Course Name	Catalog Title	Department	Text Description	Code
ARTS 260	Social Practice Art	ARTS	An introduction to Social Practice Art that covers a selection of practices and methodologies, including participatory art, public art, the role of research, performance, interventionist works, eco-art, political art, and community-based works. Students consider local, global, systemic, networked, and cultural contexts for their work, which might expose, solve, or complicate political or social conflicts. Issues of form, ethics, exhibition, the role of the studio, and the role of the artist in society are addressed in the context of larger discourses in 21st-century contemporary arts practice, where context is often researched prior to generating the form and content of the art work. Students are encouraged to explore practices beyond the basics; group and individual projects require both rigorous concept development and demonstrated concern with relational form.	SF
ARTS 274	Sustainability in Arch Design	ARTS	This studio-based course develops students' individual responses and points of view to both architectural problems and the discipline itself and explicitly focuses on the architecture of residential buildings. Students learn about approaches that lead to the design of a sustainable building and gain understanding of the principles of Integrated Building Design Process and environmental design factors. Hands-on experience is accomplished by producing architectural drawings of a residential building, generating drawings of decorative gardens, and creating artistic images of buildings and small gardens with the help of 3D architectural software. In addition to lectures and readings related to course topics, class time is spent working on individual or group desk critiques and pin-up sessions.	SF

BIOL 330	Conservation Biology	BIOL	The widespread loss of species and concerns over how to maintain maximum genetic variability in populations are at the heart of this course. Topics include biological diversity, its measurement, and differences in diversity among habitats. The course also considers threats to biological diversity such as habitat loss, exotic species introductions, pollution, and catastrophic events. This information is used to consider various conservation strategies and sustainable development. Students take a global perspective in this course and consider how globalization affects biodiversity directly and indirectly.	SF
BIOL 474	Global Health Epidemiology	BIOL	This research tutorial provides students the opportunity to plan, conduct, and present original research in the area of global health and infectious disease epidemiology. Projects involve investigations in the field, laboratory, and/or data analysis. Potential topics for projects include mapping neglected tropical disease (specifically soil transmitted helminths parasite), and their impact on maternal and child health. In addition the role of H. pylori infection in extra-gastroduodenal diseases in general, in child growth development, anemia and allergic disorders in particular will be investigated in this research tutorial laboratory.	SF
CHEM 100	Chem-Altered & Natural Environ	CHEM	An introduction to chemical principles as they are applied to environmental issues. Students learn the chemistry behind some of the most pressing modern environmental challenges and how chemistry has been used to address past problems. Topics covered include air and water chemistry, as well as energy production and climate. Designed for students interested in environmental science and environmental studies. There is no prior chemical knowledge expected. This course is not part of the CHEM 101/102 sequence of general chemistry.	SF
CHEM 477	Environmental Chemistry	CHEM	This half-semester course uses a firm grounding in chemistry to seek answers to the complex environmental questions faced by modern society. The scientific literature and field and laboratory experiments are used to explore a topic of interest such as energy production, natural cycles and their anthropogenic perturbations or environmental contaminants.	SF

CORE 103S	Remote Sensing of Environment	CORE	Remote sensing is the art and science of obtaining information about a phenomenon through a device that is not in contact with the object. The remote sensing process involves collection and analysis of data about energy, reflected from or emitted by an object. Remote sensing is used to better understand, measure, and monitor features and human activities on Earth. After an introduction to the interplay among science, technology, and remote sensing, students examine the development of remote sensing technology. Students focus on the physical principles upon which remote sensing is based, explore the basic tools of photography and photograph interpretation, and consider the principles of acquiring and interpreting data collected by non-photographic sensors. Throughout the semester, students consider how remote sensing has improved our understanding of biophysical processes using a case-study approach to demonstrate the theoretical underpinnings. Finally, consideration is given to the ethical implications of remote sensing.	SF
CORE 120S	Earth Resources	CORE	Management of the Earth's energy, mineral, and water resources is a subject of ongoing controversy and debate. This debate revolves around two related issues: the diminishing supply of some resources and the environmental cost of resource extraction and energy production. This course examines the origin and geologic setting of Earth's resources, and how these factors influence resource exploration, extraction, and use. Environmental and economic aspects of resource extraction are explored. Students examine the public debate about resource management and conservation, as well as the roles of politics and the media in shaping this debate. This course emphasizes student-led discussions of case studies dealing with current resource-related topics. The purpose of this course is to create a framework in which resource issues can be evaluated, integrating the scientific and social issues inherent in resource development.	SF

CORE 147S	Emerging Global Challenges	CORE	In the 21st century, global citizenship will require a comprehensive understanding of key challenges on a planetary scale, including global warming, diminishing energy resources, population pressures (adequate water and food supplies, humane living conditions), urbanization, and the impact of natural disasters. This course will explore the underlying scientific concepts essential to developing a thorough understanding of the phenomenon and developing a healthy skepticism and critical analysis of complex, global-scale processes. Through the application of design-thinking project-based learning, students will assess the potential global ramifications of selected global issues, develop their own interpretations, and propose creative solutions.	SF
CORE 178S	Water	CORE	Explores water technologies and their evolution through time, and how the technologies related to water distribution and treatment evolve with human's understanding of and interaction with water. Through the lens of science and engineering, students examine the role water plays in human health, the environment, and sustainability. Focused on history of water transportation; water quality issues, coinciding with an improved understanding of water following advances in chemistry, biology, and physics; and modern and emerging problems related to water and water technology. Students cover topics on the application and limitation of scientific knowledge, and broader impacts that technology has on past and current societies.	SF

CORE 192C	Native Americans in the SW	CORE	Focusing on the words from people within the Pueblo, Apache, and Dine communities of what is now called the American southwest, this course introduces students to Native American intellectual traditions and their longstanding history. Works from poets, storytellers, educators, artists, scientists, tribal council members, elders are the heart of this course in a sustained consideration of interdependence, complementarity, and the vital interconnections across past and present that are held within specific places. Particular attention is given to the importance of the land, to language retention, and to the power of story as an interventionary force in colonialism and neocolonialism.	SF
CORE 199C	Bolivia	CORE	A multidisciplinary look at communities and identities in Bolivia, a country in the heart of South America that has captured transnational attention for its Andean panpipe music, its majority indigenous population, and its social movements. The course uses music, dance, film, history, memoir, political documents, policy reports, anthropology, and journalism to grasp different community articulations in Bolivia. Along with historical understandings of Bolivian communities, the course takes a special look at thematic issues that, while locally grounded, have global resonances: indigenous rights, water, resource extraction, neoliberalism, coca and cocaine, and Andean music and dance.	SF
ECON 228	Environmental Economics	ECON	An introduction to the study of environmental problems with the perspective and analytical tools of economics. Sources of market failure with respect to environmental issues are discussed, and methods for analyzing environmental policies are developed. These tools are applied to current issues of pollution, resource use, and sustainability.	SF

ECON 483	Sem: Resource & Environ Econ	ECON	An advanced study of current resource and environmental issues. Explores the reasons for, and the welfare implications of, some of the pressing resource and environmental issues facing humankind today. Topics may include climate change and its economic impacts; the role of externalities and public goods in the economy; and the economic analysis of environmental policies. The economic, scientific, and political framework surrounding the issues is explored.	SF
ENST 202	Environmental Ethics	ENST	An introduction to the field of environmental ethics. Several key figures and philosophies in the environmental movement are studied and critically analyzed, with a particular emphasis on ethical reasoning and its influences on environmental policies and practices. Topics to be discussed include animal rights and the ethical treatment of animals, intrinsic and instrumental evaluations of the natural world and its inhabitants, the value(s) of species and ecosystems, the nature and extent of our obligations to address climate change, as well as central questions of consumption and population ethics in the context of sustainability.	SF
ENST 219	American Lit & the Environment	ENST	An introduction to literary study that focuses on human responses to their environments and ecologies. This course explores representations of relationships between people, places, and animals in American fiction, poetry, and non-fiction from the early American Renaissance to the postmodern period. Questions of how environments are inflected by gender and racial positions, as well as literature's insights into issues of environmental justice and sustainability, are addressed through works by writers such as Wendell Berry, Charles Chesnutt, Annie Dillard, William Faulkner, bell hooks, Aldo Leopold, Marilynne Robinson, Wallace Stevens, and Jean Toomer.	SF

