

Syllabus Spring 2020 - Biology 336: Parasitology

Instructor: Dr. Isaure de Buron **Office hours: by appointment (please email)**
Office: Off campus (Ft Johnson) **Phone: 953-3615** **E-mail: deburoni@cofc.edu**
Lectures: Rita 102; T and R: 9:25-10:40 pm
Laboratory Rita 153: R (L01) 12:00 – 3:00 pm

DATE	LECTURE TOPIC	LABORATORY [exercise #]	
<u>Basic Concepts in Parasitism</u>			
Jan	9	The basics of parasitism	No lab
	14, 16	The parasite's 'to do' list Overview of parasites' life cycles	[2] Compound microscope calibration
	21, 23	Adaptations to parasitism - Arms race Host defense and Parasite evasion	[3] Dispersal forms
	28, 30	R: Quiz 1- Infection vs disease - Pathogenesis of parasitic infections Therapeutics, control, and associated challenges	[5] Parasite ecology: Quantitative factors
<u>Major parasite diversity, ecology and epidemiology</u>			
Feb	4, 6	Diplomonads Kinetoplastids	[7] Parasite identification: use of a dichotomous key [15] Presentation on 4/2: what to expect?
	11, 13	Kinetoplastids cont' R- Quiz 2- Amebae	[8]: 'Protists' I
	18, 20	Apicomplexans: Malaria agents Apicomplexans: Coccidians	[8]: 'Protists' II
	25, 27	Myxozoa Digeneans: Liver flukes	IP 1- Host dissection- collection and observation of parasites
March	3, 5	T: mid term test Digeneans: Intestinal flukes	[11] Platyhelminthes I Dead line to hand in a paper to present
	10, 12	Digeneans: Blood flukes Monogeneans	[9] Parasite identification: Use of molecular tools - IP2: DNA isolation
	17, 19	<i>Spring break - No class</i>	
	24, 26	Cestodes	[11] Platyhelminthes II
/April	31, 2	R: Quiz 3- Soil transmitted nematodes The sushi worm and other food borne nematodes	Presentations
	7, 9	Filarial nematodes - R: Quiz 4- Catch up day	[14] Nematodes
	14, 16	Parasitic crustaceans	Lab test

Thursday April 23: Reading Day

Saturday April 25: 8:00-11:00 am - Final examination (comprehensive)

Textbook: Recommended: “Foundations of Parasitology” by L.S. Roberts and J. Janovy Jr., McGraw Hill. 9th ed.

Laboratory: No manual is needed. Handouts are posted on OAKS – Please print them prior to coming to class or bring your computer or other mobile device to lab. You will need a three-ring binder with **plain white** paper, a ruler (metric system!) and pencils. Because of the nature of the laboratory exercises, **no make-up labs can be given. Students are responsible for all materials presented during labs missed.** Office hours are not to be used for making-up labs. Please note that depending on availability of live/fresh material, the schedule might shift. **The safety policy stated in your manual will be strictly enforced.**

Course description: Ecology, life history, morphology, pathogenicity, and control of parasites of vertebrates and invertebrates. Emphasis is placed on the social and economic impacts of parasitism using parasites of medical and veterinary importance. Laboratory covers both classical and modern techniques currently used in the study of parasites.

Objectives: This course will initiate students to the major aspects of both parasitology and parasitism by studying what parasites are, what they do, what makes them so successful, and what their roles are in ecosystems.

Learning outcomes: Upon completion of this Parasitology course, successful students will demonstrate:

- an understanding of the fundamental principles of parasitism;
- an ability to outline the general life cycles of the major parasites of medical and veterinary importance;
- an understanding of the ecology of parasites, and of the importance of parasites in ecosystems;
- an understanding of the methods of control of parasites and their limitations;
- an understanding of the concept of zoonoses and emerging or re-emerging diseases.

Testing: Quizzes, lecture tests, and the final examination will be a combination of short essays, multiple choice, fill-in the blanks, short answers, drawings, and labeling. The final examination will be cumulative. The lowest quiz grade (including a zero) will be dropped. Quizzes will be given at the start of class and will last ~10-15 min. Tests will last the entire period.

