

Nat/Soc	Course Title	Course Title	Name	Credit Hours	Description	General Education
<p>Important to Note: Students must complete 15 credit hours in courses in global security. Of the 15 credits, 6 must come from social science/humanities courses and 6 must come from natural science/engineering/technology courses. Students MUST complete GLOBL/NPRE 483 Seminar (1 Credit Hour), which will count as either a Soc or Nat. The remaining credits may come from any courses on the approved ACDIS Certificate Course List</p>						
NAT	ANTH 246		Forensic Science	4	History and theory underlying methods used in forensic science. Topics include the courtroom, the units of a crime laboratory, methods of securing and investigating a crime scene, and the analysis of evidence collected from a crime scene such as blood, fibers, hair and fingerprints.	Nat Sci & Tech - Life Sciences
NAT	ATMS 120	ESE 120	Severe and Hazardous Weather	3	Most extreme manifestations of weather and climate are analyzed in terms of their physical basis and their historical, economic and human consequences. Emphasis is placed on the interplay between technological advances, the evolution of meteorology as a science, and the impacts of extreme weather. Technological advances include satellites, weather radars and profilers, and computer models used for weather prediction.	Nat Sci & Tech - Phys Sciences Quantitative Reasoning II
NAT	ATMS 140	ESE 140	Climate and Global Change	3	Introduces climate change and its interactions with the global environment; surveys the physical, chemical, biological and social factors contributing to global change; includes topics such as greenhouse warming, acid rain, ozone depletion, distinguishes anthropogenic influences and natural variability of the earth system; addresses societal impacts, mitigation strategies, policy options and other human responses to global change.	Nat Sci & Tech - Phys Sciences
NAT	ATMS 323	ENSU 302	Air Pollution to Global Change	3	Develops the science of air pollution across spatial scales with an Earth-systems approach. Considers how fossil fuel combustion, agriculture development, waste generation, synthetic chemicals production, biomass burning, and changes in land use are significantly altering levels of radiatively and chemically active gases and aerosols in the atmosphere, and how these pollutants interact at local, regional, and global scales. The systems nature of the processes through which air pollution is linked to global change will be examined via integrated science assessment modeling that includes feedbacks from societal policies, industrial practices, and human populations.	
NAT	ATMS 447		Climate Change Assessment	3	Provides students with first-hand experience with computer models used to study climate change and permits them to test hypotheses, develop scenarios, learn about the implications of various structures of the modeled system, and evaluate the climatic impacts of anthropogenic emissions. Students perform calculations and produce model scenarios using a web interface to our Integrated Science Assessment Model (ISAM).	
NAT	CS 461	ECE 422	Computer Security I	4	Fundamental principles of computer and communications security and information assurance: ethics, privacy, notions of threat, vulnerabilities, and risk in systems, information warfare, malicious software, data secrecy and integrity issues, network security, trusted computing, mandatory and discretionary access controls, certification and accreditation of systems against security standards. Security mechanisms: authentication, auditing, intrusion detection, access control, cryptography, security protocols, key distribution.	
NAT	CS 463	ECE 424	Computer Security II	3 or 4	Program security, trusted base, privacy, anonymity, non-interference, information flow, confinement, advanced auditing, forensics, intrusion detection, key management and distribution, policy composition and analysis, formal approaches to specification and verification of secure systems and protocols, and topics in applied cryptography.	
NAT	ENG 471		Seminar Energy and Sustain Engineering	1	Challenges of developing energy systems and civil infrastructure that are sustainable in terms of resource availability, security, and environmental impact. Guest lecturers focus on: (i) global challenges -- future energy demand, geologic sources of energy, climate change, energy-water nexus, energy and security; (ii) markets, policies and systems -- economic incentives, policy and law, life cycle analyses; (iii) opportunities for change -- CO2 sequestration, renewable power, bioenergy feedstocks, biofuels for transportation, energy use in buildings, advanced power conversion, the smart grid.	
NAT	ESE 118	GEOL 118/GLBL 118	Natural Disasters	3	Introduces the nature, causes, risks, effects, and prediction of natural disasters including earthquakes, volcanoes, landslides, subsidence, global climate change, severe weather, coastal erosion, floods, mass extinctions, and meteorite impacts; covers scientific principles and case histories of natural disasters as well as human responses (societal impact, mitigation strategies, and public policy).	Nat Sci & Tech - Phys Sciences
NAT	ESE 289		Environment and Sust Field Study	1	Group expedition to study environment and sustainability issues at a nearby field site. Includes in-class meetings, student-led presentation, and a field trip that may be short as part of a day or as long as several days. Field trip and field trip fee required.	
