposium and BA Capstone Symposium

ENVIRONMENTAL STUDIES COURSES
ENST 12105. Sex and Gender in The City. 100 Units.
This course is designed to introduce students to some of the key concerns at the intersection of gender studies and urban studies. In this course, we will take gender relations and sexuality as our primary concern and as a constitutive aspect of social relations that vitally shape cities and urban life. We will examine how gender is inscribed in city landscapes, how it is lived and embodied in relation to race, class, and sexuality, and how it is (re)produced through violence, inequality, and resistance. Over the course of the quarter, we will draw on an interdisciplinary scholarship that approaches the central question of how and why thinking about urban life in relation to gender and sex matters.

Instructor(s): Sneha Annavarapu
Terms Offered: Spring

Note(s): This course counts as a Foundations course for GNSE majors
Equivalent Course(s): GLST 22105, ARCH 22105, SOCI 28088, GNSE 12105

ENST 12300. Global Warming: Understanding the Forecast. 100 Units.
This course presents the science behind the forecast of global warming to enable the student to evaluate the likelihood and potential severity of anthropogenic climate change in the coming centuries. It includes an overview of the physics of the greenhouse effect, including comparisons with Venus and Mars; an overview of the carbon cycle in its role as a global thermostat; predictions and reliability of climate model forecasts of the greenhouse world. This course is part of the College Course Cluster program, Climate Change, Culture, and Society. (L)

Instructor(s): D. MacAyeal
Terms Offered: PHSC 13400 was last offered in Autumn 2019 and has been replaced by PHSC 13410

Prerequisite(s): Some knowledge of chemistry or physics helpful.
Equivalent Course(s): GEOS 13400, ENSC 13400, PHSC 13400
ENST 12402. Life Through a Genomic Lens. 100 Units.
The implications of the double helical structure of DNA triggered a revolution in cell biology. More recently, the technology to sequence vast stretches of DNA has offered new vistas in fields ranging from human origins to the study of biodiversity. This course considers a set of these issues, including the impact of a DNA perspective on the legal system, on medicine, and on conservation biology.
Instructor(s): A. Turkewitz, M. Nobrega Terms Offered: Winter
Prerequisite(s): BIOS 10130 or BIOS 10140. NO BIOLOGICAL SCIENCES MAJORS OR NON-BIOLOGY PRE-MED STUDENTS, except by petition.
Equivalent Course(s): BIOS 11125

ENST 12550. Environmental Justice in Principle and Practice. 100 Units.
Students will learn about different types of environmental injustice and how they intersect with other social problems, including segregation, housing, the devaluing of the lives of people of color, and the geographic distribution of environmental ills. Speakers from communities how have experienced environmental injustices in Chicago will be invited to share their perspectives with students in order to supplement readings from a diverse set of sources and outlooks.
Instructor(s): Ray Lodato Terms Offered: Summer

ENST 13132. Ecology in the Anthropocene. 100 Units.
This course emphasizes basic scientific understanding of ecological principles that relate most closely to the ways humans interact with their environments. It includes lectures on the main environmental pressures, notably human population growth, disease, pollution, climate change, habitat destruction, and harvesting. We emphasize the ongoing impacts on the natural world, particularly causes of population regulation and extinction and how they might feedback on to humans. Discussion required.
Instructor(s): T. Price Terms Offered: Autumn
Prerequisite(s): BIOS 10130 or BIOS 10140. NO BIOLOGICAL SCIENCES MAJORS OR NON-BIOLOGY PRE-MED STUDENTS, except by petition.
Equivalent Course(s): BIOS 13132

ENST 13300. The Atmosphere. 100 Units.
This course introduces the physics, chemistry, and phenomenology of the Earth’s atmosphere, with an emphasis on the fundamental science that underlies atmospheric behavior and climate. Topics include (1) atmospheric composition, evolution, and structure; (2) solar and terrestrial radiation in the atmospheric energy balance; (3) the role of water in determining atmospheric structure; and (4) wind systems, including the global circulation, and weather systems.
Instructor(s): T. Shaw Terms Offered: Spring
Prerequisite(s): MATH 13100-MATH 13200
Equivalent Course(s): GEOS 13300, ENSC 13300

ENST 13410. Global Warming: Understanding the Forecast (Flipped Class) 100 Units.
This course presents the science behind the forecast of global warming to enable the student to evaluate the likelihood and potential severity of anthropogenic climate change in the coming centuries. It includes an overview of the physics of the greenhouse effect, including comparisons with Venus and Mars; predictions and reliability of climate model forecasts of the greenhouse world. This course is part of the College Course Cluster program, Climate Change, Culture, and Society. This course covers the same material as PHSC 13400, but is organized using a flipped classroom approach in order to increase student engagement and learning.
Instructor(s): D. Abbot Terms Offered: Autumn Spring
Prerequisite(s): Some knowledge of chemistry or physics helpful.
Equivalent Course(s): ENSC 13410, PHSC 13410, GEOS 13410

ENST 20150. Sustainable Urban Development. 100 Units.
The course covers concepts and methods of sustainable urbanism, livable cities, resiliency, and smart growth principles from a social, environmental and economic perspective. In this course we examine how the development in and of cities - in the US and around the world - can be sustainable, especially given predictions of a future characterized by increasing environmental and social volatility. We begin by critiquing definitions of sustainability. The fundamental orientation of the course will be understanding cities as complex socio-natural systems, and so we will look at approaches to sustainability grouped around several of the most important component systems: climate, energy, transportation, and water. With the understanding that sustainability has no meaning if it excludes human life, perspectives from both the social sciences and humanities are woven throughout: stewardship and environmental ethics are as important as technological solutions and policy measures.
Instructor(s): Evan Carver Terms Offered: Spring Winter
Note(s): ENST 21201 and 21015 are required of students who are majoring in Environmental and Urban Studies and may be taken in any order.
Equivalent Course(s): ARCH 21050, PBPL 21050, GLST 21050

ENST 20160. Cities on Screen. 100 Units.
How do the movies shape our collective imagination about cities? Why do we so often turn to them for visions of disaster and dystopia, on the one hand, or a futuristic utopia on the other? How has film responded to cities in the past, and how can it help investigate our present urban condition? How can film be understood as a tool for
exploring what a city is? In this seminar, we will watch and discuss feature films in which the built environment or urban issues play important roles. Students will improve their film literacy -- learning not just what a film does but how it does it -- and understand applications for film in the analysis of social, spatial, temporal, and immersive phenomena, as well as how it can help inspire and communicate design more effectively.

Instructor(s): Evan Carver
Terms Offered: Winter
Equivalent Course(s): ARCH 20160

ENST 20170. Pandemics, Urban Space, and Public Life. 100 Units.
Much of the cultural vibrance, economic strength, and social innovation that characterizes cities can be credited to their density. Put simply, cities bring people together, and togetherness allows for complex and fruitful exchange. But togetherness also brings risks, notably from infectious disease. A pandemic feeds on propinquity. “Social distance,” while a short-term public health imperative, is antithetical to the very idea of the urban. In this seminar, we will explore these competing tensions in light of current and past disease outbreaks in urban settings. Drawing on a range of texts from history, design theory, sociology, and anthropology, as well as cultural artifacts like film, graphic memoir, and photography, we will engage questions like: How are the risks of contagion balanced with the benefits of density? How are such risks distributed throughout society? What creative responses have architects, urban designers, and planners brought to this challenge? Most importantly, how can we respond constructively to the challenge of pandemic to create cities where the benefits of togetherness are maximized, perhaps even improved on compared with the pre-outbreak condition? Students will have the opportunity to propose design or policy interventions to help their own communities respond to the coronavirus/COVID-19 crisis, return to a vibrant post-pandemic life, and prepare for the pandemics of the future.

Instructor(s): Evan Carver
Terms Offered: Autumn
Equivalent Course(s): HLTH 20170, PBPL 20170, ARCH 20170, GEOG 20170

ENST 20180. Writing the City. 100 Units.
How do great writers convey sense-of-place in their writing? What are the best ways to communicate scientific and social complexity in an engaging, accessible way? How can we combine academic rigor with journalistic verve and literary creativity to drive the public conversation about urgent environmental and urban issues? These are just some of the questions explored in WRITING THE CITY, an intensive course dedicated to honing our skills of verbal communication about issues related to the built and natural environments. Students will research, outline, draft, revise, and ultimately produce a well-crafted piece of journalistic writing for publication in the program’s new annual magazine, Expositions. Throughout the quarter we will engage intensely with a range of authors of place-based writing exploring various literary and journalistic techniques, narrative devices, rhetorical approaches, and stylistic strategies.

Instructor(s): Evan Carver
Terms Offered: Autumn
Prerequisite(s): At least one ENST, GEOG, or ARCH course; or one PBPL, ARTH, ANTH, or SOCI course with an urban focus; or instructor permission. Please contact ehc@uchicago.edu with questions.
Note(s): Restricted to 3rd and 4th years This course counts towards the ENST 4th year Capstone requirement.
Equivalent Course(s): ARCH 20180

ENST 20250. Introduction to Statistical Concepts and Methods. 100 Units.
Statistical techniques offer psychologists a way to build scientific theories from observations we make in the laboratory or in the world at large. As such, the ability to apply and interpret statistics in psychological research represents a foundational and necessary skill. This course will survey statistical techniques commonly used in psychological research. Attention will be given to both descriptive and inferential statistical methodology.

Instructor(s): Heald, S.
Terms Offered: Winter
Prerequisite(s): It is recommended that students complete MATH 13100 and MATH 13200 (or higher) before taking this course.
Equivalent Course(s): PSYC 20250

ENST 20300. The Science, History, Policy, and Future of Water. 100 Units.
Water is shockingly bizarre in its properties and of unsurpassed importance throughout human history, yet so mundane as to often be invisible in our daily lives. In this course, we will traverse diverse perspectives on water. The journey begins with an exploration of the mysteries of water’s properties on the molecular level, zooming out through its central role at biological and geological scales. Next, we travel through the history of human civilization, highlighting the fundamental part water has played throughout, including the complexities of water policy, privatization, and pricing in today’s world. Attention then turns to technology and innovation, emphasizing the daunting challenges dictated by increasing water stress and a changing climate as well as the enticing opportunities to achieve a secure global water future.

Instructor(s): Seth Darling
Terms Offered: Winter
Prerequisite(s): None
Equivalent Course(s): ANTH 22131, GLST 26807, MENG 20300, HIPS 20301, HIST 25426

ENST 20506. Cities, Space, Power: Introduction to urban social science. 100 Units.
This lecture course provides a broad, multidisciplinary introduction to the study of urbanization in the social sciences. The course surveys a broad range of research traditions from across the social sciences, as well as the work of urban planners, architects, and environmental scientists. Topics include: theoretical conceptualizations of the city and urbanization; methods of urban studies; the politics of urban knowledges; the historical geographies
organizations such as Greenpeace have neglected the problems of environmental injustice and racism in their poor, LGBTQ populations, and Indigenous Peoples. Although historically, some have claimed that ecocentric oppression, and domination in their disproportionate adverse impact on peoples of color, women, the global injustice, the way in which environmental crises and existential threats often reflect systemic discrimination, truly an environmental philosopher. "Environmental Racism" is one of the defining elements of environmental prominent environmental philosophers, a commitment to ecocentrism is the defining test of whether one is Land Ethic to Deep Ecology to the worldviews of many Native American and Indigenous peoples. For some philosophical perspective has been shared by many prominent forms of environmentalism, from Aldo Leopold's can be ethically considerable or "count" in a way somewhat comparable to human persons, and such a important areas of environmental philosophy. "Ecocentrism" is the view that holistic systems such as ecosystems The aim of this course is to explore the tensions and convergences between two of the most profoundly ENST 21207. Ecocentrism and Environmental Racism. 100 Units. Of capitalist urbanization; political strategies to shape and reshape the built and unbuilt environment; cities and planetary ecological transformation; post-1970s patterns and pathways of urban restructuring; and struggles for the right to the city. Instructor(s): N. Brenner Terms Offered: Winter Equivalent Course(s): PLSC 30506, ARCH 20506, PLSC 20506, SOCI 30506, CHST 20506, SOCI 20506

ENST 20510. Introduction to Spatial Data Science. 100 Units. Spatial data science consists of a collection of concepts and methods drawn from both statistics and computer science that deal with accessing, manipulating, visualizing, exploring and reasoning about geographical data. The course introduces the types of spatial data relevant in social science inquiry and reviews a range of methods to explore these data. Topics covered include formal spatial data structures, geovisualization and visual analytics, rate smoothing, spatial autocorrelation, cluster detection and spatial data mining. An important aspect of the course is to learn and apply open source GeoDa software. Instructor(s): L. Anselin Terms Offered: Autumn Prerequisite(s): STAT 22000 (or equivalent), familiarity with GIS is helpful, but not necessary Equivalent Course(s): MACS 54000, SOCI 30253, SOCI 20253, GEOG 20500, GEOG 30500

ENST 20519. Spatial Cluster Analysis. 100 Units. This course provides an overview of methods to identify interesting patterns in geographic data, so-called spatial clusters. Cluster concepts come in many different forms and can generally be differentiated between the search for interesting locations and the grouping of similar locations. The first category consists of the identification of extreme concentrations of locations (events), such as hot spots of crime events, and the location of geographical concentrations of observations with similar values for one or more variables, such as areas with elevated disease incidence. The second group consists of the combination of spatial observations into larger (aggregate) areas such that internal similarity is maximized (regionalization). The methods covered come from the fields of spatial statistics as well as machine learning (unsupervised learning) and operations research. Topics include point pattern analysis, spatial scan statistics, local spatial autocorrelation, dimension reduction, as well as spatially explicit hierarchical, agglomerative and density-based clustering. Applications range from criminology and public health to politics and marketing. An important aspect of the course is the analysis of actual data sets by means of open source software, such as GeoDa, R or Python. Instructor(s): L. Anselin Terms Offered: Spring Prerequisite(s): STAT 22000 or equivalent; SOCI 20253/30253 (or equivalent) Introduction to Spatial Data Science required. Equivalent Course(s): GEOG 20519, SOCI 20519, ACS 30519, GEOG 30519, SOCI 30519

ENST 21020. Is Humanity Doomed? 100 Units. This class explores the possibilities and perils of continued human existence on Earth. Taking climate change as a launching point, the class investigates the features of collective human life that make its prolonged existence a perennial challenge. The texts include those on challenges unique to the environment, like Stephen Gardiner’s A Perfect Moral Storm and Jared Diamond’s Collapse, as well as philosophical and religious theories of progress and their skeptics, centering class discussions on sources of hope and reasons for doubt about the human future. A central question of the course is whether climate change is unique or whether there are characteristics of human beings and human society (freedom, sin, tragedy) that make threats like it inevitable. Instructor(s): David Barr Terms Offered: Spring Equivalent Course(s): RLST 21020

ENST 21201. Human Impact on the Global Environment. 100 Units. The goal of this survey course is to analyze the impact of the human enterprise on the world that sustains it. Topics include human population dynamics and historical trends in global impact, with most of the course focusing on how humans have altered the Earth system through a variety of processes (including climate change, air, water, nutrient cycling, pollution/novel entities, biodiversity, and land use). We read and discuss diverse sources, write short analytical papers, and a final argument based research paper. Instructor(s): Alison Anastasio Terms Offered: Autumn Spring Note(s): ENST 21201 and 21050 are required of students who are majoring in Environmental Studies and may be taken in any order.

