Liberal Arts and International Studies

2016-2017

Degree Offered

• Master of International Political Economy of Resources

Certificates Offered

• Graduate Certificate in International Political Economy
• Graduate Certificate in Science, Technology, Engineering, and Policy

Minors Offered

• International Political Economy of Resources
• Science, Technology, Engineering, and Policy

Program Description

As the 21st century unfolds, individuals, communities, and nations face major challenges in energy, natural resources, and the environment. While these challenges demand practical ingenuity from engineers and applied scientists, solutions must also take into account social, political, economic, cultural, ethical, and global contexts. CSM students, as citizens and future professionals, confront a rapidly changing society that demands core technical skills complemented by flexible intelligence, original thought, and cultural sensitivity.

Courses in Liberal Arts and International Studies (LAIS) expand students' professional capacities by providing opportunities to explore the humanities, social sciences, and fine arts. Our curricula encourage the development of critical thinking skills that will help students make more informed choices as national and world citizens - promoting more complex understandings of justice, equality, culture, history, development, and sustainability. Students study ethical reasoning, compare and contrast different economies and cultures, and develop arguments from data and analyze globalization. LAIS courses also foster creativity by offering opportunities for self-discovery. Students conduct literary analyses, improve communication skills, play music, learn media theory, and write poetry. These experiences foster intellectual agility, personal maturity, and respect for the complexity of our world.

The Division of Liberal Arts & International Studies offers a graduate degree, the Master of International Political Economy of Resources (MIPER); two graduate certificates in International Political Economy (IPE); a graduate certificate in Science, Technology, Engineering, and Policy (STEP); and a graduate individual minor.

Combined Undergraduate/Graduate Degree Programs

Some students may earn the master's degree as part of CSM's Combined Undergraduate/Graduate programs. Students participating in the combined degree program may double count up to 6 semester hours of 400-level course work from their undergraduate course work.

Please note that CSM students interested in pursuing a Combined Undergraduate/Graduate program are encouraged to make an initial contact with the MIPER Director after completion of the first semester of their sophomore year for counseling on degree application procedures, admissions standards, and degree completion requirements.

See “Combined Undergraduate/Graduate Degree Programs (http://bulletin.mines.edu/graduate/programs)” elsewhere in this bulletin for further details.

Admission Requirements

The requirements for admission into LAIS Graduate Programs are as follows:

1. An undergraduate degree with a cumulative grade point average (GPA) at or above 3.0 (4.0 scale) or be a CSM undergraduate with a minimum GPA of 3.0 in LAIS course work.
2. The GRE is required. Under certain circumstances, the GRE requirements can be waived. GMAT scores may be used in lieu of the GRE.
3. A TOEFL score of 580 (paper test), 237 (computer test), or 92-93 (Internet test) or higher is required for students who are non-native English speakers.

Degree Offered

• Master of International Political Economy of Resources

Requirements for a Master of International Political Economy of Resources (MIPER)

The interdisciplinary Master of International Political Economy of Resources (MIPER) aims to train the next generation of social scientists, physical scientists, and engineers so that they possess the critical skills to respond to the global challenges of natural resource management and energy policies in the 21st century. It trains them in quantitative and qualitative methodologies as well as enhancing their skills to understand, analyze, and implement complex solutions in diverse social and political settings around the world. The program is writing- and research-intensive, with a strong focus on verbal and written communication skills in critical issues facing the extractive industries, natural resource management, and national and global energy policies in the broader context of politics, economics, culture and religion.

The Master of International Political Economy of Resources (MIPER) provides students with either a thesis-based or non-thesis professional degree that requires 36 semester hours. Students in the MIPER program may choose to earn one or more minors in other departments. Please see the website https://miper.mines.edu/ for more information on specific courses associated with the degree.

Non-Thesis Option

| Core Courses | 15.0 |
| Elective Courses | 21.0 |
| **Total Semester Hrs** | **36.0** |

Thesis Option

| Core Courses | 15.0 |
| Elective Courses | 15.0 |
| Research | 6.0 |
| **Total Semester Hrs** | **36.0** |

Minors Offered

• International Political Economy of Resources
• Science, Technology, Engineering and Policy

**International Political Economy of Resources (IPER) Graduate Minor**

The IPER minor requires a minimum of nine (9) semester hours for Master students and twelve (12) semester hour for PhD students. Students work with a full-time LAIS faculty member to create a minor that focuses on an area of interest to the student. Courses must be at the 500- or 600-level and may include independent studies and special topics. The minor must be approved by the student's graduate committee and by the LAIS Division.

