



COURSE INFORMATION SHEET

BIOLOGY 231 **INTRODUCTION TO CELLULAR AND MOLECULAR BIOLOGY** (Tentative Course Outline and Schedule for Winter 2011)

Course Description

This course examines the principles of cellular structure and function, as well as the interaction of cells with their environment.

Further Course Information:

A cell is the smallest unit of life. It is highly complex and organized so that cellular activities are precise and efficient. This course introduces students to the basic cell structures and their functions. Cellular processes including energy production, gene expression, reproduction and communication will be discussed.

Class Schedules

Lectures: A2145. Wednesdays and Fridays, 11:15 am – 12:30 pm

Tutorial: A2151. Mondays, 1:15 – 2:30 pm

Instructor Information

Instructor: Dr. Jessmi Ling

Office: A2158

Telephone: 1-403-410-2000 ext. 2919

Email: jling@ambrose.edu

Course prerequisite: Biology 131 and 133

Course objectives:

1. Students will be able to identify basic cellular structures and explain their functions.
2. Students will be able to describe details of essential cellular activities.
3. Students will gain knowledge of theories behind the various molecular biology techniques.

Required Textbook:

Gerald Karp. *Cell and Molecular Biology: Concepts and Experiments*. 5th or 6th Editions. John Wiley & Sons, Inc.

Attendance:

There are no penalties for non-attendance of lectures or tutorials, except for tests and exams.

Tentative course outline:

Date	Topic	Chapter
Jan 12	Introduction to the course	1.1-1.3
Jan 14	Plasma membrane – Structure and function I	4.1 – 4.6
Jan 17	No tutorial	
Jan 19	Plasma membrane – Structure and function II	4.7 – 4.8
Jan 21	Tutorial 1	
Jan 24	Cytoplasmic membrane systems I	8.1 – 8.4
Jan 26	Cytoplasmic membrane systems II	8.5 – 8.9
Jan 28	The mitochondrion	5
Jan 31	Tutorial 2	
Feb 2	Test I (deadline for tutorials 1 and 2)	
Feb 4	The chloroplast	6
Feb 7	Interaction between cells and their environment	7
Feb 9	Tutorial 3	
Feb 11	The cytoskeleton	9.1 – 9.4
Feb 14	Cell motility	9.5 – 9.7
Feb 16	Tutorial 4	
Feb 18	Test II (deadline for tutorials 3 and 4)	
Feb 21	Family Day (no classes)	
Feb 22-26	Mid-semester break	
Feb 28	No tutorial	
Mar 2	Gene expression	11
Mar 4	Control of gene expression	12
Mar 7	Tutorial 5	
Mar 9	Global impact day (no lectures)	
Mar 11	Cellular reproduction – mitosis	14.1-14.2
Mar 14	Cellular reproduction – meiosis	14.3
Mar 16	Tutorial 6	
Mar 18	Test III (deadline for tutorials 5 and 6)	
Mar 21	No tutorial	

Mar 23	The immune response I	17.1 – 17.3
Mar 25	The immune response II	17.4
Mar 28	Tutorial 7	
Mar 30	Intercellular communication I	15.1 – 15.3
Apr 1	Intercellular communication II	15.4
Apr 4	Intercellular communication III	15.5-15.8
Apr 6	Cell biology of cancer	16
Apr 8	Tutorial 8	
Apr 11	No tutorial	
Apr 13	Test IV	
Apr 20	Final exam (Room A2145, 9 am – noon) (deadline for tutorials 7 and 8)	

Note: Tutorials are reviews of topics covered during lectures.

Mark Distribution:

Tests (3 x 15%, 1 x 5%)	50%
Tutorials (8 x 2%)	16%
Final exam	34%

Tests will consist of short answer questions based on topics covered during lectures. The tests are not cumulative. The higher scores in three of the four tests will each carry 15% of the total course marks. The lowest test score will carry 5% of the total course marks. There are 8 planned tutorial worksheets, each will be calculated to 2% of the total course marks. Tutorial worksheets must be handed in on time or face loss of full marks. The final exam will consist of multiple-choice questions, short and long answer questions. Questions will be based on topics covered during lectures and corresponding chapters from the required textbook. The final exam will cover topics from the whole course (cumulative).

Grading Scheme:

A+	93 – 100%	C+	66 – 69%
A	87 – 92%	C	62 – 65%
A–	82 – 86%	C–	58 – 61%
B+	78 – 81%	D+	54 – 57%
B	74 – 77%	D	50 – 53%
B–	70 – 73%	F	Below 50%

Important dates:

Last day to enter course without permission; last day to withdraw from a course, change to audit, and receive tuition refund – Friday, January 21.

Scholarship application deadline – Monday, February 28.

Last day to withdraw from courses or change to audit without academic penalty – Friday, March 18.

Registration period commences – Monday, March 28.

Registration deadline for returning student scholarship eligibility – Thursday, March 31.

Last day to request revised time for a final exam – Monday, April 4.

Last day to apply for time extension for coursework – Monday, April 4.

From the registrar:

Electronic Etiquette

Students are expected to treat their instructor, guest speakers, and fellow students with respect. It is disruptive to the learning goals of a course or seminar and disrespectful to fellow students and the instructor to engage in electronically-enabled activities unrelated to the class during a class session. Please turn off all cell phones and other electronic devices during class. Laptops should be used for class-related purposes only. Please do not use iPods, MP3 players, or headphones. Do not text, read or send personal emails, go on Facebook or other social networks, search the internet, or play computer games during class. The professor has the right to disallow the student to use a laptop in future lectures and/or to ask a student to withdraw from the session if s/he does not comply with this policy. Repeat offenders will be directed to the Dean. If you are expecting communication due to an emergency, please speak with the professor before the class begins.

Academic Policies

It is the responsibility of all students to become familiar with and adhere to academic policies as stated in the Student Handbook and Academic Calendar. Personal information, that is information about an individual that may be used to identify that individual, may be collected as a requirement as part of taking this class. Any information collected will only be used and disclosed for the purpose for which the collection was intended. For further information contact the Privacy Compliance Officer at privacy@ambrose.edu.

Extensions

Although extensions to coursework in the semester are at the discretion of the instructor, students may not turn in coursework for evaluation after the last day of the scheduled final examination period unless they have received permission for a "Course Extension" from the Registrar's Office. Requests for course extensions or alternative examination time must be submitted to the Registrar's Office by the appropriate deadline (as listed in the Academic Calendar <http://www.ambrose.edu/publications/academiccalendar>). Course extensions are only granted for serious issues that arise "due to circumstances beyond the student's control."

Academic Integrity

We are committed to fostering personal integrity and will not overlook breaches of integrity such as plagiarism and cheating. Academic dishonesty is taken seriously at Ambrose University College as it undermines our academic standards and affects the integrity of each member of our learning community. Any attempt to obtain credit for academic work through fraudulent, deceptive, or dishonest means is academic dishonesty. Plagiarism involves presenting someone else's ideas, words, or work as one's own. Plagiarism is fraud and theft, but plagiarism can also occur by accident when a student fails or forgets to give credit to another person's ideas or words. Plagiarism and cheating can result in a failing grade for an assignment, for the course, or immediate dismissal from the university college. Students are expected to be familiar with the policies in the current Academic Calendar and the Student Handbook that deal with plagiarism, cheating, and the penalties and procedures for dealing with these matters. All cases of academic dishonesty are reported to the Academic Dean and become part of the student's permanent record.

Students are advised to retain this syllabus for their records.