ENST 21207. Ecocentrism and Environmental Racism. 100 Units. The aim of this course is to explore the tensions and convergences between two of the most profoundly important areas of environmental philosophy. "Ecocentrism" is the view that holistic systems such as ecosystems can be ethically considerable or "count" in a way somewhat comparable to human persons, and such a philosophical perspective has been shared by many prominent forms of environmentalism, from Aldo Leopold’s Land Ethic to Deep Ecology to the worldviews of many Native American and Indigenous peoples. For some prominent environmental philosophers, a commitment to ecocentrism is the defining test of whether one is truly an environmental philosopher. "Environmental Racism" is one of the defining elements of environmental injustice, the way in which environmental crises and existential threats often reflect systemic discrimination, oppression, and domination in their disproportionate adverse impact on peoples of color, women, the global poor, LGBTQ populations, and Indigenous Peoples. Although historically, some have claimed that ecocentric organizations such as Greenpeace have neglected the problems of environmental injustice and racism in their
quest to, e.g., “save the whales,” a deeper analysis reveals a far more complicated picture, with many affinities and alliances between ecocentrists and activists seeking environmental justice. (A)
Instructor(s): B. Schultz Terms Offered: Autumn
Equivalent Course(s): CRES 21207, HMRT 21207, CHST 21207, MAPH 31207, PLSC 21207, PHIL 21207

ENST 21301. Making the Natural World: Foundations of Human Ecology. 100 Units.
Humans have “made” the natural world both conceptually, through the creation of various ideas about nature, ecosystem, organism, and ecology, and materially, through millennia of direct action in and on the landscape. In this course we will consider the conceptual underpinnings of contemporary Western notions of nature, environment, and balance, through the examination of specific historical trajectories of anthropogenic landscape modification and human society. We will expand to include other conceptions of nature before moving on to examples from current events where we will evaluate the extent and character of human entanglement with nature and the environment.
Instructor(s): Alison Anastasio Terms Offered: Winter
Equivalent Course(s): ANTH 21303

ENST 21310. Water: Economics, Policy and Society. 100 Units.
Water is inextricably linked to human society. While modern advances in technology and new economic and policy mechanisms have emerged to address water stressors from overconsumption, development pressures, land use changes and urbanization, challenges continue to evolve across the globe. These problems, while rooted in scarcity, continue to become more complex due to myriad human and natural forces. In addition to water quality impairments, droughts and water shortages persist, putting pressure on agricultural production and urban water use, while the increased frequency and severity of rainfall and tropical storms, already being experienced globally, are only projected to grow in intensity and duration under climate change. Students will explore water from the perspective of the social sciences and public policy, with attention on behavioral dimensions of water use and water conservation. Qualitative and quantitative approaches to examining how humans use and affect water will be considered, with particular applications to Chicago and the Great Lakes region.
Instructor(s): Sabina Shaikh Terms Offered: Spring
Prerequisite(s): One economics course (ECON 19800, PBPL 20000, ENST 21800 or equivalent)
Note(s): The following courses are recommended prior to enrollment in ENST 21310: ENST/MENG 20300: The Science, History, Policy, and Future of Water
Equivalent Course(s): PBPL 21310, GLST 21310, CHST 21310, LLSO 21310, ECON 16510

ENST 21358. The Social Afterlives of Loss. 100 Units.
We are living through multiple and overlapping narratives of loss, whether the unevenly unfolding global pandemic, the historical and everyday injustice of legalized racism and police violence, widening economic inequality and insecurity, or the accelerating turbulence of the climate crisis. Loss also shapes social life in a minor key, through everyday acts of forgetting, letting go, or withdrawal. What kind of a social phenomenon is loss? How do people go on in the face of it? How can we study such a highly variable phenomenon, and what insight might we find in the process? This course investigates loss and its social afterlives, from the ordinary to the earth-shattering. We examine how loss arises and discuss why, even when expected or familiar, its disorienting effects invite creative acts of wayfinding. We first engage the material, historical, and psychic dimensions of loss and then shift scope to examine how loss affects entire communities, becomes institutionalized, and puts entire worlds into question. By engaging ethnography, history, social theory, as well as literature and popular media, we will develop a constellation of questions and approaches to loss and answer why it happens, how we live through it, and what we find in its wake.
Instructor(s): Bright, Damien Terms Offered: Winter. Winter 2022
Equivalent Course(s): ANTH 21358, HIPS 21358

ENST 21404. Britain in the Age of Steam 1783-1914. 100 Units.
In the Victorian era, Britain rose to global dominance by pioneering a new fossil-fuel economy. This course explores the profound impact of coal and steam on every aspect of Victorian society, from politics and religion to industrial capitalism and the pursuit of empire. Such historical investigation also serves a second purpose by helping us see our own fossil-fuel economy with fresh eyes through direct comparison with Victorian energy use. Assignments include short essays based on energy “field work” and explorations in past and present material culture.
Instructor(s): F. Albritton Jonsson Terms Offered: Winter
Equivalent Course(s): HIPS 21404, LLSO 21404, CHSS 31404, HIST 31404, KNOW 31410, HIST 21404

ENST 21440. (Re)constructing Nature: Restoration Ecology in a Time of Climate Change. 100 Units.
Restoration ecologists, environmental professionals, and average citizens all participate in the process of habitat restoration. How does this interdisciplinary practice balance the priorities of ecosystem function and services, conservation of imperiled species and habitats, aesthetic appeal, and human use in a dynamic climate? In this course students will gain a broad overview of the field of restoration ecology and approach it from scientific, practical, and humanistic perspectives using scientific literature, case studies, and planning documents.
Instructor(s): Alison Anastasio Terms Offered: Autumn
Equivalent Course(s): CHST 21440
ENST 21800. Economics and Environmental Policy. 100 Units.
This course combines basic microeconomic theory and tools with contemporary environmental and resources issues and controversies to examine and analyze public policy decisions. Theoretical points include externalities, public goods, common-property resources, valuing resources, benefit/cost analysis, and risk assessment. Topics include pollution, global climate change, energy use and conservation, recycling and waste management, endangered species and biodiversity, nonrenewable resources, congestion, economic growth and the environment, and equity impacts of public policies.
Instructor(s): S. Shaikh Terms Offered: Autumn
Prerequisite(s): ECON 19800 or higher, or PBPL 20000
Note(s): Not offered in Autumn of the 2020-21 academic year.
Equivalent Course(s): ECON 16520, LLSO 26201

ENST 21822. Creative Ecologies: Environmental and Multispecies Storytelling. 100 Units.
Literature plays a pivotal role in addressing environmental issues: it can perpetuate damaging narratives or offer creative solutions for sustainable living. What is then the role of literature in an era of ecological crisis? How does literature forward environmental change? How do writers represent the natural world and imagine innovative ways of living ecologically? To answer these questions, we will turn to the field of ecocriticism informed by queer ecology, decolonial thought and critical animal studies. We will explore the themes of migration, extinction, displacement, hegemony, and biodiversity in texts of various genres, from poetry to speculative fiction, particularly in relation to imperial, colonial and capitalist ecologies. Besides questioning troublesome dichotomies within our corpus, such as domestic/wilderness and nature/culture, we will also examine the links between environmental concerns and gender, race, class, and species. While we will be attentive to the specificities of the Italian local environment to fully unravel the role of Italy in aggravating or lessening environmental problems, our approach will remain comparative and global in scope. We will also revisit the literary canon and privilege the stories of historically disenfranchised voices that narrativize ethical and sociopolitical issues related to ecology. The course will include visits to Special Collections and the Map Collection to further enrich our engagement with the literary sources.
Instructor(s): Elizabeth Tavella Terms Offered: Autumn
Note(s): Taught in English. No prior knowledge of Italian is required.
Equivalent Course(s): ITAL 21822, CMLT 21822

ENST 21900. Historical Geography of the United States. 100 Units.
This course examines the historical and geographical roots of American regional diversity and national spatial organization, from 1500 to 1920, and asks why American regions have developed and retained distinctive characteristics-and what consequences this has had for contemporary society. These issues are pursued through an examination of colonization processes, economic development, spatial differentiation, settlement patterns and the changing role of cities. The emphasis is on the kind and quantity of European cultural transfer, physical changes wrought by colonization, the modification of natural environments, the conquest of distance, and the general approach of American society to the uses of space. This course requires no prerequisites. There will be an all-day field trip in the Chicago region.
Instructor(s): Michael Conzen Terms Offered: Autumn
Note(s): Restricted to 3rd and 4th years This course counts towards the ENST 4th year Capstone requirement.
This course offered in the Autumn Quarter of even-numbered years
Equivalent Course(s): HIST 38800, GEOG 31900, HIST 28800

ENST 22101. Changing America in the Last 100 Years. 100 Units.
This course examines the economic and social forces that have transformed the critical character and performance of the major regions of the United States since the 1920s, and how the interactions between regions has profoundly shifted. The course completes the historical sweep of American geographical development following on from the Autumn course, Historical Geography of the United States, but can be taken as an independent course. Emphasized are the ways in which socio-cultural, technological and economic changes have played out differently across continental space, and produced variable environmental consequences. An all-day field trip in the Chicago region visits sites that reflect some of the larger forces at work at the intra-regional scale.
Instructor(s): Michael Conzen Terms Offered: Winter
Note(s): Restricted to 3rd and 4th years This course counts towards the ENST 4th year Capstone requirement.
Equivalent Course(s): GEOG 32101, ARCH 27506, HIST 27506, HIST 37506

ENST 22147. Intro to Genres: The River's Running Course. 100 Units.
Rivers move -- over land, through history, among peoples -- and they make: landscapes and civilizations. They are the boundaries on our maps, the dividers of nations, of families, of the living and the dead, but they are also the arteries that connect us. They are meditative, meandering journeys and implacable, surging power. They are metaphors but also so plainly, corporeally themselves. In this course, we will encounter creative work about rivers, real and imaginary, from the Styx to the Chicago River and the Amazon. Through poetry, fiction, nonfiction, and film, we will consider what rivers are, what they mean to us, and how they are represented in art and literature. Rivers will also be the topic and inspiration for our own forays into creative writing. Students will be asked to keep a reading notebook as well as to produce weekly creative and critical responses for class discussion.
Instructor(s): Stephanie Soileau Terms Offered: Spring
Prerequisite(s): Prerequisite: This class can be taken independently, OR as part of the Spring 2021 Chicago Studies Quarter on Water. For more information and to apply, visit the Chicago Studies website. Equivalent Course(s): CRWR 12147, CHST 12147

ENST 22211. Riding about the South Side. 100 Units.
This course is based on bicycling through the South Side neighborhoods surrounding the University of Chicago. There will be some readings, but the primary input will be from riding-from seeing things at street level and speaking with people who are committed to living in places that often have been abandoned by others. We can read and theorize about the community surrounding us, but the premise in this class is that our work should begin with experience in that world, with direct contact and in conversation. My approach in this class is less to teach than to lead you to where things are waiting to be learned and to people who can teach you about their world better than I. Some of the themes we will cover include land rights and exploitation, architecture, town planning, placemaking, urban farming and ecology, sustainability, grass roots organization, labor rights and exploitation, immigration, social work, and street art. Each ride is organized around a set of key concerns and includes a conversation with a local insider who can help us better understand them.
Instructor(s): William Nickell Terms Offered: Autumn
Equivalent Course(s): ARCH 22211, CHST 22211, KNOW 22211

ENST 22300. South Side Ecologies. 100 Units.
South Side Ecologies is a project based course offered every other spring on an environmental topic of concern to communities on the South Side of Chicago. During the first half of the class we will use scholarly and popular sources to understand the background and extent of the issue, while the second half will engage with expert partners to execute a project in their area of need. Due to the experiential nature of this course, while we will strive to have class meetings in the official time and place, students should expect they may need to attend meetings, interviews, guest lectures, or other activities at other times and locations during the week. Every effort will be made to accommodate the needs and schedules of students in the course.
Instructor(s): Alison Anastasio Terms Offered: Spring. Every other spring. Not offered in Spring 2021.
Equivalent Course(s): CHST 22300

ENST 22310. The Commons: Environment and Economy in Early Modern Europe. 100 Units.
Drawing on case studies from Europe and the Atlantic world, this course will track changes in land use and property rights over the early modern period (ca. 1500-1800), inviting students to reflect on the relationship between natural environments (woodlands, waterways, pasture) and histories of state formation, economic growth, rebellion, and colonialism. Organizing concepts and debates will include the tragedy of the commons, moral economies, sustainability and scarcity, the “organic economy” of the old regime, primitive accumulation, and economic takeoff. Readings will encompass classic works in agrarian, environmental, and social history (i.e., Marc Bloch, E. P. Thompson, Silvia Federici, James Scott, Carolyn Merchant) as well as primary documents and contemporary texts (i.e., More, Bacon, Smith, Paine, Babeuf). We will also reflect on how these histories bear on debates about land use and natural resources in the present day.
Instructor(s): O. Cussen Terms Offered: Winter
Equivalent Course(s): HIPS 22310, HIST 22310, LLSO 22310

