Meeting Times and Instructor Information

Time:  Lect.:  T, Th 11:00AM-12:15PM (CAV 111); Lab.:  Thurs. 2:00-4:50PM (CAV 111)
Instructor:  Dr. Laurel Fohn, MD, PhD
Office:  Cavness Science Building 107
Office hours:  By appointment and as posted on office door and in Lecture/ Lab #1
Phone:  325-942-2189 (biology dept);  325-486-6644 (office)
E-Mail:  Laurel.Fohn@angelo.edu

Textbook and Supplies:
3. Marble composition notebook for lab (not a 3 ring binder)
4. Flash (USB) drive, access to P drive or free cloud storage
5. Scantron sheets for exams

Course Description:
A study of the molecular and genetic mechanisms regulating the development of animals. Specific topics include gametogenesis, embryogenesis, and tissue development. Lab emphasizes the application of knowledge gained in lecture to design experiments, predict their outcome, and understand the importance of normal and abnormal development on physiology and pathophysiology. Laboratory also explores the development of various invertebrate and vertebrate model organisms and the application of techniques used in these model systems.

I. COURSE OBJECTIVES/ STUDENT LEARNING OUTCOMES

IDEA COURSE OBJECTIVES:
Primary:
1. Gaining factual knowledge (terminology, classifications, methods, trends)
2. Learning to apply course material (to improve thinking, problem solving, decisions)
Secondary:
3. Developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course
4. Developing skills in expressing yourself orally or in writing.

STUDENT LEARNING OUTCOMES:
By the end of this course, students that successfully complete this course should be able to:
A. Correctly define and use concepts, terminology, classifications, and methods used in developmental biology. (Course Objectives 1&2)
B. Explain the advantages of conducting research with each of the various model organisms used in this course, and the contribution that experiments in these model organisms have made to our understanding of developmental biology. (Course Objective 1-3)
C. Given an observation, write a testable hypothesis, and design an appropriate experiment to test the hypothesis. (Course Objectives 1-4)
D. Implement precise word choice as an essential component of scientific communication. (Course Objectives 3 & 4)
II. METHODS OF ASSESSING STUDENT LEARNING OUTCOMES & EVALUATION CRITERIA:
The course objectives and student learning outcomes will be assessed through a combination of exams, a presentation, study guides, problem sets and lab notebook/activities and will be based on a point system.

<table>
<thead>
<tr>
<th>Assessment Type</th>
<th>Details</th>
<th>Points</th>
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<tbody>
<tr>
<td>2 exams (mid-term &amp; final) (150 points each)</td>
<td>March 21 in lab &amp; Tues, May 7 10:30 am</td>
<td>300 points</td>
</tr>
<tr>
<td>1 Lab Presentation</td>
<td></td>
<td>100 points</td>
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<tr>
<td>3 problem sets (hypothesis, experimental design, etc.) (70 points each)</td>
<td></td>
<td>210 points</td>
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<tr>
<td>6 highest lab notebook entries (35 points each)</td>
<td></td>
<td>210 points</td>
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<tr>
<td>Class participation (6 answer cards; only 1 card given per lecture)</td>
<td></td>
<td>60 points</td>
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<tr>
<td>Study guides, Reviews, Homework, Class/Lab activities, Journal Club</td>
<td></td>
<td>140 points</td>
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<tr>
<td>Total available points</td>
<td></td>
<td>1020 points</td>
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Grading Scale:
Please keep record of all of your points so you may monitor your progress throughout the semester.
900-1020 points=A; 800-899 points=B; 700-799 points=C; 600-699 points=D; 0-599 points=F

EXAMS:
Exams will help you determine your progress on Course Objectives 1&2 and SLOs A-D. Exams will be composed of practical questions arising from lecture material or laboratory experiments. Approximately 65-75% of each exam will be composed of questions requiring primarily a “recall” of lecture/laboratory information. The remaining 25-35% of each exam will be composed of questions that will require a “synthesis” of information or an “application” of knowledge to solve an unknown situation.

LAB PRESENTATION:
The lab presentation will help you progress on Objectives 1-4 and SLOs A-D. Understanding scientific knowledge, evaluating experimental data and publications, and orally presenting data (both that of others and that of your own) are key scientific skills. More details regarding the requirements of the lab presentations will be discussed in lab and posted on Bb.

PROBLEM SETS:
The problem sets will help you determine your progress on Course Objectives 1-4 and SLOs A-D. The problem set format consists of a guided short answer question. Each guided short answer question starts with an observation. You will be expected to write a hypothesis (based on a causal explanation) to explain the phenomena in the observation, design an experiment to test the hypothesis, predict possible outcomes of the experiment, and discuss the results. See Blackboard (Bb) in Problem Sets for an example guided short answer question and sample student answer.

