Tentative Syllabus

Course: Biological Concepts Biol 100FYE; Section 005 Star Number 77478

Meets: Lecture: 9:00 AM- 9:50 AM, MWF; Waggoner 773
Laboratory/Discussion: 10:00 AM to 11:50 AM T, Waggoner 104

Description: A laboratory course recommended for non-biology majors, relating reproduction, heredity, evolution, ecology, and behavior to human life and the problems of society. This general education curriculum course does not count toward a major or minor in biology. IAI: L1 900L.

Lecture Instructor: Thomas H. Alton, PhD. Associate Professor
Waggoner Hall 252 telephone: 298-1145 fax: 298-2270
Office hours: MW 10:30 to 12:00, W 2:10 to 3:00,
email: th-alton@wiu.edu;

Lab Instructor: Ms. Mari Aanenson
Peer Mentor: Mr. Zac Andrew

Textbooks and other required materials:
One of the following:
McGraw-Hill Higher Education
MUST ORDER FROM PUBLISHER web site:

Other material as distributed in class

Also required: access to internet; searches will also be required. Assuming that it is functional, grades and other course material will be posted on WesternOnline (https://westernonline.wiu.edu: from on campus; from off campus go to http://wiu.edu pull down web tools menu.
You do need an ecom account.

INSTRUCTOR HAS THE LAST WORD: While other instructors also teach this course, and there are students who have taken this course in the past or other courses with this instructor, and academic advisors talk to these students and to you, it is important to recognize that with respect to course policies, detailed content, logistics, grading policies, the instructor of this section has the Last Word. If there are any questions or disagreements with expectations or advice from students, other faculty, advisors or others, please see the instructor for clarification.
Course Goals:
At the end of the course, the student should be able to:
1. To the extent required, begin to overcome the learning disabilities resulting from exposure to the No Child Left Behind program
2. Understand the way of scientific reasoning to the level of distinguishing scientific theories from nonscientific ideas
3. Understand the scientific meaning (as opposed to popular meaning) of the term “Theory”
4. Understand the essence of the major concepts of present day biology:
   A. Cell theory
   B. Gene theory
   C. Inheritance theory
   D. Theory of Evolution
   E. Theory of Multicellular Organisms
   F. Theories of Ecology
5. Understand applications of these concepts to specific areas including but not limited to:
   A. Developmental processes, especially human
   B. How lifestyle choices can affect long-term health
   C. Potentials and limitations of “molecular medicine”
   D. Appreciate the contributions, potential and dangers of the Biotechnology industries
   E. Potentials and limitations of the uses of genetically modified crops
   F. Reality and Dangers of Global Warming
   G. Effects of unlimited population growth
7. Recognize obvious examples of distortion and ignorance of underlying science in public discussions
8. Recognize the interdisciplinary nature of scientific inquiry
9. Recognize that scientific inquiry is a human act of creativity
10. Know how to learn how to learn about new developments; make learning a life-long activity

Attendance: You are responsible for lecture material and handouts even if there is material that is not in the textbook. Attendance at exams is required. Make up exams must be made up within one week of the regularly scheduled exam or quiz or within three days of return from the absence, whichever is later.

Course Requirements:
In order to pass the course you must complete all of the following requirements:
1. Pass the exams. Unexcused absences from two exams will result in a grade of F for the course regardless of performance on remaining exams and quizzes.
2. Complete the Laboratory exercises, including submission of reports as described in the lab syllabus. Please note the lab attendance policy.
3. Participate in the required FYE cocurricular activities

Exams: Exams will cover primarily material discussed in the lecture, lab and discussion and assigned readings in the textbook and material provided in class. The exams will consist of multiple choice questions, short answer and essay questions. The final exam will cover material of the entire course; the final is comprehensive.
Grade Determination: If you complete the course requirements, your grade will be determined based on your performance on the lecture exams, required papers and lab and discussions reports. Exams scores will be curved with the curve announced after each exam such that the top grade will be 100 pts or average of top 10% = 95 pts whichever is more favorable for all students. Required papers and lab and discussions reports will be graded on the University Standard scale. Final grades will be individually computed according to whichever method gives the higher grade for the individual student:

<table>
<thead>
<tr>
<th>Item</th>
<th>points</th>
<th>or</th>
<th>Grade Scaled to Final Grade:</th>
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</thead>
<tbody>
<tr>
<td>hour exams</td>
<td>100</td>
<td></td>
<td>&gt;90.0</td>
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<tr>
<td>Final exam</td>
<td>200</td>
<td>600</td>
<td>89.5-89.9</td>
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<tr>
<td>Cocurricular Activities</td>
<td>50</td>
<td>50</td>
<td>87.0-89.4</td>
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<tr>
<td>Lab reports,</td>
<td>150</td>
<td>150</td>
<td>80.0-86.9</td>
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<tr>
<td>Total</td>
<td>1000</td>
<td>1000</td>
<td>79.5-79.9</td>
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Disability Statement: "In accordance with University policy and the Americans with Disabilities Act (ADA), academic accommodations may be made for any student who notifies the instructor of the need for an accommodation. It is imperative that the student take the initiative to bring such needs to the instructor’s attention, as he/she is not legally permitted to inquire about such particular needs of students. Students who may require special assistance in emergency evacuations (i.e. fire, tornado, etc) should contact the instructor as to the most appropriate procedures to follow in such an emergency. Contact Disability Support Services at 298-2512 for additional services."

Without the legalese what I want it to mean: "It is the policy and practice of our university to create inclusive learning environments. If there are aspects of the instruction or design of this course that result in barriers to your inclusion or to accurate assessment of achievement please notify the instructor as soon as possible. Students are also welcome to contact the disability service office." (with great thanks to Prof. R. Smith of RPTA)

Military Obligations, First Responders, Others: Individuals who are members of the military who have training obligations, pre- or post-deployment responsibilities, etc. are fully excused from any course requirements on the days in question. Every effort will be made to insure that the course subject matter of those days will be made fully available. Exams, paper due dates, will be rescheduled. The only requirement is to inform Dr. Alton of the impending obligations. First responders by the very nature of the job cannot know in advance of the requirement for absences, and may be called out of class. Please inform Dr. Alton that you have First Responder obligations that required your absence. People can very quickly develop symptoms that make participation in class impossible, and people may have friends and family who suddenly suffer illness or injury or other things that make it very difficult to participate in class activities. Dr. Alton is confronted with these same kinds of issues. Please inform Dr. Alton as soon as possible
of the general nature of the absence so the work can be made up. Some students are members of University or other organization groups that travel. Please inform Dr. Alton of any scheduled travel that requires absence from class, so that arrangements can be made for obtaining the class material and to the extent possible required work can be made up.

You Feel Sick Policy: If in YOUR judgement, you feel too sick to come to class, STAY HOME, and inform Dr. Alton, in general terms, via email why you did not come. Go to Beu or your primary care physician if you do not begin to recover. Unless abuse is suspected, your decision will not be questioned and no penalty will be imposed. Arrangements will be made to make up for missed class work.

Bad Weather Policy: If in YOUR judgement, it is unsafe to come to class, STAY HOME, and inform Dr. Alton via email why you did not come. Unless abuse is suspected, your decision will not be questioned and no penalty will be imposed. Arrangements will be made to make up for missed class work.

Student Help Resources
1. The course instructor during office hours or other times by arrangement or drop in
2. The Biological Assistance Center on MWF Wg 104
3. The Writing Center: “The mission of the University Writing Center, which serves the Macomb and Quad Cities campuses, is to offer students at any academic level collaborative, one-on-one consultation on writing projects from any discipline at any point in the writing process.”
4. The University Counseling Center “The University Counseling Center (UCC) provides free personal, academic, and career counseling services to currently enrolled Western Illinois University undergraduate and graduate students.” Located on the first floor of Memorial Hall. http://counseling.uchicago.edu/related/virtualpamphlets/study_skills.shtml

Student Responsibilities:
1. Inform Dr. Alton IMMEDIATELY in class if the material goes “over your head”
2. Make known to Dr. Alton needs for further assistance.
3. Bring to Dr. Alton’s attention any difficulties or concerns you have with the course.
4. Understand the Syllabus; Know the course requirements, due dates, exam dates and grading procedures.
5. Obtain all required books and materials for the course
6. Notify Dr. Alton if required books, etc. are not available in the bookstore.
7. Carry out assigned readings and other preparations for lecture and lab.
8. Attend and participate in all required laboratory activities except for excused absences.
9. Attend lectures.
10. Complete and submit all assignments by the due dates.
11. Use access to University computer network, especially the course WesternOnline site.
12. Obtain all material distributed in class lecture and lab.
13. Inform Dr. Alton of all absences known in advance.
14. Keep track of your grades; ask Dr. Alton if unsure
15. Be familiar with the information (including required forms, definitions, and time lines) contained in the following university web sites. Each student should access these web sites and carefully read the information they contain; your instructors will hold you responsible for knowing this information. If you have questions about any of the information contained in the web sites, ask Dr. Alton.
Department Statement on Plagiarism