ENST 22330. Flooding the World: Creation and Restoration in the Levant, Mesopotamia, and India. 100 Units.
From Genesis to the Epic of Gilgamesh and the Rig Veda to modern novels like Geraldine McCaughrean’s Not the End of the World (2004) and Jeanette Winterson’s Boating for Beginners (1997), humans have repeatedly accounted for, imagined, and ironized civilizational collapse and restoration through stories of catastrophic floods. These texts, modern and ancient, are fraught with political, religious, and historical background. In this course, we will compare these texts, focusing on literary issues like narrative plot, the construction of characters, the literary devices used, and the role of the narrator in telling the story of the flood. We will attempt to ascertain why imaginings of a deluge are generative, while being attuned to the complex differences between the ancient narratives and their significantly different afterlives. Through sustained inquiry, we will both challenge notion of sacred exceptionalism even while confronting the enduring presence of this trope in the post-modern novel.
Instructor(s): Cathleen Chopra-McGowan Terms Offered: Winter
Equivalent Course(s): RLST 22330, JWSC 26030, SALC 22330

ENST 22610. Paris and the French Revolution. 100 Units.
The French Revolution is one of the defining moments of modern world history. This course will explore the mix of social, political, and cultural factors which caused its outbreak in 1789 and go on to consider the overthrow of the Bourbon monarchy in 1792, the drift towards state-driven Terror in 1793-94, and the ensuing failure to achieve political stability down to the advent of Napoleon Bonaparte in 1799. We will view these epochal changes through the prism of France’s capital city. Paris shaped the revolution in many ways, but the revolution also reshaped Paris. The urbane city of European enlightenment acquired new identities as democratic hub from 1789 and as site of popular democracy after 1793-94. In addition, the revolution generated new ways of thinking about urban living and remodeling the city for the modern age. A wide range of primary sources will be used, including visual sources (notably paintings, political cartoons and caricatures, and maps).
Instructor(s): C. Jones Terms Offered: Winter
Prerequisite(s): Students taking FREN 22619/32619 must read French texts in French.
Equivalent Course(s): FREN 22619, HIST 22610, FREN 32619, ARCH 22610, HIST 32610
ENST 2261. Paris from "Les Misérables" to the Liberation, c. 1830-1950. 100 Units.
Starting with the grim and dysfunctional city described in Victor Hugo’s "Les Misérables," the course will examine the history of Paris over the period in which it became viewed as the city par excellence of urban modernity through to the testing times of Nazi occupation and then liberation (c. 1830-1950). As well as focussing on architecture and the built environment, we will examine the political, social, and especially cultural history of the city. A particular feature of the course will be representations of the city-literary (Victor Hugo, Baudelaire, Zola, etc.) and artistic (impressionism and postimpressionism, cubism, surrealism). We will also examine the city’s own view of itself through the prism of successive world fairs (expositions universelles).
Prerequisite(s): Students taking FREN 22620/32620 must read texts in French.
Equivalent Course(s): FREN 22620, FREN 32620, ARCH 22611, HIST 32611, HIST 22611

ENST 22708. Planetary Britain, 1600-1900. 100 Units.
What were the causes behind Britain's Industrial Revolution? In the vast scholarship on this problem, one particularly heated debate has focused on the imperial origins of industrialization. How much did colonial resources and markets contribute to economic growth and technological innovation in the metropole? The second part of the course will consider the global effects of British industrialization. To what extent can we trace anthropogenic climate change and other planetary crises back to the environmental transformation wrought by the British Empire? Topics include ecological imperialism, metabolic rift, the sugar revolution, the slave trade, naval construction and forestry, the East India Company, free trade and agriculture, energy use and climate change.
Equivalent Course(s): KNOW 22708, HIST 32708, HIST 22708, KNOW 32808, HIPS 22708, CHSS 32708

ENST 23100. Environmental Law. 100 Units.
This course will examine the bases and assumptions that have driven the development of environmental law, as well as the intersection of this body of law and foundational legal principles (including standing, liability, and the Commerce Clause). Each form of lawmaking (statutes, regulations, and court decisions) will be examined, with emphasis on reading and understanding primary sources such as court cases and the laws themselves. The course also analyzes the judicial selection process in order to understand the importance of how the individuals who decide cases that determine the shape of environmental law and regulations are chosen.
Instructor(s): Ray Lodato Terms Offered: Winter
Prerequisite(s): 3rd or 4th year standing, or consent of instructor
Equivalent Course(s): LLSO 23100, PBPL 23100

ENST 23210. Urban Core in Paris. 100 Units.
This course is both an introduction to how historians think about cities and a history of cities from the Middle Ages through the Cold War. Most of the examples are drawn from Europe, with a special focus for the version of the course taught in Paris on that city, but significant attention is given to Africa and the United States. The course is chronological in organization, but each class also focuses on a different theme, such as the place of politics, industrial development, migration, culture, and commerce in the transformation of urban forms and experiences.
Instructor(s): L. Auslander Terms Offered: Winter
Prerequisite(s): Admission to the Paris: Social Sciences Urbanism program
Equivalent Course(s): ARCH 23210, HIST 23210

ENST 23289. Marine Ecology. 100 Units.
This course provides an introduction into the physical, chemical, and biological forces controlling the function of marine ecosystems and how marine communities are organized. The structures of various types of marine ecosystems are described and contrasted, and the lectures highlight aspects of marine ecology relevant to applied issues such as conservation and harvesting.
Instructor(s): T. Wootton Terms Offered: Winter
Prerequisite(s): Three quarters of a Biological Sciences Fundamentals Sequence and prior introductory course in ecology or consent of instructor.
Note(s): E.
Equivalent Course(s): BIOS 23289

ENST 23415. Land and Rights. 100 Units.
What are land rights? Why are they so ubiquitous, and what do they do? In this course, we will study how regimes of individual and collective rights emerge and analyze the complicated ways they shape conflicts over private property, geopolitical borders, ancestral homes, and common land. Each section of the course examines how land is at the heart of economic development, territorial sovereignty, gender equality, or environmental policy, and explores how rights can both enable justice and redistribution as well as dispossession and exclusion. Course readings consist of ethnographic studies and engaged research that foreground how experts and laypeople make claims to land and show us what effects theories, laws, and narratives about rights have when people put them to work in the world.
Instructor(s): Paul Kohlbry, Pozen Center for Human Rights Postdoctoral Instructor Terms Offered: Winter
Equivalent Course(s): HMRT 23415, ANTH 23415, GLST 23415
ENST 23505. Environmental Ethics. 100 Units.
This course examines foundational issues of environmental ethics. What kind of values (economic, aesthetic, existence) are important? What kind of value do individual biota, humans, other species, ecosystems, humans, or inorganic entities have? What is the relationship of humans to the rest of the world? What should it be? Do religious and philosophical traditions contribute to or help address environmental degradation?
Instructor(s): S. Fredericks Terms Offered: Winter
Equivalent Course(s): ANTH 23517, DIGS 23517, ARCH 23517, ARTV 20665

ENST 23500. Urban Ecology and the Nature of Cities. 100 Units.
Urban ecology is an interdisciplinary field derived from the academic discipline of ecology. How well does classical ecological theory, typically formed from reductionist views of nature without humans, describe and predict patterns in human-dominated landscapes? Students will learn fundamental concepts in ecological theory, examine how these concepts apply to urban systems, and explore the paradigms of ecology in, of, and for cities. Readings and discussions will focus on classical research papers from the ecological literature, history of modern ecology, and contemporary approaches to studying biotic systems in cities.
Instructor(s): Alison Anastasio Terms Offered: Winter. Not offered Winter 2021
Note(s): Not offered Winter 2021
Equivalent Course(s): PBPL 23550

ENST 23517. Introduction to Critical Spatial Media: Visualizing Urban, Environmental, and Planetary Change. 100 Units.
This course introduces critical theories and techniques for visualizing interconnected transformations of urban, environmental, and planetary systems amidst the pressures of climate change, urbanization, and global economies of capitalism. Weekly lectures will introduce major themes and theoretical debates, paired with hands-on lab tutorials exploring a selection of methods in conventional and experimental geographic visualization. Thematically, the course will be organized around critical interpretations of the Anthropocene, a concept designating the epoch in which anthropogenic activities are recognized as the dominant force of planetary climatic and ecological change. We will present these interpretations through modules structured around different conceptual paradigms and alternative epochal designations (e.g. the Urbanocene, the Capitalocene, the Plantationocene). Through weekly lab exercises and a final, synthetic project, the course will move from critically analyzing prevalent theoretical frameworks, geospatial data, and associated visualization techniques to creatively visualizing critical alternatives. Students will learn how to construct visual narratives through a variety of spatial media (e.g. maps, diagrams, visual timelines), scales (e.g. bodies, neighborhoods, landscapes, the planetary), and techniques/platforms (e.g. GIS, web mapping, basic programming language tools, and vector/raster visualization programs).
Instructor(s): Alexander Arroyo, Grga Basic Terms Offered: Spring
Equivalent Course(s): MAAD 13517, DIGS 23517, ARCH 23517, ARTV 20665

ENST 23550. Urban Ecology and the Nature of Cities. 100 Units.
Urban ecology is an interdisciplinary field derived from the academic discipline of ecology. How well does classical ecological theory, typically formed from reductionist views of nature without humans, describe and predict patterns in human-dominated landscapes? Students will learn fundamental concepts in ecological theory, examine how these concepts apply to urban systems, and explore the paradigms of ecology in, of, and for cities. Readings and discussions will focus on classical research papers from the ecological literature, history of modern ecology, and contemporary approaches to studying biotic systems in cities.
Instructor(s): Alison Anastasio Terms Offered: Winter. Not offered Winter 2021
Note(s): Not offered Winter 2021
Equivalent Course(s): PBPL 23550

ENST 23525. Farms as Factories: Industrial Ideals in 'Modern' Agriculture. 100 Units.
Plants and animals are now produced in capital-intensive, factory-like settings. The industrialization of agriculture has not only transformed what we eat, but also the ecology of the globe and biology of its inhabitants. This course explores the logics, history, and consequences of an agricultural sector that simultaneously generates lagoons of pig manure, proprietary DNA, and monocropped landscapes. How does commoditizing wheat alter its value? How do pigs to change when they live their lives on concrete? What forms of care are needed to keep antibiotic-laden chickens alive? How does the industrial production of life rearrange 'modern' concepts of agriculture? The course situates these questions within a broader framework of capitalism and commoditization; we begin by studying the rationale of proto-industrial production on slave plantations, consider the results of agricultural 'modernization' in the 19th and 20th centuries, and analyze how social scientists have studied these processes. Then, we examine how agricultural products - plants and animals - have been physically altered to facilitate standardized production, and study how these shifts have changed the role of workers and social milieu of agrarian labor. In addition to contextualizing modern agricultural production, this class is an introduction to animal and plant studies, theories of capitalism and commodification, and environmental studies.
Instructor(s): Sandy Hunter Terms Offered: Autumn
Equivalent Course(s): ANTH 23816

ENST 23555. Humans and the Sea: A Global Maritime History of the Anthropocene. 100 Units.
Humans live on land, but most of the Earth is covered in water. This has presented both challenges and opportunities for peoples and civilizations around the world. In this course, we examine the changing ways in which humans have interacted with oceanic environments over the past three hundred years. How have people conceptualized and engaged with the sea? How have port cities developed in response to the unique urban challenges and opportunities presented by their coastal geography? What have been the environmental and societal effects of human industries such as fishing and whaling? Using firsthand accounts including sailors' diaries and memoirs, government documents, and representative examples of nautical literature, students will come to situate the history of the sea in a new critical perspective as they reflect on the way human agency has shaped and been shaped by the natural world.
Instructor(s): Carl Kubler Terms Offered: Winter. Prize Lecture for Winter 2021
Equivalent Course(s): GLST 23655
ENST 23777. Geographical Issues in Housing and Community Development. 100 Units.
This course is part of the College Course Cluster, Urban Design.
Instructor(s): M. Conzen Terms Offered: Spring. This course offered in even years.
Prerequisite(s): Open to Chicago Studies Program students.
Equivalent Course(s): PBPL 23700, GEOG 33700

ENST 23807. Toxic: Body Burdens and Environmental Exposures. 100 Units.
Toxicity is a pervasive and often elusive presence in our lives today. In this seminar class, we begin to address this condition by asking: what exactly is toxic? Who bears the burden of this classification? And, how then, are these understandings of toxicity defined and deployed in broader historical, political, and scientific contexts? From these preliminary questions, we explore the pathways through which toxic exposure, contamination, and fallout accumulates in disproportionate and uneven ways, especially for minoritized populations and upon Indigenous territories. Drawing upon a variety of social science literature and community-based research we trace these challenges through overlapping structures of race, class, gender, citizenship, and coloniality. This transnational and interdisciplinary orientation will acquaint students with case studies of exposure across different scales and geographies, from Chernobyl to Chicago. Through mixed approaches of ethnography and media curation, students will also have the opportunity to research and document their own cases studies of body burdens and environmental exposure.
Instructor(s): Teresa Montoya Terms Offered: Autumn. Autumn 2022
Equivalent Course(s): CRES 23807, HLTH 23807, ANTH 23807

ENST 23825. Social Theory of the City. 100 Units.
This seminar explores various historical, sociological and anthropological theories of cities. The course analyzes major theoretical frameworks concerned with urban forms, institutions and experience as well as particular instances of city development from pre-modern to contemporary periods. The seminar will consist of initial orienting lectures, discussion of selected texts concerned with social theories of the city, and presentation of research projects by class participants.
Instructor(s): Alan L. Kolata Terms Offered: Winter. Winter 2023 in Paris
Prerequisite(s): Admission to the Winter 2023 Paris Program
Note(s): Undergraduates only
Equivalent Course(s): ARCH 23835, ANTH 23825

ENST 23900. Environmental Chemistry. 100 Units.
The focus of this course is the fundamental science underlying issues of local and regional scale pollution. In particular, the lifetimes of important pollutants in the air, water, and soils are examined by considering the roles played by photochemistry, surface chemistry, biological processes, and dispersal into the surrounding environment. Specific topics include urban air quality, water quality, long-lived organic toxins, heavy metals, and indoor air pollution. Control measures are also considered. This course is part of the College Course Cluster program: Climate Change, Culture, and Society.
Instructor(s): D. Archer Terms Offered: Autumn
Prerequisite(s): CHEM 11100-11200 or equivalent, and prior calculus course
Equivalent Course(s): GEOS 33900, GEOS 23900, ENSC 23900

ENST 24020. The Place of the Intellectual: Civic Life in Italian Literature and Theory. 100 Units.
This course offers a survey of the notion of civic life in Italian literature and theory, from its beginning(s) to contemporary authors. The topic will be explored through some of the major representatives in Italian intellectual history, actively concerned with the life of the community at the urban, national and transnational level. From Dante to Petrarch, from Renaissance Civic Humanism to Machiavelli, from Vico to Gramsci, from Esposito to Agamben, the focus of the class will be on human sociability and on the forces that enhance or hinder the constitution of communities and collective life. Italy offers a privileged entry point into the issue of civic life due to its belated national unification and richness in local cultural varieties, traits that makes Italy unique in the European cultural and political landscape. Thematically, the class will look at the relationship between Church and Empire; at forms of communality beyond political institutions, such as friendship and family; at the imagination of ideal cities and utopias; at the effects of disruptive natural and human events on the making/unmaking of human sociability; at literature and popular culture in the constitution of regional and national identities.
Instructor(s): M. Muccione Terms Offered: Spring
Note(s): Taught in English.
Equivalent Course(s): ITAL 24020

ENST 24102. Environmental Politics. 100 Units.
Politics determines not only what particular faction holds power, but the parameters upon which contests for power are conducted. Competing political factions may diverge in the details of the policies they favor, but may agree on a central organizing principle upon which their policy differences are contested. This course acknowledges that such principles exist and structure politics, economics, and social arrangements, but also challenges the notion that these are immutable, and argues that other principles could be substituted which would drastically change these arrangements. The course introduces students to alternative theories of economics, politics, and environmental policy that challenge mainstream notions of what is acceptable under the
current structural and institutional constraints, including how the retreat to notions of realism and practicality place limits on changes necessary to preserve and protect the natural environment.

