

From: Michael Brennan [mjbrennan1@yahoo.com]  
Sent: Wednesday, September 16, 2009 9:55 PM  
To: Baldwin, Priscilla  
Subject: Re: fall 2009 syllabi

MW 6:00 to 8:55 PM Section # 1102 in NATS 129  
Instructor: Mike Brennan  
Email: mjbrennan1@yahoo.com

Required Texts: Essentials of the Living World, Johnson AND Lab Manual for Bio 10, Mader.  
Course Objectives

This is a laboratory science course geared towards non-majors. The student should come away with an understanding of science both as a way of knowing and as a human activity. The student should also have an understanding of basic chemistry and physics as these affect biological and ecological processes. Additional topics will include metabolism and nutrition as these apply to individuals and ecosystems. A basic understanding of cell structure and function and of molecular genetics and biotechnology will be expected as will a grasp of Mendelian genetics. The student should be competent with the basics of ecology and evolution and a special lecture on human ecology will familiarize the student with the issues of peak oil and catastrophic climate change. A basic understanding of human and animal physiology will also be expected. Competence in the use of a compound microscope, dissection and simple laboratory procedures will be required in the lab. The student should also gain some familiarity with the major taxonomic kingdoms and planetary ecosystems.

Attendance and Conduct

It is pretty much impossible to pass the class without regular attendance. If you are going to miss a lecture exam, you must inform me two class meetings prior to the exam day. The make-up exam must be taken within two class periods of the missed exam date. Makeups on labs and lab practicals are impossible due to scheduling constraints. Because people will habitually arrive late and disturb the class upon entry, the doors to the classroom will be locked 30 minutes after lecture begins. It may also be advisable to get a good dose of sugar and caffeine before class so that you may be alert after a

long  
day of work and rush hour traffic.

### Cheating

If you are caught cheating, you will receive a zero for that particular assignment. The administration and records offices will be alerted as well so that a record of misbehavior can be established as necessary. Cheating includes, but is not restricted to copying, crib notes, plagiarism, use of Blackberries, cell phones, Palm Pilots or similar devices during exams and quizzes etc.

### Grading Policy

There will be three lecture exams worth 100 points each. The final exam will be non-cumulative and will be worth 100 points. Extra credit will not be given. The lab will consist of two major lab exams worth 50 points each. Each lab will also consist of a written assignment worth between 3 and 5 points. The total value of the daily lab assignments will be 60 points. A written class project will be worth an additional 40 points. There will be no grading curve. There will be no extra credit assignments. Letter grades will be delineated as follows:

#### Breakdown of points:

Lecture Exams: 3 @ 100 points each = 300 points  
Final Exam 100 points  
Lab Practicals: 2 @ 50 points each = 100 points  
Lab exercises: 15 @ 3 - 5 points each = 60 points  
Class Project: 40 points

Total points available = 600 points

#### Grading scale:

540 to 600 pts = A (90-100%)  
480 to 539 pts = B (80-89%)  
420 to 479 pts = C (70-79%)  
360 to 419 pts = D (60-69%)  
359 and below = F (59% and below)

### Course Schedule:

Aug 31 Sign in, Course intro, Science as a way of knowing. Text ch 1, lab handout.  
Sept 2 Basic chemistry and some physics. Text ch 3, lab manual ch 2.  
Sept 7 Labor Day, class will not meet  
Sept 9 Basic biochemistry. Text ch 3, lab manual ch 4  
Sept 14 Cell membranes and transport. Text ch 5, lab manuals ch 4 and 5  
Sept 16 Cell biology, Text ch 6.  
Sept 21 Physiology and cell respiration. Text ch 8.  
Sept 23 Lecture Exam 1.

Sept 28 Photosynthesis. Text ch 7, Lab handout.  
Sept 30 Cell replication and gamete formation. Text ch 9-10, Lab manual ch 5.  
Oct 5 Mendelian Inheritance. Text ch 23-24. Lab manual ch 17.  
Oct 7 DNA structure and function. Text ch 12.  
Oct 12 Gene regulation. Text ch 13, lab manual ch 23 & 24.  
Oct 14 Biotechnology, Text ch 14  
Oct 19 Exam 2, Lab manual ch 26 & 27.  
Oct 21 Viruses, bacteria and disease. Text ch 17  
Oct 26 Evolutionary biology. Text ch 15, lab manual ch 25 & 26  
Oct 28 Evolutionary biology cont'd, Text ch 2.  
Nov 2 Community Ecology. Text ch 34, lab manual ch 21.  
Nov 4 Community Ecology cont'd  
Nov 9 Population biology and ecological energetics. Text ch 21  
Nov 11 Human Ecology: Peak Oil and Climate Change. Text ch 23  
Nov 16 Exam 3  
Nov 18 Human Ecology cont'd  
Nov 23 Circulatory system. Text ch 25  
Nov 25 Circulatory system cont'd  
Nov 30 Respiratory system, Text ch 26  
Dec 2 Nervous system, Text ch 30  
Dec 7 Skeletal System, Text ch 24  
Dec 9 Muscle structure and function, Text ch 24  
Dec 14 Intro to biomechanics. Text ch 24.  
Dec 16, Final exam