Fall, 2013

BIOLOGY 430 Microbiology

Tuesdays and Thursdays 8:30 am - 9:50 am
Henry Hall, Lab #1

Professor: Dr. Richard Alvey
E-mail: richard.alvey@chaminade.edu (Best way to reach me)
Personal Number 814-42-ALVEY (Personal number, 2nd best way to reach me)
Office Number: 808-739-8373 (Shared office number)
Office: Henry Hall, Room 123C
Office Hours: Mondays and Thursdays 1:30pm to 4:30pm or by appointment

Please use your "chaminade.edu" account for all email communications to me.

As mentioned above, e-mail is the best way to reach me. Please be sure to use your **chaminade.edu** account for all messages you send to me. I am unable to verify the identity of persons using other email accounts.

Textbook: Murray, Rosenthal, and Pfaller, "Medical Microbiology," 6th Edition (Current version is 7th edition, NOT required)

Course Website: http://goo.gl/M7VKrZ
(CaSe SeNsItIvE)

Course Overview:
This is a microbiology and immunology course. In addition to an overview of clinically important pathogenic and non-pathogenic organisms, the complexity of the human immune response to infection is emphasized.

Objectives for Students: At the completion of the course you, the student, will be able to do the following:

- ✓ Appreciate the historical progression of the understanding of infectious disease in humans.
- ✓ Compare and contrast the characteristics of infectious agents including but not limited to bacteria and viruses, including the structure and function of their components.
- ✓ Recognize the diversity and ubiquity of microorganisms and appreciate that only a small fraction of these organisms cause disease.
- ✓ Describe major components of innate and acquired immunity in humans
- ✓ Describe the mechanisms of virulence and immune evasion used by bacteria, viruses, fungi, and protists.
- ✓ Describe the mechanisms of human immune responses to different types of infective agents.
- ✓ Relate the use of antibiotics to the evolution of disease-causing microorganisms and epidemiology of diseases within human populations

Lectures:
1. Class time is 1 hour and 20 minutes in duration, two times weekly for 15 weeks.

2. Lecture topics are listed in the course outline. Consult the outline for exam dates and holidays.

3. Adjustments may be made to the lecture outline, such as changes in exam dates, or assignments.

Quizzes:

- Daily, 10-question quizzes will be given during the semester. Your quiz scores will be averaged together and will be equivalent to one exam.

- Quizzes can only help your grade! If your quiz grade is lower than your exam average I will adjust your quiz average to equal your exam average.

- Quiz 2nd chances: For all quizzes I offer you a 2nd chance to get the right answer. If you take the quiz and are unable to answer a question or find out later that you have put down an incorrect answer, you can email me the question number and the correct answer to get half credit for that question. In order to get the half credit your answers must be correct and you must email them to me before midnight on the same day the quiz is given.

- In the past, many students have found it useful to take a photograph of the quiz questions and sometimes their answers to review later and help with the 2nd chance option.

- Make-up quizzes will not be given. If you provide me with a paper-based, self-written excuse note (see policy below) I will not count missed quizzes in your quiz average, otherwise you will receive a zero for the missed quiz.

Grade Determination:

- The lecture grade will be determined in the following manner:

1st lecture exam	100 points	A ≥90%
2nd lecture exam	100 points	B = 80-89%
Cumulative Final Exam	200 points	C = 70-79%
Daily Quizzes	100 points	D = 60-69%
		F = ≤59.9%
Total Possible	500 points	

Note: Any exam that the student fails to complete at the expected time can be made up only with a valid reason to be determined by the instructor. The exam may be different from the exam taken by the other students.

Class Policies:

- Attendance is ***mandatory*** for each lecture. Attendance will be monitored.

- Missed quizzes cannot be made up.

- **All** excused absences will **require a paper-based** (either typed or hand-written, NOT email) request for excused absence. The note must include an explanation of the reason for not being in class, the date or dates of the absences, an **acknowledgment of the material missed**, and a signature by the student. Materials such as a doctor's note may be included as supporting evidence, but the personal note acknowledging the missed material is still required. Excused absences will be noted in the grade book and quizzes given that day will not be counted for or against the student. Missed exams will have to be made up.

- Students with special needs who meet criteria for the Americans with Disabilities Act (ADA) provisions must provide written documentation of the need for accommodations from the CUH Counseling Center (Dr. June Yasuhara; phone 735-4845) by the end of week three of the class, in order for the instructor to plan accordingly. Failure to provide written documentation will prevent your instructor from making the necessary accommodations. Please refer any questions to the Dean of Students and review the procedures at: **http://www.chaminade.edu/student_life/sss/counseling_services.php**.

- Academic dishonesty including cheating, plagiarism, and other serious offenses will not be tolerated. Appropriate action will be taken.

- Electronic devices: The use of cellular phones/text messaging is prohibited while in class. Laptops may be used to take notes but are not to be used for other purposes such as web browsing, text messaging, or working on anything else not related to class. This is a university-wide policy and the use of such devices during lecture time is disrespectful to the lecturer and neighboring students.

BIOLOGY 430 Microbiology, Infection and Immunity

Fall, 2013 **Course Outline**

Week	Class	Date	Lecture topic	Lab topic
1	1	8/27/13	Introduction	Safety/Intro/Procedures/ Microscopy/ Ubiquity of microorganisms
	2	8/29/13	History and Classification	
2	3	9/3/13	Bacterial Classification Structure and Replication	Microbial media/ Food Microbiology: making Yogurt
	4	9/5/13	Bacterial Structure and Replication	
3	5	9/10/13	Bacterial Structure and Replication	Staining
	6	9/12/13	Bacterial Metabolism and genetics	
4	7	9/17/13	Bacterial Genetics	Enumeration
	8	9/19/13	Bacterial Gene expression	
5	**9**	**9/24/13**	**REVIEW**	Diagnostic Techniques
	10	**9/26/13**	**EXAM #1**	
6	11	10/1/13	Bacterial DNA replication/antibiotics	Control of bacterial growth part 1 Antimicrobials
	12	10/3/13	Bacterial Evolution/Viruses	
7	13	10/8/13	Viral classification and function	Antibiotics
	14	10/10/13	Viral replication and vaccines	
8	15	10/15/13	Viral replication and therapeutic viruses	**Lab Exam #1**
	16	10/17/13	Fungi	
9	17	10/22/13	Fungi and parasites	Antibiotic resistance
	18	10/24/13	Malaria and other parasitic diseases	
10	**19**	**10/29/13**	**Review**	Viral isolation
	20	**10/31/13**	**EXAM #2**	
11	21	11/5/13	Immune system	Pathogen isolation – throat/nose/dirt
	22	11/7/13	Immune system	Fungi and protists
12	23	11/12/13	Immune system	TBD
	24	11/14/13	Immune malfunction	

13	25	11/19/13	TBD	TBD
	26	11/21/13	TBD	
14	27	11/26/13	TBD	Transformation
	28	**11/28/13**	**No Class**	
15	29	12/3/13	TBD	Lab FINAL EXAM
	30	12/5/13	**Review**	
		Tuesday 12/10/13	**Final Exam**	**8:30am -10:30am**