Instructor(s): R. Lodato Terms Offered: Spring
Equivalent Course(s): LLSO 24102, PBPL 24102

**ENST 24190. Imagining Chicago’s Common Buildings. 100 Units.**
This course is an architectural studio based in the common residential buildings of Chicago and the city’s built environment. While design projects and architectural skills will be the focus of the course, it will also incorporate readings, a small amount of writing, some social and geographical history, and several explorations around Chicago. The studio will: (1) give students interested in pursuing architecture or the study of cities experience with a studio course and some skills related to architectural thinking, (2) acquaint students intimately with Chicago’s common residential buildings and built fabric, and (3) situate all this within a context of social thought about residential architecture, common buildings, housing, and the city. This course is part of the College Course Cluster program: Urban Design.

Instructor(s): L. Joyner Terms Offered: Autumn
Note(s): Consent is required to enroll in this course. Interested students should email the instructor (Luke Joyner, lukejoy@uchicago.edu) to briefly explain their interest and any previous experience with the course topics. Students must attend first class to confirm enrollment.
Equivalent Course(s): ARCH 24190, ARTV 20210, ARTH 24190, GEOG 24190, AMER 24190

**ENST 24191. City Imagined, City Observed. 100 Units.**
This urban design studio course takes two distinct notions of the city as its starting point: grand, imaginative plans -- utopian, unbuilt, semi-realized, real... both as aesthetic objects, and as ideas -- and how the minute flows of day-to-day life, up from the smallest scale, enter into dialogue with little built and lived details, intended or not. With Chicago as context and canvas, we will dream both big and small, search both present and past, and draw precisely on both what we dream and what we experience... seeking not to dictate what the city will be, but to expand our sense of what a city can be. The studio work will proceed in two stages: individually developing ideal city plans, then breaking each others’ plans, using real observations and factors (and even spontaneous impulse) to complicate and rebuild them into something lovelier.

Instructor(s): L. Joyner Terms Offered: Winter
Note(s): Consent is required to enroll in this class. Priority will be given to students who have completed ARTH 24190.
Equivalent Course(s): GEOG 24191, ARTV 20205, ARCH 24191, ARTH 24191, AMER 24191

**ENST 24193. Water Water Everywhere? 100 Units.**
This interdisciplinary course explores aesthetics, environmental racism, and a human rights approach to the Commons to inform our perspective on the politics and aesthetics of water from the local to the global. The course will look at issues of scarcity and abundance through the lenses of art and human rights. The course will incorporate work by artist Iñigo Manglano-Ovalle, who will visit the class. Students will consider works by other artists including Mel Chin, Allan Kaprow, LaToya Ruby Frazier, and Fazal Sheikh, to understand how art can confront the 21st century’s environmental challenges. Readings will include Susan Sontag’s Regarding the Pain of Others, and Fred Moten & Stefano Harney’s The Undercommons. The course will include visits to site specific installations by artists Iñigo Manglano-Ovalle and Mel Chin, and visits to Chicago-area natural sites such as the Big Marsh and Lake Michigan. This course is an extension of a collaborative project at the Gray Center for Arts and Inquiry with human rights lawyer Susan Gzesh, artist Iñigo Manglano-Ovalle, and curator Abigail Winograd.

Instructor(s): S. Gzesh, A. Winograd Terms Offered: Autumn
Prerequisite(s): Third- or fourth-year standing
Note(s): Students must attend first class to confirm enrollment.
Equivalent Course(s): SOCS 21005, HMRT 24193, BPRO 24193, CHST 24193, ARTH 24193

**ENST 24196. Second Nature: New Models for the Chicago Park District. 100 Units.**
The Chicago Park District seems to preserve “first nature” within the metropolitan field. But the motive for establishing this sovereign territory was hardly natural. Today, cultural change raises questions about the significance and operation of this immense network of civic spaces. What opportunities emerge as we rethink them? While this design studio focuses on the development of new model parks for Chicago, it can support students coming from a broad range of disciplines. Texts, seminar discussions, and field trips will complement and nourish the development of architectural proposals.

Instructor(s): A. Schachman Terms Offered: Autumn
Prerequisite(s): Consent only
Note(s): Students must attend first class to confirm enrollment. Please also note that architecture studio courses comprise one 80-minute meeting and one 170-minute meeting per week. Scroll down to see timing.
Equivalent Course(s): GEOG 24196, ARTH 24196, ARTV 20206, ARCH 24196

**ENST 24253. Indigenous Rights and Capitalism. 100 Units.**
This course explores how indigenous rights emerge in relation to the uneven incorporation of indigenous land, labor, and commodities into global circuits of capital. Whether in racist discourses about primitiveness or backwardness, or romantic ones about environmentalism and resistance, it is still common to encounter narratives that assume indigenous people and places exist outside of modernity. This course, on the other hand,
ENST 24550. Urban Ecology in the Great Nearby. 100 Units.
Places like the Great Barrier Reef, Great Smoky Mountains, or Great Outdoors elicit ideas of a nature that is far away and often presumed to be "pristine." Not only are these presumptions worthy of interrogation, but they may limit our understanding of the natural world that is in close proximity to humans. In this course students will use our restricted geographical movement during a pandemic as an opportunity to focus on hyperlocal urban ecology: that of the Great Nearby. What can we learn about our neighborhood and its human and non-human residents through close observation in a finite geographic area? What are the benefits, scientifically and socially, of understanding the Great Nearby? What are the challenges of place-based ecology, especially in scaling up to make regional and global connections? Using an ecological lens to investigate the urban landscape up close, students will learn the importance of observation as it relates to forming hypotheses to understand the world, as well as revealing the urban natural world that we may not have noticed before. Grounded in the rigor of urban ecology, place-based research, long-term monitoring, and their application, students are expected to be actively outdoors in their local urban environment throughout the quarter.
Instructor(s): Alison Anastasio Terms Offered: Autumn
Note(s): This course will be in person in Chicago with an expectation that students will be able to make multiple observations weekly in a ~2 block radius of their urban location. Some class sessions/activities/assignments may take place outside close to campus. This course is intended to be complementary to ENST 23550 and does not require it as a prerequisite. Equivalent Course(s): GEOG 24550, CHST 24555
Equivalent Course(s): GEOG 24550, CHST 24555
ENST 24600. Introduction to Urban Sciences. 100 Units.
This course is a grand tour of conceptual frameworks, general phenomena, emerging data and policy applications that define a growing scientific integrated understanding of cities and urbanization. It starts with a general outlook of current worldwide explosive urbanization and associated changes in social, economic and environmental indicators. It then introduces a number of historical models, from sociology, economics and geography that have been proposed to understand how cities operate. We will discuss how these and other facets of cities can be integrated as dynamical complex systems and derive their general characteristics as social networks embedded in structured physical spaces. Resulting general properties of cities will be illustrated in different geographic and historical contexts, including an understanding of urban resource flows, emergent institutions and the division of labor and knowledge as drivers of innovation and economic growth. The second part of the course will deal with issues of inequality, heterogeneity and (sustainable) growth in cities. We will explore how these features of cities present different realities and opportunities to different individuals and how these appear as spatially concentrated (dis)advantage that shape people’s life courses. We will show how issues of inequality also have consequences at more macroscopic levels and derive the general features of population and economic growth for systems of cities and nations.
Instructor(s): Luis Bettencourt Terms Offered: Autumn
Prerequisite(s): STAT 22000
Equivalent Course(s): SOCI 20285, GEOG 34600, GEOG 24600, PBPL 24605

ENST 24660. Urban Geography. 100 Units.
This course examines the spatial organization and current restructuring of modern cities in light of the economic, social, cultural, and political forces that shape them. It explores the systematic interactions between social process and physical system. We cover basic concepts of urbanism and urbanization, systems of cities urban growth, migration, centralization and decentralization, land-use dynamics, physical geography, urban morphology, and planning. Field trip in Chicago region required. This course is part of the College Course Cluster, Urban Design.
Instructor(s): M. Conzen Terms Offered: Winter 2021-22
Note(s): This course counts towards the ENST 4th year Capstone requirement. This course offered in even years.
Equivalent Course(s): GEOG 23500, GEOG 33500, ARCH 24660

ENST 24701. U.S. Environmental Policy. 100 Units.
How environmental issues and challenges in the United States are addressed is subject to abrupt changes and reversals caused by extreme partisanship and the heightened significance of the issues for the health of the planet and all its inhabitants. The relatively brief history of this policy area, and the separate and distinct tracts in which public lands and pollution control issues are adjudicated, makes for a diverse and complex process by which humanity’s impact on the natural world is managed and contained. This course focuses on how both types of environmental issues are addressed in each branch of the Federal government, the states and localities, as well as theories of how environmental issues arrived onto the public agenda and why attention to them is cyclical. Students are encouraged to understand the life cycle of public policy from its initial arrival on the public agenda to the passage of legislation to address adverse conditions, as well as how changes in the policy occur after the inevitable decline of intensive attention.
Instructor(s): R. Lodato Terms Offered: Autumn
Note(s): Restricted to 3rd and 4th years This course counts towards the ENST 4th year Capstone requirement.
Equivalent Course(s): PBPL 24701, LLSO 24901

ENST 24705. Energy: Science, Technology, and Human Usage. 100 Units.
This course covers the technologies by which humans appropriate energy for industrial and societal use, from steam turbines to internal combustion engines to photovoltaics. We also discuss the physics and economics of the resulting human energy system: fuel sources and relationship to energy flows in the Earth system; and modeling and simulation of energy production and use. Our goal is to provide a technical foundation for students interested in careers in the energy industry or in energy policy. Field trips required to major energy converters (e.g., coal-fired and nuclear power plants, oil refinery, biogas digester) and users (e.g., steel, fertilizer production). This course is part of the College Course Cluster program: Climate Change, Culture and Society.
Instructor(s): E. Moyer
Prerequisite(s): Knowledge of physics or consent of instructor.
Note(s): See GEOS 24750/ENSC 21150.
Equivalent Course(s): GEOS 34705, GEOS 24705, ENSC 21100

ENST 24750. Humans in the Earth System. 100 Units.
Human activities now have global-scale impact on the Earth, affecting many major biogeochemical cycles. One third of the Earth's surface is now used for production of food for humans, and CO2, the waste product of human energy use, now substantially affects the Earth’s radiative balance. This course provides a framework for understanding humanity as a component of Earth system science. The course covers the Earth’s energy flows and cycles of water, carbon, and nitrogen; their interactions; and the role that humans now play in modifying them. Both agriculture and energy technologies can be seen as appropriation of natural energy flows, and we cover the history over which human appropriations have become globally significant. The course merges geophysical and biological sciences and engineering, and includes lab sessions and field trips to agriculture, water management, and energy facilities to promote intuition. One year of university-level science is recommended.
Terms Offered: Spring
Equivalent Course(s): GEOS 24750, ENSC 21150, GEOS 34750

ENST 24756. Exploring the Resilient City. 100 Units.
In recent years, sub-national units of government have enacted meaningful policy plans in the wake of the ongoing failure of the international community to address global climate change. Cities in particular have shaped their plans to address the now-inevitable effects of climate change by adopting policies that emphasize resilience and environmental protection, without sacrificing economic growth, and with attention to the ongoing challenges of poverty and inequality. This course will take a comparative look at the policies adopted by cities on an international basis, while defining what it means to be a resilient city and how much the built environment can be adjusted to limit the environmental impact of densely populated metropolises. It will also consider what impact citizen activism and input had upon the shape of each plan and the direction that its policies took. Students will also be asked to consider what might be missing from each plan and how each plan could be improved to foster greater resiliency.
Instructor(s): R. Lodato Terms Offered: Course was not offered 2019-2020
Equivalent Course(s): PBPL 24776

ENST 24776. International Environmental Policy. 100 Units.
Environmental issues have become a prominent part of the work of international organizations and their member nations. However, the resolution to issues and concerns shared in common by the nations of the world often faces obstacles based on access to wealth and resources, political and military power, and the demands of international economic institutions. While multinational agreements have been achieved and successfully implemented, resolutions to issues such as climate change have been harder to achieve. The course will look at the origins of international cooperation on environmental issues, several case studies of issues upon which the international community has attempted to bring about cooperative solutions (climate change, the ozone hole, climate refugees, etc.), and the work that regional associations of nations have done to jointly address shared environmental challenges. In addition, speakers from various consulates have addressed the class to discuss environmental policymaking in their countries.
Instructor(s): R. Lodato Terms Offered: Spring
Equivalent Course(s): PBPL 24776

ENST 24831. Techno-Ecology: The Social Life of Infrastructure. 100 Units.
Infrastructure reemerges as a heated political topic in the United States against the background of the new great power competition in the world and the increasing concern of inequality and social justice at home. Such divergent political interests illuminate the tension between the promises of infrastructure and the challenges it poses. What is infrastructure? And why does it matter? This course takes infrastructure as its object of inquiry and explores ways of building and using infrastructure in various historical and social settings. A burgeoning scholarship on infrastructure reflects on the complexity of infrastructure’s environmental, political, social, and economic impact. Infrastructure was a critical part of both empire building and nation-state development. At the same time, massive infrastructure projects could also bring about self-defeating debacles that threatened the very regimes who had implemented them. Infrastructure has elevated millions from poverty and provided more with necessity and convenience. But it also creates barriers, destroys ecological systems, and materialized discrimination. The challenges of climate change and cyber security urges us to rethink infrastructure through the lens of scale, distribution, and trust. This course aims to complicate any monolithic conceptualizations of development, and to rethink the relations between us-at the levels of individual, communal and global-with the techno-ecology called infrastructure.
Instructor(s): Yujie Li Terms Offered: Spring
Equivalent Course(s): GLST 24831

