

## 2017 COHORT MAJOR

### TRIMESTER AND SEMESTER ENVIRONMENTAL STUDIES CORE

|  | COURSES (Trimester)                               | COURSES (Semester)                                    | COURSE # COMPLETED | TERM COMPLETED | CREDITS EARNED |
|--|---|---|--------------------|----------------|----------------|
| <b>Sustainability Problems and Solutions I</b>                               | ENVR 100 (3 cr)<br>ENVR 100L (0 cr)               | ENVR 100 (4 cr)<br>ENVR 100L (0 cr)                   |                    |                |                |
| <b>Sustainability Problems and Solutions II</b>                              | <u>ENVR 200 (3 cr)</u><br><u>ENVR 200L (0 cr)</u> | ENVR 300 (4 cr)<br>ENVR 300L (0 cr)                   |                    |                |                |
| <b>Sustainability Methods I</b>  | <u>ENVR 201 (1 cr)</u>                            |   |                    |                |                |
| <b>Sustainability Perspective Seminar I</b>                                  | <u>ENVR 202 (1 cr)</u>                            |   |                    |                |                |
| <b>Sustainability Capstone Experience I: Sustainability Problem Analysis</b> | <u>ENVR 300 (3 cr)</u><br><u>ENVR 300L (0 cr)</u> | ENVR 401 (4 cr)                                       |                    |                |                |
| <b>Sustainability Methods II</b>   | <u>ENVR 401 (1 cr)</u>                            |   |                    |                |                |
| <b>Sustainability Perspective Seminar II</b>                                 | <u>ENVR 402 (1 cr)</u>                            |   |                    |                |                |
| <b>Sustainability Capstone Experience I: Sustainability Solutions</b>        | <u>ENVR 451 w/ lab (3 cr)**</u>                   | ENVR 402 (4 cr)**<br>ENVR 402L (0 cr)**               |                    |                |                |
| <b>Sustainability Perspective Seminar II</b>                                 | <u>ENVR 452 (1 cr)**</u>                          |   |                    |                |                |
| <b>GIS</b>   | GEOG 373 (3 cr)<br>GEOG 374 (3 cr)                | GEOG 273 (4 cr)<br>GEOG 274 (4 cr)<br>GEOG 375 (4 cr) |                    |                |                |

\*\* = course must be taken as a senior; underlined = simultaneous enrollment in courses; under trimesters, GIS is an elective. Under semesters, a GIS course is required.

## CURRENT TRIMESTER ENVIRONMENTAL STUDIES ELECTIVE COURSES

Under semesters, there are no categories of elective courses. The new major requires 12 credits of supporting (elective) courses. You must meet with your ENVR advisor to develop an integrated plan for the electives you plan to take/have taken.

You can select your 12 credits from any combination of the following trimester and semester courses. At least two of the electives (8 credits) must be taken at the 300 or 400 level. No more than two of the electives (8 credits) can be taken from the same department.

| COURSES (Trimester) | COURSES (Semester) | TERM COMPLETED | CREDITS EARNED |
|---------------------|--------------------|----------------|----------------|
| ANTH 100            | BIOL 324           |                |                |
| BIOL 200 w/ lab     | BIOL 327           |                |                |
| BIOL 220 w/ lab     | BIOL 38            |                |                |
| BIOL 180 w/ lab     | CHEM 117           |                |                |
| BIOL 380 w/ lab     | ECON 221           |                |                |
| CHEM 121            | ENGL 230           |                |                |
| CHEM 117            | ENVR 382           |                |                |
| ECON 121            | ENVR 383           |                |                |
| ENGL 315            | ENVR 384           |                |                |
| ENVR 380            | ENVR 380           |                |                |
| GEOG 101 w/ lab     | ENVR 385           |                |                |
| GEOG 102 w/ lab     | ENVR 386           |                |                |
| GEOG 103 w/ lab     | GEOG 105/105L      |                |                |
| GEOG 104 w/ lab     | GEOG 106/106L      |                |                |
| GEOG 110            | GEOG 303           |                |                |
| GEOG 121            | GEOG 306/306L      |                |                |
| GEOG 306 w/ lab     | GEOG 307           |                |                |
| GEOG 308            | GEOG 323           |                |                |
| GEOG 432            | GEOL 101/101L      |                |                |
| GEOL 101 w/ lab     | HIST 133           |                |                |
| GEOL 105            | HIST 330           |                |                |
| GEOL 115 w/ lab     | POLS 326           |                |                |
| GEOL 116 w/ lab     | SOAN 101           |                |                |
| POLS 336            | SOAN 102           |                |                |
| RELG 325            | SOAN 340           |                |                |
| SOC 100             |                    |                |                |

