

Developmental Biology
BIOL 4350(6350),Section A(4 credit hours)
Fall Semester 2023

Lecture (BC 2022): M & W 3:30 pm – 4:45 pm

Laboratory (BC 2071): Tue 9:30 am – 12:20 pm

Instructor: Dr. Cristina Calestani
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Office hours:

Tuesday 1:30 pm – 3:00 pm

Wednesday 5:00 pm – 6:00 pm

Or by appointment (please send me an email to my valdosta.edu account with "appointment" in the subject line).

Pre-Requisites: BIOL 1107, BIOL 1108, and BIOL 3200 with a grade of C or better or permission of instructor

Course Description: Study of gametogenesis and embryo development with an emphasis on the molecular, cellular and genetic mechanisms of selected model organisms. The course will include medical aspects of developmental biology and developmental mechanisms of evolutionary change.

Course Objectives

The students will be able to:

- 1) Describe the developmental anatomy of selected invertebrate and vertebrate embryos
- 2) Comprehend the basic molecular and cellular mechanisms of fertilization and embryo development
- 3) Compare and contrast development in different organisms
- 4) Understand experimental approaches used to answer specific questions in developmental biology
- 5) Develop and test a hypothesis using experimental embryology techniques learned in the laboratory
- 6) Analyze and interpret experimental data in developmental biology
- 7) Communicate scientific results and evaluate their significance in the context of current knowledge in developmental biology
- 8) Discuss ethical implications and societal impacts of advances in developmental biology research

Textbook

Scott F. Gilbert. 2010 Developmental Biology 9th ed. Sinauer Associates, Inc., Massachusetts USA.

Laboratory Manual

Mary S. Tyler & Ronald N. Kozlowski. 2010 DevBio Laboratory: vade mecum. An Interactive Guide to Developmental Biology (online access) To download the manual register at <http://labs.devbio.com> using the code printed inside the cover of the textbook.

Additional material for the lab will be posted on Blackboard

ASSESSMENTS

Lecture

The lecture assessments will consist of four exams. The fourth exam will be a comprehensive final.

Exams 1, 2 and 3 will be taken during class time and must be turned in by the scheduled end of class. The final exam will be on Friday December 6, 2023 from 5:00 pm to 7:00 pm.

Exams grades will be posted on Blazeview.

- All exams are based on lecture material and assigned readings
- Exams questions are multiple choice, true/false, matching and short written answers
- If you fail to attend one of the exams for any reason, you must provide documented evidence (e.g. from doctor, police, etc.) that circumstances beyond your control prevented you from taking the exam. Failure to provide reasonable evidence will result in a grade of 0 for the exam. Makeup exams will be administered at any time during the semester at the discretion of the instructor.
- If you arrive late for an exam, you will be allowed to take the exam. However, you must turn in the exam paper at the regular scheduled end of the class. You will not be allowed extra time unless a documentable emergency has occurred.
- The final exam grade (exam 4) can replace the lowest grade of exams 2 or 3. This applies only to exam 4; no other exam can replace the lowest grade. If exam 4 is used to replace a lower grade in test 1, 2, or 3, the grade for exam 4 will count twice in the final grade calculation. Exam 4 cannot be used to replace a missed test.
- Exam 4 will always count in calculating the final grade.

Extra-credit up to a maximum of 10 points will be offered. These points will be added to the student total points for the course before calculating the percentage grade. Extra credit points can be earned with class activities during the lecture or the laboratory, or with take-home assignments.

*Final grade calculation: (Lecture exams + Attendance + Lab practicals + Lab presentations + Extra Credits)/530

NOTE: Graduate students enrolled in BIOL 6350 will have additional assignments and adjusted grading scale in a supplementary syllabus.

Classroom Accommodations

Students requesting classroom accommodations or modifications due to a documented disability must contact the Access Office for Students with Disabilities located in Farber Hall. The phone numbers are 24453 (V/VP) and 2191348 (TTY). For VSU's Access Office please see <http://www.valdosta.edu/access/facresources.shtml>

Behavior in the Classroom

It is assumed that all students will act in a mature manner in the classroom, showing consideration for their peers and the instructor. Any student who consistently distracts other students or the instructor will be removed from the course. All electronic devices must be turned off or set to silent mode in the classroom.

Cheating or Plagiarism

