

ENVIRONMENTAL SCIENCE

Program Purpose: Students participating in the Environmental Science program will examine the role and impacts of humans in the ecosystem.

Environmental Science is a multidisciplinary field covering the physical, biological, economical, and legal aspects of the environment.

Transfer Information

Students planning to transfer need to consult with a counselor, prepare a Student Education Plan, and take advantage of the support services available in the Career Transfer Center located in Fountain Hall, (805) 378-1536.

ENSC M01 Environmental Science 3 Units

In-Class Hours: 52.5 lecture

Examines the ways in which Earth operates. Includes understanding the mechanics of living and physical processes in biology, chemistry, physics, and the earth sciences. Emphasizes the relationship between humans and their environment, and the impact of technology on the global environment. Surveys energy, air, water, soil pollution, and conservation, and present sustainable solutions to these practices.

Grade Modes: Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

Field Trips: May be required

Degree Applicability: Applies to Associate Degree

AA/AS GE: A2

Transfer Credit: CSU, UC

UC Credit Limitations: None

CSU GE-Breadth: B1

IGETC: 5A

ENSC M01L Environmental Science Lab 1 Unit

In-Class Hours: 52.5 laboratory

Prerequisites: ENSC M01

Explores environmental processes associated with life, Earth, and human society, including weather and climate, soil health, decomposition and cellular respiration, photosynthesis, population growth, food webs, biodiversity, the energy that powers life, the water cycle, water quality, and ocean acidification. Emphasizes scientific methodology and sampling methods to explore and test hypotheses in weekly labs.

Grade Modes: Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

Field Trips: May be required

Degree Applicability: Applies to Associate Degree

AA/AS GE: A2

Transfer Credit: CSU, UC

UC Credit Limitations: None

CSU GE-Breadth: B3

IGETC: 5C

ENSC M02 Environment and Human Interactions 4 Units

In-Class Hours: 52.5 lecture, 52.5 laboratory

Examines the biological principles that govern ecosystems and help you analyze environmental problems that relate to the human population. Covers topics such as population growth, biotic communities, weather and climate, soil health, decomposition, cellular respiration, photosynthesis, the water cycle, energy, water quality, ocean acidification, the urban environment, environmental health, toxicology, and sustainable development. Includes the study of California's major plant communities and their local environments. Emphasizes statistical and scientific methods to explore and test hypotheses in weekly labs.

Grade Modes: Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

Field Trips: May be required

Degree Applicability: Applies to Associate Degree

AA/AS GE: A1

Transfer Credit: CSU, UC

UC Credit Limitations: None

CSU GE-Breadth: B2, B3

IGETC: 5B, 5C

ENSC M03 Energy Resources and Conservation 3 Units

In-Class Hours: 52.5 lecture

Surveys the energy resources that power our global civilization. Includes conventional and alternative methods of energy production, transportation, decarbonization, and the physics of energy use.

Emphasizes the application of energy conservation in our economic and technological landscape, with attention to complexities that exist among the 3 Es: energy, the economy, and the environment.

Grade Modes: Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

Field Trips: May be required

Degree Applicability: Applies to Associate Degree

AA/AS GE: A2

Transfer Credit: CSU, UC

UC Credit Limitations: None

CSU GE-Breadth: B1

IGETC: None

ENSC M07 Applied Solar Technology 3 Units

In-Class Hours: 52.5 lecture

Surveys the fundamentals of solar technology and photovoltaic systems with a focus on design, installation, and maintenance. Emphasizes mechanical and electrical integration, system sizing, array layout, mounting, related electric codes, workplace safety standards, and troubleshooting.

Grade Modes: Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

Field Trips: May be required

Degree Applicability: Applies to Associate Degree

AA/AS GE: None

Transfer Credit: CSU

UC Credit Limitations: None

CSU GE-Breadth: None

IGETC: None

ENSC M07L Applied Solar Technology Lab 1 Unit*In-Class Hours:* 52.5 laboratory*Prerequisites:* ENSC M07 or concurrent enrollment

Provides hands-on learning of solar technology and photovoltaic systems. Emphasizes design, installation, and maintenance of residential and commercial projects.

Grade Modes: Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading**Field Trips:** Will be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**CSU GE-Breadth:** None**IGETC:** None**ENSC M80 Internship in Environmental Science 1-4 Units***In-Class Hours:* 60-240 unpaid cooperative, 75-300 paid cooperative*Prerequisites:* Completion of or concurrent enrollment in one course in the discipline and instructor approval

Provides on-the-job learning to develop effective work habits, attitudes, and career awareness in paid or unpaid internships that are related to the discipline. Involves the development and documentation of learning objectives and the completion of an internship paper, presentation, or project. Includes both workplace supervisor and faculty adviser feedback and/or written evaluations. Course Credit Limitation: To take this course, contact the Career Transfer Center. Requires orientation session. Students receive one unit of credit for each 60 hours unpaid or 75 hours paid work. May enroll in up to 4 units a semester with a maximum of 16 total units of any type of work experience.