**Science, Technology, Engineering, and Policy (STEP) Graduate Minor**

The STEP graduate minor for the MS degree requires a minimum of 9 semester hours of course work. The STEP graduate minor for the PhD degree requires a minimum 12 semester hours of course work. In all cases, the required course work must include LAIS586 (course link). Other courses may be selected from a list of recommended courses posted and regularly updated on the LAIS Science and Technology Policy Studies web site, a list which includes some courses from other academic units. Among non-LAIS courses, the MS minor is limited to one such course and the PhD minor and graduate certificate are limited to two such courses. With the approval of the LAIS STEP adviser, it is also possible to utilize a limited number of other courses from the CSM Bulletin as well as transfer courses from other institutions. For more information, please contact Dr. Jason Delborne.

**Certificates Offered**

• Graduate Certificate in International Political Economy
• Graduate Certificate in Science, Technology, Engineering and Policy

**Graduate Certificates**

The IPE Graduate Certificate program is 15 credit hour certificate and may focus on either IPE theories, methods, and models; or on specialization, such as regional development (Asia-Pacific, Latin America, Africa, Russia, Eurasia, and the Middle East), international or comparative political economy issues, and specific themes like trade, finance, the environment, gender and ethnicity. It must be approved by the MIPER Director.

The STEP graduate certificate requires a minimum 15 semester hours of course work and must include LAIS586 Science and Technology Policy. It must be approved by the STEP advisor.

Admissions requirements are the same as for the degree program. Please see the MIPER Director for more information.

**Professors**

Elizabeth Van Wie Davis
Juan C Lucena
Carl Mitcham
Kenneth Osgood, Director of the McBride Honors Program

**Associate Professors**

Hussein A. Amery
Tina L. Gianquitto, Interim Division Director
Kathleen J. Hancock
John R. Heilbrunn
Jon A. Leydens
James D. Straker

**Assistant Professors**

Sylvia Gaylord
Derrick Hudson, Director MIPER Program
Jessica Smith Rolston

**Professors Emeriti**

W. John Cieslewicz
Wilton Eckley
T. Graham Hereford
Barbara M. Olds
Eul-Soo Pang
Anton G. Pegis
Thomas Philipeose, University Emeritus Professor
Arthur B. Sacks
Joseph D. Sneed
Robert E.D. Woolsey

**Associate Professors Emeriti**

Betty J. Cannon
Kathleen H. Ochs
Laura J. Pang
Karen B. Wiley

**Teaching Professors**

James V. Jesudason
Robert Klimek
Toni Lefton
Sandy Woodson, Undergraduate Advisor

**Teaching Associate Professors**

Jonathan H. Cullison
Paula A. Farca
Cortney E. Holles
Teaching Assistant Professors

James Bishop
Olivia Burgess
Sara J. Hitt
Joseph Horan
Rachel Osgood
Seth Tucker

Courses

LAIS521. ENVIRONMENTAL PHILOSOPHY AND POLICY. 3.0 Semester Hrs.
Analyze environmental ethics and philosophy including the relation of philosophical perspectives to policy decision making. Critically examines often unstated ethical and/or philosophical assumptions about the environment and how they may complicate and occasionally undermine productive policies. Policies that may be considered include environmental protection, economic development, and energy production. 3 hours lecture; 3 semester hours.

LAIS523. ADVANCED SCIENCE COMMUNICATION. 3.0 Semester Hrs.
This course will examine historical and contemporary case studies in which science communication (or miscommunication) played key roles in shaping policy outcomes and/or public perceptions. Examples of cases might include the recent controversies over hacked climate science emails, nuclear power plant siting controversies, or discussions of ethics in classic environmental cases, such as the Dioxin pollution case. Students will study, analyze, and write about science communication and policy theories related to scientific uncertainty; the role of the scientist as communicator; and media ethics. Students will also be exposed to a number of strategies for managing their encounters with the media, as well as tools for assessing their communication responsibilities and capacities. 3 hours seminar; 3 semester hours.