ENST 232	Environmental Justice	ENST	In the wake of the environmental movement and the civil rights movement rose a crosscurrent of issues combining problems of social justice and environmental issues. During the past two decades, this crosscurrent has swelled to produce a new social movement: the environmental justice movement. This course explores the terms and ideas of environmental justice by addressing the key issues of environmental racism, distributive justice, political and cultural representation in environmental struggles, alternative theories of justice generated from disenfranchised groups, grassroots politics, and concepts of environmental identity. These issues are introduced and discussed mainly in the context of the U.S. environmental justice movement, with some international context highlighted periodically.	SF
ENST 240	Sustainability: Sci & Analysis	ENST	Using scientific evidence and tools, this course presents sustainability issues and solutions through environmental science and engineering perspectives. Students will learn about the theories and evidence behind major environmental phenomena, and students will use scientifically-grounded arguments to think critically about complex environmental challenges and possible sustainable solutions. Topics to be discussed include dependency on fossil fuels, the stress of population growth and consumption on the environment, and recycling. Students will also have the opportunity to conduct several hands-on experiments and to analyze data using statistics.	SF

ENST 241	Sustainabilit & Climate Action	ENST	Explores the initiatives, programs and policies being implemented at the local and regional government level to promote sustainability and address climate change. Students will investigate diverse policy pathways from national and local case studies. Whenever possible, students work in groups with community partners, including those in the upstate New York region, to solve complex challenges facing local governments and organizations trying to enact meaningful climate change mitigation and adaptation strategies, and sustainability-related policy. These projects will be informed by different theoretical orientations to sustainability, allowing students to gain practical experience in civic engagement and policy making.	SF
ENST 250	Environmental Policy Analysis	ENST	Explores the theories and methods of policy analysis as applied to U.S. environmental policymaking. Policy analysis is an applied social science that draws on diverse methods to generate information designed to be used in political settings and inform policy decisions. Students explore specific environmental issues such as pollution regulation, wildlife and ecosystem management, and climate/energy issues. Students learn, among other skills, to: define problems using data to describe environmental change, construct policy alternatives using various analytical techniques, define evaluative criteria, assess the alternatives, and draw conclusions.	SF
ENST 291	Independent Study	ENST	Opportunity for individual study in areas not covered by formal course offerings, under the guidance of a member of the faculty.	SF

ENST 321	Global Environmental Justice	ENST	Global environmental justice examines both procedural and distributive inequities as well as injustices in political relationships among nation states. Additionally, it places emphasis on a variety of global political issues, which have evolved from environmental concerns that transcend national boundaries. This intermediate course expounds on the concepts and theories of environmental justice from an international perspective. It evaluates the international frame of environmental justice from a human rights perspective and its applicability to different case studies. A close examination of the theoretical North-South relationship, in terms of dependency and exploitation of peripheral (South) countries by core (North) countries, is central to the course. It analyzes a constellation of issues labeled as global environmental justice, such as tribal exterminations, dislocations of marginalized communities, and resource conflicts. Real world examples of environmental justice cases are critically assessed to develop an understanding of the complex relationships among actors that lead to environmental injustices.	SF
ENST 335	US Environmental Politics	ENST	Public policies to protect the environment are among the most important and controversial issues in local, state, and national government. This course analyzes the politics of environmental protection in the United States through the use of social science theory and a variety of quantitative and qualitative methods. The course introduces frameworks for understanding environmental policy problems and reviews several important American environmental laws. Readings include social science "classics" on the environment, as well as recent scholarship on environmental politics and emerging environmental issues. Topics covered in the course include the politics of environmental science, environmentalism as a social movement, environmental lawmaking in Congress, bureaucracy and environmental regulation, federalism, environmental law, and environmental justice.	SF

ENST 389	Conservation Biology & Policy	ENST	Our world is facing unprecedented pressures from global warming, habitat loss, pollution and a myriad of other anthropogenic drivers that are negatively impacting species and ecosystems. The biological discipline that addresses the impacts of these drivers on biodiversity and ecosystem function is Conservation Biology. The step after the identification of a conservation issue is to determine conservation priorities for addressing it, and then formulating evidence-based policy. Students learn the sustainable management of socio-ecological systems using conservation biology and policy studies. Framed around a case study, a long-term research project in the Cardelus lab on the myriad impacts of high deer density on the Village and Town of Hamilton.	SF
ENST 389L	Conserv Biology & Policy Lab	ENST	Required corequisite to ENST 389.	SF
ENST 390	Comm-Based Study Env Issues	ENST	This project-based, interdisciplinary course examines current environmental issues in the context of community-based learning. Topics for investigation are selected by faculty, usually in conjunction with the campus sustainability coordinator, the Upstate Institute, or directly with local and regional agencies or organizations. Students get practical experience working in interdisciplinary teams to examine environmental issues with a goal of developing relevant recommendations.	SF
ENST 490	Seminar-Environmental Studies	ENST	In this senior seminar, students discuss the relevant literature (from multiple disciplines) and do research on one or more selected environmental issue or issues, chosen by the instructor. Topics differ from year to year. The goal is to achieve an advanced, interdisciplinary understanding of contemporary environmental issues.	SF

FSEM 122	Ecology & Quality-Environment	CORE	A mix of interlocking problems is reaching crisis levels on our planet, which is the only home for us and a rich diversity of other life forms. The bad news is the growing evidence that we are depleting the Earth's natural capital at unprecedented and accelerated rates by living in ways that are eventually unsustainable. This course introduces students to a variety of ecological principles that explain the nature of the environment. Topics include human population dynamics, matter and energy resources, ecosystems, and others. The master ecological concepts are applied to current world environmental problems to help explain water pollution, hazardous waste disposal, renewable and nonrenewable resources, etc. Environmental degradation and pollution are approached from an ecological perspective, but students also search environmental ethics and economic and political aspects for potential solutions.	SF
FSEM 130	Energy and Sustainability	CORE	Our current use of energy is unsustainable. Fossil fuels, which were deposited on Earth over hundreds of millions of years, will largely be exhausted over the course of just a few hundred years. Global climate change makes our situation even more unsustainable—we need to stop using fossil fuels long before they run out if we want to avoid catastrophic environmental change. This course takes a quantitative approach to learning about our current energy use, so that students can understand how our personal choices and lifestyles affect energy use. Please note that some of the assignments will require mathematics at the pre-calculus level. We also discuss how we might meet our energy needs in the future through renewable resources: what technologies are available now, what are their costs, and how much energy can they provide.	SF

GEOG 105	Climate and Society	GEOG	Human-induced climate change--global warming--is the defining environmental and social issue of our times. That people are dramatically altering the climate is now the resounding consensus in the scientific community. Potential short- and long-term impacts include biodiversity loss, sea-level rise and coastal flooding, more intense storms, threats to human health, and disruptions of freshwater supplies and food security. But while the global community increasingly understands the basic processes driving climate change, and is starting to appreciate the consequences of a warmer world, the coupled social and biophysical dynamics of global warming are complex and the issue remains controversial. This course explores climate-society relationships in industrial and pre-industrial periods, and considers the multifaceted natural and human dimensions of global warming. It also highlights the integrative natural and social science modes of analysis commonly used in the discipline of geography.	SF
GEOG 107	Is the Planet Doomed?	GEOG	"End of the world" scenarios have been linked to global pandemics, super-volcanoes, artificial intelligence, and melting permafrost. "Is the Planet Doomed" uses these and other examples to study contemporary catastrophism. The course explores arguments that suggest the world may have reached "peak humanity." Potential mass extinction events arise from the convergence of biological, climatic, economic, technological factors on one hand, and war on the other. The course analyzes these factors using the integrative modes of analysis commonly used in the discipline of geography. And it exposes how geography affects the catastrophic imaginary.	SF