NAT	ESE 320	GEOG 370/GEOL 370	Water Planet, Water Crisis	3	Study of the science of water on planet earth, the developing water crisis, and some possible solutions to it. Topics include water's unique physical and chemical properties; how it profoundly shapes the earth/ocean/atmosphere system; dynamics of oceans, atmosphere, lakes, rivers, groundwater, and ice masses; current fresh water supplies and their distribution on earth relative to population; current and future water crises and the compounding effects of droughts, floods, and global change; and prospects for some technological and economic approaches to easing the crisis.	
NAT	MCB 433	PATH 433	Virology and Viral Pathogenesis	3	Emphasizes basic principles of virus structure and replication, virus-cell interactions and virus-host interactions that underlie the molecular biology, pathogenesis, and transmission of viral disease.	

NAT	MCB 436		Global Biosecurity	1	Designed to provide students with broad coverage of key areas of scientific, legal, social, ethical, and political aspects of biosecurity, emphasizing current problems and research in the areas of biodefense, emerging infectious diseases, synthetic biology, and other topics. In combination with related reading assignments, the weekly special topics-based seminar will integrate knowledge of modern biomedical research, advances in biotechnology, and natural and manmade biological threats with the skills to analyze and develop public policies and strategies for enhancing global biosecurity.	
NAT	NPRE 201	GLBL 201	Energy Systems	2 or 3	Patterns of energy production and utilization and technical aspects of renewable energy resources, advanced fossil fuel systems, and advanced nuclear systems.	
NAT	NPRE 481	GLBL 481	Writing on Technology and Security	3 or 4	Development of writing skills in standard computer, desktop publishing, and electronic publishing formats. On themes such as, global and regional security environments, arms control, nuclear energy, and climate change. For graduate credit, writing projects include documentation of computational work using software appropriate for typesetting of mathematical formulas.	Advanced Composition
NAT or SOC	NPRE 483	GLBL 483	Seminar on Security	1	Preparation of reports on a set of introductory lectures and student choices from various on-campus seminar series relevant to technology of domestic and international security and the regional and international contexts that influence the nature of security problems.	Requirement for ACDIS Undergraduate Certificate in Global Security
SOC	ACE 210	ECON 210, E	Environmental Economics	3	Economic issues surrounding environmental quality, including: costs and benefits of environmental protection; economics of environmental policies (such as those dealing with toxics, water, and air pollution, and municipal solid waste); and economics of international environmental problems (such as ozone depletion and climate change).	Social & Beh Science - Soc Science
SOC	ACE 251		World Food Economy	3	Examination of global food production, consumption, and trade; problems of hunger and population; the role of agricultural development, trade, and aid in relieving hunger.	Cultural Studies - Non-West Social & Beh Science - Soc Science
SOC	ACE 310	ENVS 310/NF	Natural Resource Economics	3	Economic principles are used to analyze a broad range of natural resource policy and management issues. Economic concepts developed include public goods, social welfare, discounting, dynamic efficiency, and resource scarcity. Natural resources examined include biodiversity, fisheries, forests, minerals, soil, and water resources.	
SOC	ANTH 278		Climate Change and Civilization	3	Examination of how climate change impacts society. With the increasing need to understand how climate changes and society intersect at present, it is becoming important that we address critical questions about how lessons from the past inform present needs. Case studies from around the world are discussed.	Cultural Studies - Non-West
SOC	CHLH 210		Community Health Organizations	2	Overview of institutions and agencies which provide health information, education, services, and care. Includes historical foundations, constituencies, organizational goals and structure, funding and expenditures, modes of service delivery, political and ethical issues.	
SOC	CHLH 243		Drug Use and Abuse	2	Introduction to the biological, psychological, pharmacological, and legal aspects of drug use and abuse; surveys community and university resources concerned with drug use and abuse; emphasizes personal and social actions for responsible drug use.	
SOC	CHLH 415		International Health	3 or 4	Explores the various factors that impact the health of populations around the world. Political, cultural, social, environmental and other domains will be examined in relation to how they affect the health of residents of various countries.	
SOC	CMN 280		Comm Technology and Society	3	Introduction to theory and research on both old and new communication technologies; focus will be on how these technological systems develop and are used, and what implications of these systems have for culture and society.	Social & Beh Science - Soc Science
SOC	GEOG 210	ESE 210	Social and Environmental Issues	3	Introduction to the complex relationship between people and the natural environment from a social science perspective. Explores different approaches to environmental issues, and examines the role of population change, political economy, technologies, environmental policymaking, and social institutions in causing and resolving contemporary social and environmental global issues.	Social & Beh Science - Soc Science
SOC	GEOG 221	GLBL 221	Geographies of Global Conflict	3	Focuses on contemporary cultural conflicts, competition among nations for economic and mineral resources; treats territorial disputes from a cultural and geographic perspective. Case studies vary to illustrate types of contemporary conflicts.	Social & Beh Science - Soc Science
SOC	GEOG 379	ESE 379	Intro to GIS Systems	4	Investigates the fundamentals of geographic information science as well as the basic skills in the execution of that theoretical knowledge with industry standard software packages. Student will learn the basics of projections and coordinate systems, how geographic information is stored and manipulated, and the theory and practice behind the production of thematic maps. Includes lecture and hands-on laboratory components.	