LAIS524. RHETORIC, ENERGY & PUBLIC PLCY. 3.0 Semester Hrs.
An introduction to the ways in which rhetoric shapes public policy debates that have broad social impact, particularly debates surrounding resource/energy issues. Students study and evaluate some classical but mostly contemporary rhetorical theories, as well as apply them to resource/energy-related case studies, such as sources within fossil or renewable energy. Students write a research paper and make a policy-shaping contribution to an ongoing public policy debate in fossil or renewable energy.

LAIS525. MEDIA AND THE ENVIRONMENT. 3.0 Semester Hrs.
This course explores the ways that messages about the environment and environmentalism are communicated in the mass media, fine arts, and popular culture. The course will introduce students to key readings in communications, media studies, and cultural studies in order to understand the many ways in which the images, messages, and politics of ?nature? are constructed. Students will analyze their role as science or technology communicators and will participate in the creation of communications projects related to environmental research on campus. 3 hours seminar; 3 semester hours.

LAIS531. RELIGION AND SECURITY. 3.0 Semester Hrs.
An introduction to the central topics in religion and society. Develops an analysis of civil society in 21st century contexts and connects this analysis with leading debates about the relationship of religion and security. Creates an understanding of diverse religious traditions from the perspective of how they view security. 3 hours lecture and discussion; 3 semester hours.

LAIS535. LATIN AMERICAN DEVELOPMENT. 3.0 Semester Hrs.
Explores the political economy of current and recent past development strategies, models, efforts, and issues in Latin America, one of the most dynamic regions of the world today. Development is understood to be a nonlinear, complex set of processes involving political, economic, social, cultural, and environmental factors whose ultimate goal is to improve the quality of life for individuals. The role of both the state and the market in development processes will be examined. Topics to be covered will vary as changing realities dictate but will be drawn from such subjects as inequality of income distribution; the role of education and health care; region-markets; the impact of globalization; institution-building; corporate/community-state interfaces; neoliberalism; privatization; democracy; and public policy formulation as it relates to development goals. 3 hours lecture and discussion; 3 semester hours.

LAIS537. ASIAN DEVELOPMENT. 3.0 Semester Hrs.
Explores the historical development of Asia Pacific from agrarian to post-industrial eras; its economic, political, and cultural transformation since World War II, contemporary security issues that both divide and unite the region; and globalization processes that encourage Asian Pacific to forge a single trading bloc. 3 hours lecture and discussion; 3 semester hours.

LAIS539. MIDDLE EAST DEVELOPMENT. 3.0 Semester Hrs.
Equivalent with LAIS439, This course invokes economic, political, social and historical dynamics to help understand the development trajectories that the Middle East has been on in recent decades. This research-intensive graduate seminar discusses the development of Middle Eastern societies from their tribal and agrarian roots to post-industrial ones, and reflects on the pursuant contemporary security issues that both divide and unite the region, and analyzes the effects of globalization on econo.

LAIS541. AFRICAN DEVELOPMENT. 3.0 Semester Hrs.
Provides a broad overview of the political economy of Africa. Its goal is to give students an understanding of the possibilities of African development and the impediments that currently block its economic growth. Despite substantial natural resources, mineral reserves, and human capital, most African countries remain mired in poverty. The struggles that have arisen on the continent have fostered thinking about the curse of natural resources where countries with oil or diamonds are beset with political instability and warfare. Readings give first an introduction to the continent followed by a focus on the specific issues that confront African development today. 3 hours lecture and discussion; 3 semester hours.
LAIS542. NATURAL RESOURCES AND WAR IN AFRICA. 3.0 Semester Hrs.
Examines the relationship between natural resources and wars in Africa. It begins by discussing the complexity of Africa with its several many languages, peoples, and geographic distinctions. Among the most vexing challenges for Africa is the fact that the continent possesses such wealth and yet still struggles with endemic warfare, which is hypothetically caused by greed and competition over resource rents. Readings are multidisciplinary and draw from policy studies, economics, and political science. Students will acquire an understanding of different theoretical approaches from the social sciences to explain the relationship between abundant natural resources and war in Africa. The course helps students apply the different theories to specific cases and productive sectors. 3 hours lecture and discussion; 3 semester hours.