DEPARTMENT OF BIOLOGICAL SCIENCES
Western Illinois University

Definition of Plagiarism

The faculty of the Department of Biological Sciences ascribes to a definition of plagiarism as expressed by V. E. McMillan in Writing Papers in the Biological Sciences (Bedford/St.Martin's Press, New York, pg 16)

"Plagiarism is the theft of someone else's words, work, or ideas. It includes such acts as (1) turning in a friend's paper and saying it is yours; (2) using another person's data or ideas without acknowledgement; (3) copying an author's exact words and putting them in your paper without quotation marks; and (4) using wording that is very similar to that of the original source but passing it off as entirely your own even while acknowledging the source."

This includes information in textbooks or laboratory manuals, honors and masters theses, all writing assignments, and images. The faculty of the Department attempt to monitor student writing assignments (essay exams, papers, laboratory reports, and other writing assignments or exercises) for incidence of plagiarism. If plagiarism is found, the faculty will discuss the situation with the student and indicate to the student the penalty for this academic dishonesty. Potential penalties include those cited in the academic dishonesty section of the WIU web page, http://www.wiu.edu/policies/ugdishst.shtm/

Recommendation Letters: In order to prevent recurrence of past abuses, recommendation letters will gladly be sent only after completion of the course unless you have had this instructor in another course. A meaningful recommendation letter requires understanding of one's performance in all aspects of the course, and that is possible only after all requirements of the course are completed and evaluated.

Tentative Lecture Subjects for B100, spring 2013
Subject to change as conditions require or recommend
Not necessarily in this order

What is Science?
Cells, pt 1
Human Embryonic Development
Human Reproductive Systems
Atoms, Molecules in Biology
Cells, pt 2
Genetic Material
DNA structure and function
Mendelian Genetics and complications
Genes, structure, function
Birth Control
HIV, Aids and other Sexually Transmitted Diseases (STD)
Cell cycle; Somatic vs. Germ Cell
Surrogacy, IVF, Fetal Research
Embryo cloning, Stem Cells
Molecular Basis of Life;
Metabolism: Respiration, Photosynthesis
Life on Earth: Bacteria
Life on Earth: Archaea
Life on Earth: Eucaryotic microorganisms
Bacteria Human Genetics
Human Variation
Animal models of human disease
Genetic Diseases, Cancer
Prospects for human gene therapy; future medicine
Nervous system: the brain, learning and behavior
Nervous system: spinal cord, injury, prospects for treatment
Immune system
Endocrine system
What is normal?
Genetic Determinism, what is it? how does it affect us?
Population growth
Biodiversity
Habitats
Pollution
Global Warming

Important Dates: Nota Bene: Exam topics are tentative; actual topics determined by topics covered in class
M, 1/14 First day of classes
M 1/21 Last day for open registration
M 1/28 last day for registration with restrictions
T, 2/12 Lincoln Birthday NO CLASSES
W 2/13 First Exam: Science, Theories, Cells, Human Embryonic and Fetal Development, STDs and pathogens, Matter, Energy, biological molecules
W 3/6 Second Exam: Metabolism, genetics, regulation of gene expression, cell cycle, bacteria, archaea, viruses, genes and velopment
M 3/11- F 3/15 Spring Break NO CLASSES
T 3/12 Early Warning grades emailed, on STARS
W 3/27 10 AM to 3 PM Disability Culture Day
Su 3/31 Last day to drop course with automatic W
W 4/5 Third Exam, genetic engineering, gene therapy; nerves, endocrine system, immunity, disease, cancer
F 4/26 Fourth Exam, immunity, disease, cancer, intro to ecology
W, 5/7 FINAL EXAM 1:00 PM all of above plus ecology, human influences on environment, global warming