ENVIRONMENTAL STUDIES

Cascade Campus
Jackson Hall (JH), Room 210
971-722-5209

Rock Creek Campus
Building 7, Room 202
971-722-7255

Southeast Campus
Student Commons (SCOM), Room 214
971-722-6146

Sylvania Campus
Health Technology Building (HT), Room 305
971-722-4225

pcc.edu/programs/environmental-studies

DESCRIPTION

The overarching goal of the Environmental Studies (ESR) program at Portland Community College (PCC) is to prepare environmentally literate students who make informed, evidence-based decisions about the environmental issues affecting their communities. The fields of environmental studies and science are interdisciplinary, integrating the sciences with the study of human society, law and policy in order to address our most pressing environmental issues. The Environmental Studies program prepares students to pursue degrees in both environmental science and environmental studies. Environmental science is a field that integrates biological and physical science and uses scientific practices to investigate environmental systems, problems and solutions. Environmental studies is a field that investigates coupled human-natural systems, requiring an understanding of environmental processes as well as social systems including law, policy, sociology, economics, planning and natural resource management.

The ESR program offers a variety of courses including sustainability courses (ESR 140 and ESR 141), general education lab science courses for non-majors (ESR 171, ESR 172, and ESR 173), and a sequence of courses for students planning to major in either environmental science or environmental studies (ESR 150, ESR 200, ESR 201 and ESR 202). PCC students have the option of pursuing the Associate of Arts Oregon Transfer (AAOT) or the Associate of Science Transfer (AS) degree to complete courses in preparation for a bachelor’s degree in environmental studies or environmental science (if transferred to a four-year program at a college or university). For students planning to major in environmental science, the AS will provide more flexibility than the AAOT, and allows students to complete both their Associate degree and the required lower-division courses for the major.

Students must check the specific requirements of the major and bachelor’s program to which they intend to transfer; please review the transfer guides for environmental studies and environmental science: https://www.pcc.edu/university-transfer/majors/

For students intending to transfer to Portland State University to major in Environmental Studies or Environmental Science, the following course sequence is recommended: ESR 150 and ESR 200 (first fall or winter term), ESR 201 (first or second winter term) and ESR 202 (second fall term). Currently, these majors courses are offered only at the Rock Creek Campus. For information regarding the Environmental Studies major transfer program, please contact the Environmental Studies office at Rock Creek at 971-722-7257.

ESR 140. Introduction to Sustainability. 4 Credits.
Introduces the theories, principles and practices of sustainability and their applications. Includes discussions on maintaining ecological and environmental integrity, human health and well-being, and economic viability. May include off-site field trips, physical activity, and hands-on learning opportunities. Prerequisites: (WR 115 and RD 115) or IRW 115 and MTH 20 or equivalent placement. Audit available. This course fulfills the following GE requirements: Science, Math, Computer Science/ASOT-B, Science, Math, Computer Science/AS, Science, Math, Computer Science/AAS, Science, Math, Computer Science/AGS, Science, Math, Computer Science/AAOT.

ESR 141. Introduction to Individual Sustainability. 4 Credits.
Introduces theory, principles and practices of sustainability and their applications at the individual scale. Addresses a wide range of topics at the individual level including the built world, water, and energy; transportation options; wise purchasing; sustainable agriculture and food choices; recycling and waste reduction; recreation and its effects on the environment; restoring natural environments and connections between health and the environment. May include off-site field trips, physical activity, and hands-on learning opportunities. Prerequisite: (WR 115 and RD 115) or IRW 115 and MTH 20 or equivalent placement. Audit available.

ESR 150. Environmental Studies Orientation. 1 Credit.
Serves to orient students to environmental information available through campus library and computer resources. Uses assignments aimed at gathering and summarizing information on academic preparation of environmental professionals. Audit available.

