SPECIFIC COURSE INFORMATION FOR BIO 106
Instructor: Melissa A. F. Daggett, Ph.D.
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***All class related email correspondence must be through a MWSU email account.***
Course Information: Available on WebCT
Scheduled Office Hours: MWF 10:00 - Noon
Lecture: Spratt Hall 205, MWF (Noon - 12:50 p.m.)
FINAL DATE: Wed. May 5th, 2010
Laboratory Sections:
Tuesday: 11:00 a.m. - 1:50 p.m.
Thursday: 8:00 a.m. - 10:50 a.m.
Thursday: 2:00 p.m. - 4:50 p.m.
Required Textbooks and Supplies:
Basic Laboratory Methods for Biotechnology 2nd ed. (ISBN-10: 0321570146)
Three ring binder (>2") recommended for holding course materials and handouts
Laboratory Notebook: Composition Book

COURSE INFORMATION
BIO 106: An integrated lecture and laboratory course for biology majors and students planning to take additional courses in biology, covering basic biochemistry, cell structure and function, molecular biology, genetics, physiology and development of plants and animals. Three hours lecture and three hours lab.
Prerequisite: ACT scores in Math of 20 or higher, English of 19 or higher, Reading of 19 or higher or the equivalent in each. LAS Writing.

COURSE OBJECTIVES
Upon successful completion of this course the student should be able to:
1. Describe basic biochemical molecules.
2. Identify cellular structures and know their functions.
3. Identify the basic principles of molecular genetics
4. Describe the basic principles of cellular metabolism.
5. Identify and explain the regulation, form and processes of the cell cycle and cell division.
6. Explain the basic principles of cellular physiology.
7. Apply the Scientific Method in a laboratory setting.
8. Correctly use scientific equipment.

METHODS AND SCHEDULE
This course shall consist of a series of reading assignments, lectures, case studies, class discussion periods, computer exercises, projects, quizzes, exams and laboratory exercises and projects. A variety of multimedia aids will be utilized including slides, videos, and computer simulations. Students will be required to use library and laboratory resources for obtaining journal and newspaper articles and for completing computer Internet assignments.
TOPICS COVERED
Introduction: Themes in the Study of Life
Basic Chemistry
Water and Solutions
Carbon and Macromolecules
DNA replication, Transcription and Translation
Cell Structure and Function
Membrane Structure and Function
Metabolism
Cellular Respiration
Photosynthesis
Cell Communication
Cell Cycle and Mitosis
Specialized Cells: Neurons, Muscles and Immune cells

EVALUATION
This class includes both lecture and lab concurrently, so points from both lecture and lab portions of the course will be used to calculate the final grade. The term grade will be based on the following (tentative and subject to change):

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams</td>
<td>4 (100 pts)</td>
<td>400</td>
</tr>
<tr>
<td>Lecture Quizzes</td>
<td>10 (10 pts)</td>
<td>100</td>
</tr>
<tr>
<td>Lab Quizzes</td>
<td>5 (15 pts)</td>
<td>75</td>
</tr>
<tr>
<td>Lab Practicals</td>
<td>5 (10 pts)</td>
<td>50</td>
</tr>
<tr>
<td>Lab Assignments</td>
<td>14 (5 pts)</td>
<td>70</td>
</tr>
<tr>
<td>Total Points possible</td>
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<td>695 pts.</td>
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Attendance is required for every lecture and laboratory. You are expected to attend both lectures and laboratories. Please note that if you do miss a lecture or laboratory, you are still responsible for the information presented.

The above will be graded no stricter than as follows:
A = 90-100% (i.e. 625 pts - 695 pts.)
B = 80-89% (i.e. 556 pts - 624 pts.)
C = 70-79% (i.e. 486 pts - 555 pts.)
D = 60-69% (i.e. 417 pts - 485 pts.)
F = 0-59% (i.e. < 417 pts.)

