GLOBAL RESOURCE SYSTEMS (GLOBE)

Any experimental courses offered by GLOBE can be found at:
registrar.iastate.edu/faculty-staff/courses/explistings/ **(**http://www.registrar.iastate.edu/faculty-staff/courses/explistings/**)**

Courses primarily for undergraduates:

GLOBE 110: Orientation
(1-0) Cr. 1. F.
An introduction to Global Resource Systems (GRS) program. University and career acclimation, development of educational and professional skills, participation in GRS Learning Community. Assessed service-learning component.

GLOBE 120: Geography of Global Resource Systems
(3-0) Cr. 3. F.S.
A survey of geographic concepts with a specific focus on the distribution of natural and human-generated resources and the demand for those resources on a global scale.
Meets International Perspectives Requirement.

GLOBE 201: Introduction to Global Resource Systems
(3-0) Cr. 3. F.S.
A systematic analysis of natural, physical, and socio-economic resources. Examine ways communities prioritize, save, use, and invest in community resources to address their needs and wants in a sustainable way, and the global implications of resource systems decisions. Assessed service-learning component.

GLOBE 211: Issues in Global Resource Systems
(1-0) Cr. 1. Repeatable, maximum of 4 credits. F.S.
Discussion of topics of current importance in global resource systems. Offered on a satisfactory-fail basis only. A maximum of 4 credits of 211 may be used towards degree requirements.

GLOBE 220: Globalization and Sustainability
(Cross-listed with ANTHR, ENV S, M E, MAT E, SOC). (3-0) Cr. 3. F.S.
An introduction to understanding the key global issues in sustainability. Focuses on interconnected roles of energy, materials, human resources, economics, and technology in building and maintaining sustainable systems. Applications discussed will include challenges in both the developed and developing world and will examine the role of technology in a resource-constrained world. Cannot be used for technical elective credit in any engineering department.
Meets International Perspectives Requirement.

GLOBE 221: Apprenticeship
Cr. R. Repeatable. F.S.SS.
Prereq: Approval by the Global Resource Systems Faculty Coordinator
Practical work experience in approved domestic or international settings such as with a company, research laboratory, governmental agency or non-governmental organization. Offered on a satisfactory-fail basis only.

GLOBE 290: Independent Study
Cr. 1-2. Repeatable. F.S.SS.
Prereq: Permission of the instructor and approval by the Global Resource Systems Faculty Coordinator
Independent study on topics of special interest to the student. Comprehensive report required. Intended primarily for first-year students and sophomores.

GLOBE 290H: Independent Study, Honors
Cr. 1-2. Repeatable. F.S.SS.
Prereq: Permission of the instructor and approval by the Global Resource Systems Faculty Coordinator
Independent study on topics of special interest to the student. Comprehensive report required. Intended primarily for first-year students and sophomores.

GLOBE 303: Agricultural, Food and Natural Global Resource Systems
(3-0) Cr. 3. F.
Prereq: GLOBE 201 and ECON 101 or ECON 102 or permission of instructor.
In-depth analysis of the opportunities, constraints and consequences of agricultural, food and natural resource systems. Topics integrate global natural resources with agriculture and food systems, nutrition and health, sustainable development, and societal structures, including gender, migration and urbanization. Course content utilizes a systems approach.

GLOBE 304: Socio-Economic Global Resource Systems
(3-0) Cr. 3. S.
Prereq: GLOBE 201 and ECON 101 or ECON 102 or permission of the instructor.
In-depth analysis of the opportunities, constraints and consequences of social, economic and political global resource systems. Topics integrate agriculture and food production, globalization, population, economic planning, energy, security, trade, and policy and their role in defining different world regions. Course content utilizes a systems approach.

GLOBE 320: Global Resource Systems Internship Preparation
(1-0) Cr. 1. F.S.
Prereq: Permission of Instructor
Students enrolled in this course intend to enroll in Globe 321 or 322 in the following term. Topics provide a pre-departure orientation, including logistical, academic, cultural, and personal requirements for completion of an experiential supervised work experience.

GLOBE 321: Internship - Global

Cr. 3-6. Repeatable. F.S.SS.

Prereq: GLOBE 320, Junior or Senior and enrollment in Global Resource Systems major; permission of the instructor and approval by the Global Resource Systems Faculty Coordinator

A supervised learning experience including an analysis of an international location's resource system via immersion in a foreign culture lasting at least five weeks. The experience should focus on the region and technical area consistent with the student's degree track. Course expenses paid by student. A maximum of 12 credits of GLOBE 321 and 322 may be used for degree requirements.

Meets International Perspectives Requirement.

GLOBE 322: Internship - United States

Cr. 3-6. Repeatable. F.S.SS.

Prereq: GLOBE 320, Junior or Senior and enrollment in Global Resource Systems major; permission of the instructor and approval by the Global Resource Systems Faculty Coordinator

A supervised learning experience including an analysis of a domestic location's resource system via immersion in a different culture within the United States lasting at least five weeks. Designed for international students and for students who are not in a position to leave the United States. Course expenses paid by student. A maximum of 12 credits of Globe 321 and 322 may be used for degree requirements.