ESR 171. Environmental Science: Biological Perspectives. 4 Credits.
Covers environmental topics that are primarily biological in nature, including ecosystem functions, biodiversity, human population issues, agricultural practices, and environmental ethics. Laboratory exercises illustrate these topics and may include fieldwork. Prerequisites: (WR 115 and RD 115) or IRW 115 and MTH 20 or equivalent placement. Audit available. This course fulfills the following GE requirements: Science, Math, Computer Science/AAOT, Science, Math, Computer Science/ASOT-B, Science, Math, Computer Science/AAS, Science, Math, Computer Science/AGS, Science, Math, Computer Science/AS.

ESR 172. Environmental Science: Chemical Perspectives. 4 Credits.
Covers environmental topics that are primarily chemical in nature, including water and water pollution, environmental hazards and human health, pests and pest control, solid waste, hazardous waste, and air pollution. Laboratory exercises illustrate these topics and may include fieldwork. Prerequisite: (WR 115 and RD 115) or IRW 115 and MTH 20 or equivalent placement. Audit available. This course fulfills the following GE requirements: Science, Math, Computer Science/AAOT, Science, Math, Computer Science/ASOT-B, Science, Math, Computer Science/AAS, Science, Math, Computer Science/AGS.

ESR 173. Environmental Science: Geological Perspectives. 4 Credits.
Covers environmental topics that relate to the intersection of geological processes and materials with society, including fundamental principles of geosciences, soil resources, hydrogeology, nonrenewable and renewable energy resources, and global climate change. Laboratory exercises illustrate these topics and may include fieldwork. Prerequisite: (WR 115 and RD 115) or IRW 115 and MTH 20 or equivalent placement. Audit available. This course fulfills the following GE requirements: Science, Math, Computer Science/AAOT, Science, Math, Computer Science/ASOT-B, Science, Math, Computer Science/AAS, Science, Math, Computer Science/AGS.

ESR 200. Introduction to Environmental Systems. 4 Credits.
Introduces the structure and function of terrestrial, aquatic and atmospheric systems and the connections with human systems. Provides a foundation for using scientific literature, scientific writing, fieldwork and lab methods for collection and analysis of environmental data. Prerequisites: (WR 115 and RD 115) or IRW 115 or equivalent placement, and (LAT 236 or MTH 65 or equivalent placement score). Prerequisite/concurrent: ESR 150. Audit available. This course fulfills the following GE requirements: Science, Math, Computer Science/ASOT-B, Science, Math, Computer Science/AAOT, Science, Math, Computer Science/AS, Science, Math, Computer Science/AAS, Science, Math, Computer Science/AGS.

ESR 201. Applied Environmental Studies: Science/Policy Consideration. 4 Credits.
Covers environmental laws and the regulations promulgated under them. Introduces the legal system of the United States as well as the genesis of important federal environmental laws and the history of compliance and violation. Prerequisite: ESR 200. Audit available.
ESR 202. Applied Environmental Studies: Prep for Problem Solving. 4 Credits.
Provides experience collecting environmental data through fieldwork and laboratory analysis. Explores quantitative analysis of data using a variety of techniques. Emphasizes scientific report writing to communicate research findings. Prerequisite: ESR 200. Audit available.

ESR 204. Introduction to Environmental Restoration. 4 Credits.
Develops an understanding of ecological theories and practices of environmental restoration using local and global case studies. Provides opportunities to engage in hands-on experience with restoration projects in a variety of ecosystems, and at different stages of the restoration process. Includes fieldwork. Prerequisites: ESR 171 or ESR 200 or BI 143, and (WR 115 and RD 115) or IRW 115 and MTH 20 or equivalent placement. Audit available. This course fulfills the following GE requirements: Science, Math, Computer Science/AAOT, Science, Math, Computer Science/AS, Science, Math, Computer Science/AAS, Science, Math, Computer Science/AGS, Science, Math, Computer Science/ASOT-B.

ESR 298. Independent Study: Environmental Science. 1-4 Credit.
Provides an opportunity to perform research on a selected topic related to environmental science or environmental studies under the supervision of an instructor. Prerequisite: Instructor approval, and (WR 115 and RD 115) or IRW 115 and MTH 20 or equivalent placement. Audit available.