LAIS545. INTERNATIONAL POLITICAL ECONOMY. 3.0 Semester Hrs.
Introduces students to the field of International Political Economy (IPE). IPE scholars examine the intersection between economics and politics, with a focus on interactions between states, organizations, and individuals around the world. Students will become familiar with the three main schools of thought on IPE: Realism (mercantilism), Liberalism, and Historical Structuralism (including Marxism and feminism) and will evaluate substantive issues such as the role of international organizations (the World Trade Organization, the World Bank, and the International Monetary Fund), the monetary and trading systems, regional development, international development, foreign aid, debt crises, multinational corporations, and globalization. 3 hours seminar; 3 semester hours.

LAIS546. GLOBALIZATION. 3.0 Semester Hrs.
Assesses the historical development of international political economy as a discipline. Originally studied as the harbinger of today’s political science, economics, sociology, anthropology, and history, International Political Economy is the multidisciplinary study of the relationship between states and markets. A fuller understanding will be achieved through research and data analysis as well as interpretation of case studies. Prerequisites: LAIS345 and any 400-level IPE course, or two equivalent courses. 3 hours lecture and discussion; 3 semester hours.

LAIS548. GLOBAL ENVIRONMENTAL POLITICS AND POLICY. 3.0 Semester Hrs.
Examines the increasing importance of environmental policy and politics in international political economy and global international relations. Using historical analysis and interdisciplinary environmental studies perspectives, this course explores global environmental problems that have prompted an array of international and global regimes and other approaches to deal with them. It looks at the impact of environmental policy and politics on development, and the role that state and nonstate actors play, especially in North-South relations and in the pursuit of sustainability. Prerequisites: any two IPE courses at the 300-level; or one IPE course at the 400 level; or one IPE course at the 300 level and one environmental policy/issues course at the 400 level. 3 hours lecture and discussion; 3 semester hours.

LAIS550. POLITICAL RISK ASSESSMENT. 3.0 Semester Hrs.
Uses social science analytical tools and readings as well as indices prepared by organizations, such as the World Bank and the International Monetary Fund, to create assessments of the political, social, economic, environmental and security risks that multinational corporations may face as they expand operations around the world. Students will develop detailed political risk reports for specific countries that teams collectively select. Prerequisite: LAIS 545 and IPE Minor. 3 hours seminar; 3 semester hours.
LAIS558. NATURAL RESOURCES AND DEVELOPMENT. 3.0 Semester Hrs.
Examines the relationship between natural resources and development. It begins by discussing theories of development and how those theories account for specific choices among resource abundant countries. From the theoretical readings, students examine sector specific topics in particular cases. These subjects include oil and natural gas in African and Central Asian countries; hard rock mining in West Africa and East Asia; gemstone mining in Southern and West Africa; contracting in the extractive industries; and corporate social responsibility. Readings are multidisciplinary and draw from policy studies, economics, and political science to provide students an understanding of different theoretical approaches from the social sciences to explain the relationship between abundant natural resources and development. 3 hours lecture and discussion; 3 semester hours.

LAIS559. INTERNATIONAL INDUSTRIAL PSYCHOLOGY. 3.0 Semester Hrs.
This course has, as its primary aim, the equipping of a future consultant to deal with the cultural, socioeconomic, behavioral, psychological, ethical, and political problems in the international workplace. Specific materials covered are: Early experimentation with small group dynamics relative to economic incentive; Hawthorne experiments; experiments of Asch on perception, Analysis of case studies of work productivity in service and technological industries. Review of work of F.W. Taylor, Douglas McGregor, Blake & Mouton, and others in terms of optimal working conditions relative to wage and fringe benefits. Review ofNiccolo Machiavelli's The Prince and the Discourses, and The Art of War by Sun Tzu with application to present times and international cultural norms. The intent of this course is to teach the survival, report writing, and presentation skills, and cultural awareness needed for success in the real international business world. The students are organized into small groups and do a case each week requiring a presentation of their case study results, and a written report of the results as well. (Textbooks: Human Side of Enterprise by Douglas McGregor, Principles of Scientific Management by F.W. Taylor, The Art of War by Sun Tzu, Up The Organization by Robert Townsend, The Prince and the Discourses of Niccolo Machiavelli, and The Managerial Grid by Blake & Mouton.) 3 hours seminar; 3 semester hours.

