

UNIVERSITY OF CALGARY
DEPARTMENT OF BIOLOGICAL SCIENCES
COURSE OUTLINE

1. Course: **Biology 311 - Principles of Genetics**

Lecture Sections:	L01	MWF	10:00-11:50	ST 129	Spring 2017
LAB	B01	TR	09:00-11:45	EEEL 309	
	B02	TR	13:00-15:45	EEEL 309	

All scheduled laboratories will begin on Thursday, May 18, 2017. Students need to read the introduction to the laboratory manual and Lab #1 prior to attending the first lab and be comfortable with all terms used.

Instructor(s): Dr. Anna Manko anna.manko@ucalgary.ca

Lab Coordinator: Dr. Isabelle Barrette-Ng BI 430A 220-6240 mibarret@ucalgary.ca

D2L Course Site—BIOL 311 L01 - (Spring 2017) - Principles of Genetics (P2017BIOL311L01)

Biological Sciences Department BI 186; (403) 220-3140; biosci@ucalgary.ca

2. **PREREQUISITES:** Any two of Biology 231, 233, 241 and 243.

3. **GRADING:** The University policy on grading and related matters is described sections F.1 and F.2 of the online University Calendar. In determining the overall grade in the course the following weights will be used:

Assignments	7%
Midterm Exam	28%
Final Exam	35%**
Laboratory	30%***

** This will be a comprehensive final exam covering the entire course, but with emphasis on the material covered after the midterm exam.

*** Various lab components have predetermined weighting to a total of 30% as specified in the Lab Manual.

There will be a 2-hour final exam scheduled by the Registrar's office between June 28-June 30.

Each piece of work (assignment, laboratory report, midterm test or final examination) submitted by the student will be assigned a percentage score. The student's average percentage score for the various components listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade.

4. **Missed Components of Term Work.** The regulations of the Faculty of Science pertaining to this matter are found in the Faculty of Science area of the Calendar in section 3.6: <http://www.ucalgary.ca/pubs/calendar/current/sc-3-6.html>. It is the student's responsibility to familiarize himself/herself with these regulations. See also <http://www.ucalgary.ca/pubs/calendar/current/e-3.html>.

5. Dates and times of MT Exam(s):

Midterm **Monday, June 5, 2017** **IN CLASS 10:00AM-11:45AM** **Location: ST 129**

REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY.

6. **EXAMINATION POLICY:** No electronic or written aids (eg. cell phones, tablets, computers, PDAs, notes, textbooks) will be allowed during writing of any exams. Non-programmable calculators will be permitted to answer quantitative questions on exams, if applicable, and permission to do this will be clearly indicated on the examination paper. Students should also read the Calendar, Section G, on Examinations: <http://www.ucalgary.ca/pubs/calendar/current/g.html>

7. **WRITING ACROSS THE CURRICULUM:** In this course, the quality of the student's writing in laboratory reports will be a factor in the evaluation of those reports. See also <http://www.ucalgary.ca/pubs/calendar/current/e-2.html>.

8. **STUDIES IN THE BIOLOGICAL SCIENCES INVOLVE THE USE OF LIVING AND DEAD ORGANISMS.** See also <http://www.ucalgary.ca/pubs/calendar/current/e-5.html>.

