

BIOL 3V00 ECOSYSTEMS

Syllabus

Course Information

<i>Course Number/Section</i>	BIOL 3V00
<i>Course Title</i>	Ecosystem
<i>Course Credits</i>	3 semester credit hours
<i>Term</i>	Summer 2024

Professor Contact Information

<i>Professor</i>	Mehmet Candas
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<i>Online Office Hours</i>	With appointment only MW 9-10 AM via Teams

Course Pre-requisites, Co-requisites, and/or Other Restrictions

Successful completion of BIOL 2311

Course Description

Ecosystems are defined as areas where biological organisms and abiotic environment are in interactions. The course reviews the fundamental characteristics of ecosystems and explores the major themes that integrate biological and environmental sciences to understand and appreciate the biodiversity and interconnectedness of Earth's ecosystems. Biological principles that govern the structure and function of terrestrial, freshwater, and marine ecosystems are reviewed to gain a holistic and global perspective on ecosystem ecology. It emphasizes the notion that all organisms function within interdependent communities in ecosystems. It also lays out some of the important questions related to biodiversity, sustainability, and the future of Earth's ecosystems as organisms, species, and communities are impacted by human activity. Natural processes that shape the flow of matter and energy and nutrient cycles are reviewed to comprehend how ecosystems support life and how we can manage ecosystems better. Emphasis is given on carbon and nutrient cycling in the context of climate change and other global change drivers (e.g., agriculture, food production, land use change, and altered disturbance regimes) that have significant impacts on the state of ecosystems. Accordingly, the course explores the social, ecological, and philosophical dimensions of biological diversity conservation and natural resource management, prompting to define key problems and envision alternative possibilities for the future. The course positions ecosystem science as an essential study that integrates core concepts of biological sciences that covers the basic molecular, cellular, physiological, and ecological processes to understand networks, interactions, and dynamics within ecosystems. Applications of biological sciences in the context of ecosystem studies have great potential to contribute to many areas. Particularly, ecosystem goods and services are crucial to our survival and economic development as they constitute the basis for food, feed, fiber, fuel, medicine, and industrial raw material production, among many other benefits.

Student Learning Objectives/Outcomes

At the end of this course, students will:

- understand the general attributes of ecosystem structure and function.
- comprehend flow of energy and nutrient cycling in the environment.
- appreciate biodiversity and ecosystem services and their relation to humans and sustainability of life.
- gain insight into social, ecological, and philosophical dimensions of the conservation of biological diversity.
- gain insight into renewable energy sources and sustainable agriculture.
- understand how ecosystems are changing.
- consider and evaluate future scenarios for ecosystems.
- Be capable of analyzing technical articles about ecosystems ecology.

Required Textbooks and Materials

Environmental Science: A Need for Living Sustainably v1.0 by Joseph Shostell

ISBN (Print): 978-1-4533-9137-2

ISBN (Digital): 978-1-4533-9138-9

Textbooks can be ordered online or purchased at the [UT Dallas Bookstore](#).

Technical Requirements

In addition to a confident level of computer and Internet literacy, certain minimum technical requirements must be met to enable a successful learning experience. Please review the important technical requirements on the [Getting Started with eLearning](#) webpage.

Course Access and Navigation

This course can be accessed using your UT Dallas NetID account on the [eLearning](#) website.

Please see the course access and navigation section of the [Getting Started with eLearning](#) webpage for more information.

To become familiar with the eLearning tool, please see the [Student eLearning Tutorials](#) webpage.

UT Dallas provides eLearning technical support 24 hours a day, 7 days a week. The [eLearning Support Center](#) includes a toll-free telephone number for immediate assistance (1-866-588-3192), email request service, and an online chat service.

Communication

This course utilizes online tools for interaction and communication. Some external communication tools such as regular email and a web conferencing tool may also be used during the semester. For more details, please visit the [Student eLearning Tutorials](#) webpage for video demonstrations on eLearning tools.

Student emails and discussion board messages will be answered within 3 working days under normal circumstances.

Email Use

The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of everyone in an email exchange. The university encourages all official student email correspondence to be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individuals corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.

Distance Learning Student Resources

Online students have access to resources including the McDermott Library, Academic Advising, The AccessAbility Resource Center, and many others. Please see the [eLearning Current Students](#) webpage for more information.

Server Unavailability or Other Technical Difficulties

The University is committed to providing a reliable learning management system to all users. However, in the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will provide appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and also contact the online [eLearning Help Desk](#). The instructor and the eLearning Help Desk will work with the student to resolve any issues at the earliest possible time.

If you experience any issues with your UT Dallas account, contact the UT Dallas Office of Information Technology Help Desk: assist@utdallas.edu or call 972-883-2911. UT Dallas provides eLearning technical support 24 hours a day/7 day a week. The services include a toll-free telephone number for immediate assistance (1-866-588-3192), email request service, and an online chat service. Please use this link to access the UTD eLearning Helpdesk: <http://www.utdallas.edu/elearning/eLearningHelpdesk.html>.