Grade Modes: Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading**Repeatable for Credit:** Course may be taken up to 3 times for credit.**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**CSU GE-Breadth:** None**IGETC:** None**ENSC M122 Independent Study - Environmental Science 0.5-3 Units***In-Class Hours:* 26.25-157.5 laboratory*Prerequisites:* Completion of one course in Environmental Science and instructor approval

Allows independent study for students who wish to extend their knowledge of a particular area of environmental science through research and study. Utilizes an approved independent project. Includes one-on-one work with instructor. Interested students should contact an environmental science instructor for assistance in developing a contract for learning about a specific topic.

Grade Modes: Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**CSU GE-Breadth:** None**IGETC:** None

NONCREDIT courses

ENSC M901 Introduction to Photovoltaics (PV) 0 Units*In-Class Hours:* 32 noncredit*Advisories/Rec Prep:* MATH M05 and MATH M06 or MATH M07

Presents the sun as a resource in building design. Covers photovoltaics (PV) cells and modules, inverters, high-level PV system design, and the economics of PV. Aimed at the incumbent worker in the photovoltaics field who wishes to understand the underlying principles of photovoltaics. Safety in the photovoltaic workplace is covered in ENSC M903 OSHA 10 Construction Safety.

Grade Modes: Pass/No Pass Grading, Student Option- Letter/Credit**Repeatable for Credit:** Unlimited.**Degree Applicability:** Noncredit course; not applicable for degree credit**AA/AS GE:** None**Transfer Credit:** None**ENSC M903 OSHA 10 Construction Safety 0 Units***In-Class Hours:* 17.5 noncredit

Examines Occupational Safety and Health Administration (OSHA) policies, procedures, and standards, as well as construction safety and health principles. Includes scope and applications of the OSHA construction standards. Emphasizes those areas that are the most hazardous, using OSHA standards as a guide.

Grade Modes: Pass/No Pass Grading, Student Option- Letter/Credit**Repeatable for Credit:** Unlimited.**Degree Applicability:** Noncredit course; not applicable for degree credit**AA/AS GE:** None**Transfer Credit:** None**ENSC M971 Landscape Management - Plant Selection 0 Units***In-Class Hours:* 30 noncredit

Examines plant characteristics as identification features. Emphasizes landscape plant functional characteristics applicable to California landscapes, e.g. drought tolerance, fire resistance, erosion control. Examines plant cultural requirements in relation to landscape site conditions. Provides a baseline for developing landscape plant palettes based upon aesthetic features, functionality and site conditions.

Grade Modes: Pass/No Pass Grading**Repeatable for Credit:** Unlimited.**Field Trips:** May be required**Degree Applicability:** Noncredit course; not applicable for degree credit**AA/AS GE:** None**Transfer Credit:** None**ENSC M972 Financial Principles for Landscape Contracting 0 Units***In-Class Hours:* 20 noncredit

Discusses and illustrates financial management principles associated with the landscape design/build, maintenance and construction companies. Focuses on strategic planning, organization infrastructure, budgeting, pricing, estimating, job cost management, and proactive financial management.

Grade Modes: Pass/No Pass Grading**Repeatable for Credit:** Unlimited.**Field Trips:** May be required**Degree Applicability:** Noncredit course; not applicable for degree credit**AA/AS GE:** None**Transfer Credit:** None

ENSC M973 Management Principles for Landscape Contracting 0 Units

In-Class Hours: 20 noncredit

Discusses and illustrates applications of business management practices to the landscape industry. Emphasizes human resource management in terms of federal employment compliance, employee motivation for productivity enhancement, professional development, and leadership qualities. Introduces the concept of lean management as a resource for increasing production efficiency, and profitability.

Grade Modes: Pass/No Pass Grading

Repeatable for Credit: Unlimited.

Field Trips: May be required

Degree Applicability: Noncredit course; not applicable for degree credit

AA/AS GE: None

Transfer Credit: None

- Environmental Science, Associate in Science for Transfer (<http://catalog.vcccd.edu/moorpark/programs-courses/environmental-science/environmental-science-ast/>)
- Environmental Studies, Associate in Arts (<http://catalog.vcccd.edu/moorpark/programs-courses/environmental-science/environmental-studies-aa/>)
- Environmental Science, Associate in Science (<http://catalog.vcccd.edu/moorpark/programs-courses/environmental-science/environmental-science-as/>)
- Photovoltaic Technology, Proficiency Award (<http://catalog.vcccd.edu/moorpark/programs-courses/environmental-science/photovoltaic-technology-pa/>)

Dean

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