ENST 24922. Archival Practice for Environmental Studies: Policy, Science, and Economics. 100 Units.
This course will introduce students to the use of historical records for environmental research. Through virtual and site visits to archives, we will explore best practices for locating and surveying digitized and physical historical materials. Our practicums will engage critically with peer-review publications to examine the diverse uses of historical sources for qualitative and quantitative research. We will use archival theories to question collection-management strategies that select some works over others for preservation and explore the role of historical sources in reproducing environmental narratives. Final assignment: A project in digital humanities, data mining with R or ArcGIS for spatial analysis using primary sources (manuscripts, rare books, data, and surveys).
Instructor(s): A. Coombs Terms Offered: Spring
Equivalent Course(s): HIST 24922, HIPS 24922

ENST 25000. The Amazon: Literature, Culture, Environment. 100 Units.
This course proposes a cultural history of the Amazonian region. Through films, novels, visual arts, essays, manifests, and works on cultural and environmental history, we will explore the history of Amazon from a range of perspectives. We will examine indigenous cultures and epistemologies, extractivist activities, environmental policies, contemporary literature and film, and a global imagination of the Amazon. Authors and projects may include Claudia Andujar, Gaspar de Carvajal, Milton Hatoum, Euclides da Cunha, Ciro Guerra, Susanna Hecht, Davi Kopenawa, Ailton Krenak, Chico Mendes, Daniel Munduruku, Lúcia Sá, Silvino Santos, Candance Slater, Mario Vargas Llosa, Eduardo Viveiros de Castro, Video in the Villages, among others.
Instructor(s): Victoria Saramago Terms Offered: Spring
ENST 25006. How Things Get Done in Cities and Why. 100 Units.
Innovation. Prosperity. Democracy. Diversity. Cities long have been lauded as unique incubators of these social features. In contrast to the national level, the smaller scale and dense diversity of cities is thought to encourage the development of civic solutions that work for the many. But cities are inhabited by distinct groups of people with divergent interests and varied beliefs about how to address countless urban issues, such as creating jobs, delivering education, ensuring safe neighborhoods, promoting environmental sustainability, and taking care of the vulnerable. Many groups and organizations have an interest in the outcomes of these processes. Some take action to try to shape them to their own advantage, while others have few chances to make themselves heard. This course examines the social and political dynamics that undergird possible avenues for creating social change in cities, including interest representation, decision-making, and inclusion/exclusion. We will draw insights from multiple disciplines and explore a variety of substantive areas, such as housing, public safety, economic development, education, and the provision of social welfare. This course is part of the College Course Cluster program: Urban Design.
Terms Offered: TBD
Equivalent Course(s): LL21100, PBPL 25006, SOCI 20294, SSAD 21100

ENST 25012. Undergraduate research seminar: Chicago Urban Morphology. 100 Units.
This seminar is open to Seniors and Juniors, particularly for but not necessarily limited to those in the fields of geography, environmental science, and urban studies. It is designed for students to undertake original research on a topic of their own choosing within the broad scope of Chicago's built environment. Following a brief reading course in the theoretical literature of urban morphology, each student will identify and select a topic of interest to research using Chicago sources, with the objective of a formal written research paper. Discussions will center around formulating research questions, theoretical underpinnings, suitable methodology, modes of writing, appropriate presentation of evidence, and effective illustration. Sessions will combine open discussion with a rotating series of periodic individual progress reports to the group, reflecting an interesting diversity of topics and mutual support in gaining experience in the research process.
Instructor(s): Michael Conzen Terms Offered: Winter
Note(s): Restricted to 3rd and 4th years This course counts towards the ENST 4th year Capstone requirement.
Equivalent Course(s): PBPL 25012, ARCH 25012, CHST 25012, SOCI 20552, GEOG 25012

ENST 25014. Introduction to Environmental History. 100 Units.
How have humans interacted with the environment over time? This course introduces students to the methods and topics of environmental history by way of classic and recent works in the field: Crosby, Cronon, Worster, Russell, and McNeill, etc. Major topics of investigation include preservationism, ecological imperialism, evolutionary history, forest conservation, organic and industrial agriculture, labor history, the commons and land reform, energy consumption, and climate change. Our scope covers the whole period from 1492 with case studies from European, American, and British imperial history.
Instructor(s): F. Albritton Jonsson Terms Offered: Winter
Equivalent Course(s): CHSS 35014, HIST 35014, HIPS 25014, HIST 25014

ENST 25025. Environmental Histories of the Global South. 100 Units.
Drawing on cases from Africa, Latin America, and especially Asia, this course explores key themes in the modern environmental history of the world beyond the rich industrialized North. Our investigations will focus on the ecological impacts of colonialism, war, and development, and how environmental management has helped to construct modern states and capitalist practices in turn. Ranging from the malarial plantations of the Caribbean to the forests of southeast Asia, we will analyze not-so-natural disasters like floods and chemical spills as well as the slow violence of deforestation and droughts. Combining primary sources with classic scholarship, we will encounter pioneering green activists like the original "tree huggers" of the Himalayas and environmental advocates for brutal population control. The course will conclude by examining the emergence of a newly assertive Global South in international climate negotiations, and its implications for the environmental history of our planet at large. The course is open to all, but may be of particular interest to students who have taken "Introduction to Environmental History."
Instructor(s): L. Chatterjee Terms Offered: Winter
Note(s): Assignments: in-class presentation and a long paper.
Equivalent Course(s): HIST 35024, CHSS 35525, HIPS 25525, SALC 35025, HIST 25025, SALC 25025

ENST 25026. Tutorial: Toxic America: Pollutants, Poisons, Politics. 100 Units.
Exposure to toxic substances is a routine condition of life in the United States. If toxics represent "adverse effects" to living systems, how and why did they become so abundant in the air, water, and food we ingest? The premise of this course is that the twentieth century witnessed soaring levels of toxic pollution. As synthetic chemicals, agricultural dusts, antibiotic residues, radioactive isotopes, and heavy metals saturated our environments, American scientists, activists, and artists identified and politicized lists of poisons. Students will first learn about the history of toxicology and environmental health in the US. We will then work with these frameworks to examine toxic events and everyday exposures as forms of fallout. We will investigate how the distribution of toxics reflects the racial, gender, and settler-colonial histories of America. We will explore history through an
understanding that risk and exposure are central to environmental justice. A final concern is to consider how invisible, microscopic, and nonhuman living things inform our historical methods and questions.

Instructor(s): A. Seber Terms Offered: Spring. Offered in Spring 2022
Equivalent Course(s): HIPS 29643, HIST 25126

**ENST 25027. Infrastructure Histories. 100 Units.**

Dams, sewers, container ships, water pipes, power lines, air conditioning, and garbage dumps: the critical infrastructures that enable modern life are so often invisible, except when they fail. This course explores the historical role of infrastructure as a set of planet-spanning systems of resource extraction and crucial conduits of social and political power. Looking at cases from apartheid South Africa and the Suez Canal to Mumbai and Chicago itself, we will consider the relationship of infrastructure with capitalism, settler colonialism, and postcolonial development. We will see how forms of citizenship and exclusion have been shaped and negotiated via wires, leaky pipes, and improvised repairs, and we will consider perhaps the biggest question of all: In this age of ecological crisis, do energy-guzzling infrastructural systems have a strange form of more-than-human agency all of their own?

Instructor(s): L. Chatterjee Terms Offered: Autumn
Note(s): Assignment: a long paper
Equivalent Course(s): HIPS 25270, HIST 35027, ARCH 25027, HIST 25027, CHSS 35270

**ENST 25111. Visualization and Biology: Science, Culture, and Representation. 100 Units.**

How do scientific images get made? This deceptively simple question lies at the heart of this course. Over three weeks at the MBL, we will examine the techniques, technologies, philosophies and histories of scientific image making, with a particular focus on marine biology. Rather than simply reading theories of visualization and representation, students will immerse themselves in the making of images themselves. Students will perform hands-on work with historical and contemporary theories and techniques of microscopy, taxonomy, anatomy, and specimen collecting. They will also examine the theoretical, philosophical, and ethical underpinnings of those practices. Through a combination of ethnographic (participant observation) and historical (archival) work, students will develop rich accounts of scientific visualization - from matters of objectivity and instrumentation, to problems of vision and the limits of (human) senses, to questions of aesthetics, abstraction, and representation. During the course, students will have the opportunity to work with Marine Biological Laboratory faculty, have access to laboratory and archives, and will develop new data and novel accounts of the social, cultural, and technical creation of scientific images.

Instructor(s): Michael Paul Rossi Terms Offered: Autumn
Prerequisite(s): Prerequisite: Consent Only
Note(s): Prerequisite: Consent Only. Course meets for three weeks, 9/9 thru 9/27 (5-6 days/week, 8 hours per day), at Marine Biological Laboratories, in Woods Hole Massachusetts. Course will be part of Autumn quarter course load. For more information see http://college.uchicago.edu/academics/mlb-september-courses
Equivalent Course(s): HIST 14904, HIPS 15100, ANTH 23809

**ENST 25114. Natural History and Empire, circa 1500-1800. 100 Units.**

This course will examine natural history-broadly defined as a systematic, observational body of knowledge devoted to describing and understanding the physical world of plants, animals, natural environments, and (sometimes) people-in the context of European imperial expansion during the early modern era. Natural history was upended by the first European encounters with the New World. The encounter with these new lands exposed Europeans for the first time to unknown flora and fauna, which required acute empirical observation, collection, cataloguing, and circulation between periphery and metropole in order to understand their properties and determine their usefulness. As the Spanish, Portuguese, British, French, and Dutch competed with one another to establish overseas trade and military networks in the sixteenth, seventeenth, and eighteenth centuries, they also competed over and shared information on natural resources. The course will combine lecture and discussion and mix primary source readings on natural history in the early modern world with modern historical writings. Though the readings skew a bit toward Britain and the British Atlantic world, every effort has been made to include texts and topics from multiple European and colonial locales. Topics and themes will include early modern sources of natural history from antiquity and their (re)interpretation in imperial context; early modern collecting cultures and cabinets of curiosities; Linnaeus and the origins of taxonomy, and specimen collecting. They will also examine the theoretical, philosophical, and ethical underpinnings of those practices. Through a combination of ethnographic (participant observation) and historical (archival) work, students will develop rich accounts of scientific visualization - from matters of objectivity and instrumentation, to problems of vision and the limits of (human) senses, to questions of aesthetics, abstraction, and representation. During the course, students will have the opportunity to work with Marine Biological Laboratory faculty, have access to laboratory and archives, and will develop new data and novel accounts of the social, cultural, and technical creation of scientific images.

Instructor(s): Michael Paul Rossi Terms Offered: Autumn
Prerequisite(s): Prerequisite: Consent Only
Note(s): Prerequisite: Consent Only. Course meets for three weeks, 9/9 thru 9/27 (5-6 days/week, 8 hours per day), at Marine Biological Laboratories, in Woods Hole Massachusetts. Course will be part of Autumn quarter course load. For more information see http://college.uchicago.edu/academics/mlb-september-courses
Equivalent Course(s): HIST 14904, HIPS 15100, ANTH 23809

**ENST 25115. Francis Bacon’s Philosophy of Nature. 100 Units.**

Historians of science have traditionally regarded Francis Bacon (1561-1626) as one of the most prominent seventeenth-century champions of induction, empiricism, and experimental methodology. While these are perhaps his most important contributions to natural philosophy, Bacon and his adherents also exerted a profound influence on Western notions of power over nature and of the possibilities of alteration, manipulation, and exploitation of the natural world. This course will examine some of Bacon’s principal works (“The New Organon”, “The Advancement of Learning”, “The New Atlantis”, and “The Great Instauration”) in order to first develop an understanding of Bacon’s philosophical positions and the changing landscape of natural philosophy in the seventeenth century. Then, we will examine the implications of Bacon’s philosophy from his lifetime to the present, focusing particularly on the rise of artisanal and craft knowledge; the emergence of civil institutions for cooperative knowledge making; utopian and cornucopian conceptions of the natural economy; science as the manipulation of nature; the competing and complementary notions of dominion over nature versus
environmental stewardship; the practical uses of natural materials during European imperial expansion; the origins of industrialization and technological development; and his influence on modern science, politics, economics, and environmentalism.

Instructor(s): J. Niermeier-Dohoney Terms Offered: Winter
Equivalent Course(s): HIST 25115, HIPS 25115

ENST 25116. Utopia, Dystopia, and the Apocalypse in Western Culture. 100 Units.
This course will examine how Western society has asked and answered questions about potential futures throughout its history. We will look especially at ways in which these questions have been explored through utopian, dystopian, and apocalyptic scenarios within religious, scientific, and political cultures. These narratives have denoted moral righteousness, critiqued the hubris of science and industrialization, and advocated or denounced systems of governance and social organization. They also reveal historical assumptions about human nature, progress, and the relationship between rationality and irrationality. Topics will include Biblical apocalypticism and its influence in the medieval and modern worlds; medieval and early modern millenarianism or the active pursuit of the apocalypse; early modern utopianism and its influence on later utopian writing; modern economic prognostication; modern utopian and dystopian science fiction in literature, film, and television; nineteenth- and twentieth-century socialist and nationalist utopianism and totalitarianism; global catastrophic risks such as asteroid impacts, pandemics, climate change, ecological degradation, and nuclear war; and the increasing importance of science in "futurology" or "future studies," a burgeoning field in the postwar era.

