

# ENVIRONMENTAL SCIENCE: ENVIRONMENTAL HEALTH (BS)

Environmental degradation significantly impacts human health, damaging people's health through pesticide exposure, poor air quality, water contamination, and extreme heat events linked to climate change. Our environmental health program prepares students to address these interconnected issues and improve the well-being of people and the planet.

## CURRICULUM

Students studying Environmental Health develop a solid foundation in environmental science, environmental economics and policy, and the societal issues associated with environmental degradation.

| Code                             | Title   | Hours |
|----------------------------------|---|-------|
| <b>Core Curriculum</b>           |   |       |
| ENVS 137                         | Foundations of Environmental Science I          | 3     |
| BIOL 101                         | General Biology I                               | 3     |
| BIOL 111                         | General Biology I Lab                           | 1     |
| CHEM 160                         | Chemical Structure and Properties               | 3     |
| CHEM 161                         | Chemical Structure and Properties Laboratory    | 1     |
| BIOL 102                         | General Biology II                              | 3     |
| BIOL 112                         | General Biology II Lab                          | 1     |
| CHEM 180                         | Chemical Reactivity I                           | 3     |
| CHEM 181                         | Chemical Reactivity I Lab                       | 1     |
| ENVS 200                         | Environmental Careers and Professional Skills   | 1     |
| ENVS 203                         | Environmental Statistics                        | 3     |
| ENVS 274                         | Chemistry of the Environment                    | 3     |
| ENVS 275                         | Chemistry of the Environment Lab                | 1     |
| ENVS 280                         | Principles of Ecology                           | 3     |
| ENVS 286S                        | Principles of Ecology Lab                       | 1     |
| PLSC 392                         | Environmental Politics                          | 3     |
| ENVS 300                         | Introduction to Public Health                   | 3     |
| ENVS 301                         | Environmental Health                            | 3     |
| ENVS 303                         | Introduction to Epidemiology                    | 3     |
| <b>Justice and Ethics Choice</b> |   |       |
| Select one of the following:     |   | 3     |
| ENVS 284                         | Environmental Justice                           |       |
| PHIL 287                         | Environmental Ethics                            |       |
| THEO 204                         | Religious Ethics and the Ecological Crisis      |       |
| <b>Economics Choice</b>          |   |       |
| ENVS 335                         | Ecological Economics                            | 3     |
| or ECON 328                      | Environmental Economics                         |       |
| <b>Engaged Learning Choice</b>   |   |       |
| Select one of the following:     |   | 3     |
| ENVS 226                         | Science & Conservation of Freshwater Ecosystems |       |
| ENVS 267                         | Bird Conservation and Ecology                   |       |
| ENVS 273                         | Energy and The Environment                      |       |
| ENVS 283                         | Environmental Sustainability                    |       |
| ENVS 340                         | Natural History of Belize                       |       |

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|--|---|-----------|
| ENVS 345                                 | Conservation and Sustainability of Neotropical Ecosystems |           |
| ENVS 350A                                | Solutions to Environmental Problems: Water                |           |
| ENVS 350B                                | Solutions to Environmental Problems: Biogas               |           |
| ENVS 350C                                | Solutions to Environmental Problems: Climate Action       |           |
| ENVS 350F                                | Solutions to Environmental Problems: Food Systems         |           |
| ENVS 391                                 | Environmental Research                                    |           |
| ENVS 395                                 | Environmental Internship                                  |           |
| <b>Capstone Choice</b>                   |   |           |
| Select one of the following:             |   | 3         |
| ENVS 390                                 | Integrative Seminar                                       |           |
| ENVS 391C                                | Independent Environmental Research (Capstone)             |           |
| ENVS 395C                                | Environmental Internship (Capstone)                       |           |
| <b>Electives</b>                         |   | <b>15</b> |
| See designated elective categories below |   |           |
| <b>Total Hours</b>                       |   | <b>70</b> |

## Electives

| Code                                    | Title   | Hours |
|---|---|-------|
| <b>Environmental Health and Society</b> |   |       |
| Select one of the following:            |   | 3     |
| ENVS 204                                | Gender, Health & Environment                        |       |
| ENVS 279 / HIST 279E                    | Climate and History                                 |       |
| ENVS 284                                | Environmental Justice                               |       |
| ENVS 297 / HIST 297E                    | North American Environmental History                |       |
| ENVS 298                                | Special Topics (with SES approval)                  |       |
| ENVS 310                                | Introduction to Environmental Law & Policy          |       |
| ENVS 311                                | Natural Resources and Land Use Law & Policy         |       |
| ENVS 312                                | Water Law & Policy                                  |       |
| ENVS 313                                | Energy Law & Policy                                 |       |
| ENVS 335                                | Ecological Economics                                |       |
| ENVS 338                                | Climate Change and Human Health                     |       |
| ENVS 340                                | Natural History of Belize                           |       |
| ENVS 350A                               | Solutions to Environmental Problems: Water          |       |
| ENVS 350B                               | Solutions to Environmental Problems: Biogas         |       |
| ENVS 350C                               | Solutions to Environmental Problems: Climate Action |       |
| ENVS 350F                               | Solutions to Environmental Problems: Food Systems   |       |
| ENVS 363                                | Sustainable Business Management                     |       |
| ENVS 383                                | Human Dimensions of Conservation                    |       |
| ENVS 389                                | Ecological Risk Assessment                          |       |
| ENVS 391                                | Environmental Research (with SES approval)          |       |
| ENVS 395                                | Environmental Internship (with SES approval)        |       |
| ENVS 398                                | Special Topics (with SES approval)                  |       |
| ENVS 399                                | Directed Readings (with SES approval)               |       |
| COMM 101                                | Public Speaking & Critical Thinking                 |       |
| COMM 260                                | Environmental Journalism                            |       |
| COMM 277                                | Organizational Communication                        |       |

