Micro 5147: Eukaryotic Pathogens

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Class: T & Th 2:20 pm – 3:40 pm
Location: Campbell Hall 213
Office Hrs: by appointment and after class

Course Description

This course will discuss the major eukaryotic pathogens of medical importance with a primary emphasis on unicellular fungal and parasite pathogens that cause disease in humans. The course will focus on molecular mechanisms of pathogenesis, pathogen modulation of the host immune response, and diagnostics/therapeutics development. As this is an upper division class, we will emphasize and discuss experimental data from scientific literature, including critical evaluation of primary data and understanding of the implications of the results. Student participation during in-class discussions is expected.

Grading

	60%	63%	67%	70%	73%	77%	80%	83%	87%	90%	93%
E	**D-**	**D**	**D+**	**C-**	**C**	**C+**	**B-**	**B**	**B+**	**A-**	**A**

Grades will be determined by a student's performance on two exams (midterm and final) as well as two group projects/presentations. Individual scores will be normalized to the high score on each test/assignment. In-class participation may be used at the instructor's discretion in assigning final grades to students who are on grade division borders.

Project 1:	(Sep 7, 2:20 pm)	10%
Midterm:	(Oct 17, 2:20 pm)	30%
Project 2:	(Oct 31 – Nov 28)	25%
Final:	(Dec 8, 4:00 pm)	35%
Total:		100%

Group Projects

Students will be placed into groups of 4-5 people. Project #1 will be based around host defense evasion strategies and will entail presentation of ideas to the class. Project #2 will be focused on a primary research article selected from the literature. Groups will compose a written analysis and present a 20-30 minute summary and discussion of the paper's findings. Individual groups will present during the last half of the course at which time the written report will be due.

2015 Schedule

Aug 22	(T)	Innate Immune Defenses
Aug 24	(Th)	Innate Immune Defenses
Aug 29	(T)	Adaptive Immune Defenses
Aug 31	(Th)	Fungal Pathogenesis
Sep 5	(T)	*Candida*
Sep 7	(Th)	PROJECT 1
Sep 12	(T)	*Candida*
Sep 14	(Th)	*Candida*
Sep 19	(T)	*Aspergillus*
Sep 21	(Th)	*Aspergillus*
Sep 26	(T)	*Cryptococcus*
Sep 28	(Th)	*Cryptococcus*
Oct 3	(T)	*Histoplasma*
Oct 5	(Th)	*Blastomyces & Coccidioides*
Oct 10	(T)	Fungal Diagnostics/Therapeutics
Oct 12	(Th)	(no class – Autumn Break)

Oct 17	(T)	*MIDTERM EXAM (2:20 pm)*
Oct 19	(Th)	*Entamoeba*
Oct 24	(T)	*Trypanosomes*
Oct 26	(Th)	*Trypanosomes*
Oct 31*	(T)	*Trypanosomes*
Nov 2*	(Th)	*Leishmania*
Nov 7*	(T)	*Leishmania*
Nov 9*	(Th)	*Toxoplasma*
Nov 14*	(T)	*Toxoplasma*
Nov 16*	(Th)	*Plasmodium*
Nov 21*	(T)	*Plasmodium*
Nov 23	(Th)	(no class – Thanksgiving Break)
Nov 28*	(T)	*Plasmodium*
Nov 30	(Th)	Parasite Diagnostics & Therapeutics
Dec 5	(T)	Parasite and Fungal Review
Dec 8	(F)	FINAL EXAM (4:00 pm)

* PROJECT 2 PRESENTATIONS

Required Academic Integrity Statement

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's Code of Student Conduct, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University's Code of Student Conduct and this syllabus may constitute "Academic Misconduct."

The Ohio State University's Code of Student Conduct (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the University, or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University's Code of Student Conduct is never considered an "excuse" for academic misconduct.

If I suspect that a student has committed academic misconduct in this course, I am obligated by University Rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the University's Code of Student Conduct (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University. Committee on Academic Misconduct: oaa.osu.edu/coam/home.html

Required College Diversity Statement

The Department of Microbiology promotes a welcoming and inclusive environment for all students and staff, regardless of race, gender, ethnicity, national origin, disability or sexual orientation. There is no tolerance for hateful speech or actions. All violations of this policy should be reported to the OSU Bias Assessment and Response Team (BART, studentaffairs.osu.edu/bias).

The Department encourages diversity at all levels, particularly among the next generation of scientists. Students are encouraged to participate in organizations that provide support specifically for science and engineering students who are African-American, Asian, disabled, Hispanic, LGBTQ or women. These organizations are listed on the Colleges of Arts and Sciences (artsandsciences.osu.edu/stem-organizations) and Engineering (engineering.osu.edu/studentorgs) web sites.