Laboratory notebooks will be picked up at the end of most laboratory sessions to be graded. The grade will be given on a scale from 0 (absence or no laboratory notebook left for grading) to 5. Grades will be based upon clarity, accuracy, and completeness. The laboratory test will include identification of specimens, drawings, and labeling as well as demonstration of knowledge of topics covered in the laboratory.

Students will search for a primary literature research paper about parasites not covered in class and will give a PowerPoint presentation about this paper. The paper will need approval from the instructor (see syllabus for deadline to hand in the paper for approval). Neither case studies nor review articles will be approved. The presentation will last 8-10 min. More information about expected content of the presentation can be found in the lab manual.

Grading:	Quizzes: 10% each (lowest dropped) = 30% total	Presentation: 5%
	Midterm test: 20%	Lab test: 10 %
	Final test: 30 % cumulative	Lab notebook: 5%

Grading scale:	A-: 90 – 93 %	A: 94 - 100 %	
	B-: 80 - 83%	B: 84– 86 %	B+: 87 - 89 %
	C-: 70 – 73 %	C: 74 - 76%	C+: 77- 79 %
	D-: 60 – 63 %	D: 64 - 66%	D+: 67 - 69%
	F: < 60 %		

Attendance: Attendance in lectures and in laboratories is **mandatory. Missing 3 laboratories will result in a WA grade (which calculates as an F). Students are responsible for all material and announcements made in class and laboratory.** These announcements may include changes in the course syllabus, material to review for examinations, and examination dates. **Written proof verifying an acceptable reason for an excused absence will be required** before being excused from attending a laboratory session or taking a test. Quizzes and tests missed for non-excused absences will be graded zero.

Special accommodations: Any student eligible for and needing accommodations because of a documented disability is requested to speak with the professor during the first two weeks of class or as soon as the student has been approved for services so that reasonable accommodations can be arranged.

Policies: You are expected to do all work in accordance with the principles of **the Honor Code. Cell phones, pagers, and any other electronic devices must be turned OFF when in class and taking quizzes and tests. No hats may be worn when taking quizzes and tests. Written proof verifying an acceptable reason for an excused absence will be required** before being excused from attending a laboratory session or taking a quiz or a test. **Quizzes and tests missed for non-excused absences will be graded zero.**

Honor Code and Academic Integrity:

Lying, cheating, attempted cheating, and plagiarism are violations of our Honor Code that, when identified, are investigated. Each incident will be examined to determine the degree of deception involved.

Incidents where the instructor determines the student's actions are related more to misunderstanding and confusion will be handled by the instructor. The instructor designs an intervention or assigns a grade reduction to help prevent the student from repeating the error. The response is recorded on a form and signed both by the instructor and the student. It is forwarded to the Office of the Dean of Students and placed in the student's file.

Cases of suspected academic dishonesty will be reported directly by the instructor and/or others having knowledge of the incident to the Dean of Students. A student found responsible by the Honor Board for academic dishonesty will receive a XXF in the course, indicating failure of the course due to academic dishonesty. This status indicator will appear on the student's transcript for two years after which the student may petition for the XX to be expunged. The F is permanent.

Students can find the complete Honor Code and all related processes in the *Student Handbook* at <http://deanofstudents.cofc.edu/honor-system/studenthandbook/index.php>

Mental & Physical Wellbeing:

At the college, we take every students' mental and physical wellbeing seriously. If you find yourself experiencing physical illnesses, please reach out to student health services (843.953.5520). And if you find yourself experiencing any mental health challenges (for example, anxiety, depression, stressful life events, sleep deprivation, and/or loneliness/homesickness) please consider contacting either the Counseling Center (professional counselors at <http://counseling.cofc.edu> or 843.953.5640) or the Students 4 Support (certified volunteers through texting "4support" to 839863 or visit

<http://counseling.cofc.edu/cct/index.php>). You can also visit both on campus on the 3rd floor of Robert Scott Small. These services are there for you to help you cope with difficulties you may be experiencing and to maintain optimal physical and mental health.