Policy on missed problem sets: Due dates are FIRM. There are no makeup problem sets. This is because we will discuss the problem sets in class on the day that they are due.

LAB NOTEBOOK:
The lab notebook will help measure your progress on Objectives 1-4 and SLOs A-D. Keeping accurate, detailed notes in your lab notebook is an essential first step to communicating your findings to others. To encourage you to keep your lab notebooks updated, I collect and grade them randomly throughout the semester. I will announce prior to the end of class that notebooks are due by the end of that class period. Only 210 lab notebook points are allowed, but you may have the opportunity to earn more points, depending on whether you perform additional experiments. I will only include the 6 lab notebook entries/experiments with the highest grades. The guidelines are available on Bb in Lab notebooks.

Policy on missed or late Lab Notebook: I do NOT accept lab notebooks for grading after the end of class. Please bring lab notebooks with you to every class to avoid missing a lab notebook collection.
CLASS PARTICIPATION:
Class participation activities will help you progress on Course Objectives 1-4 and SLOs A-D. Class participation includes attending class and participating in group discussions. Students will be given 6 cards. Each time a student answers (at an acceptable level) a question/s presented by the instructor, the student may hand in a card. Each card is worth 10 points. Only one card per student may be submitted per lecture session This will be discussed in more detail on the first day of class.

STUDY GUIDES, etc:
Study guides and other activities will help you progress on Course Objectives 1-4 and SLOs A-E. Study guides are designed to help you keep up with the course material. They will cover readings for lecture AND lab. They are intended to help you prepare for any in-class activities related to the material. These are individual assignments, but you may use any resource available to you including your textbook, reliable internet sources, or the library. These are take-home assignments- not take-Dr. Fohn assignments. I will not answer these questions for you. In addition to being announced in class, they will also be posted on Bb in Study Guides. Additionally class activities, homework, or journal club presentations/ discussions in lecture or lab may fall into this category. Policy on missed or late study guides: Due dates are FIRM. I do not accept late study guides. However, there will be multiple activities through the semester and there are additional points built into the system, in case there is a lecture you are unable to attend. However, you are still responsible for any information in a missed or incomplete study guide/ activity.

LIFELINE POLICY: I realize that unforeseen minor circumstances occasionally arise. Therefore, there are 20 extra points built into the system to enhance you grade, and extra lab/ homework assignment(s). This is sufficient to compensate for a single deficit in a lab notebook, a class participation card, or study guide/class activity.

THREE BEFORE ME POLICY: Since this is a senior level course, I expect you to find answers to common questions in the syllabus, on Bb, or other handouts I provide. Before asking me this type of question (for example, deadlines, reading assignments, or format), please consult at least 3 resources. You are always strongly encouraged, however, to ask questions to help clarify something you have found in one of the resources available for this course.

III. Attendance/ Absences:
Attendance is mandatory due to the collaborative nature of this course. Please arrive on time and plan to stay the duration of the class period. Please don’t schedule appointments, vacation, work, or medical/graduate school interviews during class time. However, I do realize that emergencies and circumstances beyond your control can arise (see lifeline policy above). Policy on Observance of Religious Holy Day is stated below: Please let me know in advance in writing (email is acceptable) if you intend to miss class due to a religious holy day so that you can complete missed in-class assignments and/or activities.

IV. Make-up Work
Students are required to take all exams and to complete all assignments on time. Exceptions will be made only in rare and unusual circumstances and ONLY BY PRIOR ARRANGEMENT. THERE ARE NO EXCEPTIONS TO THIS RULE. Make-up exams, when rarely justified, will be given at a mutually convenient time.

V. Drop/Withdrawal Policy
The last day that a student may drop/withdraw from class without a grade is Thursday, March 28 (ie. these students will receive a W on their transcript). Any student remaining on the official role after this date will receive a grade.
VI. REQUIREMENTS FOR GRADUATE CREDIT

Students expecting graduate credit will be required to prepare a formal research report on any topic relevant to developmental biology (if currently working on a thesis topic, this subject should be of ancillary interest). For graduate students, these papers will alter the grading scale as depicted in the table below. Papers should be type written, include a minimum of seven (7) primary references and demonstrate an understanding and integration of these references. Papers may be turned in for preliminary review on or before Monday, April 8. Papers will be critiqued, graded and returned within the next two weeks. If the student is satisfied with that grade, it will be recorded. If the student wishes to improve his/her grade, the paper should be revised and turned in no later than Monday, May 6 for a final grade.

