Science 3305, Fall, 2013
Environmental Systems, Pfeiffer
Section 001 M, W 7:00-8:30pm Room 100 Life Science

Instructor Information:

Dr. Marius Pfeiffer. 817-515-6846

Office hour immediately before and after the class meets.

Email:

marius.pfeiffer@uta.edu

College of Science website:

http://www.uta.edu/cos

College of Science Phone: (Rita Anderson) 817-272-2129

Course website on Blackboard:

https://elearn.uta.edu/webapps/login/

Grading:

Your grade will be determined as follows

A. Four lecture examinations and a comprehensive final: 20% of total grade each.
B. Each exam has a homework component worth 20% of the exam grade.
C. A missed exam can be replaced by the final exam grade.

B. Grades: A = 90-100; B = 80-89; C = 70-79; D = 60-69; F = below 60.

Use scantron 882 E and a #2 pencil. Erasures should be called to the attention of the professor at the time the scantron is turned in on exam day.

Class notes , links and assignments will be posted on the Blackboard website. Students should form study groups in anticipation of the first exam.

Textbook: 'Living in the Environment' 17th edition by Miller and Spoolman. Available in bookstore.

ISBN

Hardback -10:0-538-49414-1

Looseleaf-10:0-538-49414-x

E-book available

Withdrawal: Census date and Final Drop Date

In order to receive a grade of W, you must drop by Oct 30. Drop forms must be brought to class for me to sign and then taken to College of Science offices. See University Drop Policy.

Important Dates

Sept 16, Exam 1 over lessons 1-3

Oct 07, Exam 2, Lessons 4-6

Oct 28, Exam 3, Lessons 7-9

Nov 18, Exam 4, Lessons 10-12

Dec 11, Exam over Lessons 13-15, Comprehensive final.

Sep 02 Labor Day holiday
Sep 09 Census date
Oct 30 Drop day
Nov 28-29 Thanksgiving holiday
Dec 04 Last day of class
Dec 11 Final Exam

Lessons-

Lesson
1) Basics of matter and energy.
2) Basic Chemistry.
3) Geology, tectonics.
4) Atmosphere, hydrosphere and climate.
5) Biogeochemical cycling.
6) Biochemical Evolution.
7) Biota, biodiversity.
8) Ecology, biomes and populations.
9) Ecosystems
10) Dynamics
11) Exploitation
12) Population dynamics
13) Agriculture
14) Energy
15) Prognosis and recommendations.

MAKE-UP LECTURE EXAMINATIONS:
Makeup will consist of double credit for the final cumulative exam.

COURSE DESCRIPTION:
Topics include a discussion of the major characteristics of ecological populations, communities and ecosystems along with current analysis of major local and global environmental problems.

STUDENT LEARNING OUTCOMES:
1) Students will describe the relationships between matter and energy and the basis for ecosystem's manipulation of matter and energy.
2) Students will describe trophic level manipulation of matter and energy characteristic of ecosystems..
3) The student will describe the mechanisms of biological adaptation and evolution.
4) The student will describe how populations grow and how population size relates to resource availability.
5) The student will summarize human population growth and its impact on the biosphere.
6) The student will relate the variation in global climate and the dependent distribution of life associated with specific climates.
7) The student will characterize the ecological roles of aquatic ecological systems and their general classification and distributions.
8) The student will summarize the roles, consequences and solutions to human destruction of biodiversity.
9) The student will summarize the global state of biodiversity.
10) The student will describe global food production, its effectiveness and effects on the biosphere.
11) The student will demonstrate the global water cycle and the effects of human activity on this.
12) The student will describe the structure of the earth, tectonic processes and the distribution of mineral resources in the earth's crust.
13) Students will review thermodynamics, describe the distribution, historical uses of fossil and nuclear power sources including issues of sustainability and safety.
14) Students will describe the chemical and biological environment humanity lives in and how that environment is changing.

15) Students will describe the atmosphere and the function of all gases and particles present. Students will define pollutants, their historical and predicted effects.
16) Students will describe climate historically, characterize present day climate change, the causes and impact of changing ozone levels at different levels in the atmosphere.
17) Students will identify sources, impacts and long term fates of water pollutants.

PREREQUISITE:
Biology 1282 or similar suggested.

MavMail:
UT Arlington has adopted MavMail (e-mail) as an official means of communication with students. Students are required to check MavMail regularly. Further information regarding your student email account can be found at: http://www.uta.edu/oit/email/

STUDENT RESPONSIBILITIES:
A. Familiarize yourself with course syllabus. Read each chapter assigned before the relevant lecture.
B. Attend class regularly, on time, and remain the entire class period. Attendance will be taken.
C. Assume responsibility for your own learning. I cannot teach you, I can only explain what you want to understand and guide you through the material.
D. Form a study group with 3-6 other students. A functioning study group will consistently perform better on exams.
E. Adhere strictly to standards of academic honesty as it applies to exams and any assignments we may devise.
F. Show respect for instructor and fellow students at all times. Do not telephone, text or use laptops for non-course material. I will promptly ask you to leave the class if those activities are more pressing for you. Please do not enter the class late, converse with students about non-relevant material, or interrupt me with issues unrelated to the material we are talking about.

ATTENDANCE POLICY:
Attendance is required at each lecture and excessive absences can potentially affect your course grade.

ACADEMIC DISHONESTY:
It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University. "Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts." (Regents' Rules and Regulations, Part One, Chapter VI, Section 3, Subsection 3.2, Subdivision 3.22).

AMERICANS WITH DISABILITIES ACT:
The university of Texas at Arlington is on record as being committed to both the spirit and letter of federal equal opportunity legislation: reference Public Law 93112--The Rehabilitation "Act

of 1973 as amended. With the passage of new federal legislation entitled Americans with Disabilities Act - (ADA), pursuant to section 504 of the Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens.
As a faculty member, I am required by law to provide "reasonable accommodation" to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing faculty at the beginning of the semester and in providing authorized documentation through designated administrative channels.

DROP FOR NONPAYMENT:
Payment must be received by the term due date or your registration will be cancelled. If your registration is cancelled for non-payment, you may reregister for classes but only is seats are available.

STUDENT SUPPORT SERVICES:
"The University of Texas at Arlington supports a variety of student success programs to help you connect with the University and achieve academic success. They include learning assistance, developmental education, advising and mentoring, admission and transition, and federally funded programs. Students requiring assistance academically, personally, or socially should contact the Office of Student Success Programs at 817-272-6107 (8-5 roughly).

AFTER HOURS SAFETY ESCORT:
The Sam Mav Escort service provides a service to assist students, faculty, staff and campus visitors to reach their destinations after regular business hours. The hours of service are 7:00pm to 3:00am, Sun-Thu evenings. Telephone 817-272-3381, press*, then 4 at the relevant prompts.