

Class Information		Instructor Information		First day of classes:	Wed., Sept. 9, 2015
Days	Mondays	Instructor:	Jessmi Ling, Ph.D.	Last day to add/drop, or change to audit:	Sun, Sept 20, 2015
Time:	13:00-14:15	Email:	JLing@ambrose.edu	Last day to request revised exam:	Mon., Oct. 26, 2015
Room:	A2145	Phone:	(403)410-2000 ext 2919	Last day to withdraw from course:	Thu, Nov. 12, 2015
Lab/Tutorial:	Mondays, 9:00 – 12:00, A2145	Office:	A2158	Last day to apply for time extension for coursework:	Mon, Nov 23, 2015
FINAL EXAM: Tues, Dec 22. 13:00-16:00, A2212		Office Hrs:	Fridays, 11:30 – 13:30	Last day of classes:	Mon, Dec 14, 2015

Textbook:

Kuby Immunology. 7th Edition. Owen J, Punt J and Stranford S. 2013. WH Freeman and Co. New York. ISBN-13: 9781464137846.

Course Description:

This course will examine the body processes involved in the immune response.

Expected Learning Outcomes:

1. Students will be familiar with cellular and humoral components of the immune system.
2. Students will learn the fundamental processes of the immune system.
3. Students will appreciate the importance of the immune system and its role in immunological diseases.
4. Students will gain experience in critically reviewing papers, as well as presenting case studies in small group discussions.

Course Schedule:

Please note that the course this year is a directed studies course with laboratory. Allotted class times will be used for theory, lab, or both. The schedule below lists tasks for each class/lab Mondays. Class begins at 9 am every Monday regardless of activity.

Date	Topic	Chapter
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Mon, Sept 14	Course Introduction – Theory and Laboratory Topics Overview of the immune system Cells of the immune system Read Ch 3 and 4 Lab 1: Cells of the Immune System	1 2
Mon, Sept 21	Lab 2: Antibody Preparation Receptors and signaling: B and T receptors Receptors and signaling: antibody structure and cytokines Read Ch 5 and 6.	3 4
Mon, Sept 28	Lab 3: Western Blot Innate immunity The complement system Read Ch 7 and 8.	5 6
Mon, Oct 5	Lymphocyte receptor genes MHC and antigen presentation Review for Midterm I	7 8
Mon, Oct 12	Thanksgiving Day (No classes)	
Mon, Oct 19	Lab 4: Antigen-antibody interaction I (ELISA, immunoblot) Midterm I (Chapters 1 – 8) Read Ch 9 and 11	
Mon, Oct 26	Lab 5: Antigen-antibody interaction II (Ouchterlony, immunodiffusion) T-cell development T-cell activation, differentiation and memory Read Ch 10 and 12	9 11
Mon, Nov 2	Lab 6: Antigen-antibody interaction III (Immunoprecipitation, immunoelectrophoresis) B-cell development B-cell activation, differentiation and memory Read Ch 13 and 14.	10 12
Mon, Nov 9	Effector responses	13

	Immune responses in time and space Review for Midterm II	14
Mon, Nov 16	Midterm II (Chapters 9 – 14) Read Ch 15, Ch 16 and Papers	
Mon, Nov 23	Inflammation: Allergy and hypersensitivities Tolerance, autoimmunity and transplantation Literature review and discussion Read Ch 17, 18 and Papers	15 16a
Mon, Nov 30	Transplantation Infectious diseases and vaccines Literature review and discussion Read Ch 18, 19 and Papers	16b 17
Mon, Dec 7	Immunodeficiency disorders Cancer and the immune system Literature review and discussion	18 19
Mon, Dec 14	Final review session	
Tues, Dec 22	Final Exam. A2212. 1:00 – 4:00 pm	

Requirements:

Tests consist of short answer questions based on topics covered during lectures. The tests are not cumulative. The final exam consists of multiple-choice questions, short and long answer questions. Questions are based on topics covered during lectures and corresponding chapters from the required textbook. The final exam will cover topics from the whole course (cumulative).

Assignments include all assessment for laboratory assignments, quizzes, paper discussions and case studies. The due date for each assignment will be provided on the assignment sheet. Please hand in all assignments as instructed. Late submissions are not accepted unless sufficient reason is provided for an extension, whereby a written request for extension is supplied to the instructor prior to the due date. Please note that students must earn at least 60% of cumulative assignment marks in order to have the assignment marks added to the final marks for grading.

