

Biology 3870 Parasitology
CRN 85008 4 credit hours

Fall Semester, 2021

Instructor - Dr. J. Mitchell Lockhart

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Office Hours: Monday 9:50-11:00, Tuesday 8:00-9:30, Wednesday 10:00-12:00 or by
appointment

Course hours: Lecture – Monday, Wednesday, Friday 8:00-8:50 AM, BCB 1202

Laboratory – Monday, 11:00 AM – 1:50 PM, BCB 2071

Textbook – Foundations of Parasitology, 9th edition. Gerald D. Schmidt and Larry S. Roberts,
McGraw Hill (Suggested). Text is available online through CourseSmart.

Laboratory Textbook – None. Lab material will be available on Blazeview.

Prerequisites: BIOL 1107, 1108, 3200 and 3250 or permission of instructor.

Course Objectives: A study of the morphology, life cycles, and host-parasite relationships of
representative protozoan and metazoan parasites. Human parasites are emphasized.

Attendance: MANDATORY

The final grade will be a combination of your exam scores, final exam score, and the various projects discussed below:

Lecture Exam 1, 2, and 3	100 pts. each (each worth equal)
Laboratory Portfolio	200 pts.
Powerpoint Assignments (1-2)	50-100 pts (each worth equal)
Laboratory Exams (2)	100 pts each
Comprehensive Final Exam -	200 pts.
Total	950-1000 pts.

Grade Scale: 90-100 = A, 80-89 = B, 70-79 = C, 60-69 = D, <60 = F

Privacy Act: Because of the Buckley Amendment or Privacy Act, grades will not be discussed over the phone, via email, given to friends, or given to relatives.

Cheating: Refer to the Student Code of Ethics in the Valdosta State University Student Handbook. A student caught cheating will be penalized ranging from receiving a zero for that assignment or test to failing the class.

Title IX: Valdosta State University (VSU) is committed to creating a diverse and inclusive work and learning environment free from discrimination and harassment. VSU is dedicated to creating an environment where all campus community members feel valued, respected, and included.

Valdosta State University prohibits discrimination on the basis of race, color, ethnicity, national origin, sex (including pregnancy status, sexual harassment and sexual violence), sexual orientation, gender identity, religion, age, national origin, disability, genetic information, or veteran status, in the University's programs and activities as required by applicable laws and regulations such as Title IX. The individual designated with responsibility for coordination of compliance efforts and receipt of inquiries concerning nondiscrimination policies is the University's Title IX Coordinator: Maggie Viverette, Director of the Office of Social Equity, titleix@valosta.edu, 1208 N. Patterson St., Valdosta State University, Valdosta, Georgia 31608, 229-333-5463.

Student Opinion of Instruction Statement: At the end of the term, all students will be expected to complete an online Student Opinion of Instruction survey (SOI) that will be available through SmartEvals. Students will receive an email notification through their VSU email address when the SOI is available (generally at least one week before the end of the term). SOI responses are anonymous to instructors/administrators, and they will be able to access results only after they have submitted final grades. Before final grade submission, instructors will not be able to see any responses, but they can see the percentage of students who have or have not completed their SOIs. While instructors will not be able to see student names, an automated system will send a reminder email to those who have yet to complete their SOIs. Students who

those who have v

to the health and wellness of VSU students can be seen at <https://www.valdosta.edu/administration/finance-admin/campus-wellness/student-resources.php>.

You can find information, including how you can access the Brightspace Pulse app that will allow you to view BlazeVIEW on your smartphone at <https://www.d2l.com/products/pulse/>. In BlazeVIEW, all VSU students have a course with guides for how to use tools in BlazeVIEW; search for "VSU BlazeVIEW Student Tutorial 2020."

Face Coverings: As the Blazer Creed articulates, members of the VSU community are expected to live by the high standards of civility, integrity, and citizenship and embrace their responsibility as a member of the Blazer community. In recognition of this responsibility, and in response to the best available science and current guidance from the Centers for Disease Control and Prevention and the Georgia Department of Public Health, while face coverings are no longer required, individuals are strongly encouraged to continue wearing a face covering indoors. Unvaccinated individuals are strongly encouraged to get vaccinated. Vaccines remain available at no cost for all

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Other Assignments: Your instructor MAY periodically assign some tasks to be completed dw0.000009128000912000

Course Outcomes:

Course:

By the end of BIOL 3870, students who successfully complete the course should have:

1. Gained factual knowledge, to include anatomy/histology, terminology, methods, and principles, about Parasitology. (DO – 2,3,5; VSUGEO – 5)

including the language, social and religious customs, aesthetic expression, geography, and intellectual and political history, to enable them to interact with individuals within that society from an informed perspective. They will possess an international viewpoint that will allow them to examine critically the culture of their own nation and to participate in global society.

