



Parasitology

The University of Toledo
College of Natural Science and Mathematics
BIOL4330-001 CRN13457

Instructor:	Dr. Sally E. Harmych	Term:	Spring 2017
Email:	sally.harmych@utoledo.edu	Class Location:	WO3246
Office Hours:	T/W/R 9-10 AM T/R 12:30-2:00 PM	Class Day/ Time:	MW 11 AM– 12:15 PM
Office Location:	WO1235K	Credit Hours:	3
Office Phone:	419.530.4585		

COURSE/CATALOG DESCRIPTION

A study of the host-parasite interaction including aspects of parasite morphology, taxonomy, development and ecology.

STUDENT LEARNING OUTCOMES

Students who successfully complete this course will be able to:

- Describe the different types of parasites and hosts.
- Explain the relationship between a parasite and host and the effects of that relationship.
- Describe the difference between Cestodes, Nematodes, Trematodes and protozoa.
- Describe in detail the life cycles and pathology of the parasitic organisms discussed.
- Describe the methods of parasite control and the advantages and disadvantages of each method.
- Describe the strategies used by parasites to evade the host immune response.
- Describe the immune response of the host to parasitic infection.

TEACHING STRATEGIES

I expect that since you are taking this course you are interested in learning about the subject of parasitology. The best way to be successful is to read the text, attend lecture and take notes. It is helpful if you read the text before attending lecture. When you come to lecture it is expected that your focus will be on the material covered, not your cell phone, latest email or Facebook postings, or today's news headlines. I encourage you to ask questions if you are having difficulty. You can also ask me questions directly after class, during office hours, via email or over the phone. I am here to help you be successful, but I cannot do that if you do not ask.

PREREQUISITES AND COREQUISITES

BIOL 2150 FOR LEVEL UG WITH MIN. GRADE OF D- AND BIOL 2170 FOR LEVEL UG WITH MIN. GRADE OF D-.

REQUIRED TEXTS AND ANCILLARY MATERIALS

Foundations of Parasitology, Larry S. Roberts and John J. Janovy, Jr., Steve Nadler, 2009, 9th Edition, McGraw-Hill
ISBN # 9780073524191

TECHNOLOGY REQUIREMENT

Powerpoint
Blackboard Access



UNIVERSITY POLICIES

The University is an equal opportunity educational institution. Please read The University's Policy Statement on Nondiscrimination on the Basis of Disability Americans with Disability Act Compliance (http://www.utoledo.edu/policies/administration/diversity/pdfs/3364_50_03_Nondiscrimination_o.pdf)

ACADEMIC ACCOMMODATIONS

The University of Toledo is committed to providing equal access to education for all students. If you have a documented disability or you believe you have a disability and would like information regarding academic accommodations/adjustments in this course please contact the Student Disability Services Office at (419)530-4981 or through the UT website at <http://www.utoledo.edu/offices/student-disability-services/index.html>

GRADING

Your grade in this course will be determined based on your performance on a map quiz midterm exams and the comprehensive final exam.

Map Quiz: You will be asked to complete a map quiz this semester. The quiz involves the identification of countries around the world where parasitic infections are common. You are expected to earn a score of 21/25 on the quiz to earn the 10 points towards your final grade. You may take the quiz as many times as needed to earn this score. This needs to be completed by the end of the last class meeting on April 26, 2016.

Midterm Exams: You will be given four (4), midterm exams each worth 100 points. Each exam will consist of a combination of short answer, matching, labeling and essay questions. The material covered on the exams will include information covered in lecture as well as in the corresponding chapters.

Final Exam: The final exam is comprehensive and will be worth 150 points. The final exam will have the same types of questions as the midterm exams. The distribution of the information for the final exam will be discussed closer to the end of the semester.

Final Grade Calculation:

Map quiz	10 points
Midterm exams	400 points
Final Exam	<u>150 points</u>
	560 points

*****Academic dishonesty may lead to failure of this course. Read the University policy about this subject found at the end of this document*****

Grading Scale: Exams will be scored as % correct points, which will correspond to a letter grade according to the table below. This scale is based on the assumption that knowledge of more than 50% of the material is needed to pass this course.

<u>GRADE</u>	<u>% CORRECT</u>	<u>GRADE</u>	<u>%CORRECT</u>
A	90 – 100	C	67 - 70
A-	87 – 89	C-	63 - 66
B+	83 – 86	D+	59 - 62
B	79 – 82	D	55 - 58
B-	75 – 78	D-	51 – 54
C+	71 – 74	F	0 - 50



Any student listed in the course after **March 24th** can only receive a **grade of A – F**. Any student who stops attending class after taking the first exam will receive a grade of F for all the missed exams, ***unless that student withdraws from the course by March 24, 2016. I will only assign **IN** grades in extraordinary cases when unexpected conditions prevent a student from completing the course within the term of enrollment. An IN grade must be removed by the end of the following semester.