Instructor(s): J. Niermeier-Dohoney Terms Offered: Spring
Equivalent Course(s): HIST 25116, RLST 25116, HIPS 25116

ENST 25117. Natural History of Humans/Human History of Nature. 100 Units.
In this course we will think broadly about human history as a type of natural history and the recent history of nature as a part of the human narrative. Students will be introduced to the concept of "deep time," its discovery by geologists and biologists in the 18th and 19th centuries, and its impact on human history. Topics will include 16th- and 17th-century historiography and Biblical exegesis, geological theories of Hutton, Cuvier, and Lyell, and biological theories of Lamarck and Darwin. We will examine how certain modern sciences have affected historians' approaches. Topics will include how the structure and function of the brain affected kinship development, language acquisition, and social bonding; interpretations of "human nature" by theology, philosophy, anthropology, and psychology; massive time scales and intergenerational governing, justice, and ethics; and geography's role in shaping civilizational development. Finally, we will consider how the rising human impact over natural earth systems may change the way human and civilizational history will be studied going forward. Topics include anthropogenic changes to the biosphere through hunting and agriculture in the ancient world and the globalization of communicable diseases and invasive plant and animal species after 1492; the impact of climate change on modern civilization; the potential that humans are responsible for a new geological epoch; and what "history" looks like without humans.

Instructor(s): J. Niermeier-Dohoney Terms Offered: Spring
Equivalent Course(s): HIPS 25117, HIST 25117

ENST 25130. Social Theory for a Green New Deal. 100 Units.
U.S. House Resolution 109-popularly known as the Green New Deal-pledges a systemic corrective to the social and ecological harms of late industrial capitalism. With a particular focus on questions of economic and environmental justice, this seminar anthropologically assesses the prospect of a Green New Deal and its potential relationship to society, policy, and the built environment. Thinking relationally across scales and systems, we will consider the stakes of this large-scale yet still largely undefined legislative proposal and its implications for the social contract in a warming world. Attending to the ways in which race, class and gender inform late industrial life, the seminar will explore (via the environmental humanities and feminist & indigenous STS) concepts such as stewardship, climate justice, environmental racism, intergenerational ethics, more-than-human ontologies, and the Anthropocene (plus alternative frames).

Instructor(s): Journey, Rebecca Terms Offered: Spring
Equivalent Course(s): GLST 25130, ANTH 23812

ENST 25218. American Epidemics, Past and Present. 100 Units.
This course explores how disease epidemics have shaped watershed periods in US history from the late eighteenth century to the present. Through readings, lectures, and in-class discussions, we will employ different categories of analysis (e.g., race, gender, class, and citizenship) to answer a range of historical questions focused on disease, health, and medicine. For instance, to what extent did smallpox alter the trajectory of the American Revolution? How did cholera and typhoid affect the lived experiences of slaves and soldiers during the Civil War? In what ways did the US government capitalize on fears over yellow fever and bubonic plague to justify continued interventions across the Caribbean and the Pacific? What do these episodes from the American past reveal about contemporary encounters with modern diseases like HIV/AIDS, Ebola, and COVID-19? Course readings will be drawn from book chapters and scholarly articles, as well as primary sources ranging from public-health reports, medical correspondence, and scientific journals to newspapers, political cartoons, maps, and personal diaries. Grades will be based on participation, weekly Canvas posts, peer review, and a series of written assignments (a proposal and an annotated bibliography, primary source analysis, book review, and rough draft) all of which will culminate in a ten-page final research paper.

Instructor(s): C. Kindell Terms Offered: Winter
ENST 25401. Cities in Protest. 100 Units.
Long considered as condensers of social interaction, cities are here examined as to their response under significant public protest. Such events are understood as "stress-tests" to conventional urban theory as they alter, if only temporarily, previously understood conventional relationships of public and private domains. The project then is to document, assess, and understand those changes. Initial work focuses on documentation of protests using architecturally-based techniques, to provide clearer understanding and materials for comparison and discussion. Attention is on the year of 1968, a time when many cities were taken over by conflagrations. Drawings and digital models are to be prepared from detailed review of photographs, news reports and histories to document the events. A second area of investigation involves representation and how differing techniques of graphic projection impacts our understandings. A range of representational strategies are to be compared and assessed as to how they respond to the changes in urban spatialities engendered by protests. Work then concludes with individual investigations of more contemporary protests, identified and discussed together.

Instructor(s): G. Goldberg
Prerequisite(s): As with most architecture studio courses offered, consent is required to enroll. Work will include exploring representation so design or drawing experience strongly preferred. Please contact Prof. Goldberg directly (gg@g2a2.com) to request consent.

Note(s): Students must attend first class to confirm enrollment. Please also note that architecture studio courses comprise one 80-minute meeting and one 170-minute meeting per week. Scroll down to see timing.
Equivalent Course(s): CHST 25401, ARTH 25401, ARTV 20030, AMER 25401, ARCH 25401

ENST 25422. Struggle and Solidarity: The Politics of Chicago Labor in the 19th and 20th Centuries. 100 Units.
In this course we will question how and why Chicago was important to the way we think about "work." Employment, equity, wages, and security are certainly of debate throughout the nation today, but Chicago in particular, has been at the forefront of this contentious conversation for nearly two hundred years. We will analyze a series of historical events, neighborhoods, and groups of the 19th and 20th centuries in order to better understand the relationship between advancing capitalism, labor politics, the workers' body, exploitation, and resistance. In particular, the three major issues we will analyze will be the Haymarket Massacre, the Chicago Union Stock Yards and meat packing industry, as well as the African-American Pullman Porters and their union. To be sure, laborers built this city with broad shoulders, but also with a resilient commitment to struggle and solidarity that changed the social, political, and economic landscape of the United States and the world forever.

Students will leave this course with more than a deep understanding of Chicago labor history. A parallel goal of this course is for students to gain analytical tools to engage with this history in an applied fashion. We will learn how to categorize, distinguish, and dissect these historical accounts in order to better evaluate the mechanisms and catalysts of social movements: What about the confluence of labor and capital sparked these events? The course will also include guest speakers and a field trip.

Instructor(s): K. Bryce Lowry Terms Offered: Winter. Winter 2022
Equivalent Course(s): HIST 28812, ANTH 25422, CHST 25422

ENST 25423. Chicago's Agricultural Hinterland. 100 Units.
Chicago was built by the laborers who drained lakeside swamps to create its neighborhoods, the immigrants who worked in its factories and slaughterhouses, and the business magnates that boosted the construction of a prairie metropolis on the ancestral lands of the Three Fires Confederacy. But, in as much as Chicago was built by these people, it was also built by farmers scattered across the Midwest. For that matter, the city is a product of the hogs, wheat, cattle, and corn raised by those settlers, and the capital that flowed from city to farm and back again.

Instructor(s): R Alexander "Sandy" Hunter Terms Offered: Spring
Equivalent Course(s): CHST 25423, ANTH 25424

ENST 25424. GIS and Human Ecologies. 100 Units.
Floods, wildfires, deforestation, urban sprawl, agricultural expansion: environmental processes like these have dramatic effects unequally distributed across space. As such, interrogating the social consequences of these processes demands spatial thinking. This course introduces students to how researchers in the social sciences use Geographic Information Systems (GIS) to analyze interactions between humans and the environment. In this class we will critically examine GIS as a way of knowing and representing interactions between humans and the natural world: What are the advantages and limits of spatial data sets? How does using GIS structure the questions researchers ask? How does it make possible new questions? What are the limits of a GIS analysis? In this course, students with an existing foundation in GIS will develop the investigative skills to use ArcGIS software to answer complex research questions. Through in-class exercises and course readings students will learn to move beyond using GIS to represent data and instead treat it as a tool for evaluating social science research questions. Over the course of the quarter, students will build on assignments to develop their own analytical research project from start to finish, beginning with data procurement and concluding with a final presentation of results.

Instructor(s): Sandy Hunter Terms Offered: Winter
Equivalent Course(s): GLST 25424, GEOG 25424, PBPL 25424
ENST 25460. Environmental Effects on Human Health. 100 Units.
Given the increasing urbanization of human populations and increasing footprint of the human enterprise throughout the world, the way in which the environment directly and cumulatively affects human health can be particularly profound. In this course, students will be introduced to environmental health issues, research, policy and advocacy. An overview of fundamental concepts in environmental health will be paired with case studies based on current local issues and topical research. Guest lectures by local experts will be featured and discussions will connect biological, chemical, and physical exposures to their real effects on human communities.
Instructor(s): Alison Anastasio Terms Offered: Winter
Note(s): Restricted to 3rd and 4th years. This course counts towards the ENST 4th year Capstone requirement.
Equivalent Course(s): HLTTH 25460

ENST 25500. Biogeography. 100 Units.
This course examines factors governing the distribution and abundance of animals and plants. Topics include patterns and processes in historical biogeography, island biogeography, geographical ecology, areography, and conservation biology (e.g., design and effectiveness of nature reserves).
Instructor(s): J. Bates (odd years- Autumn); R. Ree (odd years- Winter) Terms Offered: Autumn Winter. Offered during odd years only, Winter & Autumn.
Prerequisite(s): Three quarters of a Biological Sciences Fundamentals sequence and a course in either ecology, evolution, or earth history; or consent of instructor
Note(s): E. GP.
Equivalent Course(s): GEOG 35500, GEOG 25500, EVOL 45500, BIOS 23406

ENST 25507. Make Love, Not Babies: A History of Population Control. 100 Units.
People have been worrying about population-and the strain that growing numbers of people have on natural resources and the environment-since at least the late eighteenth century, when Thomas Malthus penned his Essay on the Principle of Population. This course will follow the history of environmentally motivated population control movements, from Malthus to French feminists at the turn of the twentieth century, to the birth of the environmental movement in the United States in the late 1960s, to international efforts to control population in the developing world in the 1990s. Students will encounter the perspectives of feminists, environmentalists, and economists as we consider how racism, reproductive rights, and the legacy of humanitarian intervention have shaped global approaches to population.
Instructor(s): P. O'Donnell Terms Offered: Winter
Note(s): Assignments: short papers, in class presentation, long paper
Equivalent Course(s): HIPS 25507, GNSE 25507, HIST 25507, HLTTH 25507

ENST 25704. Environmental Justice in Chicago. 100 Units.
This course will examine the development of environmental justice theory and practice through social scientific and ethical literature about the subject as well as primary source accounts of environmental injustices. We will focus on environmental justice issues in Chicago including, but not limited to waste disposal, toxic air and water, the Chicago heat wave, and climate change. Particular attention will be paid to environmental racism and the often understudied role of religion in environmental justice theory and practice. Throughout the course we will explore how normative commitments are expressed in different types of literature as well as the basis for normative judgments and the types of authorities authors utilize and claim as they consider environmental justice.
Instructor(s): Sarah Fredericks Terms Offered: Winter
Note(s): Graduate students need permission to enroll and will have additional requirements.
Equivalent Course(s): RLST 25704, KNOW 25704, PBPL 25704, CHST 25704, AMER 25704, CRES 25704

ENST 25705. Climate Ethics. 100 Units.
Anthropogenic climate change is the largest challenge facing human civilization. Its physical and temporal scale and unprecedented complexity at minimum require extensions of existing ethical systems, if not new ethical tools. In this course we will examine how religious and philosophical ethical systems respond to the vast temporal and spatial scales of climate change. For instance, common principles of environmental ethics such as justice and responsibility are often reimagined in climate ethics even as they are central to the ethical analysis of its effects. In the course, we will take a comparative approach to environmental ethics, examining perspectives from secular Western philosophy, Christianity (Catholic and Protestant), Buddhist, and Indigenous thought. We will also look at a variety of ethical methods. Throughout the course we will focus on climate change as well as articulating rigorous ethical arguments about its causes and implications.
Instructor(s): Sarah Fredericks Terms Offered: Spring
Equivalent Course(s): RLST 25703

ENST 25715. The Bible and Ecology. 100 Units.
In 2010, HarperCollins published The Green Bible, which claims to help readers "understand the Bible's powerful message for the earth." What precisely is the Bible's "message for the earth"? Does the Bible even contain one unified message about the relationship between God, human beings, and the natural world? For many, the question of "what the Bible says" about the environment has become urgent in the midst of the intersecting environmental crises of our day, from global warming to the sixth mass extinction. And yet, there does not seem to be an easy answer to this question; the Bible has been used both to support ethics of conservation and to justify exploitation of the earth's resources. In this course, we will analyze key passages employed in contemporary
discourse about the Bible and the environment from a historical-critical perspective. At the same time, we will investigate how these texts are being invoked today in support of various agendas. Along the way, we will discover and interrogate the profound influence of biblical cosmologies, anthropologies, and eschatologies in shaping attitudes towards the earth and its nonhuman inhabitants. No prior knowledge of biblical literature is expected.
Instructor(s): Christine Trotter Terms Offered: Spring
Equivalent Course(s): RLST 25705

ENST 25910. Introduction to Location Analysis. 100 Units.
Understanding the location of business activities - agricultural, industrial, retail, and knowledge-based - has long been a focus for economic geographers, regional scientists, and urban planners. This course traces the key theories and conceptual models that have been developed over time to explain why economic activities tend to locate where they do. To introduce and explain these theories, this course covers several foundational concepts in economic geography and urban planning, such as: bid-rent theory, locational triangulation, various models of urban structure and growth, urban market areas, transportation, economic restructuring, and the "back-to-the-city" movement. This course incorporates several GIS exercises to teach students the basic principles of location optimization and to help illuminate the foundational theoretical principles of economic geography.
Instructor(s): Kevin Credit Terms Offered: Autumn. Offered 2020-21
Equivalent Course(s): GEOG 35900, GEOG 25900

ENST 26001. Urban Design Practicum: Revitalizing South/West Retail Corridors. 100 Units.
This course is a hands-on, applied learning experience in which students will translate principles of good urban design to two retail corridors on the South Side. We will be working alongside the National Main Street Center, which is headquartered in Chicago, and in support of Chicago's INVEST South/West community improvement initiative. Our specific task will be to produce a set of design guidelines for selected retail corridors. There are no pre-requisites, but students with interest or ability in graphic design and/or 3D modeling are especially encouraged to register.
Instructor(s): Talen, Emily Terms Offered: Autumn
Equivalent Course(s): GEG 36001, CHST 26001, ARCH 26001

ENST 26003. Chicago by Design. 100 Units.
This course examines the theory and practice of urban design at the scale of block, street, and building-the pedestrian realm. Topics include walkability; the design of streets; architectural style and its effect on pedestrian experience; safety and security in relation to accessibility and social connection; concepts of urban fabric, repair, and placemaking; the regulation of urban form; and the social implications of civic spaces. Students will analyze normative principles and the debates that surround them through readings and discussion as well as firsthand interaction with the urbanism of Chicago. This course is part of the College Course Cluster, Urban Design.
Instructor(s): Emily Talen Terms Offered: Spring. Not offered in Spring 2021
Equivalent Course(s): PBPL 26003, SOSC 26003, GEOG 24300