Grading curves will not be applied to final grades

ADDITIONAL COURSE INFORMATION FOR BIO 106
- Attendance is mandatory: In order to improve student learning and retention and to achieve compliance with federal financial aid policies, Western has implemented a mandatory attendance policy for students in all 100 & 200 level courses. Instructors are required to monitor and track student attendance. A student will be given an excused absence when acting as an official representative of the university. The student must provide prior written verification signed by the faculty/staff supervisor of the event. (Email notification alone will not be accepted).
- Completion of an “absence form” must be completed for every lecture or laboratory missed.
- Students are responsible for obtaining the information missed during an absence.
- Students are allowed 6 unexcused lecture absences and 1 unexcused lab absence for the whole semester.
- Upon the 7th unexcused lecture absence or the 2nd unexcused lab absence that occur before midterm the instructor will report the student to the Registrar’s Office, who will administratively withdraw the
student from the course and notify the Financial Aid Office to reduce financial aid as appropriate. If the 7th unexcused lecture absence or 2nd unexcused laboratory absence occurs after midterm, the instructor will delete the student from the class roster and assign a final grade of FA.

- Attendance in lecture will be documented by using your CPS clicker at any point during the class. Therefore you must bring your properly working clicker to every scheduled lecture, be on time, and leave your clicker on during the entire lecture period, unless otherwise instructed.
- Conflicts due to extracurricular activities, including athletics, should be brought to the instructor's attention as soon as possible. Failure to do so may result in an unexcused absence.

- **Lecture Exams (4 x 100 pts):**
  - 4 exams will be given as scheduled on the syllabus and weighted equally.
  - The format of exams will be announced in class. Possible formats include multiple choice, fill in the blank, essays or a combination of these formats. You are required to provide your own pen or pencil for every exam, as well your CPS responder. **Failure to bring a working clicker to an exam or quiz will result in a grade deduction of 5%.**
  - All exams must be completed during the scheduled class time. Students with disabilities that require special consideration, such as extra time for completing the exam, must provide the appropriate documentation from the Special Need Office and make prior arrangements well in advance of the exam date. This point applies to all other quizzes in lecture and lab.
  - Exam material will come from lecture, readings, assignments, videos, as well as any discussions that occur during lectures. Note that any information discussed during class may not be addressed in the readings and some of the readings may not be discussed in class.
  - Exam 4 will be given as scheduled during finals week
    - First part (50%) This part of the final will include questions over any material covered after Exam III.
    - Second part (50%) This is the comprehensive part of the final and may include any information covered during the semester.
  - **Make-up policy:** If an emergency prevents you from taking a scheduled exam you may take a make-up exam during the semester based on the following criteria:
    1. Notify the instructor by voice mail or email (giving your excuse) **before** the start of the scheduled exam.
    2. Arrange to complete the make-up exam ASAP. (You will not be able to return to lecture before arranging a date and time for the make-up exam.) Failure to appear on time for the make-up exam will result in a zero for that exam.
    3. All make-up exams will be different from the regular lecture exam, possibly essay in nature, and may be inherently more difficult than the exam given in class.

- **Lecture Quizzes (10 x 10 pts):**
  - Quizzes will be administered as scheduled during the last 20 minutes of class, unless otherwise announced. All quizzes are due at the end of the class period.
  - Make-up quizzes are NOT available.
  - **Failure to bring a working clicker to an exam or quiz will result in a grade deduction of 5%.**

- **Laboratories:** (Quizzes 5 x 15 pts.), (Reports 14 x 5 pts.), (Practicals 5 x 10 pts.)
  - Attendance at your regularly scheduled lab period is required and strictly enforced. You must sign in and out of every lab session.
  - Make-up laboratories, including lab quizzes will NOT be available. It is each student's responsibility to make arrangements with another lab member to obtain missed materials and information.
• Every laboratory session will require the completion of a specific 5 point report. The specific nature and directions for each report will be described during the laboratory period and may be slightly different for each laboratory section.
• Lab practicals may require appointments scheduled outside your regularly scheduled lab time.
• Changes to these instructions may occur during the semester to meet the flexible and unavoidable situations that arise during a laboratory. You will be required to keep yourself updated on a weekly basis to any changes. Changes will be announced at the beginning of the lab session and may not be repeated for those who arrive late.
• A no food or drink policy in the laboratory will be strictly enforced. All food or drink containers must be closed and placed completely out of sight and not used during your time in the laboratory.