GLOBE 330: Global Health Disparities

(Cross-listed with V MPM). (3-0) Cr. 3. S.

Prereq: Junior classification

Historical and contemporary factors contributing to disparities in health outcomes for persons disadvantaged by income, location, ethnicity, sexual orientation, and abilities. Analysis and evaluation of health promotional materials, such as campaigns, and community-based interventions focused on reducing global health disparities.

Meets U.S. Diversity Requirement

GLOBE 335: The Economics of Global Agricultural Food and Bio-energy

(Cross-listed with ECON). (3-0) Cr. 3.

Prereq: ECON 101

Applied economic analysis of the determinants of world agricultural production, marketing, and use in feed, food, fiber, biofuel, and other applications, and global food processing and consumption. Analysis of market case studies and various data on global agricultural production and transformation, land and resource use, demography, economic activity, nutrition and health trends.

Meets International Perspectives Requirement.

GLOBE 360: Global Health

(Cross-listed with MICRO, V MPM). (3-0) Cr. 3. F.

Prereq: BIOL 211

Explores human health across the world with particular emphasis on low- and lower-middle-income countries. Attention is given to the interconnectedness of health determinants, problems, and solutions found in global health, including the role of animals and the environment. Broad in scope, highlighting different cultures and the historical foundations of global health. Topics include colonialism, poverty, emerging diseases, climate change, biodiversity, one health, maternal and child health, HIV, malaria, urbanization, noncommunicable diseases and more. Current events will be a feature of all class meetings.

Meets International Perspectives Requirement.

GLOBE 385: Economic Development

(Cross-listed with ECON). (3-0) Cr. 3.

Prereq: ECON 101; ECON 102

Current problems of developing countries, theories of economic development, agriculture, and economic development, measurement and prediction of economic performance of developing countries, alternative policies and reforms required for satisfying basic needs of Third World countries, interrelationships between industrialized countries and the developing countries, including foreign aid.

Meets International Perspectives Requirement.

GLOBE 398: Cooperative Education

Cr. R. F.S.SS.

Prereq: Permission of faculty coordinator for the major.

Students must complete GLOBE 398 Cooperative Education Approval Form and register for GLOBE 398 before commencing each work period. Work periods for students in cooperative education related to Global Resource Systems. Offered on a satisfactory-fail basis only.

GLOBE 401: Senior Project

Cr. 3. F.S.SS.

Prereq: Senior classification in Global Resource Systems

Research project in collaboration with faculty that complements and furthers a student's experiences from Globe 321 and 322 while simultaneously bringing into focus entire four-year experience. Student will write a research report and make either an oral or poster presentation.

GLOBE 401H: Senior Project, Honors

Cr. 3. F.S.SS.

Prereq: Senior classification in Global Resource Systems

Research project in collaboration with faculty that complements and furthers a student's experiences from Globe 321 and 322 while simultaneously bringing into focus entire four-year experience. Student will write a research report and make either an oral or poster presentation.

GLOBE 402: Responses to Global Resource System Challenges
(3-0) Cr. 3. S.
Capstone analysis of critical global resource challenges facing both developed and developing countries. Students will use research skills to investigate specific global resource issues and use communications skills to work as a team to integrate their research, develop an interdisciplinary perspective, and evaluate potential solutions to resource challenges.

GLOBE 441: International Animal Agriculture
(Cross-listed with AN S). (3-0) Cr. 3. S.
Prereq: AN S 223 or AN S 225 or AN S 226 or AN S 229 or AN S 235
An overview of animal agriculture with emphasis in developing countries. Historical, economic, environmental, and political considerations will be assessed and evaluated. Issues related to gender, resilience and sustainability for different production systems including alternative livestock species, will be investigated. The role of animal source foods in attainment of global food security will be discussed.
Meets International Perspectives Requirement.

GLOBE 480: Engineering Analysis of Biological Systems
(Cross-listed with A B E, ENSCI). (2-2) Cr. 3. F.
Prereq: A B E 380 or Permission of Instructor
Systems-level quantitative analysis of various biological systems, including applications in foods, feeds, biofuels, bioenergy, and other bio-based systems. Introduction to techno-economic analysis and life-cycle assessment of these systems at multiple production scales. Applying these tools to evaluate and improve cost and sustainability performance. Students enrolled in ABE 580 will be required to conduct additional learning activities.

GLOBE 490: Independent Study
Cr. 1-4. Repeatable. F.S.SS.
Prereq: Permission of the instructor and approval by the Global Resource Systems Faculty Coordinator
Independent study on topics of special interest to the student. Comprehensive report required. Intended primarily for juniors and seniors. A maximum of 9 credits of all (university-wide) 490 courses may be used for degree requirements.

GLOBE 490A: Independent Study: General
Cr. 1-4. Repeatable. F.S.SS.
Prereq: Permission of the instructor and approval by the Global Resource Systems Faculty Coordinator
Independent study on topics of special interest to the student. Comprehensive report required. Intended primarily for juniors and seniors. A maximum of 9 credits of all (university-wide) 490 courses may be used for degree requirements.