GEOG 315	Sustain Livelihoods in Asia	GEOG	We are living in the world of growing uncertainty filled with various "shocks" such as natural disasters, financial crises, and development projects, and more insidious "distress" via resource depletion, excessive industrial specialization, and demographic transitions. This course focuses on how households and communities cope with, resist, adapt to, and challenge these large structural "disturbances" in locally specific and ingenious ways in order to take control and enhance their livelihood opportunities and cultural identities. Case studies are drawn from various parts of Asia, with a particular focus on Japan. Although theoretical foundations of this course are grounded in the literature on sustainable livelihood and community resilience in geography and neighboring fields, it is designed for students with various disciplinary backgrounds and interest in Asia. Students are expected to apply their disciplinary skills and regional knowledge to the course project.	SF
GEOG 326	Environmental Hazards	GEOG	Environmental hazards are threats to people and the things they value. Hazards are a complex mix of natural processes and human actions; thus, they do not just happen, but are caused. This course emphasizes the role of institutions, technology, and human behavior in hazard creation, as well as ways in which society responds to hazards of multiple origins: case studies center on earthquakes, hurricanes, and wildfire (natural hazards); toxic pollution (technological hazards); and malaria and invasive species (biological hazards). A key theme explores ways in which society may mitigate the risk of environmental hazards and manage them more effectively.	SF

GEOG 328	Sustainability & Nat Resources	GEOG	Uses social science perspectives on sustainability and sustainable development to analyze the production and consumption of major natural resources. Addresses the following questions: What are natural resources, and how do their geographies combine with those of wealth and poverty, of political power and technological and institutional capacity, to affect the potential for actions towards sustainable development? How is our understanding of sustainable resource development enriched by critical perspectives from the social sciences about the meaning of such contested concepts as sustainability and development, and about issues of equity, power, participation, property rights, and unequal impacts (of both resource depletion and environmental policies)? How can the three dimensions (environmental, social, and economic) of sustainability better guide the production and consumption of natural resources, renewable or nonrenewable, in different places and by different actors? The topical and regional focus of the course varies from year to year; it may, for example, focus on oil (or energy more generally), on minerals, or on biological and genetic resources; and on specific geographic areas, such as central New York, Latin America, or the Arctic.	SF
GEOG 329	Environmental Security	GEOG	About how the environment poses one of the most important security threats of the 21st century. From an interdisciplinary perspective, students are introduced to the different ways that climate change and environmental problems more generally are presenting new kinds of security threats. In many ways, greater environmental concern from governments and international organizations over the dramatic environmental changes afoot in the world is a welcome development. But will the "environmental security" framework reinforce global inequalities and maintain the status quo? Or might it mean rethinking the very foundations of what we mean by “security”?	SF

GEOG 401	Senior Seminar	GEOG	The senior seminar focuses on emerging research within a subfield of contemporary geography chosen by the instructor. Students identify and pursue advanced work on topics within that subfield.	SF
GEOL 101	Environmental Geology	GEOL	Many geologic processes and events have a significant impact on human societies. Volcanic eruptions, earthquakes, landslides and floods all threaten lives and property and societies rely on water, mineral, climate, and energy resources to thrive. Similarly, society has many impacts on the Earth system through water and air pollution and climate change. This course examines the complex interplay between human activities and the environment through a multi-disciplinary approach, with the goal of applying science to better manage natural hazard risk, understand and mitigate future climate change, and use water, mineral and energy resources more sustainably.	SF
GEOL 102	Sustainable Earth	GEOL	Focuses on Earth and its complex and life-sustaining resources, within an integrated framework including the terrestrial realm, the atmosphere, and the hydrosphere (freshwater, oceans, and glacial ice). Students develop a deeper understanding of the physical, chemical, biological and human interactions that determine the past, present and future states of Earth. Places a strong emphasis on the societal impacts of earth system science and provides a fundamental basis for understanding the world in which we seek to live sustainably.	SF
HIST 302	Global Toxic History	HIST	Focuses on the themes of contamination, waste, and toxic exposure in the modern world, with the goal of understanding environmental health issues in historical context. What political, economic, and social forces have contributed to the prevalence of contamination? Why have some communities suffered disproportionately? How have people in the past identified and coped with toxic danger, and how have they fought against the contamination of their regions, cities, homes, and bodies? In the face of mounting global challenges of toxicity and contamination today, students consider what lessons might be found in these past struggles.	SF

PCON 329	Environmental Security	PCON	About how the environment poses one of the most important security threats of the 21st century. From an interdisciplinary perspective, introduces students to the different ways that climate change and environmental problems more generally are presenting new kinds of security threats. In many ways, greater environmental concern from governments and international organizations over the dramatic environmental changes afoot in the world is a welcome development. But will the "environmental security" framework reinforce global inequalities and maintain the status quo? Or might it mean rethinking the very foundations of what we mean by "security"?	SF
PHIL 202	Environmental Ethics	PHIL	An introduction to the field of environmental ethics. Some of the major figures and philosophies in the environmental movement are studied and critically analyzed with a particular emphasis on the ethical reasoning and its influences on environmental policies and practices. Topics include the historical development of the environmental movement, central debates between preservationist and conservationist ethics, intrinsic and instrumental evaluations of the natural environment and its inhabitants, animal rights and the ethical treatment of animals, shallow and deep ecological distinctions, and anthropocentric versus biocentric and ecocentric evaluations of nature.	SF

POSC 335	US Environmental Politics	POSC	Public policies to protect the environment are among the most important and controversial issues in local, state, and national government. This course analyzes the politics of environmental protection in the United States through the use of social science theory and a variety of quantitative and qualitative methods. The course introduces frameworks for understanding environmental policy problems and reviews several important American environmental laws. Readings include social science "classics" on the environment, as well as recent scholarship on environmental politics and emerging environmental issues. Topics covered in the course include the politics of environmental science, environmentalism as a social movement, environmental lawmaking in Congress, bureaucracy and environmental regulation, federalism, environmental law, and environmental justice.	SF
ALST 201	Africa	ALST	An introduction to the interdisciplinary study of Africa and to the African Studies major and minor at Colgate. The goal is to introduce students to a major world area with which many, even highly educated, Westerners are unfamiliar. Africa is the original home of the human species, and the intellectual contributions of the continent and its people to the concept of a common humanity are tremendous, including agricultural and industrial technologies, artistic and aesthetic principles, and religious and philosophical ideas. Due to early patterns of globalization and European colonization in the western hemisphere, the Atlantic slave trade, and ultimately colonialism on the continent itself, Africa was configured as “the Dark Continent” in European discourses of the nineteenth century.	SI

ALST 290	Model African Union	ALST	The Model African Union is an annual national student simulation of the workings of a large multilateral organization, the African Union. Composed of 55 member states, the African Union was constituted in 2000 as the successor to the Organization of African Unity (OAU). Its objectives are to achieve continental integration, similar to that of the European Union, in balance with recognizing the national sovereignty of its member states. The Model African Union is in session for four days in late February, hosted by Howard University in Washington D.C., and students from more than 30 colleges and universities around the country participate. The on-campus portion of the course meets weekly for the five weeks prior to the trip and one week after, for debriefing. Students are assigned to specific country delegations and committees, research and prepare position papers, draft resolutions, debate and vote on action items, and generally take on the roles of African diplomats. The trip includes a visit to the embassy of the country each delegation is representing. May be taken more than once, with different country and committee assignments each year.	SI
ANTH 103	Introduction to Archaeology	SOAN	Introduces students to the basic concepts and issues of archaeology today through an examination of both method and theory. Topics include data analysis and interpretation, culture history, prehistoric technology and settlements, and cultural resources management. Lab component directly links natural resource management with cultural history and customs.	SI

ARTS 202	Digit Stud:Distrib & Intervent	ARTS	An introduction to digital art that covers a selection of digital art practices, including reproducible art, networked and telematic art, kits, multiples, fabrication, DIY, and interventionist practices. Students work with digital tools such as vector and raster programs, html and css, and fabrication to produce and distribute art that can operate inside and outside the gallery. The internet, for instance, is considered as a distribution platform and as a potential exhibition space. In working with existing media and technology such as surveillance, students employ “creative misuse” to make playful, humorous, and poignant contemporary artworks. Students are encouraged to explore concepts and programs beyond the basics; group and individual projects will require both rigorous concept development and proficiency in technology. The Little Hall Digital Studio is equipped with Macintosh computers and relevant software.	SI
BIOL 101	Topics in Organismal Biology	BIOL	Introduces students to the complexities of biodiversity, from the ecosystem to the genetic level. By examining the factors affecting the structure and function of terrestrial, marine, and freshwater communities, students learn about the diversity of organisms in these systems. Students gain an appreciation for the roles of evolutionary and ecological history, as well as modern ecological interactions, in shaping biodiversity across the globe. Students are exposed to the many ways that human activities affect biodiversity.	SI