ENST 26005. Cities by Design. 100 Units.
This course examines the theory and practice of city design-how, throughout history, people have sought to mold and shape cities in pre-determined ways. The form of the city is the result of myriad factors, but in this course we will hone in on the purposeful act of designing cities according to normative thinking-ideas about how cities ought to be. Using examples from all time periods and places around the globe, we will examine how cities are purposefully designed and what impact those designs have had. Where and when has city design been successful, and where has it resulted in more harm than good?
Instructor(s): Emily Talen Terms Offered: Autumn
Equivalent Course(s): PBPL 26005, ARCH 26005, GEOG 26005

ENST 26006. Sustainable Cities Lab. 100 Units.
The Sustainable Cities Lab will provide the opportunity to learn and utilize urban design tools while competing in a global sustainability competition to design green and thriving city neighborhoods that work to reduce greenhouse gas emissions, and improve quality of life for local communities. Students will apply their skills to create an entry for the Students Reinventing Cities competition (https://www.cnoreinventingcities.org/en/students/). The course will support student development of knowledge and skills related to this competition, focusing on applications of urban design and sustainable urbanism concepts and principles. Various workshops will be utilized for training in design tools, graphics, data visualization, and other methods necessary to create a winning entry. Basic knowledge of GIS or comparable skill in graphic design or illustration is required.
Instructor(s): Emily Talen Terms Offered: Spring
Note(s): Pre-reqs include ENST 28702 or ENST 20185 or ARCH 24205 or equivalent experience in QGIS, graphic or other design tools. Course content will be taught remotely but there will be (3) required site visits throughout the quarter, so students must be located in Chicago.
Equivalent Course(s): CHST 26006, GEOG 26006

ENST 26008. Historic Preservation Studio. 100 Units.
This course is an introduction to the preservation of the built environment. What are the benefits of preserving historic resources? Students will conduct studies of historic buildings in Chicago, exploring their cultural significance and impact on neighborhoods, and applying preservation tools and methods to formulate policies to advance preservation goals. We will also debate preservation's role in addressing climate change and its role
ENST 26070. Explorations of Mars. 100 Units.
Mars is more than a physical object located millions of miles from Earth. Through centuries of knowledge-making people have made the “Red Planet” into a place that looms large in cultural and scientific imagination. Mars is now the primary target for human exploration and colonization in the Solar System. How did this happen? What does this mean? What do we know about Mars, and what’s at stake when we make knowledge about it? Combining perspectives from the social sciences and humanities, this course investigates how knowledge about Mars is created and communicated in not only science and technology fields but across public culture. A major focus will be learning how Mars has been embedded within diverse social and political projects here on Earth. Through reading-inspired group discussions and instructor-led experiential research projects, the course will move from the earliest visual observations of Mars to recent robotic missions on the planet’s surface. In doing so, this seminar will critically grapple with evolving human efforts to make Mars usable. No prior knowledge of Mars is required.
Instructor(s): Ray Lodato Terms Offered: Autumn
Equivalent Course(s): GEOG 36008, ARCH 26008, CHST 26008

ENST 26100. Roots of the Modern American City. 100 Units.
This course traces the economic, social, and physical development of the city in North America from pre-European times to the mid-twentieth century. We emphasize evolving regional urban systems, the changing spatial organization of people and land use in urban areas, and the developing distinctiveness of American urban landscapes. All-day Illinois field trip required. This course is part of the College Course Cluster, Urban Design.
Instructor(s): M. Conzen Terms Offered: Autumn. Offered 2021-22
Note(s): This course offered in odd years.
Equivalent Course(s): HIST 38900, GEOG 36100, GEOG 26100, ARCH 26100, HIST 28900

ENST 26170. Why Do Animals Talk? Beastly Worlds in South Asian Literature. 100 Units.
Comprised of a diverse set of languages covering a disparate set of regions, South Asian literatures share a deep investment in the figure of the animal. Whether imagined through the genre of political advice, in narrative tellings of the past lives of the Buddha, or simply as characters in an expanded continuum of life, animals serve as important literary devices to reflect on human beings as well as autonomous subjects bound up with humans with their own distinct emotional and spiritual lives. Drawing particularly from the Sanskrit tradition among others, this course will introduce students to a broad survey of animal literature in South Asia alongside more recent scholarship in Animal Studies. By the end of the course, students can expect to have a myriad of answers to the question: why do animals talk?
Instructor(s): Sarah Pierce Taylor Terms Offered: Spring
Equivalent Course(s): RLS 26170, SALC 26170

ENST 26255. Environmental Justice Field Research Project I. 100 Units.
This two-quarter sequence will expose students to real-world policy-making questions and field-based research methodologies to design an environmentally based research project, collect data, conduct analyses, and present findings. In the first quarter, we will follow a robust methodological training program in collaboration with University partners to advance the foundations laid elsewhere in the public policy studies program. In the second quarter, this expertise in a full range of research methodologies will be put into practice to tackle public policy problems in the city and neighborhoods that surround the University. PBPL 26255 and PBPL 26355 satisfy the Public Policy practicum Windows and Methods requirements.
Instructor(s): Lodato, R. Terms Offered: Autumn
Prerequisite(s): Students taking this course to meet the Public Policy practicum requirement must take both courses.
Equivalent Course(s): PBPL 26255

ENST 26260. Environmental Justice in Principle and Practice. 100 Units.
This course will investigate the foundational texts on environmental justice as well as case studies, both in and out of Chicago. Students will consider issues across a wide spectrum of concerns, including toxics, lead in water, waste management, and access to greenspaces, particularly in urban areas. These topics will be taught in accompaniment with a broader understanding of how social change occurs, what barriers exist to producing just outcomes, and what practices have worked to overcome obstacles in the past. The class will welcome speakers from a variety of backgrounds to address their work on these topics, and the class will design a research project that will be executed in Spring on a topic related to environmental justice in Chicago.
Instructor(s): Ray Lodato Terms Offered: Autumn
Note(s): This course will cover the same content as ENST 26255.
Equivalent Course(s): PBPL 26260

ENST 26322. A History of Public Spaces in Mexico, 1520-2020. 100 Units.
Streets and plazas have been sites in which much of Mexican history has been fought, forged, and even performed. This course examines the history of public spaces in Mexico since the Spanish Conquest. By
ENST 26355. Environmental Justice Field Research Project II. 100 Units.
This two-quarter sequence will expose students to real-world policy-making questions and field-based research methodologies to design an environmentally based research project, collect data, conduct analysis, and present findings. In the first quarter, we will follow a robust methodological training program in collaboration with University partners to advance the foundations laid elsewhere in the public policy studies program. In the second quarter, this expertise in a full range of research methodologies will be put into practice to tackle public policy problems in the city and neighborhoods that surround the University. PBPL 26255 and PBPL 26355 satisfy the Public Policy practicum Windows and Methods requirements.
Instructor(s): Lodato, R. Terms Offered: Winter
Prerequisite(s): Students taking this course to meet the Public Policy practicum requirement must take both courses.
Equivalent Course(s): CHST 26355, PBPL 26355

ENST 26366. Planning for Land and Life in the Calumet. 100 Units.
The collaborative plan to create a Calumet National Heritage Area that touches aspects of environmental conservation, economic development, cultural heritage, recreation, arts, and education will ground this course’s exploration of landscape history and landscape planning in the Calumet region. Students will investigate this planning process and its relationship to other local and regional plans. A strong focus of the course is on the opportunities and challenges this complex and richly textured industrial region faces in its transition to a more sustainable future.
Instructor(s): Mark Bouman Terms Offered: Spring
Note(s): This course is part of the Chicago Studies Quarter: Calumet but may be taken as a standalone class. Students interested in enrolling in all three Calumet Quarter classes should contact cskrable@uchicago.edu. For more information on the Calumet quarter, visit chicagogstudies.uchicago.edu/calumet. This course is presented in partnership with the Field Museum’s Keller Science Action Center, and will include mandatory Friday field excursions on 4/1, 4/8, 4/29, 5/6, 5/13, 5/20, and 5/27.
Equivalent Course(s): PBPL 26366, CHST 26366

ENST 26382. Development and Environment in Latin America. 100 Units.
Description: This course will consider the relationship between development and the environment in Latin America and the Caribbean. We will consider the social, political, and economic effects of natural resource extraction, the quest to improve places and peoples, and attendant ecological transformations, from the onset of European colonialism in the fifteenth century, to state- and private-led improvement policies in the twentieth. Some questions we will consider are: How have policies affected the sustainability of land use in the last five centuries? In what ways has the modern impetus for development, beginning in the nineteenth century and reaching its current intensity in the mid-twentieth, shifted ideas and practices of sustainability in both environmental and social terms? And, more broadly, to what extent does the notion of development help us explain the historical relationship between humans and the environment?
Instructor(s): Diana Schwartz Francisco Terms Offered: Winter
Equivalent Course(s): HIST 26317, HIST 36317, LACS 26382, ANTH 23094, GEOG 26382, LACS 36382, HIPS 26382, GLST 26382

ENST 26388. Food Justice and Biodiversity in Latin America. 100 Units.
This course asks how the relationships between food production and consumption, economic justice, and biodiversity have changed over the last century in Latin America and the Caribbean. As a region known both for its ecological diversity and as a producer of tropical foods regularly consumed in the United States, plantation-style agriculture has often undermined its celebrated biodiversity. In centering the role of workers and consumers, this course considers the layered relationships—ecological, social, political, economic and cultural—between the production and consumption of food from Latin America and the Caribbean. In Autumn 2022, the course will also engage questions of food justice and biodiversity in the Chicagoland area and in particular among Latine/x com
Instructor(s): Diana Schwartz Francisco Terms Offered: Autumn
Note(s): Preferred: some background in Latin American history, geography and/or contemporary issues
Equivalent Course(s): LACS 26388, GLST 26388, HIST 26323

ENST 26511. Cities from Scratch: The History of Urban Latin America. 100 Units.
Latin America is one of the world’s most urbanized regions and its urban heritage long predates European conquest. Yet the region’s urban experience has generally been understood through North Atlantic models, which often treat Latin American cities as disjunctive, distorted knockoffs of idealized US or European cities. This class interrogates and expands those North Atlantic visions by emphasizing the history of vital urban
issues such as informality, inequality, intimacy, race, gender, violence, plural regulatory regimes, the urban environment, and rights to the city. Interdisciplinary course materials include anthropology, sociology, history, fiction, film, photography, and journalism produced from the late nineteenth to the early twenty-first centuries. Instructor(s): B. Fischer Terms Offered: Winter
Prerequisite(s): Some coursework in Latin American studies, urban studies, and/or history
Equivalent Course(s): LACS 26510, HIST 26511, ARCH 26511, HIST 36511, LACS 36510

ENST 26801. The Global Urban. 100 Units.
This course was conceived with the aim of “globalizing” urban scholarship. To this end, we will highlight different urban trajectories and forms and different ways of being urban around the world. We will focus on urban experiences in the Global South and in Southeast Asia particularly. We will spend the first week of the course discussing how and why Southern cities are different. We will talk about their explosive growth in the twentieth century, the precarious nature of urban employment, informal settlement as a major urban form, the housing divide as a social structure distinct to such cities, class formation, economic and spatial restructuring under neoliberalism, and the nature of urban citizenship. We will spend the second week examining two very different cases: Manila and Phnom Penh. In the third week, we will focus exclusively on Hong Kong, and students will be tasked with conducting their own urban fieldwork. Instructor(s): Marco Garrido Terms Offered: Summer
Equivalent Course(s): GLST 26801

ENST 27002. Compiling and Mediating Environmental History. 100 Units.
How do audiovisual media archives inform both the research and presentation of environmental history? Social media posts, fiction film, photographs from geological surveys, and urban field recordings all index historical environmental conditions. Artists and scholars enlist such archives to reanimate lost and changed landscapes for contemporary audiences, raising historiographical questions about how research excavates, extracts, and assembles both image and sound. This course looks at a series of documentary films and online media projects that enlist media to narrate histories of socio-ecological interaction. These projects explore site-specific environmental crises as they were deliberately or inadvertently recorded by media, including the toxic legacies of U.S. Imperialism, the extraction economy of South African apartheid, or how Hollywood films unconsciously document the long-term impacts of climate change. Students will analyze these media objects alongside readings in media historiographical theory, environmental history, and documentary theory. The goal of this engagement is to guide students toward a final project that employs both research and creative practice to compile a report about an environmental historical case study that utilizes a media archive to make the argument. This course shows how humanistic inquiry into documentary media and the material conditions of media production can inform the assembly and presentation of environmental historical knowledge. Instructor(s): Thomas Pringle Terms Offered: Spring
Note(s): No production experience is required. This course partially fulfills the research seminar requirement for the IRHUM major.
Equivalent Course(s): KNOW 26072, IRHU 27002

ENST 27155. Urban Design with Nature. 100 Units.
This course will use the Chicago region as the setting to evaluate the social, environmental, and economic effects of alternative forms of human settlement. Students will examine the history, theory and practice of designing cities in sustainable ways - i.e., human settlements that are socially just, economically viable, and environmentally sound. Students will explore the literature on sustainable urban design from a variety of perspectives, and then focus on how sustainability theories play out in the Chicago region. How can Chicago’s neighborhoods be designed to promote environmental, social, and economic sustainability goals? This course is part of the College Course Cluster program: Urban Design.
Instructor(s): Sabina Shaikh and Emily Talen Terms Offered: Spring
Note(s): This course counts towards the ENST 4th year Capstone requirement. Restricted to 3rd and 4th year students.
Equivalent Course(s): CHST 27155, GEOG 27155, PBPL 27156, BPRO 27155

ENST 27325. Urban Ecology in the Calumet Region. 100 Units.
This course will give students a foundation in the local ecology of the Calumet region. Students will use local research and habitats to understand fundamental concepts in ecology and explore some of these habitats during field trips with scientists and practitioners. As a class, we will examine the extent to which these fundamental ecological concepts are applicable in the urban ecology of the Calumet, and the role humans have had in modifying local habitats, as well as restoring natural and managing novel ecosystems. In 2022, the course focus will be on wetlands: their function ecologically, and their past, present, and future in the region. Instructor(s): Alison Anastasio Terms Offered: Spring
Note(s): Attendance at the first class session is a requirement for enrollment in this course. This course is part of the Chicago Studies Quarter: Calumet but may be taken as a standalone class. Students interested in enrolling in all three Calumet Quarter classes should contact cskrable@uchicago.edu. For more information on the Calumet quarter, visit chicagostudies.uchicago.edu/calumet. This course will include mandatory Friday field excursions on 4/1, 4/8, 4/22, 5/6, 5/20, and 5/27.
Equivalent Course(s): GEOG 27325, PBPL 27325, CHST 27325

