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BIOM 427.01: General Parasitology

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BIOM 427, General Parasitology 2021
Tuesday and Thursday, 8:00am – 8:50am, HS 207

Instructor: Dr. Jim Driver. Office - Electron Microscopy Laboratory, ISB 017
Office Hr. 11:00am – 12:00pm Tuesdays or by appointment
Email: jim.driver@mso.umt.edu

Textbook: Required. Foundations of Parasitology, Schmidt and Roberts. 9th Ed. Available at UM Bookstore or online.

Covid-19 Health and Safety. We will be following the University guidelines for Covid-19 in this class. Please do your best to prevent the spread of the virus. It is required that we all wearing a mask and keeping a safe distance from other students while in the classroom. Fun fact: viruses can be transmitted thru your tear ducts. That is why you can get a cold or flu by rubbing your eyes if you get a virus on your hands. I hope that if we are diligent about the University Covid guidelines we can get thru the entire semester without any community spread and keep meeting in person.

Lecture exams: There will be 3 lecture exams; two exams during the semester and a final exam covering the last of the semester's new material. There will also be one short writing assignment as described below. Additionally class attendance is required and part of your grade will be based on attending class.

UMOnline – Moodle: Lectures will be posted in units containing materials to be covered for each upcoming exam. I reserve the right to alter the amount of material that will be covered for each exam. Lectures posted on Moodle will be in Powerpoint format. In class I will explain the topics covered and will likely add additional material not in the Powerpoints posted on Moodle. However, exam questions will come from the topics outlined in the Powerpoint slides and on additional material on those specific topics in the textbook. Prior to each exam I will provide and post on Moodle a handout with the general topics that will be covered for each exam. I encourage you to attend the class especially since this class is concentrated in a short time period and it will be easy to get behind on the material I will cover during each class period.

Covid-19, Moodle, and Lectures. Due to the Coronavirus if there are students who cannot attend this class in person due to exposure or quarantine, I will record lectures with audio and video during the class lecture time and send the link to those students. The University has posted Covid guidelines that should minimize the risk of infection if everyone follows the guidelines. If at any time you have symptoms that may indicate a Covid-19 infection please stay home, contact me by email and I will send you access to the lecture.

Learning outcomes

General Parasitology is designed as a survey of parasites. This class will focus on parasites of humans and of domestic animals although we will cover some parasites of wild populations as examples of parasite types and life cycles. The material will be divided into 4 broad categories.

1. The parasitic Protozoa.
2. The parasitic Flatworms or Platyhelminthes.
3. The parasitic Roundworms or Nematodes.
4. The parasitic Arthropods and Insects vectors of parasites.

For each group we will cover the morphology and structures common to the group as well as the distinctive morphology of the individual parasites covered within the group. For the individual parasites we will describe the epidemiology of the disease and the pathology of the disease. Also for each we will outline the parasitic life cycle in some detail including any secondary hosts and/or vectors of the parasite. Along with the pathology we will study the immunology of the host-parasite interaction as well as diagnosis and treatment where available. Finally we will cover the topic of control of the parasite in the environment. Ultimately this course should allow the student to be familiar with the scope of parasitic

diseases worldwide and the disease burden they have placed on humans and domestic animals over time. By the end of the class the student should also be able to describe a variety of major parasites and vectors, their life cycles, the diseases they cause, available treatments, and the possibilities for control.

Classroom attendance, make-up exams.

The class Powerpoint lectures will be posted on Moodle but there will be a fair amount of material covered in the class that helps explain the topics in greater detail. It has been determined that the number one factor determining success in a course is regular attendance. Disruptive behavior such as talking or disturbing other students by leaving lecture early is not acceptable. If you expect to leave class early, please tell me before class begins. **Make-up exams will be permitted only with compelling and supported reasons.** Make-up exams will be scheduled at the convenience of the instructor.

Lecture exams and quizzes: There will be 3 lecture exams; two exams during the semester and a final exam based on new material only. Each exam including the final will be worth 100 points. There will also be one short writing assignment as described below that will also be worth 100 points. There will also be several short quizzes given in class that will be scheduled at various times during the semester depending on what we have covered in the lectures. These will be worth 50 points.

Exam Schedule.

Exam 1 September 28th. 8 am

Exam 2 October 26th. 8 am

Final Exam December 13th 10:10 am – 12:10

Quizzes – There will be several quizzes given in class based on material covered in previous classes. They will be scheduled at times to be determined by the instructor but students will be given ample advanced notice.

Written assignment - Due by 5pm November 9th.

Grading

Grades for this course will be based on 2 Semester exams (100 points each) and a Final exam (100 points, partially comprehensive), several quizzes for 50 points total and a short writing assignment (100 points). Class attendance will account for approximately 10% of your grade up to 44 points. The following grading scheme will be used:

100-90% = A, 89.9-80% = B, 79.9-70% = C, 69.9-60% = D, <60% = F

If you are taking this class as Pass/No Pass the University requirement for a Passing grade is the equivalent of a “C” (70%) or higher cumulative average on exams and assignments.

Written assignment:

Topic due by October 28th. Send to Dr. Driver at jim.driver@mso.umt.edu.

Paper due by 5pm November 9th.

Each student will pick a parasite, a parasitic disease, or a topic related to parasitic disease treatment or vaccine development for a 1-page single-spaced paper. This paper is to be directed to a public audience of non-scientists. You will attempt to illustrate your topic in a way that will help the audience understand the science behind the topic. As microbiologists or health professionals you must be able to clearly explain diseases and treatments to a public that might not understand these topics or may have been misled by other information outlets (see - The Internet). The paper will be graded on clarity of writing, suitability for the target audience, scientific validity, and quality of the writing (grammar, spelling, etc.). Please cite a minimum of 2 references at the end of the paper. Since the internet is a common resource for all types of research (or pseudo-research) make sure to back up your information with a trip to the CDC or WHO web sites or the primary research literature.

Paper may be handed in in class or emailed to jim.driver@mso.umt.edu. Late papers will be penalized 10% for every day past the deadline.

Instructor's policy for accommodating disabilities

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and the Office for Disability Equity (ODE). If you anticipate or experience barriers based on disability, please contact the ODE at: (406) 243-2243, ode@umontana.edu, or visit www.umt.edu/disability for more information. Retroactive accommodation requests will not be honored, so please, do not delay. As your instructor, I will work with you and the ODE to implement an effective accommodation, and you are welcome to contact me privately if you wish.

Instructor's policy on academic honesty and plagiarism.

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code.