LAIS560. GLOBAL GEOPOLITICS. 3.0 Semester Hrs.
Examines geopolitical theories and how they help us explain and understand contemporary developments in the world. Empirical evidence from case studies help students develop a deeper understanding of the interconnections between the political, economic, social, cultural and geographic dimensions of governmental policies and corporate decisions. Prerequisites: any two IPE courses at the 300-level, or one IPE course at the 400 level. 3 hours lecture and discussion; 3 semester hours.

LAIS564. QUANTITATIVE METHODS FOR THE SOCIAL SCIENCES. 3.0 Semester Hrs.
Teaches basic methods of quantitative empirical research in the social sciences. Places social science in the broader context of scientific inquiry by addressing the role of observation and hypothesis testing in the social sciences. The focus is on linear regression and group comparisons, with attention to questions of research design, internal validity, and reliability. 3 hours lecture and discussion; 3 semester hours.

LAIS565. SCIENCE, TECHNOLOGY, AND SOCIETY. 3.0 Semester Hrs.
Provides an introduction to foundational concepts, themes, and questions developed within the interdisciplinary field of science and technology studies (STS). Readings address anthropological understandings of laboratory practice, sociological perspectives on the settling of techno-scientific controversies, historical insights on the development of scientific institutions, philosophical stances on the interactions between technology and humans, and relationships between science and democracy. Students complete several writing assignments, present material from readings and research, and help to facilitate discussion. 3 hours lecture and discussion; 3 semester hours.

LAIS570. HISTORY OF SCIENTIFIC THOUGHT. 3.0 Semester Hrs.
This course offers a critical examination of the history of scientific thought, investigation, discovery, and controversy in a range of historical contexts. This course, which examines the transition from descriptive and speculative science to quantitative and predictive science, will help students understand the broad context of science, technology, and social relations, a key component of the MEPS program framework. 3 hours lecture and discussion; 3 semester hours.

LAIS577. ENGINEERING AND SUSTAINABLE COMMUNITY DEVELOPMENT. 3.0 Semester Hrs.
Analyzes the relationship between engineering and sustainable community development (SCD) from historical, political, ethical, cultural, and practical perspectives. Students will study and analyze different dimensions of sustainability, development, and “helping”, and the role that engineering might play in each. Will include critical explorations of strengths and limitations of dominant methods in engineering problem solving, design and research for working in SCD. Through case-studies, students will analyze and evaluate projects in SCD and develop criteria for their evaluation. 3 hours lecture and discussion; 3 semester hours.

LAIS578. ENGINEERING AND SOCIAL JUSTICE. 3.0 Semester Hrs. (II)
Explores the meaning of social justice in different areas of social life and the role that engineers and engineering can play in promoting or defending social justice. Begins with students’ exploration of their own social locations, alliances, and resistances to social justice through critical engagement of interdisciplinary readings that challenge engineering mindsets. Offers understandings of why and how engineering has on occasion been aligned with or divergent from specific social justice issues and causes. 3 hours seminar; 3 semester hours.

LAIS586. SCIENCE AND TECHNOLOGY POLICY. 3.0 Semester Hrs.
Examines current issues relating to science and technology policy in the United States and, as appropriate, in other countries. 3 hours lecture and discussion; 3 semester hours.

LAIS587. ENVIRONMENTAL POLITICS AND POLICY. 3.0 Semester Hrs.
Explores environmental policies and the political and governmental processes that produce them. Group discussion and independent research on specific environmental issues. Primary but not exclusive focus on the U.S. 3 hours lecture and discussion; 3 semester hours.

LAIS588. WATER POLITICS AND POLICY. 3.0 Semester Hrs.
Examines water policies and the political and governmental processes that produce them, as an example of natural resource politics and policy in general. Group discussion and independent research on specific politics and policy issues. Primary but not exclusive focus on the U.S. 3 hours lecture and discussion; 3 semester hours.
LAIS589. NUCLEAR POWER AND PUBLIC POLICY. 3.0 Semester Hrs.
A general introduction to research and practice concerning policies and practices relevant to the development and management of nuclear power. Corequisite: PHGN590 Nuclear Reactor Physics. 3 hours lecture and seminar; 3 semester hours.