ENST 26801. The Global Urban. 100 Units.
This course was conceived with the aim of “globalizing” urban scholarship. To this end, we will highlight different urban trajectories and forms and different ways of being urban around the world. We will focus on urban experiences in the Global South and in Southeast Asia particularly. We will spend the first week of the course discussing how and why Southern cities are different. We will talk about their explosive growth in the twentieth century, the precarious nature of urban employment, informal settlement as a major urban form, the housing divide as a social structure distinct to such cities, class formation, economic and spatial restructuring under neoliberalism, and the nature of urban citizenship. We will spend the second week examining two very different cases: Manila and Phnom Penh. In the third week, we will focus exclusively on Hong Kong, and students will be tasked with conducting their own urban fieldwork. Instructor(s): Marco Garrido Terms Offered: Summer
Equivalent Course(s): GLST 26801

ENST 27002. Compiling and Mediating Environmental History. 100 Units.
How do audiovisual media archives inform both the research and presentation of environmental history? Social media posts, fiction film, photographs from geological surveys, and urban field recordings all index historical environmental conditions. Artists and scholars enlist such archives to reanimate lost and changed landscapes for contemporary audiences, raising historiographical questions about how research excavates, extracts, and assembles both image and sound. This course looks at a series of documentary films and online media projects that enlist media to narrate histories of socio-ecological interaction. These projects explore site-specific environmental crises as they were deliberately or inadvertently recorded by media, including the toxic legacies of U.S. Imperialism, the extraction economy of South African apartheid, or how Hollywood films unconsciously document the long-term impacts of climate change. Students will analyze these media objects alongside readings in media historiographical theory, environmental history, and documentary theory. The goal of this engagement is to guide students toward a final project that employs both research and creative practice to compile a report about an environmental historical case study that utilizes a media archive to make the argument. This course shows how humanistic inquiry into documentary media and the material conditions of media production can inform the assembly and presentation of environmental historical knowledge. Instructor(s): Thomas Pringle Terms Offered: Spring
Note(s): No production experience is required. This course partially fulfills the research seminar requirement for the IRHUM major.
Equivalent Course(s): KNOW 26072, IRHU 27002

ENST 27155. Urban Design with Nature. 100 Units.
This course will use the Chicago region as the setting to evaluate the social, environmental, and economic effects of alternative forms of human settlement. Students will examine the history, theory and practice of designing cities in sustainable ways - i.e., human settlements that are socially just, economically viable, and environmentally sound. Students will explore the literature on sustainable urban design from a variety of perspectives, and then focus on how sustainability theories play out in the Chicago region. How can Chicago’s neighborhoods be designed to promote environmental, social, and economic sustainability goals? This course is part of the College Course Cluster program: Urban Design.
Instructor(s): Sabina Shaikh and Emily Talen Terms Offered: Spring
Note(s): This course counts towards the ENST 4th year Capstone requirement. Restricted to 3rd and 4th year students.
Equivalent Course(s): CHST 27155, GEOG 27155, PBPL 27156, BPRO 27155

ENST 27325. Urban Ecology in the Calumet Region. 100 Units.
This course will give students a foundation in the local ecology of the Calumet region. Students will use local research and habitats to understand fundamental concepts in ecology and explore some of these habitats during field trips with scientists and practitioners. As a class, we will examine the extent to which these fundamental ecological concepts are applicable in the urban ecology of the Calumet, and the role humans have had in modifying local habitats, as well as restoring natural and managing novel ecosystems. In 2022, the course focus will be on wetlands: their function ecologically, and their past, present, and future in the region. Instructor(s): Alison Anastasio Terms Offered: Spring
Note(s): Attendance at the first class session is a requirement for enrollment in this course. This course is part of the Chicago Studies Quarter: Calumet but may be taken as a standalone class. Students interested in enrolling in all three Calumet Quarter classes should contact cskrable@uchicago.edu. For more information on the Calumet quarter, visit chicagostudies.uchicago.edu/calumet. This course will include mandatory Friday field excursions on 4/1, 4/8, 4/22, 5/6, 5/20, and 5/27.
Equivalent Course(s): GEOG 27325, PBPL 27325, CHST 27325
ENST 27400. Epidemiology and Population Health. 100 Units.
Epidemiology is the basic science of public health. It is the study of how diseases are distributed across populations and how one designs population-based studies to learn about disease causes, with the object of identifying preventive strategies. Epidemiology is a quantitative field and draws on biostatistical methods. Historically, epidemiology’s roots were in the investigation of infectious disease outbreaks and epidemics. Since the mid-twentieth century, the scope of epidemiologic investigations has expanded to a fuller range non-infectious diseases and health problems. This course will introduce classic studies, study designs and analytic methods, with a focus on global health problems.
Instructor(s): D. Lauderdale Terms Offered: Autumn
Prerequisite(s): STAT 22000 or other introductory statistics highly desirable. For BIOS students-completion of the first three quarters of a Biological Sciences Fundamentals sequence.
Note(s): This course does not meet requirements for the biological sciences major.
Equivalent Course(s): PPHA 36410, STAT 22810, HLTH 20910, PBHS 30910

ENST 27521-27522. Energy in World Civilizations I-II.
This two-quarter course sequence explores the historical roots of climate change and other global environmental problems by focusing on the social use of energy over time. Part I covers energy systems across the world from prehistory to the end of the nineteenth century. Part II investigates global energy systems from the early twentieth century to the present. The courses should be taken in chronological sequence. Taken together, they fulfill the general education requirement in civilization studies.

ENST 27521. Energy in World Civilizations I. 100 Units.
This two-quarter course explores the historical roots of climate change and other global environmental problems with a special attention to how energy use shapes human societies over time. Part I covers energy systems across the world from prehistory to the end of the nineteenth century.
Instructor(s): C. Kearns Terms Offered: Autumn
Prerequisite(s): Parts I and II should be taken in sequence. This sequence meets the general education requirement in civilization studies.
Equivalent Course(s): HIPS 17521, HIST 17521

ENST 27522. Energy in World Civilizations II. 100 Units.
This two-quarter course explores the historical roots of climate change and other global environmental problems with a special attention to how energy use shapes human societies over time. Part II covers energy systems across the world from the early twentieth century to the present, examining themes such as the uneven globalization of energy-intensive lifestyles, the changing geopolitics of energy, and possible futures beyond fossil-fuel dependence.
Instructor(s): E. Chatterjee Terms Offered: Winter
Prerequisite(s): Parts I and II should be taken in sequence. This sequence meets the general education requirement in civilization studies.
Equivalent Course(s): HIPS 17522, HIST 17522

ENST 27534. The Aspirational City: Chicago’s Multicultural Communities. 100 Units.
No city has meant more to the hopes and dreams of more divergent groups of Americans than Chicago. The Aspirational City: Chicago’s Multicultural Communities will explore the histories of Chicago’s various racial, ethnic and marginalized communities and the ways in which they have sought to fashion the destinies of themselves, their communities, and the city of Chicago. The course is a weekly seminar open to both undergraduate and graduate students.
Terms Offered: Spring
Equivalent Course(s): CRES 27534, HIST 27308

ENST 27700. Sensing the Anthropocene. 100 Units.
In this co-taught 3-week and in-person course between the departments of English (Jennifer Scappettone) and Visual Arts (Amber Ginsburg), we will deploy those senses most overlooked in academic discourse surrounding aesthetics and urbanism-hearing, taste, touch, and smell-to explore the history and actuality of Chicago as a site of anthropogenic changes. Holding our classes entirely out of doors, we will move through the city seeking out and documenting traces of the city’s foundations in phenomena such as the colonization of the ancestral homelands of the Three Fires Confederacy and trade routes of many other indigenous groups; the filling in of swamp; the redirection of the river; and the creation of transportation and industrial infrastructure-all with uneven effects on human and nonhuman inhabitants. Coursework will combine readings in history and theory of the Anthropocene together with examples of how artists and activists have made the Anthropocene visible and audible, providing forums for experimental documentation and annotations as we draw, score, map, narrate, sing, curate and collate our sensory experience of the Anthropocene.
Instructor(s): A. Ginsburg, J. Scappettone Terms Offered: Autumn
Prerequisite(s): Third or fourth-year standing
Note(s): This intensive three-week course meets out of doors from September 27 through October 17. Graduate registration by Consent Only.
Equivalent Course(s): CHST 27200, ARTV 22322, ENGL 27700, ARTV 32322, ENGL 47700, ARCH 22322, BPRO 27200
ENST 28702. Introduction to GIS and Spatial Analysis. 100 Units.
This course provides an introduction and overview of how spatial thinking is translated into specific methods to handle geographic information and the statistical analysis of such information. This is not a course to learn a specific GIS software program, but the goal is to learn how to think about spatial aspects of research questions, as they pertain to how the data are collected, organized and transformed, and how these spatial aspects affect statistical methods. The focus is on research questions relevant in the social sciences, which inspires the selection of the particular methods that are covered. Examples include spatial data integration (spatial join), transformations between different spatial scales (overlay), the computation of “spatial” variables (distance, buffer, shortest path), geovisualization, visual analytics, and the assessment of spatial autocorrelation (the lack of independence among spatial variables). The methods will be illustrated by means of open source software such as QGIS and R.
Instructor(s): M. Kolak Terms Offered: Spring Summer 2021-22
Equivalent Course(s): SOCI 30283, GEOG 38702, GEOG 28702, ARCH 28702, SOCI 20283

ENST 28722. Spatial Cognition. 100 Units.
This course serves as an overview of spatial cognition and environmental perception, which relates to all aspects of spatial thinking, spatial behavior, and human-environment interaction in spatial and social contexts. Topics of study include cognitive maps and wayfinding behavior, spatial and environmental learning, spatial choice and decision-making, migration and travel, time geography, place and regional identity, and the role of gender and culture in spatial cognition.
Instructor(s): Bae, Crystal Terms Offered: Spring 2021-22
Equivalent Course(s): GEOG 37102, GEOG 27102

ENST 28728. Climate Change and Society: Human Impacts, Adaptation, and Policy Solutions. 100 Units.
Anthropogenic climate change is one of the most difficult challenges faced by modern society. A revolution in socioeconomic and environmental data, along with new and old insights from economics, can inform how we face this global challenge. During the course, our focus will be on the impacts of climate change upon society, and the necessity of solutions that deal with the global scope, local scales, and often unequal nature of the impacts. This interdisciplinary course covers the tools and insights from economic analysis, environmental science, and statistics that inform our understanding of climate change impacts, the design of mitigation and adaptation policies, and the implementation of these policies. Students will develop a mastery of key conceptual ideas from environmental economics relevant for climate change and acquire tools, both theoretical and empirical, for conducting analyses of climate impacts and policies. The latter part of the course will hone students’ ability in applying these insights and tools through policy debates and presentations. The goal is to help students become informed and critically-minded practitioners of evidence-based, climate-informed policy making.
Instructor(s): Jina, A. Terms Offered: Winter
Note(s): This course is intended to be accessible to people from all disciplines and backgrounds. Some introduction to statistics and economics (e.g., PBPL 20000 or ECON 20000) may be helpful, but not essential.
Equivalent Course(s): GEOG 38702, GEOG 28702

ENST 28800. Readings in Spatial Analysis. 100 Units.
This independent reading option is an opportunity to explore special topics in the exploration, visualization and statistical modeling of geospatial data.
Instructor(s): M. Kolak Terms Offered: Autumn Spring Winter 2021-22
Note(s): This course is consent-only. Students are required to submit the College Reading and Research Course Form. Available for either quality grades or for P/F grading.
Equivalent Course(s): GEOG 38700, GEOG 28700

ENST 28925. Health Impacts of Transportation Policies. 100 Units.
Governments invest in transport infrastructure because it encourages economic growth and mobility of people and goods, which have direct and indirect benefits to health. Yet, an excessive reliance on motorized modes of transport harms population health, the environment, and social well-being. The impact on population health is substantial: Globally, road traffic crashes kill over 1.3 million annually. Air pollution, to which transport is a major contributor, kills another 3.2 million people. Motorized modes of transport are also an important contributor to sedentary lifestyles. Physical inactivity is estimated to cause 3.2 million deaths every year, globally. This course will introduce students to thinking about transportation as a technological system that affects human health and well-being through intended and unintended mechanisms. The course will examine the complex relationship between transportation, land use, urban form, and geography, and explore how decisions in other sectors affect transportation systems, and how these in turn affect human health. Students will learn to recognize how the system level properties of a range of transportation systems (such as limited-access highways, urban mass transit, inter-city rail) affect human health.
Instructor(s): Bhalia, Kavi Terms Offered: Spring
Equivalent Course(s): ARCH 28925, PBPL 28925, HLTH 28925

ENST 29525. The Global Life of Things. 100 Units.
We are often told that the market has taken over all aspects of our social lives. The effects of this process can be seen in the financialization of the economy, the deregulation of labor, and the exploitation of natural resources. Goods are produced on one side of the world and consumed in another. Even college students are seen as investments that accrue value. How did this happen? This course will examine the deep history of how so much
of the world became commodities. Focussing primarily on the seventeenth to the nineteenth centuries, we will ask how work, time, land, money, and people were commodified. We will also consider how historians and anthropologists have told the history of global capitalism through particular commodities, including sugar, cotton, meat, grain and mushrooms. Readings will span western Europe, India, the Atlantic World, Chicago, and contemporary Japan. Periodically, we will reflect on how these histories bear on questions of labor, gender, and the environment in the present day.
Instructor(s): O. Cussen Terms Offered: Spring
Equivalent Course(s): HIST 29525, GLST 29525

ENST 29801. BA Colloquium I. 100 Units.
This colloquium is designed to aid students in their thesis research. Students are exposed to different conceptual frameworks and research strategies. The class meets weekly.
Instructor(s): Sabina Shaikh Terms Offered: Autumn
Prerequisite(s): Students must have an approved topic proposal and a faculty reader.
Equivalent Course(s): GEOG 29801

ENST 29802. BA Colloquium II. 100 Units.
This colloquium assists students in conceptualizing, researching, and writing their BA theses.
Instructor(s): Graduate Preceptor Terms Offered: Winter
Prerequisite(s): Students must have an approved topic proposal and a faculty reader.
Equivalent Course(s): GEOG 29802