BIOL 102	Topics in Human Health	BIOL	Human beings are composed of nearly 100 trillion cells of over 200 different specialized types. For an individual to remain alive and healthy, these cells must be effectively organized into tissues and organs that perform specific functions. This course examines external and internal factors that influence both normal and abnormal cell, tissue, and organ function, providing students without an extensive science background with exposure to the biology of human health and disease. Course topics include human diet and nutrition and the cell biology of disease. Students examine how biologists address issues relating to health and disease and how our understanding of basic biology contributes to enhancing human health. The course is composed of lectures and discussions, and may include in-class laboratory-based exercises.	SI
BIOL 181	Evolution, Ecology, Diversity	BIOL	Concentrates on the evolutionary biology of organisms and the ecological processes that influence the distribution and abundance of plants and animals, as well as their interactions. The history of biological diversification (including the origin of life; the evolution of prokaryotes and eukaryotes; and the invasion of land by plants, fungi, and animals) is discussed. In addition, the mechanisms of evolution, including natural selection, adaptation, and extinction, are studied. Topics in population ecology as they relate to evolutionary processes including physiological and behavioral ecology, population growth, and species interactions (e.g., competition, predation, mutualism) are also covered; there is a strong focus on the physical, chemical, and biological factors that affect populations. The course ends with studying ecosystem ecology and the impacts of global warming and anthropogenic impacts on the environment.	SI
BIOL 181L	Evoln, Ecol, Diversity Lab	BIOL	Required corequisite to BIOL 181. Projects in the laboratory and field include experiments designed to understand evolutionary principles and to test ecological hypotheses.	SI

BIOL 203	Ecology	BIOL	Uses the study of ecology to explore the collaborative process of scientific research, the critical reading of primary literature, the design and implementation of experimental studies, quantitative skills, and the interpretation and communication of research results. Like in all 200-level courses, students focus on the "process" of exploring biology. Emphasizes the quantitative aspects of ecology by exploring concepts of population and community ecology including competition and predation, the use of diversity and community similarity indices, population regulation models, island biogeography, food web analysis, and community and ecosystem-level processes. In addition to textbook readings, students also read papers from the primary literature on topics covered in class.	SI
BIOL 203L	Ecology Lab	BIOL	Required corequisite to BIOL 203. The laboratory includes field trips to examine terrestrial and aquatic communities, exposing students to field methods that quantitatively measure population and community parameters.	SI
BIOL 206	Organismal Biology	BIOL	Organismal biology is the study of how structure and function of individual organisms shape ecology, evolution, and biological diversity. This course uses the study of organismal biology to explore the collaborative process of scientific research, the critical reading of primary literature, the design and implementation of experimental studies, quantitative skills, and the interpretation and communication of research results. Like all 200-level courses, BIOL 206 focuses on the "process" of exploring biology. Students focus on physiological and ecological problems that arise as organisms interact with their environment, and examine these interactions between and within major groups of organisms.	SI
BIOL 206L	Organismal Biology Lab	BIOL	Required corequisite to BIOL 206. Includes field trips to terrestrial and aquatic environments that expose students to local diversity and to techniques frequently used in the field.	SI

BIOL 301	Parasitology	BIOL	Introduces students to the range of eukaryotic organisms that cause parasitic diseases in humans. The focus is on globally important helminths, protozoans, and arthropods. The latter will be covered as both agents and vectors of human parasitic diseases. Topics covered include biology, geographical distribution, sources of infections, life cycles, route(s) of transmission, clinical disease, and control/preventive measures. The basic principles of laboratory diagnosis and treatment of parasitic diseases are included in the course to enhance the practical parasitology knowledge of the students. The course includes reading of the primary literature, and requires oral and written critical analysis of the literature.	SI
BIOL 310	Epidemiology	BIOL	Provides an introduction to epidemiology, the basic science of public health. Epidemiology provides a systematic approach for acquiring and evaluating information on the distribution and causes of disease and other health outcomes in populations. Topics include the history of epidemiology, an overview of epidemiologic methods (e.g., study design, measures of disease distribution and association, interpretation), and the application of epidemiologic research to the development and evaluation of disease prevention and control strategies. Current or historically relevant infectious and chronic diseases are explored through lectures, interactive exercises, and independent assignments.	SI

BIOL 311	Comparative Physiology	BIOL	All animals are faced with similar fundamental problems, namely, acquiring and using energy, exchanging nutrients and wastes with the environment, balancing water and electrolytes, and reproducing. This course is about how animals address these problems in the context of the varied (and sometimes extreme) environments in which they live. With evolution as a unifying theme, both the general principles of animal function (the similarities among different animals) and the exceptions to the general rules are investigated. Topics include size and scaling, energy metabolism, temperature tolerance and regulation, gas exchange, water and osmotic regulation, respiration and circulation, excitable tissue, and global climate change physiology. General principles of animal physiology are also explored using examples of animals that live in extreme environments. When offered, BIOL 311L is a required corequisite.	SI
BIOL 311L	Comparative Physiology Lab	BIOL	Required corequisite to BIOL 311. This laboratory involves hypothesis-guided experimentation with quantitative analysis of data.	SI
BIOL 313	Microbiology	BIOL	Microbiology is an incredibly broad field that involves the study of organisms that cannot be seen without the aid of a microscope. Despite their small size, microbes are critical components of our bodies and ecosystems. This course examines the diversity of microbes in nature and their importance in human affairs from disease to agriculture. It also examines the characteristics of individual microorganisms that enable them to inhabit particular environments. Topics include microbial cell biology, genetics, metabolism, ecology and pathogenesis.	SI
BIOL 318	Vertebrate Physiology	BIOL	Examines the relationship between structure and function in the vertebrate body, starting at the level of molecules and cells, and moving through tissues, organs, and organ systems. Major topics include the endocrine, nervous, and cardiovascular systems; digestive physiology; and water, salt, pH balance in the body and the effects of global climate change on vertebrate physiology.	SI

BIOL 332	Tropical Ecology	BIOL	Addresses tropical ecology starting with the discoveries and theories of early explorers to modern theories of biogeography of species richness. Students also learn about the human impacts on tropical diversity and the sustainability of tropical ecosystems. Students use seminal papers as readings and discuss questions that are still debated by tropical ecologists: Why are the tropics so diverse? How is this diversity maintained? How do communities respond to disturbance? And how does global warming affect communities and species richness? Students design experiments and write proposals on field projects that are executed during the extended study portion of the course.	SI
BIOL 332E	Tropical Ecology Extend Study	BIOL	A three-week trip to Costa Rica, Central America, where students visit tropical lowland rainforest, montane cloud forest, and lowland dry forest, and visit a mangrove swamp, secondary forest, and high elevation tropical bog. In each study site students conduct the research studies proposed and decided on during the lecture course. The extended study includes rigorous field work, individual and group projects, research reports, and presentations--all with the backdrop of the forest.	SI
BIOL 355	Adv Topics Organismal Biology	BIOL	Over the past few decades there has been increasing focus on multicellular organisms at the level of expression of genomes and interactions within and among cells. Recent advances in integration of scientific perspectives from across disciplines are leading to a renewed holistic approach to the study of organismal biology. In this course, the roles of organisms in environments, their functional and behavioral diversity, their evolutionary history, and their representation of physical and living systems are explored through historical and recent literature, case studies, and consideration of how the current growth in integrative science influences our understanding of organismal ecology and evolution. Different groups of organisms are used to illustrate the history, current state of understanding, and emerging principles in the study of whole organisms. Lab component links climate change with evolution and conservation biology.	SI

