

SC 1101 Syllabus Fall 2009

SCIENCE, SOCIETY AND THE ENVIRONMENT 1

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LOCATION: SCI 109 Lecture

M,W 9:30-10:45 and 12:30 - 1:45

Office Hours: 11:15-12:15 M&W

Phone: 770-423-6183

Please check the following URL to determine if KSU is closed due to an ice or snow event

https://portal2.kennesaw.edu/pls/portal92/APP_SNOW.DYN_SHOW_STATUS.show

Also, WSB Channel 2 lists any school or University closings

SCIENCE 1101: SCIENCE, SOCIETY AND THE ENVIRONMENT 1

A Course in the General Education Program

Program Description: The General Education Program at KSU offers a common academic experience for all its students. In a series of interrelated courses in the liberal arts and sciences, it provides the opportunity for students to acquire the intellectual skills and knowledge characteristic of educated persons. Thus, it lays the foundation for success in their academic, professional, and personal lives. Whereas the major program contributes to a college education depth in a designated specialization, the General Education Program provides breadth by introducing and connecting a variety of disciplines.

Program Goals: The General Education Program at KSU has five goals. During the course of the program, students should achieve the following:

1. Develop productive habits
2. Develop effective communication skills
3. Expand knowledge and understanding
4. Expand creative capabilities
5. Exhibit understanding of the impact of ethical and aesthetic values

Course Description: This course is the first in a two part sequence that fulfills the general education science requirement. Using the context of environmental issues, it introduces students to the basic nature of matter, energy, and living systems and to the nature of science. Emphasis is placed on making decisions about scientific issues. Science 1101 is not designed for science majors and is not a prerequisite for introductory courses in biology, chemistry, or physics.

Purpose: The purpose of this course and this sequence is to strengthen the appreciation for and understanding of science and its role in society and to provide students with skills and information they need to make informed decisions in their personal and public lives.

Course Objectives: Upon completion of this course, students will understand the basic nature of science as well as that of matter, energy, and living systems. In addition, students will be able to critique simple scientific investigations. Students will understand the interdependence among earth's systems.

Learning Objectives: Students completing this course will be able to perform the following tasks.

NATURE OF SCIENCE

1. Design and/ or critique simple experiments
2. Use statistics to analyze empirical data and draw conclusions

3. Organize and display data on tables and graphs
4. Differentiate between scientific and non-scientific hypotheses
5. Consider the objective nature of science in drawing conclusions
6. Explain the dynamic nature of scientific knowledge
7. Read and explain scientific articles written for lay persons

NATURE OF ENERGY, MATTER, AND LIVING SYSTEMS

1. Understand the Laws, Principles and Theories of the Mechanical Universe
2. Understand the History of Science leading to and development of Laws, Principles and Theories of Applied Science
3. Identify the consequences of the laws of thermodynamics
4. Describe the structure and reactivity of matter at the atomic and molecular levels
5. Describe the cycling of major elements through the environment and make predictions about the consequences of disruptions to these cycles
6. Explain the functions of and reciprocal nature of photosynthesis and respiration
7. Understand the influence of politics on Scientific research, research using computer modeling and dissemination of collected data

ECOSYSTEMS

1. Describe the tropic model for the flow of energy through an ecosystem
2. Describe the structure of an ecosystem, identifying the roles and types of interactions between different organisms
3. Predict major consequences of a given disturbance in an ecosystem
4. Understand the factors that govern terrestrial Biomes
5. Understand the evidence for the Theory of Evolution and Darwinian Natural Selection

YOU MUST BE COMPUTER LITERATE TO BE SUCCESSFUL IN THIS COURSE

YOU WILL NEED TO ACCESS THE ONLINE TESTS FROM CAMPUS (access from home computer possible if your computer is configured correctly with a low security level)

I WILL NOT ACCEPT ANY EXCUSES FOR YOUR INABILITY TO ACCESS AND COMPLETE THESE ONLINE TESTS, THERE ARE COMPUTER LABS IN ALL COLLEGES ON THE UNIVERSITY CAMPUS.

IT IS YOUR RESPONSIBILITY TO MAKE SURE YOUR HOME COMPUTER IS CONFIGURED CORRECTLY TO ACCESS AND COMPLETE THESE ONLINE GROUP ACTIVITY TESTS. **BUT...** The campus computer labs offer many hours of operation for you to complete these tasks on campus.

