Biology 202L: Genetics

UNM Valencia Campus

Semester: Spring

Year: 2017

CRN #: 33647 Section 501. Mondays & Wednesdays 9:00-10:15 in AS 133.

Credits: 4 credit hours

Course Description: This class covers introductory concepts vital for biology majors including; meiosis and sexual reproduction, Mendelian genetics, DNA and gene structure and function, genomics, and gene expression.

Instructor: Dr. Ben Flicker

Contact Information: My office isAS 132. My phone number on campus is 505-925-8726. My email address is benflicker@unm.edu. Email is the best way to contact me.

Office hours: Mondays 10:30-12:00 & 1-2:30; Tuesdays 3:00-4:30; Wednesdays 1:30-2:30; Thursdays 10:30-12:00, or by appointment.

Textbook: *Biological Science*, Scott Freeman, Kim Quillin, Lizabeth Allison, Michael Black, Greg Podgorski, Emily Taylor & Jeff Carmichael, 2017. 6th edition, Pearson Higher Education. Access to the "mastering biology" website for the textbook is required for the course. It can be purchased on its own (including access to the electronic book) at the website masteringbiology.com. Once you create an account you will need the class code to register for the section. The code is: MBFLICKER19091

UNM Learn: Course materials will be posted on the course website (**https://learn.unm.edu**) This includes the syllabus, all assignments and announcements, as well as links to email the instructor and other students in the course.
You are responsible for all such communication on the learn course page, so please check regularly.

Student Learning Objectives:

1.) Students will display an understanding of the processes and outcomes of nuclear division by mitosis and meiosis (Ch. 12 & 13)

2.) Students will show comprehension of patterns of inheritance by Mendel's laws, Punnet square analysis, gene linkage, and sex-linked inheritance (Chapter 14).

3.) Students will exhibit familiarity with basic structure of DNA and how the information of genes is expressed and controlled in the cell (Chapters 15-19).

4.) Students will demonstrate knowledge of genetic engineering and genomics.

5.) Students will understand basic concepts of development.

-The goal of this class is to help you become literate in these scientific concepts and be able to apply them in biology as you move forward.

Attendance: Attendance is Required for all classes. Students are responsible for getting information presented in any class missed. Students may be dropped from the class after 4 absences. Attendance will be taken via a daily sign-in sheet. Excessive tardiness (greater than 10 minutes) will be counted as an absence. Quizzes and Exams will begin promptly at the beginning of the period. **Arriving late for a quiz or exam could result in a score of zero.**

Learning Center: The learning center is a useful resource for students and faculty located in the building with the library. Some regular office hours (TBA) will be kept there and provide a space to work together with classmates and the instructor outside of class periods.

Withdrawal: If you drop the course after the drop deadline, you will receive a grade of 'W'.

Title IX: In an effort to meet obligations under Title IX, UNM faculty, Teaching Assistants, and Graduate Assistants are considered "responsible employees" by the department of Education (see pg 15 - **http://www2.ed.gov/about/offices/list/ocr/docs/qa-201404-title-ix.pdf**). This designation requires that any report of gender discrimination which includes sexual harassment, sexual misconduct,

and sexual violence made to a faculty member, TA, or GA must be reported to the Titel IX coordinator at the Office of Equal Opportunity (**Oeo.unm.edu**) For more information on the campus policy regarding sexual misconduct, see: **https://policy.unm.edu/university-policies/2000/2740.html**

Missed exam/quiz policy: Only official documentation of a medical or family emergency will excuse a missed exam or quiz. In such an instance please contact me as soon as possible to arrange a potential make-up. Un-excused absences on an exam/ quiz date will result in a grade of zero for the assessment.

Students with disabilities: Qualified Students with disabilities should see me or the campus testing center as soon as possible so we can meet your needs suitably and quickly.

Learning Objectives: For each chapter/ topic covered, you will be provided with a list of learning objectives. This list will include the relevant vocabulary terms and concepts that will be covered in that chapter and that you will be responsible for on quizzes and exams.

Mastering Biology Activities: Through the course mastering biology webpage you will be responsible to complete activities for each chapter by the due date. Each chapter's assignment will be due **before** we cover that chapter in lecture. This will provide you with a base from which to learn, allowing us to focus on the complex topics of each chapter in class and gain a broader depth of knowledge for each topic in class. *Excessive failures to complete these assignments on time may result in being dropped from the course, as it will show a continued failure to prepare for class*.