Course Schedule

Week	Date	Topic	Chapters
1	January 9	Tropical disease overview/ Basic principles and concepts	1, 2
	January 11	Parasitic Protozoa	4
2	January 16	No Class – Martin Luther King Day	
	January 18	Introduction to the Kinetoplastida	5
3	January 23	Trypanosomes: African sleeping sickness & Chagas disease	5
	January 25	Old world Leishmaniasis and New world Leishmaniasis	5
4	January 30	<i>Giardia and Trichomonas</i>	6
	February 1	Exam 1	
5	February 6	Sarcodina: <i>Entamoeba</i> / Introduction to Apicomplexa	7, 8
	February 8	<i>Eimeria and Toxoplasma</i>	8
6	February 13	<i>Plasmodium</i>	9
	February 15	Malaria	9
7	February 20	Malaria: chemotherapy and vaccines	9
	February 22	Exam II	
8	February 27	Introduction to Platyhelminthes/ Trematode life cycles	13, 15
	March 1	Trematode taxonomy	15
9	March 6-10	No Class – Spring Break	
10	March 13	Digenes; Schistosoma	16
	March 15	Digenes: <i>Paragonimus/ Clonorchis (Opisthorchus)</i>	18
11	March 20	Cestodes: anatomy and life cycles	20, 21
	March 22	<i>Diphyllobothrium, Taenia sp., Echinococcus</i>	21
12	March 27	Introduction to Nematodes/ <i>Trichuris</i> and <i>Trichinella</i>	22, 23
	March 29	Exam III	
13	April 3	Introduction to Filaria/ <i>Wuchereria</i>	29
	April 5	Filaria: <i>Onchocerca, Loa loa</i> and <i>Dracunculus</i>	29, 30

14	April 10	Hookworms, <i>Ascaris</i> , <i>Toxocara</i> , <i>Enterobias</i>	24, 25, 26
	April 12	Parasitic arthropods (selected) and arachnids	33-39
15	April 17	Immune responses to parasites and vaccine strategies	3
	April 19	Exam IV	
16	April 24	Biochemistry of parasites/ Chemotherapy against parasites	
	April 26	Course overview/ Evaluations	
	May 5	Final Exam 10:15 AM - 12:15 PM WO3246 (Friday)	

Policy Statement on Academic Dishonesty

Academic dishonesty will not be tolerated. Among the aims of education are the acquisition of knowledge and development of the skills necessary for success in any profession. Activities inconsistent with these aims will not be permitted. Students are responsible for knowing what constitutes academic dishonesty. If students are uncertain about what constitutes plagiarism or cheating they should seek the instructor's advice. Examples of academic dishonesty include, but are not limited to:

- Plagiarizing or representing the words, ideas or information of another person as one's own and not offering proper documentation;
- Giving or receiving, prior to an examination, any unauthorized information concerning the content of that examination;
- Referring to or displaying any unauthorized materials inside or outside of the examination room during the course of an examination;
- Communicating during an examination in any manner with any unauthorized person concerning the examination or any part of it;
- Giving or receiving substantive aid during the course of an examination;
- Commencing an examination before the stipulated time or continuing to work on an examination after the announced conclusion of the examination period;
- Taking, converting, concealing, defacing, damaging or destroying any property related to the preparation or completion of assignments, research or examination;
- Submitting the same written work to fulfill the requirements for more than one course.

While academic integrity is particularly the responsibility of the student, the faculty members also have a responsibility. Assignments and tests should be constructed and proctored so as to discourage academic dishonesty. Faculty members are expected to inform their students explicitly as to what materials and procedures are authorized for use in the preparation of assignments or in examinations (e.g., the use of calculator, computer, text materials, etc.). Should cases of academic dishonesty be found among students, the instructor may choose to counsel the student, or the following sanctions may be imposed:

- The student may be assigned an F for the work in question.
- The student may be assigned an F for the course. In this case the instructor should inform the Dean and the student of this action. The Dean will make certain that the student receives the F grade and is not permitted to withdraw from the course.
- The student may be placed on probation or suspended for some definite period of time, dismissed or expelled by the Dean if either the seriousness of the offense or a record of repeated offenses warrants it. A notation that such a sanction has been imposed will be made part of the student's permanent record. It is expected that the Dean will consult with the instructor and the student in making such a judgment, and that the Dean will notify the student of the sanction imposed and of the appeals procedure.

A student found to be academically dishonest by a faculty member may appeal according to procedures approved by the respective colleges. The procedures for making a final appeal to the Student Grievance Committee may be found in the Student Handbook.