GLOBE 490E: Independent Study: Entrepreneurship
Cr. 1-4. Repeatable. F.S.SS.
Prereq: Permission of the instructor and approval by the Global Resource Systems Faculty Coordinator
Independent study on topics of special interest to the student. Comprehensive report required. Intended primarily for juniors and seniors. A maximum of 9 credits of all (university-wide) 490 courses may be used for degree requirements.

GLOBE 490H: Independent Study: Honors
Cr. 1-4. Repeatable. F.S.SS.
Prereq: Permission of the instructor and approval by the Global Resource Systems Faculty Coordinator
Independent study on topics of special interest to the student. Comprehensive report required. Intended primarily for juniors and seniors. A maximum of 9 credits of all (university-wide) 490 courses may be used for degree requirements.

GLOBE 490Z: Independent Study: Service Learning
Cr. 1-4. Repeatable. F.S.SS.
Prereq: Permission of the instructor and approval by the Global Resource Systems Faculty Coordinator
Independent study on topics of special interest to the student. Comprehensive report required. Intended primarily for juniors and seniors. Assessed service-learning component. A maximum of 9 credits of all (university-wide) 490 courses may be used for degree requirements.

GLOBE 493: Workshop in Global Resource Systems
Cr. 1-3. Repeatable, maximum of 4 times. F.S.SS.
Prereq: Permission of Instructor
Workshop experience in selected topics in global resource systems. Variable format may include lecture, recitation, laboratory, and field. Offered on a satisfactory-fail basis only.

GLOBE 494: Service Learning
Cr. arr. F.S.SS.
Prereq: Permission of Instructor
Selected projects that result in outcomes benefiting a non-Iowa State University entity while instilling a professional ethics and accomplishing student learning goals. Course expenses paid by student. Assessed service-learning component.

GLOBE 494A: Service Learning: International
Cr. arr. Repeatable, maximum of 12 credits. F.S.SS.
Prereq: Permission of Instructor
Selected projects that result in outcomes benefiting a non-Iowa State University entity while instilling professional ethics and accomplishing student learning goals. Course expenses paid by student. Assessed service-learning component.
Meets International Perspectives Requirement.

GLOBE 494B: Service Learning: Domestic
Cr. arr. Repeatable, maximum of 12 credits. F.S.SS.
Prereq: Permission of Instructor
Selected projects that result in outcomes benefiting a non-Iowa State University entity while instilling professional ethics and accomplishing student learning goals. Course expenses paid by student. Assessed service-learning component.

GLOBE 494C: Service Learning: U.S. Diversity Project
Cr. 3. Repeatable. F.S.SS.
Prereq: Permission of Instructor
Selected projects that result in outcomes benefiting a non-Iowa State University entity, while instilling professional ethics and accomplishing student learning goals. Academic work under faculty supervision may include written reports, presentations, and guided readings. Course expenses paid by student. Assessed service-learning component.

GLOBE 495: Global Resource Systems Study Abroad Course Preparation
Cr. 1-2. Repeatable. F.S.
Prereq: Permission of Instructor
Global resource systems topics will include the agricultural industries, climate, crops, culture, economics, food, geography, government, history, livestock, marketing, natural resources, public policies, soils, and preparation for travel to locations to be visited. Students enrolled in this course intend to register for Globe 494A, 496 or 497 the following term.

GLOBE 496: Global Resource Systems Study Abroad
Cr. 2-4. Repeatable. F.S.SS.
Prereq: Permission of Instructor
Extended field trips abroad to study global resource systems. Location and duration of trips will vary. Pre-trip sessions arranged through Globe 495. Trip expenses paid by student.
Meets International Perspectives Requirement.

GLOBE 496B: Global Resource Systems Domestic Travel Study
Cr. 1-4. Repeatable, maximum of 4 times. F.S.SS.
Prereq: Permission of Instructor
Limited enrollment. Extended domestic field trips to study global resource systems topics. Location and duration of trips will vary. Pre-trip sessions arranged. Trip expenses paid by student.

GLOBE 497: Deans Global Ag and Food Leadership Program
Cr. 1-4. Repeatable. F.S.SS.
Prereq: 2 credits of GLOBE 495; Permission of Instructor
An integrated agricultural and food production and policy program that allows students to assess, analyze and evaluate complex, country-specific situations and to develop their skills, knowledge and abilities via team-oriented projects that involve complex issues such as development of effective foreign food aid and agricultural and food production systems, drivers of world hunger, sustainable resource management and efficacy of policy, and the role of the USA and the United Nations and other development agencies in these systems. International location and duration of program will vary. Pre-trip sessions arranged through Globe 495. Trip expenses paid by students.
Meets International Perspectives Requirement.

GLOBE 499: Undergraduate Research
Cr. arr. F.S.SS.
Prereq: Permission of the instructor and approval by the Global Resource Systems Faculty Coordinator
Research projects in collaboration with faculty.