LAIS590. ENERGY AND SOCIETY. 3.0 Semester Hrs.
(I) The course begins with a brief introduction to global energy production and conservation, focusing on particular case studies that highlight the relationship among energy, society, and community in different contexts. The course examines energy successes and failures wherein communities, governments, and/or energy companies come together to promote socially just and economically viable forms of energy production/conservation. The course also explores conflicts driven by energy development. These case studies are supplemented by the expertise of guest speakers from industry, government, NGOs, and elsewhere. Areas of focus include questioning the forward momentum of energy production, its social and environmental impact, including how it distributes power, resources and risks across different social groups and communities. 3 hours seminar; 3 semester hours.

LAIS598. SPECIAL TOPICS. 6.0 Semester Hrs.
(I, II, S) Pilot course or special topics course. Topics chosen from special interests of instructor(s) and student(s). Usually the course is offered only once, but no more than twice for the same course content. Prerequisite: none. Variable credit: 0 to 6 credit hours. Repeatable for credit under different titles.

LAIS599. INDEPENDENT STUDY. 0.5-6 Semester Hr.
(I, II, S) Individual research or special problem projects supervised by a faculty member, also, when a student and instructor agree on a subject matter, content, and credit hours. Prerequisite: Independent Study form must be completed and submitted to the Registrar. Variable credit: 0.5 to 6 credit hours. Repeatable for credit under different topics/experience and maximums vary by department. Contact the Department for credit limits toward the degree.

LAIS601. ACADEMIC PUBLISHING. 0.5-6 Semester Hrs.
Students will finish this course with increased knowledge of general and discipline-specific writing conversations as well as the ability to use that knowledge in publishing portions of theses or dissertations. Beyond the research article, students will also have the opportunity to learn more about genres such as conference abstracts, conference presentations, literature reviews, and research funding proposals. Prerequisite: Must have completed one full year (or equivalent) of graduate school coursework. Variable credit: 2 or 3 semester hours.

LAIS698. SPECIAL TOPICS. 6.0 Semester Hrs.
(I, II) Pilot course or special topics course. Topics chosen from special interests of instructor(s) and student(s). Usually the course is offered only once, but no more than twice for the same course content. Prerequisite: none. Variable credit: 0 to 6 credit hours. Repeatable for credit under different titles.

LAIS699. INDEPENDENT STUDY. 0.5-6 Semester Hr.
(I, II, S) Individual research or special problem projects supervised by a faculty member, also, when a student and instructor agree on a subject matter, content, and credit hours. Prerequisite: Independent Study form must be completed and submitted to the Registrar. Variable credit: 0.5 to 6 credit hours. Repeatable for credit under different topics/experience and maximums vary by department. Contact the Department for credit limits toward the degree.

LAIS707. GRADUATE THESIS / DISSERTATION RESEARCH CREDIT.
1-15 Semester Hr.
(I, II, S) GRADUATE THESIS/DISSERTATION RESEARCH CREDIT Research credit hours required for completion of a Masters-level thesis or Doctoral dissertation. Research must be carried out under the direct supervision of the student's faculty advisor. Variable class and semester hours. Repeatable for credit.

LICM501. PROFESSIONAL ORAL COMMUNICATION. 1.0 Semester Hr.
A five-week course which teaches the fundamentals of effectively preparing and presenting messages. "Hands-on" course emphasizing short (5- and 10-minute) weekly presentations made in small groups to simulate professional and corporate communications. Students are encouraged to make formal presentations which relate to their academic or professional fields. Extensive instruction in the use of visuals. Presentations are rehearsed in class two days prior to the formal presentations, all of which are video-taped and carefully evaluated. 1 hour lecture/lab; 1 semester hour.

SYGN502. INTRODUCTION TO RESEARCH ETHICS. 1.0 Semester Hr.
A five-week course that introduces students to the various components of responsible and research practices. Topics covered move from issues related to the planning of research through the conducting of research to the dissemination of research results. The course culminates with students writing and defending their ethics statements. 1 hour lecture/lab; 1 semester hour.