Pathogenic Microbiology (Bio321) Syllabus

Instructor

Dr. Dave Westenberg  
Department of Biological Sciences  
Office: 202 Schrenk Hall 341-4798  
Lab: 203 Schrenk Hall 341-6586  
djwesten@mst.edu

Office Hours - MW 11:00 - 11:50, or by appointment or just stop by my office or lab and if I'm available I'll be happy to answer questions.

Course Description – A study of medically important microorganisms. Special emphasis will be placed on recent advances in the molecular genetics of host pathogen interactions. This course will focus on the various strategies microorganisms use to attach, invade and multiply in a host. Knowledge of these mechanisms of pathogenesis is being used to develop prevention and treatment strategies for a number of diseases. We will use current literature and case studies to focus on selected model organisms that will introduce the major concepts in microbial pathogenesis.

Case Studies: Cases in Medical Microbiology and Infectious Diseases by Gilligan, Smiley and Shapiro.

Reserve material: Handouts and journal articles will be available on Blackboard.

Grading and Exams: Your grade is based on your scores on three take-home exams (100 points each), Eight reading reports (25 points each - see below for description), 2 projects [Wiki page (50 points) and informational brochure (50 points)] and participation (100 points) for a total of 700 points. Participation includes classroom discussion and attendance. If you have more than four unexcused absences you will forfeit 50 points.

Course Goals: At the end of this course you should be able to:

- Describe strategies microorganisms use to attach, invade and multiply in a host and strategies hosts use to interfere with these processes.
- Critically analyze current literature relating to pathogenic microbiology.
- Evaluate case studies describing specific host-pathogen interactions.
- Explain the use of modern technology to investigate host pathogen interactions.
- Devise and evaluate prevention and treatment strategies for infectious diseases.
The exam due dates are scheduled as follows:

- Exam 1: Friday, September 25
- Exam 2: Friday, October 30
- Exam 3: Friday, December 18

**Reading Reports.** We will discuss several recent articles from the literature. This will be used to relate the material covered in class to current work in the field of microbial pathogenesis. You are expected to read all articles prior to the assigned date. To ensure that the articles are read, you will be required to submit a reading report summarizing the contents of each article. Reading Reports are due by the beginning of class on the day on which the article is to be discussed and can be submitted electronically (Late reports will NOT be accepted).

1) Provide the title, author(s), date and source of each reading.
2) Indicate the senior author's affiliation (e.g. Department of Microbiology and Molecular Genetics, Michigan State University).
3) In 1 - 3 sentences, summarize the main point(s) of the reading. For example: What was the hypothesis? Was it supported by the results?
4) In 1 - 3 sentences each, describe the major strengths of the reading, the major weaknesses, and give your overall opinion/evaluation of the reading. Were any controls missing? Did the data support the conclusions?
5) In 1 - 2 sentences, state why you think that this reading was assigned.

Disability Support Services: [http://dss.mst.edu](http://dss.mst.edu) Any student inquiring about academic accommodations because of a disability should be referred to Disability Support Services so that appropriate and reasonable accommodative services can be determined and recommended. DSS is located in 204 Norwood Hall (341-4211, dss@mst.edu). "If you have a documented disability and anticipate needing accommodations in this course, you are strongly encouraged to meet with me early in the semester. You will need to request that the Disability Services staff send a letter to me verifying your disability and specifying the accommodation you will need before I can arrange your accommodation."

Academic Dishonesty: [http://registrar.mst.edu/academicregs/index.html](http://registrar.mst.edu/academicregs/index.html) Page 30 of the Student Academic Regulations handbook describes the student standard of conduct relative to the System’s Collected Rules and Regulations section 200.010, and offers descriptions of academic dishonesty including cheating, plagiarism or sabotage. Additional guidance for faculty, including a description of the process for dealing with issues related to academic dishonesty, is available on-line at [http://ugs.mst.edu](http://ugs.mst.edu).

If you have any comments or concerns regarding this course or either instructor (good or bad) please feel free to discuss them with us. If you are not satisfied with our response or prefer to speak with someone else, you may contact the Chair of the Biology Department, Dr. Robert Aronstam (aronstam@mst.edu, 341-4819) or the Vice-Provost for Undergraduate Studies, Dr. Harvest Collier (hcollier@mst.edu, 341-4390).