

MONTGOMERY COUNTY COMMUNITY COLLEGE
 BIO 115
 Environmental Biology
 3-3-0

CATALOG DESCRIPTION

This course is designed to explore three aspects of the environment: the interacting components of the environment apart from humans, the impact of humans and contemporary cultures on the environment, and local pollution problems and possible solutions.

REQUISITES

Previous Course Requirements

None

Concurrent Course Requirements

None

LEARNING OUTCOMES Upon successful completion of this course, the student will be able to:	LEARNING ACTIVITIES	EVALUATION METHODS
1. Describe energy flow, nutrient cycling and the population dynamics of ecosystems.	Lectures Class Discussions Field Trips Presentations Written Exams Research Papers Case Studies	Quizzes Tests
2. Examine current environmental problems in relation to the way the world naturally works and act accordingly.	Lectures Class Discussions Field Trips Presentations Written Exams Research Papers Case Studies	Quizzes Tests Research Papers Class Discussion
3. Describe the complexity of environmental issues and the information necessary to alleviate or mitigate the problems.	Lectures Class Discussions Field Trips Presentations Written Exams Research Papers Case Studies	Quizzes Tests Research Papers Class Discussion

At the conclusion of each semester/session, assessment of the learning outcomes will be completed by course faculty using the listed evaluation method(s). Aggregated results will be submitted to the Associate Vice President of Academic Affairs. The benchmark for each learning outcome is that *70% of students will meet or exceed outcome criteria.*

SEQUENCE OF TOPICS

1. Analysis of ecosystems by examining the flow of energy, the biogeochemical cycles, the principles of population growth
2. Energy flow in human cultures, the pathway of various nutrients and the growth of human population.
3. Natural world functions a detailed examination of local environmental problems.

LEARNING MATERIALS

Textbook: Sherman, Daniel J. & Montgomery, David R. (2024). Environmental Science and Sustainability (2nd ed). W. W. Norton & Company

Open Educational Resource Textbook: Fisher, Matthew R. (2024). Environmental Biology. [https://bio.libretexts.org/Bookshelves/Ecology/Environmental_Biology_\(Fisher\)](https://bio.libretexts.org/Bookshelves/Ecology/Environmental_Biology_(Fisher))

Current periodicals pertaining to environmental issues; government documents from the national, regional, state and local environmental agencies; appropriate pamphlets and books as well as other appropriate resources will be used.

Other learning materials may be required and made available directly to the student and/or via the College's Libraries and/or course management system.

COURSE APPROVAL:

Prepared by: Dr. Richard J. Andren	Date: 6/1/1998
VPAA/Provost Compliance Verification: Dr. Bradley Gottfried	Date: 1998
Revised by: Jerry Coleman	Date: 3/2013
VPAA/Provost or designee Compliance Verification: Victoria L. Bastecki-Perez, Ed.D.	Date: 6/10/2013
Revised by: Debbie Dalrymple	Date: 6/27/2016
VPAA/Provost or designee Compliance Verification: Victoria L. Bastecki-Perez, Ed.D.	Date: 6/27/2016
Revised by: Debbie Dalrymple	Date: 12/18/2017
VPAA/Provost or designee Compliance Verification: Victoria L. Bastecki-Perez, Ed.D.	Date: 12/18/2017
Revised by: Cee Carlson	Date: 11/5/2024
VPAA or designee Compliance Verification:	Date: 11/13/2024



This course is consistent with Montgomery County Community College's mission. It was developed, approved and will be delivered in full compliance with the policies and procedures established by the College.