***Graduate students must score a minimum of 80% on this paper and turn in at least 4 participation cards below to receive graduate credit.***

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Points</th>
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<tbody>
<tr>
<td>2 exams (mid-term &amp; final) (150 points each)</td>
<td>300</td>
</tr>
<tr>
<td>1 Lab Presentation</td>
<td>70</td>
</tr>
<tr>
<td>3 problem sets (hypothesis, experimental design, etc.) (70 pts each)</td>
<td>210</td>
</tr>
<tr>
<td>6 highest lab notebook entries (35 points each)</td>
<td>210</td>
</tr>
<tr>
<td>Class participation - (8 answer cards; only 1 in a given lecture) (first 4 expected for grad credit, final 4 @10 pts each)</td>
<td>40</td>
</tr>
<tr>
<td>Study guides, Reviews, Homework, Class/Lab activities, Journal Club</td>
<td>140</td>
</tr>
<tr>
<td>Research report for graduate credit (must score 80% or higher)</td>
<td>70</td>
</tr>
<tr>
<td>Total available points</td>
<td>1040</td>
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</tbody>
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VII. University Policies:

1. University Academic Honor Code:

Angelo State University expects its students to maintain complete honesty and integrity in their academic pursuits. Students are responsible for understanding the Academic Honor Code, which is contained in both print and web versions of the Student Handbook.

In short, it is the policy of Angelo State University that all students are expected to “engage in all academic pursuits in a manner that is beyond reproach” and to “maintain complete honesty and integrity in their experiences both in and out of the classroom.” Students in this class are expected to submit work in accord with the above stated guidelines. If a student is found to be submitting a completed assignment that is shown not to be their own, that student and the student(s) that allowed his/her work to be copied will not receive credit for the work in contention and will receive a zero for that assignment. Furthermore, any student observed by the instructor to be willfully copying from another student during an exam/quiz or otherwise engaged in using devices not allowed by the instructor during an examination will not receive credit for that examination/quiz and a grade of zero will be assigned. In each case of suspected academic dishonesty, the student will also be subject to further review and potential disciplinary action by the university which may involve dismissal from the course.

2. HANDICAPPING CONDITIONS/LEARNING DISABILITIES

Angelo State University prohibits willful acts of discrimination against those individuals with handicapping conditions or learning disabilities. Persons with disabilities which may warrant academic accommodations must contact the Student Life Office, Room 112 University Center, (325) 942-2191 or (325) 942-2126 (TDD/FAX) or by e-mail at Student.Life@angelo.edu in order to request such accommodations prior to any accommodations being implemented.

If you believe that your success in the course is at risk due to these conditions, you are encouraged to make this request early in the semester so that appropriate arrangements can be made. The instructor must receive a letter from Student Life describing the accommodations to be made at least one week prior to the assignments the student is requesting accommodation for. For additional information on this policy, see OP 10.15 on the ASU website at http://www.angelo.edu/opmanual/.

3. Religious Holy Day:

Angelo State University provides for the observation of religious holy days as follows:

1. “Religious holy day” means a holy day observed by a religion whose places of worship are exempt from property taxation under Texas Tax Code §11.20.
2. A student who intends to observe a religious holy day should make that intention known in writing to the instructor during the first week of the semester and one week prior to the absence. If this submission is completed, a student who is absent from classes for the observance of a religious holy day shall be allowed to take make up missed exams or assignments scheduled for that day in accordance with syllabus policy. For additional information on this policy, see OP 10.19 on the ASU website at http://www.angelo.edu/opmanual/.

4. Title IX at Angelo State University:
Angelo State University is committed to providing and strengthening an educational, working, and living environment where students, faculty, staff, and visitors are free from sex discrimination of any kind. Sex discrimination, sexual misconduct, public indecency, interpersonal violence, sexual assault, sexual exploitation, sexual harassment, and stalking are not tolerated at ASU. As a faculty member, I am a Responsible Employee meaning that I will report any allegations I am notified of to the Office of Title IX Compliance in order to connect students with resources and options in addressing the allegations reported. You are encouraged to report any incidents to ASU’s Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator. You may do so by contacting: Michelle Boone, J.D., Director of Title IX Compliance/Title IX Coordinator, Mayer Administration Building, Room 200; (325)-942-2022 michelle.boone@angelo.edu

You may also file a report online 24/7 at www.angelo.edu/incident-form.

If you are wishing to speak to someone about an incident in confidence you may contact the University Health Clinic and Counseling Center at 325-942-2173 or the ASU Crisis Helpline at 325-486-6345.

The Office of Title IX Compliance also provides accommodations related to pregnancy (such as communicating with your professors regarding medically necessary absences, modifications required because of pregnancy, etc.). If you are pregnant and need assistance or accommodations, please contact the Office of Title IX Compliance utilizing the information above. For more information about Title IX in general you may visit www.angelo.edu/title-ix.