

Micro 5026 Microbial pathogenesis

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Location and Time of Class Meetings:

Room 444B on Monday, Wednesday, Thursday, Friday

Room ALTC 2.211 on Tuesdays

June 5-June 23 T-F 9am - 11am.

Overview: This is an introductory active learning experience to increase your knowledge base in the area of Microbial Pathogenesis. After introductory lectures on topics of bacterial pathogenesis, you will be divided into student teams and assigned a journal article to present to the class. Student teams will research the topic, identify reviews or primary papers and prepare a presentation. All team members will present to the class and are expected to be actively involved in the development of the materials. Class will be condensed into three weeks at the end of the semester to allow teams to research materials, prepare lectures, and slides. The course format will consist of both didactic lectures and then paper presentations and discussions. Because this is a graduate course, you will be responsible for a significant amount of reading and preparation outside of the classroom so that class time can be most productively used for discussions and presentations of key concepts and of experimental methodologies.

Requirements: You must attend class, since much of the class is based on presentation and discussion it is not possible to make up the material. The first week of class will consist of four lectures providing an overview of bacterial pathogenesis topics. Journal articles will be assigned to groups during this first week of class. The second week of class will be reserved for the student groups to meet outside of class to prepare their presentations. The third week of class will consist of the student group presentations with a final presentation on the microbiome on the final day of class.

Presentations: All presentations must be on topic and focused around your topic. Material is to be presented at a graduate level and thus presenting basic aspects of biology is not required unless it is unusual. Discussion of irrelevant materials to fill time or for other reasons will have a negative impact on your presentation grade. For your presentations you should introduce the pathogens, diseases caused, and major mechanisms of virulence. If you are talking about a feature of biology, cell wall for example, you should introduce the topic, relate it to disease and pathogenesis. Teams should shoot for a 40 min

presentation, we have up to 50 minutes for discussion and questions, and 10 minutes to take the quiz. We highly recommend you practice your final presentation as a team before presenting to the class.

Grading: 40% of your grade will be determined by your quiz grade and 60% by your participation and presentation.

Professionalism: All work and images presented on slides should be properly attributed to their original source. It is important to note that in this course, there is no distinction between the students in the MS or Ph.D. programs. Expectations are the same and everyone is equal. Working on a team can be difficult and it is a critical skill to learn that will translate to every aspect of your work life. It is expected that all team members will participate and every team member must present. Team members must contribute intellectually to the presentation and act professionally during team meetings. If a team feels that a member is not contributing or is not being professional, I should be informed as this can impact the entire team grade. I shouldn't have to restate this, but we have had problems in the past: **cheating, dishonesty, or the appearance thereof** to influence student outcomes or the final grade will not be tolerated and could result in a grade of F for the course.

Class Schedule:

Date:	Room:	Lecturer:	Topic:
June 5	Med 444B	Dr. Kannan	Course introduction + Bacterial Structures
June 6	ALTC 2.211	Dr. Kannan	Bacterial toxins and virulence factors
June 7	Med 444B	Dr. Ge	Bacterial secretion systems & membrane vesicles
June 8	Med 444B	Dr. Zhong	Bacterial signaling, Bacterium-host interactions, PAMPs, interaction modes; Assign student groups
June 9-19		Class does not meet	Student groups prepare presentations
June 20	ALTC 2.211	Group 1	TBD
June 21	Med 444B	Group 2	TBD
June 22	Med 444B	Group 3	TBD
June 23	Med 444B	9-10 AM: Group 4 10-11 AM-Dr. Zadeh	Introduction to the Microbiome