Mark distribution:

Tests (2 × 20%)	40%
Assignments	30%
Final exam	30%

Assignments:

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|--------------------------------------|----------|
| - Labs 1 – 6 (10 marks each) | 60 marks |
| - Quizzes | 10 marks |
| - Case studies and paper discussions | 30 marks |

Attendance:

There are no penalties for absence from lectures. However, attendance is compulsory for all laboratory, tests and exams. Allocated marks will not be awarded if student is absent from any laboratory, tests or exams without written notice and sufficient reason.

Grade Summary:

The available letters for course grades are as follows:

<u>Letter Grade</u>	<u>Description</u>
A+	
A	Excellent
A-	
B+	
B	Good
B-	
C+	
C	Satisfactory
C-	
D+	
D	Minimal Pass
F	Failure

Grading scheme for Bio 445:

A+	95.0 – 100%	C+	69.0 – 73.9%
A	90.0 – 94.9%	C	64.0 – 68.9%
A-	86.0 – 89.9%	C-	59.0 – 63.9%
B+	82.0 – 85.9%	D+	55.0 – 58.9%
B	78.0 – 81.9%	D	50.0 – 54.9%
B-	74.0 – 77.9%	F	Below 49.9%

Because of the nature of the Alpha 4.00 system, there can be no uniform College-wide conversion scale. The relationship between raw scores (e.g. percentages) and the resultant letter grade will depend on the nature of the course and the instructor's assessment of the level of each class, compared to similar classes taught previously.

Please note that final grades will be available on student registration system. Printed grade sheets are not mailed out.

Other

Policies:

Communication

All students have received an Ambrose e-mail account upon registration. It is the student's responsibility to check this account regularly as the Ambrose email system will be the professor's instrument for notifying students of important matters (cancelled class sessions, extensions, requested appointments, etc.) between class sessions. If students do not wish to use their Ambrose accounts, they will need to forward all messages from the Ambrose account to another personal account.

Registration

During the **Registration Revision Period** students may enter a course without permission, change the designation of any class from credit to audit and /or voluntary withdraw from a course without financial or academic penalty or record. Courses should be added or dropped on the student portal by the deadline date; please consult the List of Important Dates. After that date, the original status remains and the student is responsible for related fees.

Students intending to withdraw from a course after the Registration Revision Period must apply to the Office of the Registrar by submitting a "Request to Withdraw from a Course" form or by sending an email to the Registrar's Office by the **Withdrawal Deadline**; please consult the List of Important Dates on the my.ambrose.edu website. Students will not receive a tuition refund for courses from which they withdraw after the Registration Revision period. A grade of "W" will appear on their transcript.

Exam Scheduling

Students wishing to withdraw from a course, but who fail to do so by the applicable date, will receive the grade earned in accordance with the course syllabus. A student obliged to withdraw from a course after the Withdrawal Deadline because of health or other reasons may apply to the Registrar for special consideration.

Students, who find a conflict in their exam schedule must submit a Revised Examination Request form to the Registrar's Office by the deadline date; please consult the List of Important Dates. Requests will be considered for the following reasons only: 1) the scheduled final examination slot conflicts with another exam; 2) the student has three final exams within three consecutive exam time blocks; 3) the scheduled final exam slot conflicts with an exam at another institution; 4) extenuating circumstances. Travel is not considered a valid excuse for re-scheduling or missing a final exam.

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 use electronics for purposes unrelated to the course during a class session. Turn off all cell phones and other electronic devices during class. Laptops should be used for class-related purposes only. 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. Some professors will not allow the use of any electronic devices in 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 Academic Calendar. Personal information (information about an individual that may be used to identify that individual) may be required 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 deadline date; please consult the List of Important Dates. Course extensions are only granted for serious issues that arise "due to circumstances beyond the student's control."

Appeal of Grade

An appeal for change of grade on any course work must be made to the course instructor within one week of receiving notification of the grade. An appeal for change of final grade must be submitted to the Registrar's Office

in writing and providing the basis for appeal within 30 days of receiving notification of the final grade, providing the basis for appeal. A review fee of \$50.00 must accompany the appeal. If the appeal is sustained, the fee will be refunded.

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 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 acknowledge 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 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.

Note: Students are strongly advised to retain this syllabus for their records.