- Additional Information:
  • Preface to Lecture:
    This course has two major avenues for evaluating student understanding and performance. The first is through a traditional lecture format. This portion requires the following from the student
    1. Preparation - complete all assigned reading assignments on time.
    2. Regular attendance - attend every lecture and be on time.
    3. Active participation - every student is expected to take notes during lecture, in addition to the notes provided by the instructor and to answer clicker questions when they are presented during lecture. Any student sleeping or disrupting the class may be asked to leave.
    4. Reflective study - a thorough understanding of the course material may require up to 3-5 hours of study time for every 50 minutes spent in lecture depending on an individual's background. (This means 9 – 15 hours per week study time.)

  Evaluation of understanding will be in the form of exams and quizzes.

  • Preface to Laboratory:
    The second avenue is the laboratory. Laboratory work will include readings, problem sets, quizzes, informal reports, and practicals. These are intended to be more "skill" related activities. Evaluations of these therefore include participation, quality of work and attitude. A positive attitude is expected during the performance of laboratory activities. Anyone displaying what I feel is a negative attitude and/or negative influence on the quality of experience for others in the lab will be asked to leave and points will be deducted for that laboratory period.

Students with Disabilities
• Any student in this course who has a disability that prevents the fullest expression of abilities should contact me personally as soon as possible so that we can discuss class requirements.
• It will be to the advantage of students with disabilities requiring special accommodation to contact the Special Need Coordinator at least two months before enrollment. The Special Needs Office is located in SS/C 202B. The coordinator will explain services to the student and assist the student with any school related problems that might be encountered. The number is 816-271-4330.
Academic Honesty Policy

- **Academic Honesty Policy and Due Process:** Academic honesty is required in all academic endeavors. Violations of academic honesty include any instance of plagiarism, cheating, seeking credit for another's work, falsifying documents or academic records, or any other fraudulent classroom activity.
- Violations of academic honesty may result in a failing grade on the assignment, failure in the course, or expulsion from school.
- When a student's grade has been affected, violations of academic honesty will be reported to the Provost or the designated representative. Please see the Western Student handbook and Calendar for a full description of the Western Academic Honesty policy and the student due process procedure. The handbook is available online at [http://www.missouriwestern.edu/handbook/index.pdf](http://www.missouriwestern.edu/handbook/index.pdf).
- **Violations of Academic Honesty:** Violations of academic honesty include, but are not limited to, the following activities:
  1. Copying another person's work and claiming it as your own;
  2. Using the work of a group of students when the assignment requires individual work;
  3. Looking at or attempting to look at an examination before it is administered;
  4. Using materials during an examination that are not permitted;
  5. Allowing another student to take your exam for you;
  6. Intentionally impeding the academic work of others;
  7. Using any electronic device to transmit portions of questions or answers on an examination to other students;
  8. Using any electronic device to improperly store information for an exam;
  9. Knowingly furnishing false information to the University or its representatives.
  10. Assisting other students in any of the acts listed above.
  
  **Note:** “Clicker” misuse as described above will result in permanent dismissal from class and a grade of F.

Classroom Professionalism:
Each student is expected to act in a professional, courteous, and respectful manner and help maintain a clean and safe learning environment for all. The use of any personal electronic devices (PDA, MP3 music player, cellular phone, etc.) during class time is prohibited. Turn all such devices off upon entering the classroom or lab. Disruptions, disrespectful, or unsafe actions will result in dismissal from the course.