BIOL 373	Virology	BIOL	Viruses infect every organism and are a fundamental driver of biologic processes. This course is an in-depth examination of the biology of viruses, focused on general virus replication strategies; specific viruses and their impacts on human health; and specialized topics in virology, including cancer virology, vaccines, and the use of viral vectors in biotechnology. Critical reading of the primary virological literature is an important element of the course.	SI
BIOL 373L	Virology Lab	BIOL	Required corequisite to BIOL 373. This laboratory introduces students to basic methodology involved in virology research while conducting novel experiments to investigate virus-cell interactions.	SI
BIOL 482	Adaptation to Environment	BIOL	This laboratory-based, research-oriented course examines the molecular and cellular mechanisms that enable animals to withstand a variety of environmental conditions. Students design, implement, and report on their own original research using various approaches, from classical physiology and biochemistry to modern molecular biology.	SI
BIOL 485	Experimental Animal Behavior	BIOL	This research tutorial explores issues, methodology, and experimental designs in fields associated with animal and human behavior including molecular ecology, behavioral ecology, conservation biology, and behavioral genetics of social insects and humans. Research can involve both field and laboratory work.	SI
BIOL 488	Investign Terrestrial Ecology	BIOL	This research tutorial provides students the opportunity to plan, conduct, and present original research in terrestrial ecology. Projects involve investigations in the field, laboratory, or both. Students focus on a particular species or group of species according to interest and feasibility. Potential topics for projects include invasive species, acid deposition, and competition among similar species. Emphasis is placed on the application of ecological, behavioral, and physiological principles to understanding the abundance and distribution of species in real landscapes.	SI

CHIN 121	Elementary Chinese I	EALL	This introduction to modern standard Chinese emphasizes understanding and speaking, with practice in reading and writing approximately 300 characters in either traditional or simplified forms. It covers basic structural patterns and vocabulary needed for ordinary conversation as well as future development.	SI
CHIN 122	Elementary Chinese II	EALL	This introduction to modern standard Chinese emphasizes understanding and speaking, with practice in reading and writing approximately 300 characters in either traditional or simplified forms. It covers basic structural patterns and vocabulary needed for ordinary conversation as well as future development.	SI
CHIN 299	Chinese Medical Culture	EALL	Chinese medicine as a full-bodied version (not a part) of Chinese culture was first recorded in The Yellow Emperor's Inner Classic dating back to the 5th century BC. Interrelating astronomy, cosmology, nature-human correspondence, seasonal climates' impact on health, lifestyle adjustments, acupuncture, herbs, medical ethics and other topics, this text remains the cornerstone of traditional Chinese medicine (TCM) today. The book's broad and inter-defining perspectives set the tones for Chinese medical culture as a whole, further innovated throughout the ages up to the present day in and beyond China including our own New York State through the practice, teaching, and research of acupuncture. This interdisciplinary course deals with the Chinese understanding of nature (including human), the body, and well-being through engaging with scholarly materials and through qigong, food, tea, and other practicable activities. Students write a paper, do a qigong performance, and cook a healthful dish each for a final interactive learning session. Taught in English with no prerequisites, all students welcome.	SI

CORE 128S	Global Change and You	CORE	Our planet is currently undergoing a level of abiotic and biotic change that is unprecedented in recent history and the scientific consensus is that it is anthropogenic. This course introduces students to the recent data on climate change and inferred causes and consequences of that change. Throughout the course, the way in which humans influence these changes and also the ways in which these changes impact humans are explored. The main focus of the course is the carbon cycle, specifically on human energy consumption, food production, and water use, and how they are linked to biodiversity loss. The many sides of issues (e.g., biofuels) are explored and debated throughout the course. The immediate consequences of global change are demonstrated in a required weekend fieldtrip to the Adirondacks in the third week of the classes to learn about the effects of pollution and climate on our local ecosystems.	SI
CORE 129S	Dangerous Earth	CORE	Geologic disasters, such as floods, earthquakes, and volcanic eruptions, serve as dramatic reminders of the power of nature and the catastrophic impact that these disasters have on society. As recent events such as the 2003 tsunami in Sumatra demonstrate, these disasters can exact a terrible cost in both economic terms and loss of life. Society has a clear interest in understanding what causes these disasters and how to reduce their impact on human populations. Geology provides a scientific framework for understanding the potential risks and effects of geologic disasters. This course examines the science behind four disasters that pose major risks to society: floods, earthquakes, volcanic eruptions, and meteoric impacts. Students examine significant case studies to understand the types of data collected to study these disasters, ambiguities in the data, and how risk is estimated. Students also examine potential ways to reduce the damage caused by such hazards and the scientific, economic, political, and societal implications of these approaches.	SI

CORE 150C	Native People of Great Plains	CORE	The Native people of the Great Plains are among the most familiar, yet least understood, cultural groups in all of North America. This course seeks to understand Plains Indian people beyond the simplistic renderings of Hollywood films. How have Plains people adapted to their unique environment, and how have their livelihoods changed over time? What historical processes underlay Plains Indian people's relationship to settler society, and how can we understand changes to plains life through lenses like race and gender? And what is happening in Plains Indian communities today? With these questions in mind, this Core Communities and Identities seminar will trace the experiences of Plains Indian people from the colonial era through the present day.	SI
CORE 162S	Foodwise	CORE	Food is essential for all of us to survive but we often take food and food preparation for granted. Have you ever wondered why some food tastes as it does or how food preparation can alter the taste of consistency of a dish? What is a balanced diet and why do we strive to have one? In this course students explore how understanding the science of food and cooking enhances our enjoyment of it as well as our benefit from it. Students look at the history and culture of human nourishment, and explore some controversial aspects of food and food technology, such as use of additives, genetically modified organisms, and diets and weight loss programs. If you have an appetite for learning or are just food motivated, this course may appeal to your senses.	SI
CORE 165C	China	CORE	China has the distinction of being one of the world's oldest continuous cultures, with 5,000 years of rich, complex history. Today, it is also a rising international power with the second largest economy on the globe. CORE 165C approaches China not as a monolithic entity, but as a complicated place and people best understood through diverse perspectives, including but not limited to history, economics, geography, literature, art, politics, environment, society, ethnicity, gender, migration, and diaspora. Students also gain indispensable research skills as they develop their own projects.	SI

CORE 177S	Critical Analys of Hlth Issues	CORE	Examines a key global health issue, such as AIDS or Cancer, from an interdisciplinary approach. The readings introduce students to the history, politics, science, and public health issues of the disease. Students will examine the epidemiology of the disease, examining how geography, socioeconomic status, and other factors influence transmission and treatment, and statistical measures used to analyze data about causes, cures and spread of disease will be introduced. Finally, the impacts of the disease on communities at different scales will be examined.	SI
CORE 186S	The Rhetoric of Science	CORE	Applies rhetorical theories and methods to scientific discourse in the public and academic sphere. Students develop an understanding of the relationship between research and writing, and they practice these skills by examining historical and current scientific debates and controversies. Through looking at case studies, students will gain an increased understanding of how, where, and when scientific research is influenced by (and influencing of) different audiences and communities. Students will examine and work with qualitative research methods, genre theory, rhetorical style, and multimodal compositions. Lab component links current topics such as climate change and natural resource management to the exploration of scientific discourse.	SI
CORE 188C	The Iroquois	CORE	Examines the archaeology, culture, history, economics, religion, literature, arts, politics, law, and individual lives of the Iroquois (Haudenosaunee) Indians - Colgate's closest Native American neighbors - from the period before European contact to the present day. Students place Iroquois experiences in North American Indian contexts (comparing the Iroquois, e.g., to the Cherokee), especially regarding the loss and persistence of tribal sovereignty; and investigate Iroquois relations with New York State and the United States, especially in regard to competing land claims.	SI

CORE 193C	Brazil	CORE	Examines communities and identities in Brazil, the largest nation in Latin America. Focuses on the formation of communities under the constraints of Portuguese colonialism, within slavery, in the vast interior of the country, under conditions of extreme violence and poverty, and in the realm of Brazil's vibrant popular culture. Particular attention is paid to the role of individuals in forming and maintaining communities, and to the complex processes of regional and national identity formation. Spans the colonial period to the present, with readings drawn from history, anthropology, literature, ethnography, and journalism, as well as a range of visual sources.	SI
CORE 197C	Tibet	CORE	Examines the formation of a Tibetan identity. This is largely a recent phenomenon brought about unwittingly by the ethnocentric policies imposed throughout the Tibetan Plateau by the modern Chinese state. However, earlier processes were already under way before the People's Liberation Army entered Tibet in the 1950s, which made the transition from a constellation of feudal polities to a nation possible. These included a common written language, common subsistence patterns (farming, pastoralism, and trade), Buddhism, participation in common rituals and festival (especially religious pilgrimage), a certain respect for the authority of the Dalai Lamas, and so on. Students examine these processes as well as the consequences of China's political and economic incorporation of Tibetan areas into its nascent nation-state. Specific topics to be explored include "the Tibet Problem" (i.e. contemporary Sino-Tibetan relations and conflict), the historic colonial and religious ties between China Proper and Tibet, religious life and everyday Tibetans, "nomadism" (or pastoralism), polyandry and women in Tibet, and Tibetans' encounter with modernity and the West.	SI