**GPA from all ENVR classes and electives: \_\_\_\_\_ must be greater than 2.0**

## 2017 COHORT MINOR

### TRIMESTER AND SEMESTER ENVIRONMENTAL STUDIES CORE

|   | COURSES (Trimester)                               | COURSES (Semester)                                    | COURSE # COMPLETED | TERM COMPLETED | CREDITS EARNED |
|---|---|---|--------------------|----------------|----------------|
| <b>Sustainability Problems and Solutions I</b>  | ENVR 100 (3 cr)<br>ENVR 100L (0 cr)               | ENVR 100 (4 cr)<br>ENVR 100L (0 cr)                   |                    |                |                |
| <b>Sustainability Problems and Solutions II</b> | <u>ENVR 200 (3 cr)</u><br><u>ENVR 200L (0 cr)</u> | ENVR 300 (4 cr)<br>ENVR 300L (0 cr)                   |                    |                |                |
| <b>Sustainability Methods I</b>                 | <u>ENVR 201 (1 cr)</u>                            |   |                    |                |                |
| <b>Sustainability Perspective Seminar I</b>     | <u>ENVR 202 (1 cr)</u>                            |   |                    |                |                |
| <b>GIS</b>                                      | GEOG 373 (3 cr)<br>GEOG 374 (3 cr)                | GEOG 273 (4 cr)<br>GEOG 274 (4 cr)<br>GEOG 375 (4 cr) |                    |                |                |

underlined = simultaneous enrollment in courses; under trimesters, GIS is an elective. Under semesters, a GIS course is required.

## CURRENT TRIMESTER ENVIRONMENTAL STUDIES ELECTIVE COURSES

Under semesters, the categories of elective courses are gone. The new minor requires 8 credits of supporting (elective) courses. You must meet with your ENVR advisor to develop an integrated plan for the electives you plan to take/have taken.

You can select your 8 credits from any combination of the following trimester and semester courses

| COURSES (Trimester) | COURSES (Semester) | TERM COMPLETED | CREDITS EARNED |
|---------------------|--------------------|----------------|----------------|
| ANTH 100            | BIOL 324           |                |                |
| BIOL 200 w/ lab     | BIOL 327           |                |                |
| BIOL 220 w/ lab     | BIOL 38            |                |                |
| BIOL 180 w/ lab     | CHEM 117           |                |                |
| BIOL 380 w/ lab     | ECON 221           |                |                |
| CHEM 121            | ENGL 230           |                |                |
| CHEM 117            | ENVR 382           |                |                |
| ECON 121            | ENVR 383           |                |                |
| ENGL 315            | ENVR 384           |                |                |
| ENVR 380            | ENVR 380           |                |                |
| GEOG 101 w/ lab     | ENVR 385           |                |                |
| GEOG 102 w/ lab     | ENVR 386           |                |                |
| GEOG 103 w/ lab     | GEOG 105/105L      |                |                |
| GEOG 104 w/ lab     | GEOG 106/106L      |                |                |
| GEOG 110            | GEOG 303           |                |                |
| GEOG 121            | GEOG 306/306L      |                |                |
| GEOG 306 w/ lab     | GEOG 307           |                |                |
| GEOG 308            | GEOG 323           |                |                |
| GEOG 432            | GEOG 101/101L      |                |                |
| GEOG 101 w/ lab     | HIST 133           |                |                |
| GEOG 105            | HIST 330           |                |                |
| GEOG 115 w/ lab     | POLS 326           |                |                |
| GEOG 116 w/ lab     | SOAN 101           |                |                |
| POLS 336            | SOAN 102           |                |                |
| RELG 325            | SOAN 340           |                |                |
| SOC 100             |                    |                |                |

