Syllabus Fall 2018 - 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 152; T and R: 10:50-12:05 pm**
***Laboratory* Rita 153: R (L01) 12:30 pm – 3:30 pm or R (L02) 3:45-6:45 pm**

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 material, the schedule might shift. You will be made aware of changes in class before lab. **The safety policy stated in your manual will be strictly enforced**. Come to lab. prepared.

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 the ecosystem;
- an understanding of the methods of control 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 checked and/or picked up at the end of most laboratory sessios to be graded. Each week a 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.

You are expected to do all work in accordance with the principles of the Honor Code

Cell phones and other electronic devices must be turned off when in class and taking tests. No hats when taking tests. No eating, chewing, or drinking in the laboratory. NO TEXTING in class or laboratory!

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.

Grading:

A-: 90 – 93 %	A: 94 - 100 %	
B- : 80 - 83%	B: 80– 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.

DATE		LECTURE TOPIC	LABORATORY [exercise #]
		Basic Concepts in Parasitism	
Aug	21, 23	The basics of parasitism	[1] Symbiosis
	28, 30	The parasite's 'to do' list Overview of parasites' life cycles	[2] Compound microscope calibration
Sept	4, 6	Adaptations to parasitism - Arms race Host defense and Parasite evasion	[3] Dispersal forms
	11, 13	Infection vs disease - Pathogenesis of parasitic infections **R: Quiz 1-** Therapeutics, control, and associated challenges	[5] Parasite ecology: Quantitative factors
		Parasites and conservation biology	
	18, 20	Parasites as indicators of environmental health Parasites as natural tags	[7] Parasite identification: use of a dichotomous key **Dead line to choose a paper for presentation**
		Major parasite diversity, ecology and epidemiology	
	25, 27	Diplomonads Kinetoplastids	[9] Parasite identification: Use of molecular tools
Oct	2, 4	Amebae Apicomplexans: Malaria agents	[8]: 'Protists'
	9, 11	Apicomplexans: Coccidians **R- Quiz 2-** Digeneans: Liver and intestinal flukes	IP 1- Host dissection- collection of parasites **IP theme: understand the challenges in the study of parasite diversity**
	16-18	Catch up day Digeneans: Blood flukes	IP 2: Morphological study
	23, 25	**T: mid term test** Monogeneans - Cestodes	IP3: DNA isolation + literature search
/Nov	30, 1	Cestodes cont' Soil transmitted nematodes	[11] Platyhelminthes
	6, 8	***T: 6 =Fall break - No class*** **R: Quiz 3** The sushi worm and other food borne nematodes	**Presentations**
	13, 15	Filarial nematodes -	[14] Nematodes
	20 22:	Mange and myasis ***Thanksgiving Holiday. No class***	***No lab***
	27, 29	Parasitic crustaceans **R: Quiz 4** – Catch up day	**Lab test**

Dec 3 Monday (i.e. no class) **Dead line for lab IP paper – to be sent electronically**

Dec 4 Tuesday Reading Day

Thursday Dec 6: 8:00-11:00 am - Final examination (comprehensive)

Grading:

Quizzes: 10% each (lowest dropped) = 30% total
Midterm test: 20%
Final test: 25 % cumulative

Presentation: 5%
Independent project + paper: 5%
Lab notebook: 5%
Lab test: 10 %