ECON 219	Chinese Economy	ECON	Using an interdisciplinary approach, this course provides a general survey of China's economic reform and related public policy issues since 1978. In addition to offering a basic knowledge about the Chinese economy and its reforms in the past quarter century, the course develops a framework to help students understand and evaluate the evolution of China's economic development strategy and public policy in recent years that has guided the country's economic reform.	SI
EDUC 214	Theories-Teaching & Learning	EDUC	An exploration of how selected cognitive theorists have defined learning and a critical examination of how teachers teach. Questions asked include the following: What is learning? How does a teacher’s definition of learning influence how he or she actually teaches? What are current ideas about effective teaching for all students to learn? Students in the course are asked to examine their own assumptions about these issues and engage in teaching both in and out of this class. This class satisfies 10–30 hours of the 100 required school-based fieldwork for students seeking teacher certification.	SI
EDUC 453	Sem Curric & Instr Scien/Math	EDUC	A seminar dealing with general issues in curriculum planning and instruction with special emphasis on the relationship between curriculum goals and instructional techniques. Special topics include major aims and purposes of science and mathematics education and interpersonal relationships in the classroom. This course is required of all students enrolled in student teaching in science or mathematics and all students enrolled in elementary student teaching. It does not count toward major credit.	SI

ENGL 219	American Lit & the Environment	ENGL	An introduction to literary study that focuses on human responses to their environments and ecologies. This course explores representations of relationships between people, places, and animals in American fiction, poetry, and non-fiction from the early American Renaissance to the postmodern period. Questions of how environments are inflected by gender and racial positions, as well as literature's insights into issues of environmental justice and sustainability, are addressed through works by writers such as Wendell Berry, Charles Chesnutt, Annie Dillard, William Faulkner, bell hooks, Aldo Leopold, Marilynne Robinson, Wallace Stevens, and Jean Toomer.	SI
ENST 234	Global Environmental Health	ENST	Environmental health is a field of interdisciplinary study that integrates human society and behavior with ecological processes to understand environmental dimensions of human health. Students focus on not only knowledge generated in the natural and social sciences that concerns human-environmental interactions and its implications for human health risk, but also includes an extensive case study on various emergent issues in public health. Case Studies in Global Environmental Health Issues introduces students to the conceptual and empirical underpinning of the direct and indirect relationships between environment and health, approaches to measuring these relationships, and the ways in which health policies, programs and clinical practices have been organized to reduce risk at various geographic scales: locally, nationally and internationally. Students have an opportunity to complete an extensive research project on issues of environmental health during the second half of the semester.	SI

ENST 309	Australian Environ Issues/SG	ENST	Covers key geographic and environmental issues in Australia with a particular focus on environmental diversity. Through class lectures and discussion, critical reading, independent research papers, and field trips, students consider how the geologic and environmental history of Australia shaped biodiversity, and how humans have affected these natural communities. Field excursions will introduce students to Australia's rich and diverse flora and fauna, its environmental and cultural heritage, and illustrate current challenges in environmental protection and management. Trips within New South Wales include: Sydney, Canberra, Jervis Bay, Royal National Park, Budderoo National Park and Port Kembla. An additional 5 day trip takes the group to Queensland to visit the Atherton Tablelands, tropical rainforests and the Great Barrier Reef.	SI

ENST 324	Hunting, Eating, Vegetarianism	ENST	Historically, hunting for food has represented one of the most direct ways in which people have engaged with nature. Some scholars even believe that the “hunting instinct” is a fundamental aspect of human identity. People in modern industrialized societies, however, often have little idea about the origins of the flesh they consume, most of which is raised and slaughtered on an industrial-scale. While the majority continue to eat meat, poultry, and/or fish, a minority have chosen to become vegetarians or even vegans for ethical, religious, cultural, health-oriented, or environmental reasons. Others continue to hunt and fish but within ecosystems dramatically altered by human intervention and amidst cultural landscapes complicated by commercialized and trophy hunting. Drawing upon a wide range of sources including literature, artistic and documentary films, works of popular culture, autobiographical accounts, online hunting (and anti-hunting) forums, diverse web resources, self-reflective essays, and scholarly approaches ranging from animal studies to humanistic ecocriticism, this course investigates the intertwined themes of hunting, industrial versus small-scale farming and fishing, eating, vegetarianism, and the ethical and existential choices they present to members of modern industrialized societies.	SI
ENST 491	Independent Study	ENST	Opportunity for individual study in areas not covered by formal course offerings, under the guidance of a member of the faculty.	SI

FSEM 114	Ethiopia	CORE	Surveys the culture, religion, communities, history, and socio-economic developments of Ethiopia from the ancient times to the modern period. Ethiopia is home to over 80 ethnic groups with striking cultures that are distinct from Western traditions. Major themes include peoples and languages; traditional customs and beliefs; Christianity and Islam; marriages; community service organizations; literature, novels; education; ethnic relations; traditional art and music; colonial resistance; sports; socio-economic developments; natural resources usage; Ethiopia and Europe; the Ethiopian revolution; Ethiopian immigrants in the United States; traditional harmful practices; and politics. Emphasis is also given to contemporary issues. Lectures are supplemented by discussions, film presentation, group activity, and coffee ceremony.	SI
FSEM 119	California	CORE	Examines the fabric of California's syncretic cultures in historical, geographic, sociologic, artistic, racial, literary, political, and economic contexts. The diverse settlement patterns, environmental and economic challenge/opportunity, explosion of art forms, and continuous creation of new communities often foreshadowed trends of the entire nation. Readings explore major themes and issues of California history, while literary and personal narratives provide insight into social and political realities, including the struggles of successive waves of immigrants to interact with the established populations. Artistic and architectural expressions that document cultural phenomena offer tangible examples of the creative forces that shaped Californian intellectual and physical communities. Sociological case studies as well as economic, political, and environmental reporting assist students to understand the challenges, failures, and victories of the composite California culture. Underlying all of this is a continuous study of the variegated geography of California, which has both offered and required substantial human choices.	SI

FSEM 124	Discover Biol:Invasive Species	CORE	Provides students with an introduction to biological processes through the lens of biological invasions. The practice of science and how we communicate science are considered through explorations of invasive plants and animals in terrestrial and aquatic habitats. Biological invasions are considered in the framework of broad ecological and evolutionary concepts, and in the context of global change. Students deliberate in written reports and class presentations on specific ways in which invasive species affect biodiversity, how they adapt to new environments, and how humans play a role in homogenizing biodiversity.	SI
FSEM 125	Emerging Tech: Nanotechnology	CORE	Imagine repairing your body without surgery and no longer burning fossil fuels. Imagine enjoying abundance with no manufacturing costs and taking an elevator to the moon. Imagine also the loss of all personal privacy and the irreversible poisoning of the environment. Such are the hopes, hype, and fears of nanotechnology — the study of materials and devices with dimensions on the nanoscale (1 x 10-9m, the realm of assemblies of molecules). This course provides an introduction to the science and potential implications of molecular nanotechnology. Scientific and sensationalist visions of nanotechnology are critically examined through a combination of readings, lectures, discussions, and presentations. The course forges an appreciation for the nanoscale, an understanding of the excitement and the challenges, and an awareness of the societal and ethical implications. Through the lens of nanotechnology, students gain insights applicable to the broad landscape of emerging technologies — and encourage curiosity towards the future.	SI