## ENVIRONMENTAL STUDIES Semester Course Catalog Descriptions

### **ENVR-100, Sustainability: The Ecological Dimension**, 4 credits, PN

In-depth interdisciplinary examination of complex sustainability problems (water, food systems, climate change, forests, etc.) including their systemic structure, dynamics, future development, and normative issues. In-depth examination of human dependence upon and alteration of supporting (biodiversity, disturbance regimes, soil resources, hydrological cycle, and nutrient cycles), regulating, provisioning, and cultural ecosystem services. Emphasis on formulating an interdisciplinary model to understand the resilience and vulnerability of complex social-ecological systems (SES) to disturbances and stresses and using such model to assess the social, economic, and environmental dimensions of local and regional sustainability problems. Introduction to key methods used to identify, analyze, and solve the ecological dimensions of such problems. Students will complete an ecologically-oriented campus-based sustainability project. The culminating project and case study will require students to place the ecological component of such systems within the context of the entire SES by emphasizing the two-way interactions (dependence of human well being on ecosystem services and influence of human pursuits of well-being on such services) between the ecological and social components. Includes one two-hour lab per week that focuses on a campus or local sustainability problem.

**ENVR-100L, lab for 100**, 0 credits. Four-hour lab meets weekly, take concurrently with ENVR 100.

### **ENVR-101, Sustainability: The Social Dimension**, 4 credits, PS

In-depth interdisciplinary examination of complex sustainability problems (water, food systems, climate change, forests, etc.) including their systemic structure, dynamics, future development, and normative issues. In-depth examination of the major components of human well-being and their relationship to ecosystem services. Emphasis on formulating an interdisciplinary model to understand the adaptive capacity and vulnerability of complex social-ecological systems (SES) to disturbances and stresses and using such model to assess the social, economic, and environmental dimensions of local and regional sustainability problems. Introduction to key methods used to identify, analyze, and solve the social dimensions of such problems including stakeholder identification and assessment, social capital and power, and social network analysis. Students will complete a socially-oriented campus-based sustainability project. The culminating project and case study will require students to place the social component of such systems within the context of the entire SES by emphasizing the two-way interactions (dependence of human well being on ecosystem services and influence of human pursuits of well-being on such services) between the ecological and social components.

### **ENVR-300, Climate Change and Sustainable Energy**, 4 credits

Intermediate level examination of the complex sustainability problem of climate change and access to modern emphasizing the complex direct and indirect cross-scale interactions between the social and ecological components of such systems. In-depth examination of relationship between access to modern energy and human well-being and climate change challenge facing humanity Emphasis on refining the interdisciplinary model developed in ENVR 100/101 sequence and using such model to compare and contrast the environmental, social, economic, political, and ethical/moral dimensions of alternative energy resources and technologies (coal, natural gas, wind, solar, geothermal, nuclear, biofuels, biomass, hydro, etc.) and assess future alternative scenarios of systems. Students formulate an action-oriented of portfolio of solution strategies to drive a transition to a more sustainable society by avoiding dangerous climate change and improving human well-being without exceeding the Earth's life support systems. Students will complete a significant team-based project that develops a solution to a local energy problem in collaboration with a campus or external stakeholder. Includes one four-hour lab per week that focuses on field trips to energy generating facilities and real-world simulations and negotiations. Prerequisites: ENVR 100 and ENVR 101 or consent from instructor.