SOC	GEOG 410	ESE 410	Green Development	4	Theory and practice of sustainable development. Course materials draw upon theoretical and case study material from the social and natural sciences to analyze environment and development relations with emphasis on the Global South.	

SOC	GLBL 220		Governance	3	Gateway course into the Governance thematic area for Global Studies majors providing an introduction to important themes, problems and approaches to global governance in a series of issue areas, including security, economics, migration, and the environment. Covers the historical development of the international system as well as contemporary controversies. Case studies are used to explore the strength and weaknesses of current governance approaches, and students will conduct independent research into existing structures.	
SOC	GLBL 240		Global Health	3	Introduction to issues and problems in global health. As the world becomes more and more interconnected it is important for students to be aware of health issues from a global perspective. We will consider a variety of issues that influence the health of different population and countries. The topics to be discussed include: the environment, nutrition, education, the medical system, culture, and agency involvement in health. Case studies will be used to demonstrate some successes at addressing these issues and problems that were encountered.	
SOC	PHIL 436		Philosophy of Law and of the State	3 or 4	Examination of issues in the philosophy of law, such as the nature of law, law and morality, justice, liberty and authority, punishment, and legal responsibility.	
SOC	PS 300		Terrorism	3	Terrorism, a violent tactic with a strikingly long history of use, has become a central security concern and political issue in the U.S. in recent years. This course relies on both theoretical and empirical literature to examine a host of questions about terrorism in an advanced, intensive, discussion-based seminar. In particular, we investigate the definition(s) of terrorism, its historical use and evolution, the motivations of various types of groups that employ or have employed this tactic, different forms of terrorism, variation in state responses to terrorism (or, where and when terrorism successfully results in concessions), and the effectiveness of a range of counterterrorism strategies and tactics.	
SOC	PS 386		International Law	3	Analyzes the concepts and bases of public international law. Topics include sources and subjects of international law, as well as issues of jurisdiction, territory, law of the sea, and use of military force.	
SOC	PS 390		American Foreign Policy	3	Considers the major foreign policy decisions currently confronting the United States government: analyzes their background, principal issues, and alternative actions, as well as the policy formulation process.	
SOC	PS 396		International Conflict	3	Examines the conditions that promote war and peace between states. General topics covered are: historical patterns in warfare; causes of war, including arms races and power distributions; outcomes of war; and approaches to peace.	
SOC	PS 397		Authoritarian Regimes	3	Examines the various aspects of the politics in authoritarian regimes: their emergence and breakdown, the policy choices and institutions typically adopted, leadership change, and the theories that explain them. Historical case studies and statistical data will be used to examine real-world cases.	
SOC	SOC 160		Global Inequalities and Social Change	3	Introduces sociological concepts of poverty, inequality, and social change within a global context. Themes explored include basic food security, poverty and hunger; population and resource distribution; foreign aid and development institutions; and social policies and movements for change. Course approach is historical and transnational, and typically includes case studies from Africa, Asia, Latin America, and the United States.	Social & Beh Science - Soc Sci Cultural Studies - Non-West
SOC	SOC 275		Criminology	3	Nature and extent of crime; past and present theories of crime causation; criminal behavior in the United States and abroad, and its relation to personal, structural and cultural conditions; the nature of the criminal justice system and the influences of the exercise of discretion among actors in the criminal justice system.	
SOC	SOC 350		Technology and Society	3	Examines the social and cultural origins of modern technology and technological innovation; the effects of technology and its change on society. Topics include the impact of technology on beliefs and values, accommodation and resistance to change, and technology and the Third World.	Social & Beh Science - Soc Sci
SOC	SOCW 360		Social Work and the Military	3	This course provides an overview of military social work practice including: military culture, issues and needs of soldiers and their families, ethical considerations, and the roll of social workers.	
SOC	TSM 311		Humanity in the Food Web	3	The human food web is the complex network of technologies, environments, people, and social institutions that produces, processes, and distributes the world's food supply. Students will study the food webs of the past, present, and future and will explore various human roles, including their own, in the global technology-environment-society-food system. Course topics include domestication, mechanization, urbanization, the green revolution, biotechnology, food safety, the environment, and appropriate technologies for developing countries.	Advanced Composition Humanities - Hist & Phil
SOC	UP 260		Social Inequality and Planning	3	How are inequalities produced and contested in an urban environment? This course examines this question by analyzing how the urban landscape shapes and is shaped by race, class, and gender inequalities. Uses comparative cases to explore successful intervention, both from formal and informal, across multiple scales from the local to the global.	Social & Beh Science - Soc Sci