FSEM 137	Molecules that Rock Your World	CORE	Elements, like iron, and alloys, like bronze, have entire “ages” name after them. Students read accounts of how elements and molecules have affected the course of civilization from ancient to current times. Students may be familiar with notorious elements like uranium and plutonium and their impact on world events, but how did tin change the course of history? Moving quickly from elements to molecules, the course looks at some of the roles molecules have played in colonization, health, environment, lifestyle, and so forth. The emphasis is not on the history of molecules, but rather molecules in history. As students explore these interesting histories, they pull in a few of the relevant scientific observations and molecular structures that give rise to the important characteristics of particular “world rocking” molecules. This course is centered on outside reading and class discussion with the addition of some short basic lectures on fundamental chemistry to provide context. The plan for this fall includes Uranium (energy and weapons), Salt (food preservation and conquest), Nitrogen (food production and explosives), Water (clean drinking and infrastructure), Ethanol (from fermentation and distillation to use and abuse), and Progesterone (birth control and women's rights).	SI

FSEM 177	Geology Outdoors	GEOL	Central New York has changed dramatically throughout geologic time. A billion years ago, the area around Colgate was underneath a mountain belt the size of the Himalayas; 400 million years ago, the area was in the tropics and covered by a shallow sea. And as recently as 20,000 years ago, an ice sheet a mile thick covered Hamilton. How can we possibly know these things? The evidence is actually in the landscape all around us; we just need to learn how to read the clues left behind. And what better way to learn about these events than to be outside! This unique field-based seminar is designed to use the area around Colgate as a natural laboratory to study the geologic history of the region. The highlight of the course will be Monday afternoon field trips to local areas where we will learn first-hand how to observe and interpret evidence for these and other dramatic geologic changes. Therefore, if you enroll in this seminar, you should plan to keep your Monday afternoons free from 1:20 to 5:00 PM. Evaluation will be based on semi-weekly writing assignments and a final research project on the geologic history of New York.	SI
GEOG 211	Geographies of Nature,Econ, Soc	GEOG	Acquaints students with the approaches and subject matter of human and nature-society geography. It introduces geography' s longstanding concerns with spatial location, place, and nature-society interaction, as studied through ways of knowing that are central to the discipline—spatial representation and analysis, cross-scalar comparisons, integrative synthesis, and the social construction of space and environment. Case studies, drawn from all world regions, illustrate how geographers use these tools and perspectives to clarify such issues as human well-being and inequality, economic and sociocultural globalization, population patterns and processes, human impact on the environment, and sustainable development in the Anthropocene.	SI

GEOG 231	Geog of Physical Enviroment	GEOG	Provides students with a general understanding of the processes and spatial distribution of the Earth's primary physical systems and the ways in which humans interact with these systems. Course emphasis is divided into three areas: atmospheric processes, the spatial dynamics of vegetation and soils, and landform development. Students are introduced to the basic physical processes and interactions that operate within each of these categories, with special focus on the ways in which these factors relate to contemporary environmental problems.	SI
GEOG 250	Research Methods	GEOG	Acquaints students with key principles and practices of original scholarly research. First emphasizes the key role in research of a clearly formulated question, one that is significant and workable and is grounded in a conceptual framework drawn from the existing literature. Then focuses on the techniques and rationale of a particular method of research, which will vary from semester to semester. Examples of possible foci include statistical analysis, interviews, community-based and participatory research, content analysis, or the interpretation of historical primary sources. In close consultation with the instructor, students design, carry out, and report on a research project employing that method to answer a question of their own design.	SI

GEOG 306	The Geography of Happiness	GEOG	Achieving some degree of happiness is a primary goal for most people. Certainly, a huge industry has emerged in recent years to feed the public's desire for ways to improve their happiness. There is also a rapidly growing amount of research on the subject. This course starts with an overview of the diverse, multidisciplinary scholarship on factors that may contribute to happiness. But the main goal of the course is to consider themes central to the discipline of geography: how do environmental changes, efforts to achieve sustainable development, and culture affect the geography of happiness? Do people achieve a greater sense of well-being when interacting with wilderness or by exploring nature in their backyards? Does environmental stewardship improve happiness? What roles do attitudes about food and leisure play in how happy people are? Students explore these questions via out-of-class excursions, films, diverse mix of scholarly and popular press readings, guest speakers, and individual research projects.	SI

GEOG 310	Geopolitics	GEOG	Broadly defined, Geopolitics is the study of "the relationship among politics and geography, demography, and economics, especially with respect to the foreign policy of a nation." As the study of political geography on a global scale, geopolitics examines the relationship between territories, boundaries, and states in the "closed system" we call planet earth. But geopolitics is more than an academic field. Geopolitical thought has actually instructed states how to relate to one another in the contest for territory, security, and resources. For example, the history of geopolitical analysis is closely connected to -- and has often justified -- various imperial projects. As a result, this course examines the relation between the development of geopolitical thought on one hand, and geopolitical events on the other. Of particular importance to the relation between theories of geopolitics and the actual geostrategies of states has been the development of conflict on a planetary scale. And so, this course traces that relation through the study of geopolitical thought and practice in the course of imperial struggles in the 19th century, World Wars and the threat of nuclear wars in the 20th century, and new global challenges such as resource wars and environmental security in our own time.	SI

GEOG 311	Global Urban	GEOG	An exploration of contemporary urban geography and academic writing about the city. It introduces students to the ways in which urban geography has played a role, along with other disciplines that focus on the urban, in understanding cities and the issues that surround them. This includes an examination of how cities are conceived, lived, and represented. The course investigates the following topics: What are the various ways that people create, and attempt to materialize, their geographical imaginations of what they want the city to be? What are the ways in which different social groups make claims on space and place, and how does the scale at which these activities occur have effects? What are the critical questions to ask about urban landscapes today? How would you formulate a research proposal on such topics? The course offers a theoretical and practical framework within which to examine the city as a site of socio-cultural and political-economic transformation. In this framework, students analyze how the state, market, and civil society intersect, and how this has changed over the 20th century in the U.S. and other parts of the world.	SI
GEOG 321	Gender, Justice, Envir Change	GEOG	Explores how the environment (both physical and social) shapes, and is shaped by, the roles of men and women in society. Addresses environmental issues from the dual perspective of gender relations and social justice to advance understandings of the fundamental relationship between human activities and our physical and social environments. To this end, students work across diverse geographies to explore (1) the social relations underlying environmental problems; (2) the ways in which gender, class, race, ethnicity, age and dis/ability intersect in environmental issues; and (3) the social and environmental processes that underlie the construction of gender and the life-worlds of the individuals in those "geographies." Students bring a global perspective to the issues by drawing out local-global linkages. Case studies are drawn from North America, Latin America, Africa, and Asia.	SI

GEOG 331	Environmental Data Science	GEOG	Introduces fundamental concepts and tools central to the emerging field of Environmental Data Science. Satellites, environmental sensors, and citizen science networks collect a tremendous amount of geospatial data that offers unprecedented insight into the environment. The integration of computational tools, statistics, and an understanding of the earth system is essential for utilizing big data to understand environmental processes (e.g. climate change, food security). Topics covered include data provenance and reproducibility, data fusion, visualization, and statistical programing for environmental data. Students learn how to manipulate and analyze large climatic, ecological, and geospatial data sets using a statistical programing language. No prior programming experience is required.	SI
GEOG 338	Earth System Ecology	GEOG	Examines how plants influence exchanges of energy, carbon, and water between the biosphere and the atmosphere. Begins with an examination of key biological and physical processes that regulate ecosystem carbon and water cycles, paying particular attention to critical linkages between the two. This leads to a consideration of how these processes function at larger spatial scales, and how they vary with time in response to climatic drivers. The land surface energy balance is discussed here as well, because it is inextricably linked with ecosystem carbon and water cycling. Finally, the interplay between ecosystems and climate is examined.	SI
GEOG 490	Honors Preparation	GEOG	Students enroll in this course in the fall semester of the senior year if granted permission to explore a potential honors project and prepare a formal proposal to pursue honors work in geography. Permission to enroll in this course does not guarantee permission to pursue honors in geography.	SI
GEOL 101L	Environmental Geology Lab	GEOL	Required corequisite to GEOL 101. Labs are field-based as much as possible and are designed, not only to build a deeper understanding of the course material, but also to provide hands-on experience with some of the scientific techniques geologists use to study the environment.	SI