Required Text: Withgott, Jay and Scott Brecnan; "Environment – The Science Behind The Stories" 3rd Edition Pearson, Benjamin, Cummings 2008

Topic	Chapter
Introduction: Historical Perspective Empirical Science	
Nature of Science: Scientific Method	1
Ordered Universe (Newtonian Mechanics)	

Energy, Thermodynamics	
	Exam 1 09/30/09 (tentative)
Electromagnetic Spectrum (light)	4
Atomic Theory	
Chemical Equations, Formula	
Chemical bonding	
	Exam 2 10/28/09 (tentative)
Biogeochemical Cycles	5,6,7
Ecology, Ecosystems	7
Earth Biomes	20
Evolution and Natural Selection	21
Pollution, Conservation	21

FINAL EXAM DATES

9:30 class 12/07/09 at 9:30 and 12:30 class 12/07/09 at 12:30

Learning Communities C26, C27 and C28:

In addition to all assignments for this class, you will be expected to attend my lectures, attend special programs provided (First Aid and CPR Training) certification opportunities by Red Cross as first responders and on September 14, 2009 Speaker General Honoree appearance on campus for address and book signing session.

Please Note:

CLASS CANCELLED ON 09/14/09 – LEARNING COMMUNITIES MANDATORY ATTENDANCE AT GENERAL HONOREE SPEECH

MY LECTURE NOTES OUTLINE CAN BE ACCESSED ONLINE WHEN YOU HAVE REGISTERED ON MY WEB SITE AND HAVE A 4 DIGIT ID #

The LECTURE schedule is tentative. I may choose to eliminate some topics and/or spend more time on other topics. Also, not all of the topics are discussed in detail in the Cunningham text. You may want to obtain a College level intro text in physical science. The library has such textbooks. **DO NOT GO TO THE CAMPUS BOOKSTORE AND LOOK FOR ALTERNATE TEXTS.** However, the General bookstore may have used copies of a text or there are several on-line sources of these text types for purchase.

Attendance: It is to your benefit to attend class. Exams will be taken from lectures, class discussions, group activities and completed labs. Please arrive on time for lectures. Do not bring individuals not enrolled in class. NOTE: Exams are Multiple Guess (Optiscan). I will POST a review sheet on- line from which the exam is made, one week before the Exam. NOTE: Make-up exams will be given (one (1) make up exam per semester only with a valid excuse) to be taken immediately following your final exam. Be aware that the make up exam is NOT the same as the exam taken at the assigned time. Final Exam cannot be "made-up". It must be taken at the assigned time.

Grading Procedure For Course

Internet Activity (Amusement park physics)	25 pts
(due 09/23/09)	

INFO about this activity and due date is on my KSU index page under SCI 1101 problems

Tests online (6 tests 50 pts each)	300 pts
In class Exams (100 pts each)	300 pts
TOTAL	625 PTS

Please note the weight of each assignment. This scale is NOT weighted for **EXAMS** only. You will note that 300 points are exam points and the remaining 325 points are TOTALLY within YOUR control if you attend class, participate in class discussions, complete online activity tests and internet activity

Points earned for online tests, in=class exams and internet activity are additive. There are NO letter grades until the course end!!!

THERE ARE NO EXTRA CREDIT POINTS AVAILABLE (There are many points "built" into the course for you to be successful) Course grade is TOTAL # of points (each total listed below is the minimum number of points for that grade)
 A= 555, B=490, C=418, D=360 & F is less than 360

ON LINE LAB MANUAL at <http://science.kennesaw.edu/biophys/gened/1101labs> all on-line labs are active at the beginning of each module.

- SI Instructors – 9:30 Christina Nguyen and 12:30 Jesse Cole
- You will be required to complete 12 Labs in this course (please refer to the Lab Schedule listed by dates in the on-line Lab Manual).
- Lab 1 must be completed on campus in any computer lab. Print the info from the online lab manual and take with you to run the simulation in a computer lab (use any letter of fish you choose)
- USE THE ON-LINE LAB MANUAL FOR EACH LAB
- QUESTIONS FROM THE LABS COMPLETED (TO DATE) WILL BE ON THE EXAMS

ONLINE TESTS WORKSHEETS FOR VIDEOS, WEB ACTIVITY AND IN-CLASS DISCUSSIONS ARE ON THE INDEX PAGE OF MY KSU WEBSITE UNDER PRACTICES AND PROBLEMS: SCI 1101**

The first time you log on to the test site, you will need to enter your KSU ID # and your password. The password cannot exceed 10 characters of letters or letters and numbers. **(NO PUNCTUATION, SPACES OR SYMBOLS).** ***A page will then come up giving you YOUR Testing ID # that you will use the entire semester for in-class Exams AND online tests.

