

ENVIRONMENTAL SCIENCE

Environmental Science Program Learning Outcomes (<https://catalog.csudh.edu/program-learning-outcomes/natural-behavioral-sciences/master-science-environmental-science-learning-outcomes/>)

College of Natural and Behavioral Sciences
Department of Earth Science and Geography
Master of Science

Faculty

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Program Description

The Master in Science in Environmental Science is an interdisciplinary program housed in the College of Natural and Behavioral Science (NBS). The mission of the program is to prepare the leaders, thinkers and planners necessary to address and solve environmental challenges using interdisciplinary approaches. Because of our location and internship opportunities, the emphasis of the program is on the unique problems of the urban environment. The program is appropriate for students with interests in careers in government, urban or environmental planning, environmental education, research, journalism, law, and academia.

Features

The program is interdisciplinary, with core and elective courses drawn from the natural and social sciences. Core courses introduce the student to the unique problems of the urban environment, to environmental analysis, policy and planning, to mathematical and analytic skills to address environmental problems, and the original research literature in environmental science. Elective courses allow students the flexibility to tailor their academic programs to meet specific goals. Students obtain real-world experience in the urban environment through internships in government, non-governmental, or other agencies and organizations. The academic program culminates with an original research project leading to a thesis.

Career Possibilities

Among the many employment opportunities available for recipients of an M.S. in Environmental Science are government agencies, particularly in the areas of environmental protection and management, water, sewer and power-generation utilities, analytic laboratories, environmental and engineering firms, private industry and management, and non-profit organizations. Potential areas of employment include forestry, agriculture, fisheries management, environmental education, air quality analysis or control, soil conservation, environmental lobbying, remote sensing, urban and regional planning, soil and water conservation, environmental policy analysis, environmental impact analysis, environmental planning, conservation systems analysis, earth science, oceanography, hydrology, seismology, and environmental social impact analysis. In addition, the M.S. in Environmental Science is excellent preparation for further academic pursuits, such as a Ph.D. in environmental science or a degree in environmental law.

Admission Requirements

Applicants must hold a bachelor's degree in a natural or social science from an accredited university with a minimum grade point average of 3.0 overall or 3.0 in the last 60 upper division semester (90 quarter) units of upper division course work, and have completed two courses in a field related to environmental science and a statistics course, with grades of "B" or better.

Applicants must also document writing proficiency by submitting administrative evidence of graduate writing proficiency. This is usually the satisfactory completion of an upper-division writing course or a writing exit examination prior to receiving the undergraduate diploma. In the CSU system this writing competency is called the Graduation Writing Assessment Requirement (GWAR). MSES applicants must provide evidence of satisfying the GWAR (or equivalent) at the graduate level of proficiency. The MSES program regards the graduate level of proficiency as a grade of B or higher in ENG 350 Advanced Composition (3), or a score of 8 or higher on the Graduate Writing Examination (GWE). For graduates from other institutions, there is an alternative procedure to satisfy the GWAR requirement—the Petition for Fulfillment of GWAR—explained in the section Graduation Writing Assessment Requirement of the CSUDH University Catalog.

Applicants who have not attended schools at the secondary level or above for at least three years full-time where English is the principal language of instruction must present one of the following:

An IELTS overall band score of at least 7.0 is the minimum required for applicants to the Environmental Science Master's Program at CSUDH.

A TOEFL score of at least 560 on the paper and pencil test or at least 87 on the internet-based test is the minimum required for applicants to the Environmental Science Master's Program at CSUDH.

For the internet-based TOEFL (TOEFL iBT), the following are recommended minimum scores for each section:

- Writing: 25
- Speaking: 24
- Reading: 21
- Listening: 17

Applications are not considered complete without the test scores.

These test scores should be sent along with your other application materials to the address provided above.

Please note that scores are considered valid for only two years, and that if several scores are submitted, only the most recent is considered.

Students who meet all but one requirement of the MSES program may be admitted in conditionally classified status at the discretion of the Program Coordinator. They must meet all conditions by the end of the first academic year.

Admission Procedures

Admission to the program involves two applications. Prospective students must:

1. Submit an application to the University for admission with graduate standing, following the procedures outlined in the Admissions section of the University Catalog.

2. Students are strongly advised to contact a potential Faculty mentor prior to submitting application materials to increase the possibility of enrollment.
3. Submit to the M. S. in Environmental Science Program Coordinator:
 - A letter describing interests, goals and expectations in pursuing the master's degree in environmental science.
 - Two letters of recommendation sent directly from individuals who can evaluate potential for graduate study.
 - Verification of completion of the GVAR with a score of eight or above or IELTS or TOEFL scores.
 - Official undergraduate transcripts (separate official copies from those sent to University Admissions).

The application deadline for the **Fall semester is May 1st**. Applications for the **Spring semester are due November 1st**.

Application materials can be sent to:

California State University Dominguez Hills
College of Natural and Behavioral Sciences, Dean's Office
Library 5734
ATTN: Environmental Science Program Coordinator
1000 E. Victoria Carson, CA 90747

Academic Advisement

Upon acceptance to the program, each student will select or be assigned to a faculty advisor and plan an individualized program of study based on the student's interests and career goals. All students in the program will be required to be advised every semester to assess student progress and program effectiveness.

Master of Science in Environmental Science

Degree Requirements (30 units)

The M.S. in Environmental Science requires completion of 30 units, at least 21 of which must be at the graduate (500-level).