Academic Calendar

MODULE	CHPS	TOPICS	TEST DATE
I	1	Introduction to Environmental Science: Sustainability	TEST 1 June 17
	3	Matter, Energy, and the Environment	
II	4	Evolution, Populations, and Communities	TEST 2 July 1
	5	Ecosystems and Biomes	
III	7	Preserving Biodiversity	TEST 3 July 15
	8	Agriculture, Food, and the Environment	
IV	10	Water Resources	TEST 4 July 29
	11	Air Quality, Climate Change, and Air Pollution	
V	14	Renewable Energy Sources	TEST 5 August 9
	15	Environmental Health and Toxicology	
	17	Sustainable Community Development and Urbanization	

Class Materials

The Instructor may provide class materials that will be made available to all students registered for this class as they are intended to supplement the classroom experience. These materials may be downloaded during the course; however, these materials are for registered students' use only. Classroom materials may not be reproduced or shared with those not in class or uploaded to other online environments except to implement an approved AccessAbility Resource Center accommodation. Failure to comply with these University requirements is a violation of the [Student Code of Conduct](#).

Class Recordings

Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Unless the AccessAbility Resource Center has approved the student to record the instruction, students are expressly prohibited from recording any part of this course. Recordings may not be published, reproduced, or shared with those not in the class, or uploaded to other online environments except to implement an approved AccessAbility Resource Center accommodation. Failure to comply with these University requirements is a violation of the [Student Code of Conduct](#).

Copyright Notice

It is the policy of the University of Texas at Dallas to adhere to the requirements of the United States Copyright Law of 1976, as amended, (Title 17, United States Code), including ensuring that the restrictions that apply to the reproduction of software are adhered to and that the bounds of copying permissible under the fair use doctrine are not exceeded. Copying, displaying, reproducing, or distributing copyrighted material may infringe upon the copyright owner's rights. Unauthorized distribution of copyrighted material, including unauthorized peer-to-peer file sharing, may subject students to appropriate disciplinary action as well as civil and criminal penalties. Usage of such material is only appropriate when that usage constitutes "fair use" under the Copyright Act. For more information about the fair use exemption: <http://copyright.lib.utexas.edu/copypol2.html>.

As a UT Dallas student, you are required to follow UT Dallas' copyright policy (UTDPP1043 at <http://policy.utdallas.edu/utdpp1043>) and the UT System's policy, UTS107 at <http://www.utsystem.edu/board-of-regents/policy-library/policies/uts107-use-copyrighted-materials>.

Tests and Grading Policy

- There are 5 online tests. Each test covers topics specified in learning modules. There is no comprehensive final test.
- Tests may have 50-60 questions with multiple choice, true/false, and matching questions.
- Tests will be open for access in eLearning on the dates specified in the schedule.
- Tests are timed for 75 minutes, and they must be completed 8:00 AM - 8:00 PM on the dates given.
- Tests must be completed with only one attempt and answers must be submitted during access.
- At the end of the time, the test closes and answers are submitted automatically.
- Submissions are final; no change is applied to submitted tests.
- Scores are posted automatically based on a total of 100 points for each test.
- Partially completed tests will receive a score according to the completed portion of the test.
- Scores for missed or not taken/not completed tests are registered "zero".

- There is no make-up or retake for tests, and no test score is dropped from final grade calculation.
- Completion of all 5 tests is required.
- There is no extra credit.
- There is no comprehensive final exam.
- Letter grades are based on the average of test scores, and are determined according to the following scale:

Letter Grade	Percentage grade
A+	95-100
A	84-94
A-	75-83
B+	70-74
B	65-69
B-	60-64
C+	55-59
C	50-54
C-	45-49
D+	40-44
D	36-39
D-	30-35
F	<30

- Midterm letter grades will be based on the test scores available at the time of midterm grade posting. End of semester final letter grade will be based on an average of five test scores. If the average numerical score is fractional, it will be rounded off to the nearest integer value, i.e., 0.5 - 0.9 will be rounded up to the next highest whole number. For example, 83.5 would be rounded to 84, but 83.4 would be rounded to 83.

Classroom Citizenship

The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD publication, A to Z Guide, which is provided to all registered students each academic year.

The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the Rules and Regulations, Board of Regents, The University of Texas System, Part 1, Chapter VI, Section 3, and in Title V, Rules on Student Services and Activities of the university's Handbook of Operating Procedures. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391).

A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.

Academic Integrity

The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.

Scholastic dishonesty includes, but is not limited to, statements, acts or omissions related to applications for enrollment or the award of a degree, and/or the submission as one's own work or material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings.

Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

Comet Creed

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

"As a Comet, I pledge honesty, integrity, and service in all that I do."

Withdrawal from Class

The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, we cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.

Accommodations for Students with Disabilities

Please review [the section](#) within the UT Dallas Syllabus Policies and Procedures webpage.

Academic Support Resources

Please visit the [Academic Support Resources](#) page to view the University's academic support resources for all students.

UT Dallas Syllabus Policies and Procedures

Please visit the [Syllabus Policies](#) page to view the University's policies and procedures segment of the course syllabus.

Please review the catalog sections regarding the [credit/no credit](#) or [pass/fail](#) grading option and withdrawal from class.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.