9. OTHER IMPORTANT INFORMATION FOR STUDENTS:

- (a) **Academic Misconduct:** (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University Calendar under [Section K](#). Student Misconduct to inform yourself of definitions, processes and penalties.
- (b) **Assembly Points:** In case of emergency during class time, be sure to FAMILIARIZE YOURSELF with the information on [assembly points](#).
- (c) **Student Accommodations:** Students needing an Accommodation because of a Disability or medical condition should contact Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities available at http://www.ucalgary.ca/policies/files/policies/procedure-for-accommodations-for-students-with-disabilities_0.pdf.
- Students needing an Accommodation in relation to their coursework or to fulfil requirements for a graduate degree, based on a Protected Ground other than Disability, should communicate this need, preferably in writing, to the Associate Head of Biological Sciences, Dr. H. Addy by email addy@ucalgary.ca or phone 403 220-3140.
- (d) **Safewalk:** Campus Security will escort individuals day or night (<http://www.ucalgary.ca/security/safewalk/>). Call 220-5333 for assistance. Use any campus phone, emergency phone or the yellow phones located at most parking lot pay booths.
- (e) **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). As one consequence, students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information see also <http://www.ucalgary.ca/secretariat/privacy>.
- (f) **Student Union Information:** VP Academic Phone: 403 220-3911 Email: suvpaca@ucalgary.ca
SU Faculty Rep. Phone: 403 220-3913 Email: science1@su.ucalgary.ca, science2@su.ucalgary.ca and science3@su.ucalgary.ca;
Student Ombuds Office: 403 220-6420 Email: ombuds@ucalgary.ca; <http://ucalgary.ca/provost/students/ombuds>
- (g) **Internet and Electronic Device Information:** You can assume that in all classes that you attend, your cell phone should be turned off unless instructed otherwise. Also, communication with other individuals, via laptop computers, Blackberries or other devices connectable to the Internet is not allowed in class time unless specifically permitted by the instructor. If you violate this policy you may be asked to leave the classroom. Repeated abuse may result in a charge of misconduct.
- (h) At the University of Calgary, feedback provided by students through the Universal Student Ratings of Instruction (USRI) survey provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses (www.ucalgary.ca/usri). Your responses make a difference - please participate in USRI Surveys.

Department Approval _____ Original Signed _____ Date _____

B311 CO P17 11/05/2017 08:51

TEXT: Required:

An Introduction to Genetic Analysis. 11th ed., Griffiths, Wessler, Carroll, Doebley (10th ed. is also acceptable)

Solutions Megamanual for An Introduction to Genetic Analysis, 11th Edition, Fixsen, W.D., Lavett, D.K., W.H. Freeman. (10th ed. is also acceptable)

Carolina Drosophila Manual, Flagg, R.O., 5th Edition, Carolina Biological Supply Company

Biology 311 Laboratory Manual, Spring 2016 (To be downloaded from D2L)

EXPECTED STUDY TIME: At least two hours per one-hour lecture plus the required laboratory

TENTATIVE LECTURE SCHEDULE SPRING 2017

Date(s)	Topic(s)	Chapter(s)
May 15	Intro to course, autosomal and sex-linked inheritance, pedigree analysis	2
May 17	Independent assortment of genes	3
May 19	Linkage, recombination, genetic mapping, chi-square, multiple crossovers	4
May 24		
May 26	Gene interactions	6
May 29	Bacterial and viral genetics	Part of 5
May 31	Bacterial and viral genetics	Part of 5
June 2	Large-scale chromosomal changes	17
June 5	MIDTERM – In class	–
June 7	DNA structure and replication, genetic technologies	Parts of 1, 7, 10, 14
June 9	Genetic variability and DNA polymorphisms	16, 18
June 12	Detection of DNA polymorphisms and phenotypic change	10, 14, 16, 18
June 14	Regulation of gene expression in prokaryotes	11
June 16	Regulation of gene expression in eukaryotes	12
June 19	Epigenetics and Developmental genetics	12, 13
June 21		
June 23	Mutations and Genetics of Cancer	16, 17
June 26	Transposons	15
June 28-30	FINAL EXAM scheduled by the registrar	–

Note: there is no lecture on May 22nd (Victoria Day)

Final Grade Scale :

A+: 95 or higher
A : 90 and under 95
A- : 85 and under 90
B+: 80 and under 85
B : 75 and under 80
B- : 70 and under 75
C+: 65 and under 70
C : 60 and under 65
C- : 55 and under 60
D+ : 53 and under 55
D : 50 and under 53
F : <50