A. Required Courses (24 units)

BIO 510 Urban Environmental Science (3)
BIO 502 Biostatistics (3)
or
PSY 530 Advanced Analysis of Variance and Multivariate Techniques (3)
ANT 555 People, Culture and the Environment (3)
GEO 433 Environmental Analysis (3)
ENV 590 Graduate Seminar (1-3)
ENV 596 Internship in Environmental Science (3)
ENV 598 Directed Research (1-3)
ENV 599 Thesis (3)

Note: For students enrolled in the Thesis and Internship Options, ENV 590 Graduate Seminar (1-3) must be taken at least twice; 1-2 units each

B. Electives (6 units)

In consultation with an academic advisor, each student will select 2 elective courses from the following list. Elective courses will be selected that best suit the academic background and career goals of the student.

Other courses may be substituted with the approval of the academic advisor and Program Coordinator.

Biology Chemistry

CHE 474 Geochemistry (3)

Geography

GEO 405 Advanced Cartography (3)
GEO 408 Remote Sensing and Image Processing (3)
GEO 412 Rivers and Streams (3)
GEO 415 Geographic Information Systems (3)
GEO 416 Earth's Climates (3)
GEO 420 Natural Resources (3)

Geology

EAR 410 Environmental Geology (3)
EAR 460 Global Change (3)
EAR 476 Groundwater (3)

Sociology

SOC 408 Survey Research (3)

C. Options

1. Thesis

A written thesis, based on an original research project in environmental science, and an oral defense of the thesis are required for completion of the degree.

Each student must select a thesis advisor and two faculty to serve as the graduate thesis committee. When additional expertise is required, a member may be from another institution, but at least two committee members, including the Chair, must be full-time CSUDH faculty.

The student in consultation with his or her major advisor will prepare a research proposal along with a time line to completion. The proposal must outline the problem, its significance, and the methods to be employed to collect and analyze data. The proposal must be approved by the two other members of the thesis committee and submitted to the Program Coordinator.

The thesis will be evaluated on the basis of originality, critical and independent thinking, appropriate organization and format, and thorough documentation. Upon the completion and acceptance of the thesis, the student and advisor will arrange for an oral defense of the thesis. This ordinarily takes the form of a seminar to which the faculty, students and public are invited to attend.

2. Internship

A culminating report and portfolio are required for completion of the degree.

Each student must obtain faculty approval for each of the internships. Faculty supervisor must be full-time CSUDH faculty, but when additional expertise is required, an additional supervisor may be from another institution or from the part-time faculty. Each internship must focus on the student's intended field of study within the field of Environmental Science and should guide the student to completing a final culminating report.

The student, in consultation with both their faculty advisor and internship supervisor will prepare a final written report detailing skills learned, tasks accomplished, and/or research conducted. The written report must detail environmental methods used during the internship and explain to others how to complete the tasks undertaken.

The culminating written report will be evaluated on the basis of originality, critical independent thinking, appropriate organization and format,

and thorough documentation. Upon completion and acceptance by the faculty advisor, the student is required to present the material at a conference.

(<https://catalog.csudh.edu/general-information/graduate-degree-postbaccalaureate-studies/>.)"

D. Continuing Student Status

Students must maintain continuous enrollment throughout the graduate program and during the semester they graduate. Students who miss a semester must reapply to the university and to the program. Students who have completed all course work and are working on their thesis may enroll in ENV 600 Graduate Continuation Course (1), or equivalent, to maintain continuous attendance.

E. Grades

An overall "B" average is required in courses in the student's program and all courses must be passed with a grade of "B-" or above.

F. Policy on Revalidation of Outdated Course Work

All course work taken in the master's degree program must be completed within the five years immediately preceding the date of graduation. Revalidation of outdated course work may be requested from the University Graduate Studies Office through the Environmental Science Program Coordinator. Outdated course work means courses that were completed between five and seven years immediately preceding the date of graduation. The request must be accompanied by a petition from the program Coordinator that verifies that the student has done one of the following:

- repeated the course and passed it with a grade of B or better;
- taken the exams and completed the assignments of the course as it is currently offered and earned a grade of B or better;
- taken and passed a written comprehensive exam which covers the course contents.

G. Classified Standing

If a student has been admitted to Conditionally Classified status he or she must fulfill the conditions for Classified standing by the end of the first year after admission. The student must submit an Application for Classified Standing to the Dean of Graduate Studies, who will forward the request to the Environmental Science Coordinator. To receive classified standing, the student must have:

- completed all prerequisite courses and requirements including the GWAR;
- a grade point average of 3.0 or better in all courses taken at CSUDH and received a grade of B- or better in all courses.

H. Advancement to Candidacy

An application for advancement of candidacy is submitted when the student has completed most of the course work. Application is made through the Program Coordinator and must be done before the student can submit the thesis or culminating written report. This application will list the student's program of courses and other requirements which must be completed for the degree.

The Program coordinator send the advancement to candidacy form to the College Dean and Graduate Dean who forwards it to the graduation unit of the Registrar's Office. It is used for the degree check after the student has submitted an Application for Graduation from the Office of the Registrar.

I. University Requirements

In addition to the program requirements, students must meet all university requirements for the master's degree. Students should consult the section of the catalog entitled "Requirements for the Master's Degree