GEOL 105	Megageology	GEOL	A course tracing the history of the Earth from the origin of the solar system to the present. Also considered are the origin and evolution of the Earth's crust and interior; plate tectonics, continental drift and mountain building; absolute age dating; the origin of the hydrosphere and atmosphere; earthquakes and volcanism. The results of recent planetary exploration are incorporated into an examination of the origin of the solar system.	SI
GEOL 135	Oceanography & Environment	GEOL	A study of the major contemporary concepts of biological, chemical, geological, and physical oceanography. The nature and origin of ocean basins by global plate tectonics, sedimentation, sea water composition, water masses, oceanic circulation, waves, tides, life in the sea, and biological productivity, are all discussed. The role of human impacts and environmental change, including ocean warming and acidification, and marine pollution are stressed throughout the course.	SI
GEOL 225	Sedimentology & Surficial Proc	GEOL	A detailed study of modern sedimentary environments and their use in interpreting ancient sedimentary rocks. The chemical and physical processes leading to weathering, erosion, transport, deposition, and lithification of sediments are considered. Interpretation of local Paleozoic, Pleistocene, and Holocene sediments is carried out through field study projects. Economic aspects of sedimentary rocks, such as the occurrence of oil, natural gas, and coal, are discussed.	SI
GEOL 311	Environmental Geophysics	GEOL	Near-surface features of the Earth display a stunning variety of structures and compositions. These features give insight in the geology of a region, and can also be important in the fields of environmental studies, engineering, and archaeology. Many subsurface structures are not visible at the surface, but can be illuminated using geophysical measurements and modeling. In this course, students will learn the science behind several geophysical techniques, including gravity surveying, reflection and refraction seismology, GPS monitoring, and electric and magnetic methods. Two weekend field days are required.	SI

GEOL 335	Hydrology and Geomorphology	GEOL	The geologic materials nearest the Earth's surface are those that interact with the biosphere, atmosphere, and hydrosphere. This course explores the nature of surficial geologic materials and processes by using geographic information system (GIS) tools and hydrological modeling software. Major topics are landform development, chemical weathering, soil development and quality, and surface and groundwater hydrology.	SI
GEOL 416	Marine Geology	GEOL	The course is designed to provide a realistic understanding of rapidly evolving concepts in the field of geological oceanography. Sedimentary and geophysical data are discussed in the context of global plate tectonics. These data are used to examine the processes responsible for the origin and evolution of continental margins and ocean basins and to reconstruct global climate history.	SI
GEOL 491	Independent Study	GEOL	Opportunity for individual study in areas not covered by formal course offerings, under the guidance of a member of the faculty.	SI

LGBT 340	Rural Sexualities and Genders	LGBT	Global LGBTQ politics and historiography have produced a dominant narrative that celebrates urban centers and Western metropolises as the spaces in which queer life and communities thrive. However, non-normative sexualities and expressions of gender have long been cultivated in rural spaces. This course draws on theoretical, literary and cinematic works that engage with the challenges and complexities of being queer in rural spaces, particularly when compounded by poverty, racism, the degradation of the environment, and exploitation of natural resources. Furthermore, this course explores the potential of rural LGBTQ communities to offer new models and definitions of queerness that are anti-consumerist, anti-.urban, decolonial and sustainable. This class will prompt students to understand gender and sexual diversity to be intimately tied to issues such as environmental justice, biodiversity, and indigeneity through examples taken from around the world and in upstate New York	SI
NASC 110	Singapore, Sci. & Life Aquatic	NASC	This fractional credit course serves as the foundational experience for the Singapore Study Group. The course introduces students to the rich culture and history of Singapore, provides discussions about the unique geographic setting, and examines the role of science, technology and engineering in the growth and future of Singapore. This course will be taught primarily in the three weeks leading up to the beginning of the term at the National University of Singapore (NUS) with reflection on the themes continuing throughout the study group, and concluding during reading week at NUS. This course emphasizes geographic settings as it relates to natural resource management, customs, and environmental justice.	SI

NAST 356	Global Indigenous History	NAST	Indigenous communities exist throughout the world, but rarely is their history approached in global terms. What does "indigenous" mean, and how does world history look different when approached from the perspective of indigenous people? How does such an approach change the way we think about our national stories, and why does that matter? With these questions in mind, students explore the history of indigenous peoples from around the world, including communities in the United States, Latin America, Pacific island nations, Canada, and Australia. By examining these diverse people's experiences with outside colonization from the 15th century to the present, students are offered new perspectives on ongoing histories of colonialism, resistance, adaptation, and cultural resilience.	SI
NAST 360	Borderlands of North America	NAST	Instead of looking at history from the vantage of national centers, borderlands history focuses on the complicated places where empires, nations, and Indigenous peoples have collided, converged, and overlapped over time. Borderlands were—and continue to be—perplexing places, where national identities and boundaries often held little sway, and where marginalized peoples sought to forge new paths. A focus on borderlands has the power to change our perspective on the history of North America, and to lend insight into the complex politics that define the border up to the present day, including heated debates over migration and the building of border walls. With this in mind, students examines the history of Indigenous, U.S.-Mexican, U.S-Canadian, and imperial borderlands from the 16th through the 21st centuries, including their political, social, and environmental dimensions. (TR)	SI

PCON 310	Geopolitics	PCON	Broadly defined, Geopolitics is the study of "the relationship among politics and geography, demography, and economics, especially with respect to the foreign policy of a nation." As the study of political geography on a global scale, geopolitics examines the relationship between territories, boundaries, and states in the "closed system" we call planet earth. But geopolitics is more than an academic field. Geopolitical thought has actually instructed states how to relate to one another in the contest for territory, security, and resources. For example, the history of geopolitical analysis is closely connected to -- and has often justified -- various imperial projects. As a result, this course examines the relation between the development of geopolitical thought on one hand, and geopolitical events on the other. Of particular importance to the relation between theories of geopolitics and the actual geostrategies of states has been the development of conflict on a planetary scale. And so, this course traces that relation through the study of geopolitical thought and practice in the course of imperial struggles in the 19th century, World Wars and the threat of nuclear wars in the 20th, and new global challenges such as resource wars and environmental security in our own time.	SI
POSC 433	Sem: Topics in Globalization	POSC	Addresses the causes and implications of globalization from a variety of disciplinary perspectives, including political science, economics, sociology, and philosophy. Aims to sharpen students' skills as critical readers and thinkers, and directs them in producing a capstone research project in their seminar paper.	SI
RELG 222	Comparative Scripture	RELG	Based on comparative scriptural analysis or what is now called "Scriptural Reasoning." The focus will be on close readings of the Hebrew Bible, New Testament, and Qur'an with an eye to common themes and differences. Students will engage in a comparison of interpretive traditions in Judaism, Christianity and Islam to see how particular scriptural passages are understood in the religious traditions. The course will also spend time studying the ways in which scriptural reasoning has been used as a form of religious conflict resolution and peace-building in situations of conflict in the UK and Middle East.	SI

RELG 226	Reason, Religion, & God	RELG	Examines the similarities and differences between rational and religious understandings of God. By pursuing close readings of classic texts in the field of philosophy of religion, this course considers how both philosophical and religious ideas are often developed together. Students explore various arguments about the rationality of God as responses to wider intellectual, cultural, and historical contexts in which they are made and to the specific shape and needs of a particular religious tradition (e.g., Catholicism, Protestantism, or Judaism). Students also explore the "rationality" of religious forms such as scripture, symbol, ritual, and prayer. In different semesters, select themes such as revelation, theodicy (the justification of God in the face of human suffering), providence and free will, or the theism/atheism debate are investigated.	SI
WRIT 354	Dialogue/Deliberate Dem Life	WRIT	Public communication is a vital part of democratic life. It is through the circulation and exchange of public speech that citizens shape the contours of public life, build community, and determine their core civic values. More importantly, it is through the work of democratic dialogue that citizens struggle with their inevitable differences and seek to find ways of working together despite those differences. The purpose of this class is to examine both the theory and practice of deliberative democracy, with the aim of better understanding how communities might use dialogue and deliberation to effectively engage across different perspectives. Students are asked to think critically about the possibilities and challenges of democratic dialogue. Students are also trained in facilitation techniques, with the major project for this class providing students an opportunity to facilitate an open forum on a campus-related issue. Students in this course explored issues of campus sustainability and climate change at Colgate through the lab component.	SI