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|--|---|
| COMM 306                               | Environmental Advocacy                              |
| COMM 379                               | Digital Sustainability                              |
| ECON 328                               | Environmental Economics                             |
| ENGL 288                               | Nature in Literature                                |
| MGMT 201                               | Managing People and Organizations                   |
| PHIL 287                               | Environmental Ethics                                |
| PLSC 354                               | Global Environmental Politics                       |
| PSYC 277                               | Environmental Psychology                            |
| SOCL 226                               | Science, Technology, & Society                      |
| SOCL 252                               | Global Inequalities                                 |
| SOCL 272                               | Environmental Sociology                             |
| SOCL 276                               | The Sociology and Politics of Food                  |
| SOCL 278                               | Global Health                                       |
| THEO 204                               | Religious Ethics and the Ecological Crisis          |
| THEO 344                               | Theology and Ecology                                |
| <b>Environmental Science Electives</b> |   |
| Select four of the following: 12       |   |
| ENVS 204                               | Gender, Health & Environment                        |
| ENVS 207                               | Plants and Civilization                             |
| ENVS 218                               | Biodiversity & Biogeography                         |
| ENVS 223                               | Soil Ecology  |
| ENVS 224                               | Climate & Climate Change                            |
| ENVS 226                               | Science & Conservation of Freshwater Ecosystems     |
| ENVS 283                               | Environmental Sustainability                        |
| ENVS 298                               | Special Topics (with SES approval)                  |
| ENVS 322                               | Invasive Species                                    |
| ENVS 323                               | Environmental Microbiology                          |
| ENVS 325                               | Sustainable Agriculture                             |
| ENVS 326                               | Agroecosystems                                      |
| ENVS 327                               | Food Systems Analysis                               |
| ENVS 330                               | Restoration Ecology                                 |
| ENVS 338                               | Climate Change and Human Health                     |
| ENVS 350A                              | Solutions to Environmental Problems: Water          |
| ENVS 350B                              | Solutions to Environmental Problems: Biogas         |
| ENVS 350C                              | Solutions to Environmental Problems: Climate Action |
| ENVS 350F                              | Solutions to Environmental Problems: Food Systems   |
| ENVS 380                               | Introduction to Geographic Information Systems      |
| ENVS 381                               | Advanced GIS Applications                           |
| ENVS 382                               | Remote Sensing                                      |
| ENVS 385                               | Introduction to Global Health                       |
| ENVS 387                               | Principles of Ecotoxicology                         |
| ENVS 388                               | Applied Environmental Statistics                    |
| ENVS 389                               | Ecological Risk Assessment                          |
| ENVS 391                               | Environmental Research (with SES approval)          |
| ENVS 395                               | Environmental Internship (with SES approval)        |
| ENVS 398                               | Special Topics (with SES approval)                  |
| ENVS 399                               | Directed Readings (with SES approval)               |
| ANTH 104                               | The Human Ecological Footprint                      |
| ANTH 303                               | People and Conservation                             |

BIOL, CHEM, PHYS 300-level courses (with SES approval)

**Total Hours****15**

## School of Environmental Sustainability Graduation Requirements

All SES students are required to complete a foreign language requirement and a writing intensive requirement. The SES language requirement can be fulfilled by 1) earning college credit at the 102-level or above; or 2) demonstrating proficiency via the SES foreign language proficiency examination. The SES writing intensive requirement is fulfilled by successfully completing two Loyola WI courses (max of one per semester). Writing intensive courses have a "W" in the section number.

## Additional Undergraduate Graduation Requirements

All Undergraduate students are required to complete the University Core, at least one Engaged Learning course, and UNIV 101. SCPS students are not required to take UNIV 101. Nursing students in the Accelerated BSN program are not required to take core or UNIV 101. You can find more information in the University Requirements (<https://catalog.luc.edu/undergraduate/university-requirements/>) area.

## LEARNING OUTCOMES

- Examine the sources of environmental degradation and their impacts on health.
- Apply the tools of public health to characterize the impacts on community health using a planetary health perspective.
- Integrate environmental regulatory policies to evaluate the health impacts at local and global scales.
- Incorporate critical public health and environmental health justice perspectives into environmental and human dimensions.

## SES Shared Learning Outcomes

All SES majors share the following Program Learning Objectives, in addition to their unique major-specific Program Learning Objectives:

1. Articulate the foundational principles of natural and social sciences and humanities essential to solving environmental problems.
2. Critically evaluate the accuracy and credibility of information relating to environmental topics.
3. Employ knowledge and skills to design and implement solutions that contribute to a just and sustainable world.
4. Exemplify the values of environmental and social justice through actions to care for our common home and one another.