Problem sets: Weekly problem sets will be given out to reinforce class topics and to prepare you for in-class quizzes and exams.

Exams: 4 exams will be given. The first 3 will be worth 100 points each. The final exam will be cumulative, comprised of new material covered since the third midterm as well as all previous material. The final exam will be worth 150 points.

Quizzes: 4 quizzes will be given during the semester. These will be given in class in the week before the upcoming exam. They will be designed as exam prep, to prepare you for the types of questions on the forthcoming exams. These are worth 25 points each.

Study Aids: Studying the sciences is, in some ways, similar to learning a foreign language. There are a lot of vocabulary terms that are critical to learn in order to understand the concepts of the course. To aid in that I highly recommend making flash cards of the relevant vocabulary terms given out by the instructor. A course web page of these critical vocabulary terms has been set up on the studyblue (studyblue.com) server for use on computers and smartphones.

Course Grading Policy: Lecture grades will be based on the percentage of points earned (100% or higher = A+, 99-91% = A, 90% = A-. 88-89% = B+, 87-81% = B, 80% = B-, 79-78% = C+, 77-71% = C, 70% = C-, 69-68% = D+, 67-61% = D, 60% = D-, < 60% = F.

- 110 points: Chapter problem sets (11 assignments @ 10 points each)
- 110 points: Mastering Biology activities (11 assignments @ 10 points each)
- 80 points: In class activities/class participation/Attendance
- 100 points: Quizzes (4 assignments @ 25 points each)
- 300 points: Exams (3 exams @ 100 points each)
- 150 points: Cumulative final exam
- 400 points: Lab Activities & Participation
- = 1250 Total points

Week	Subjects covered	Homework/ Quizzes
1/17/17	Course Introduction	
1/19/17	Chapter 13: Meiosis	MB 13
1/24/17	Chapter 13: Meiosis pt. 2	Ch. 13 problems
1/26/17	Chapter 14: Mendel pt. 1	MB 14
1/31/17	Chapter 14: Mendel pt. 2	
2/02/17	Chapter 14: Mendel pt. 3	Ch. 14 problems

2/07/17	Exam Review	Quiz 1
2/09/17	Exam 1: Chapters 13 & 14	Exam 1
2/14/17	Chapter 15: DNA and the Gene	MB 15
2/16/17	Chapter 15: DNA part 2	Ch. 15 problems
2/21/17	Chapter 16: How genes work	MB 16
2/23/17	Chapter 16: Genes part 2	Ch. 16 problems
2/28/17	Chapter 17: Gene expression	MB 17
3/02/17	Chapter 17: Gene expression part 2	Ch. 17 problems
3/07/17	Exam Review	Quiz 2
3/09/17	Exam 2 (Chapters 15-17)	
3/14/17	Spring Break: No Class	
3/16/17	Spring Break!	
3/21/17	Chapter 18: Control of gene expression	MB 18
3/23/17	Chapter 18: Part 2	Ch. 18 problems
3/28/17	Chapter 19: Part 1	MB 19
3/30/17	Chapter 19: Part 2	Ch. 19 problems
4/04/17	Chapter 20: Analyzing and Engineering genes	MB 20
4/06/17	Chapter 20: Genetic Engineering part 2	Ch. 20 Problems

4/11/17 4/13/17	Chapter 21: Genomics Chapter 21: Genomics pt. 2	MB 21 Ch. 21 Problems
4/18/17 4/20/17	Lecture Review Exam 3 (Chapters 18-21)	Quiz 3
4/25/17 4/27/17	Chapter 22: Principles of Development Chapter 22: Principles of Development pt. 2	MB 22 Ch. 22 problems
5/02/17 5/04/17	Chapter 23: Animal Development Lecture Review	Quiz 4
5/11/17	**Cumulative Final Exam (9:00-11:00)**	

***** Instructor reserves the right to alter course schedule as the semester progresses. Students will be given advance notice (at least 1 week) of any change in dates of quizzes, homework assignments, or midterm exams.

Thank you for registering for Biology 201L at UNM-VC. I am very excited to be here to help you continue your education and achieve your goals.