



COURSE INFORMATION SHEET

BIOLOGY 231 **INTRODUCTION TO CELLULAR AND MOLECULAR BIOLOGY** (Tentative Course Outline and Schedule for Winter 2012)

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: A2212. Wednesdays and Fridays, 11:15 am – 12:30 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 11	Introduction to the course	1.1-1.3
Jan 13	Plasma membrane – Structure and function I	4.1 – 4.6
Jan 18	Plasma membrane – Structure and function II	4.7 – 4.8
Jan 20	Cytoplasmic membrane systems I	8.1 – 8.4
Jan 25	Cytoplasmic membrane systems II	8.5 – 8.9
Jan 27	The mitochondrion	5
Feb 1	Test I (deadline for tutorials 1 and 2)	
Feb 3	The chloroplast	6
Feb 8	Interaction between cells and their environment	7
Feb 10	The cytoskeleton	9.1 – 9.4
Feb 15	Cell motility	9.5 – 9.7
Feb 17	Test II (deadline for tutorials 3 and 4)	
Feb 21-25	Mid-semester break	
Feb 29	Gene expression	11
Mar 2	Control of gene expression	12
Mar 7	Global impact day (no lectures)	
Mar 9	Cellular reproduction – mitosis	14.1-14.2
Mar 14	Cellular reproduction – meiosis	14.3
Mar 16	Test III (deadline for tutorials 5 and 6)	
Mar 21	The immune response I	17.1 – 17.3
Mar 23	The immune response II	17.4
Mar 28	Intercellular communication I	15.1 – 15.3
Mar 30	Intercellular communication II	15.4
Apr 4	Intercellular communication III	15.5-15.8
Apr 6	Cell biology of cancer	16
Apr 11	Test IV	
Apr 19	Final exam (Room A2131, 1 – 4 pm) (deadline for tutorials 7 and 8)	

Note: Tutorials are reviews of topics covered during lectures.

Mark Distribution:

Tests (3 x 17%, 1 x 6%)	57%
Tutorials (8 x 1%)	8%
Final exam	35%

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 17% of the total course marks. The lowest test score will carry 6% of the total course marks.

There are 8 planned tutorial worksheets, each carries 1% of the total course marks. Tutorial worksheets must be complete and handed in on time to obtain 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:

Convocation Chapel – Thursday, January 12.

Last day to enter course without permission; last day to withdraw from a course, change to audit, and receive tuition refund – Sunday, January 22.

Returning Scholarship application available – Wednesday, February 1.

Returning Scholarship application deadline – Tuesday, February 28.

Last day to withdraw from courses or change to audit without academic penalty – Friday, March 23.

Registration period commences – Monday, April 2.

Last day to request revised time for a final exam – Monday, April 9.

Last day to apply for time extension for coursework – Monday, April 9.

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.