

BIOL 4580 (6580), Molecular Genetics

Spring Semester 2019

BIOL 4580 Section A (CRN# 23628, Undergraduate, 4 Credit hours)

BIOL 4580 Section B (CRN# 23629, Undergraduate, 4 Credit hours)

BIOL 6580 Section B (CRN# 23631, Graduate, 4 Credit hours)

Department of Biology, College of Science & Math, Valdosta State University

Lecture (BC 2022):		M & W	2:00 p.m. – 3:15 p.m.
Laboratory (BC 2071)	Section A:	M	10:00 a.m. – 12:50 p.m.
	Section B:	T	9:30 a.m. – 12:20 p.m.

Instructor: Dr. Brian C. Ring
Office: BC 2084
Office hours: **M & W** 3:30 p.m. – 4:30 p.m.
Phone: 249-4841 (Dept. office 333-5759)
Email: bcring@valdosta.edu (**please use D2L first please**)

Pre-Requisites: BIOL 3200 or permission of instructor.

Note: Graduate student(s) enrolled in BIOL 6580 will be given a supplemental syllabus.

Course Description: The study of the molecular nature of eukaryotic genomes, with emphasis on biotechnology. The lecture will focus on using modern molecular genetic techniques as a means to understanding complex eukaryotic genomes. Emphasis will be placed on reading current, relevant scientific literature. The laboratory will involve hands

Lecture/Discussion Sessions: (350 pts, 70%) Students will be graded on their performance during lecture time based on the following criteria: 3 Lecture/cumulative final Exams (20% each, 100 points each) & Participation (10%, 50 points). **By week 10 groups will select a Genome Paper for approval and each group will present the paper in the last few weeks.**

Lecture Exams will cover material from lecture and will be based upon our discussion of the Phage Lambda Genetic Switch and various journal articles assigned in class. Exams are composed of primarily short answer.

Participation is key to the success of this course. Some lecture will be provided by your instructor, but the majority of the time is left for discussion of the reading assignments collaboratively. Therefore, attendance in this course is mandatory and each missed lecture will result in **5 points** lost from your participation grade and missed course time equivalent to greater than 20% (~5 days) will result in a failing grade as per University policy. **Group paper discussion will account for the remaining attendance points.** Attendance may be taken at any time during the lecture or laboratory and used as an indicator of class participation as noted. Laboratories in particular are important not to miss as you will not be able to prepare for lab exams. If you miss **more than 2 laboratory** sessions you will fail this course as per University policy. In the event that a student will miss a lab, s/he should notify the instructor in writing by email and be prepared to provide documentation of the excused absence t the
excuse or not. **ABSOLUTELY NO LECTURES OR LABORATORIES CAN BE "MADE UP."**

Laboratory: (150 pts, 30%) Two exams worth 75 points each. Exams are composed of multiple choice and/or short answer covering what we learned in the laboratory. The first lab exam is the practical introduction to molecular genetics chemistry in the lab (labs 1-3). The second lab exam is based on our inquiry into your own genetic profile using the basic molecular genetic skills learned from labs 1-3 and our analysis of gene sequences from a fish model species.

Grade Calculation & Distribution: Final grades will be based on a percentage of your cumulative points relative to the total points possible (e.g. $400/500 = 80\% = B$). See below chart.

Grade Calculation