3. Students will use computer and information technology when appropriate. They will demonstrate knowledge of computer concepts and terminology. They will possess basic working knowledge of a computer operating system. They will be able to use at least two software tools, such as word processors, spreadsheets, database management systems, or statistical packages. They will be able to find information using computer searching tools.
4. Students will express themselves clearly, logically, and precisely in writing and in speaking, and they will demonstrate competence in reading and listening. They will display the ability to write coherently in standard English; to speak well; to read, to understand, and to interpret the content of written materials in various disciplines; and to listen effectively and to understand different modes of communication.
5. Students will demonstrate knowledge of scientific and mathematical principles and proficiency in laboratory 126.02 ty.

Tentative Lecture Outline - This is the order in which we will cover topics.

TOPIC

Introduction to Parasitology

Basic Principles and Concepts I: Parasite Systematics, Ecology and Evolution

Basic Principles and Concepts II: Immunology and Pathology

Parasitic Protozoa: Form, Function, and Classification

Kinetoplasta: Trypanosomes and Their Kin

Other Flagellated Protozoa

The Amebas

Phylum Apicomplexa: Gregarines, Coccidia, and Related Organisms

Phylum Apicomplexa: Malaria Organisms and Piroplasms

Phylum Ciliophora: Ciliated Protistan Parasites

Phyla Microspora and Myxozoa: Parasites with Polar Filaments

The Mesozoa: Pioneers or Degenerates?

Introduction to Phylum Platyhelminthes

Trematoda: Aspidobothrea

Trematoda: Form, Function, and Classification of Digeneans

Digeneans: Strigeiformes

Digeneans: Echinostomatiformes

Digeneans: Plagiorchiformes and Opisthorchiformes

Monogeneoidea

Cestoidea: Form, Function, and Classification of the Tapeworms

Tapeworms

Phylum Nematoda: Form, Function, and Classification

Nematodes: Trichinellida and Dioctophymatida, Enoplean Parasites

Nematodes: Tylenchina, Pioneering Parasites

Nematodes: Strongyloidea, Bursate Rhabditians

Nematodes: Ascaridomorpha, Intestinal Large Roundworms

Nematodes: Oxyuridomorpha, Pinworms

Nematodes: Gnathostomatomorpha and Spiruromorpha, A Potpourri

Nematodes: Filarioidea, Filarial Worms

Nematodes: Dracunculoidea, Guinea Worms, and Others

Phylum Nematomorpha, Hairworms

Phylum Acanthocephala: Thorny-Headed Worms

Phylum Arthropoda: Form, Function, and Classification

Parasitic Crustaceans

Phylum Pentastomida: Tongue Worms

Parasitic Insects: Phthiraptera, Chewing and Sucking Lice

Parasitic Insects: Hemiptera, Bugs

Parasitic Insects: Fleas, Order Siphonaptera

Parasitic Insects: Diptera, Flies
Parasitic Insects: Strepsiptera, Hymenoptera, and Others
Parasitic Arachnids: Subclass Acari, Ticks and Mites

Lecture Exams:

- 1 – September 20
 - 2 – October 27
 - 3 – December 3
- Final Exam: Wednesday, December 8, 8:00-10:00AM

Tentative Lab Schedule:

- Lab 1 – Order Trypanosomatida – Trypanosomes
- Lab 2 – Order Kinetoplastida – Leishmania
- Lab 3 – Other Flagellate Protozoa
- Lab 4 – Phylum Ciliophora
- Lab 5 – Phylum Sarcodina
- Lab 6 – Phylum Apicomplexa- Plasmodium vivax
- Lab 7 – Phylum Apicomplexa – Plasmodium falciparum
- Lab 8 – Phylum Apicomplexa – Coccidia
- Lab 9 – Phylum Platyhelminthes – Order Strigeiformes
- Lab 10 – Echinostomatiformes
- Lab 11 – Nematoda I
- Lab 12 – Nematoda II
- Lab 13 – Cestoda
- Lab 14 –