**ENVR-300L, lab for 300**, 0 credits. Four-hour lab meets weekly, take concurrently with ENVR 300.

**ENVR-380, Special Topics, 4 credits**

Students use an interdisciplinary and systems approach to conduct an in-depth analysis of the social, economic, and environmental dimensions of a real-world sustainability problem facing campus or a community in the region.

**ENVR 382, Social Change for a Sustainable World, 4 credits (PS)**

This course responds to the urgent crisis of sustainability in the contemporary moment by asking: what strategies for change might allow for the fastest and most effective sustainability transition for human civilization? The course begins by introducing some of the economic and political structures and patterns that reinforce unsustainable practices through case studies of the fossil fuel industry and disaster capitalism. Then two avenues for change will be explored in-depth: community economies (including cooperatives and community-based resource management) and social movements (involving discussions of historical and contemporary examples and strategies). Students will develop a class project around a campaign of their choice on Augustana's campus or in the Quad Cities more broadly.

**ENVR 383 Political Ecology of Land, 4 credits (PP)**

This course explores historical and contemporary issues of land ownership and conflict, with attention to social inequalities and environmental consequences. Beginning with the end of feudalism, land privatization, and the enclosure of the commons, this class moves through history to the present day, highlighting topics like colonization and settler colonialism, plantation slavery and sharecropping, the Green Revolution, urbanization and displacement, the recent global land grab, conflicts over fossil fuels, and conservation politics. The class will also explore contemporary initiatives to generate more equitable use and distribution of land, including land trusts, community-based conservation, squatting, and resistance.

**ENVR 384, Permaculture Theory and Practice, 4 credits (PN)**

This course will introduce permaculture as an intellectual tradition and practice in developing sustainable socio-ecological systems. It begins with an introduction to socio-ecological systems and contemporary problems in agriculture, then introduces permaculture as a foundation for developing more sustainable human relationships with the environment modeled on patterns found in natural systems. Topics include water catchment and reuse, natural building strategies, compost and human waste, companion perennial plants, biological pest control, soil health, and social strategies for community sustainability. Students will complete projects on Augustana's campus, focusing on Augie Acres.

**ENVR 385, Plant Diversity, 2 credits**

Morphology, evolution, and taxonomy of plants with emphasis on plant families, especially those local to Rock Island and the Augustana campus. Certain groups may be emphasized based on instructor's expertise.

**ENVR 386, Animal Diversity, 2 credits**

Morphology, evolution, and taxonomy of animals with emphasis on animal families, especially those local to Rock Island and the Augustana campus. Certain groups may be emphasized based on instructor's expertise.

**ENVR-401, Capstone Experience I: Introduction to Social Ecological Systems, 4 credits**

Introduction to the social-ecological system for the capstone experience. Students are introduced to the key concepts, theories, and methods through a case study of a model SES. The course may include field trips to Augustana field stations and local cities to model the SES. Taken in the fall or spring semester of the junior year. Prerequisites: ENVR 300 (including simultaneous enrollment) or consent from instructor.

**ENVR-402, Capstone Experience II: Assessing Sustainability Problems, 4 credits**

Working as teams and mentored by an interdisciplinary team of faculty, students use a sustainability science approach (combining interdisciplinary and collaborative methods) to conduct an in-depth assessment of the social, economic, and

environmental dimensions of a real-world sustainability problem facing a community. Emphasis on the collection and analysis of information and data on the social ecological system. Advance training on the functionally linked complex of knowledge, skills, and attitudes necessary to solve complex, controversial sustainability problems including: collaborative team work, impactful stakeholder engagement, comprehensive project management, effective and empathic communication, and conflict resolution. Prerequisites: ENVR 401.

**ENVR-402L, lab for 402**, 0 credits. Four-hour lab meets weekly, take concurrently with ENVR 402.

**ENVR 499, Directed Study**, 1 credit

Opportunity for students to study a particular subject under a faculty member's direction. Prerequisites: permission of department chair and instructor.