**** DO NOT share this information with anyone !!!!

The on-line tests will be active from Monday 12 AM until Friday at Midnight (There will be 6 tests each worth 50 pts)

Points are earned only when YOU COMPLETE THE ONLINE TEST **successfully** **NO EXCEPTIONS**

No Make-Up of online tests

THE DATES AND TITLES OF THE ONLINE ACTIVITY TESTS

Activity 1 Who Owns Scientific Data	start 08/31/09	CLOSE 09/04/09
Activity 2 Physics Problems	start 09/28/09	CLOSE 10/02/09
Activity 3 Chemistry Problems	start 10/26/09	CLOSE 10/30/09
Activity 4 Hot Planet Video	start 11/02/09	CLOSE 11/06/09
Activity 5 Microbes or Pole to Pole Video	start 11/16/09	CLOSE 11/20/09
Activity 6 Evolution Video	start 11/30/09	CLOSE 12/04/09

THERE **WILL NOT BE A LIST** OF ALL EARNED GRADES AVAILABLE TO YOU ON-LINE. YOU WILL EARN POINTS AND PRINT YOUR SCORE PAGES INDIVIDUALLY AS YOU TAKE THEM. IN CLASS EXAM GRADES WILL BE POSTED ON MY SITE UNDER EXAM GRADES A WEEK AFTER EXAM IS ADMINISTERED AND WILL REMAIN ONLINE FOR A WEEK , THEN REMOVED

For all the above videos there are worksheets on the index page of my KSU website under SCI 1101 problems and practices

ON-LINE tests are **available so you may print the test, click cancel and take your time to answer.**

You will then be able to log back in and submit your answers, then click the **SUBMIT** button

As soon as you submit your online test, you will be given your **score on a score page**

If the score page does not come up after you have submitted your completed test, then you have **not** successfully submitted your test !!!! You will be responsible for keeping up with your scores.

Every time you logon to print a test, to check whether a test is available or to submit your test answers, the exact time, date, IP address, successful completion of the test and your score page are automatically logged by the server, therefore any excuse for missing the deadline will not be accepted. It is to your benefit to take your online tests early rather than last minute, so in the event you have difficulty with submission (except the time constraints) I may be able to assist you so you will not miss the deadline

ACADEMIC WITHDRAWAL

NEW ACADEMIC WITHDRAWAL POLICY EFFECTIVE FALL SEMESTER 2004

Students may withdraw from one or more courses anytime before the last three weeks of the semester. However, as of Fall 2004, students will be allowed a maximum of eight total withdrawals if they enter KSU as a freshman. Students will be allowed one withdrawal per fifteen credit hours attempted, for a maximum of eight. Students who choose to pursue a second degree at KSU will be allowed two additional withdrawals. Students who entered KSU before the Fall of 2004 will be allowed one withdrawal per fifteen credit hours attempted for a maximum of eight. To withdraw, the student should complete an official withdrawal form in the Office of the Registrar. Students who officially withdraw from courses on or before the last day to withdraw without academic penalty will receive a "W". Students who officially withdraw after the last day to withdraw without academic penalty (and before the last three weeks of the semester) will receive a "WF", which will be counted as an "F" in calculation of their grade point average.

The only exceptions to these withdrawal regulations will be for instances involving unusual circumstances, which are fully documented. Students may appeal to the academic standing committee for consideration of unusual circumstances.

LAST DATE TO WITHDRAW WITHOUT ACADEMIC PENALTY-**OCTOBER 12, 2009**

Academic Integrity

Every KSU student is responsible for upholding the provisions of the Student code of Conduct, as published in the Undergraduate and Graduate catalogs. Section II of the Student Code of Conduct addresses the University's policy on academic honesty, including provisions regarding plagiarism and cheating, unauthorized access to University materials, misrepresentation/falsification of University records or academic malicious/intentional misuses of computer facilities and/or services, and misuse of student identification cards. Incidents of alleged academic misconduct will be handled through the established procedures of the University Judiciary Program, which includes either an "Informal" resolution by a faculty member, resulting in a grade adjustment, or a formal hearing procedure, which may subject a student to the Code of

Conduct's minimum one semester suspension requirement.