

**Midwestern State University Biology  
Fall 2023**

**I. Animal Parasitology**

BIOL 4524-101 Lecture: TR 12:30PM - 1:50PM BO 100  
Lab: T 2:00 – 4:50PM BO 207

**II. Instructor:**

Dr. Mike Shipley Office: BO 218C  
Phone: 397-4517 E-mail: michael.shipley@msutexas.edu  
Office hours: MW 10:30-11:30 AM; TR 11:00-12:30 PM; or by appointment

**III. Required Text:**

1. Roberts, Larry S., and Janovy, John, Jr. 2013. **Schmidt & Roberts' Foundations of Parasitology**, 9<sup>th</sup> ed.; McGraw Hill, Boston, MA.

**IV. Goals and Objectives:**

Animal Parasitology is a course designed to introduce the host-parasite relationship among representative groups of animals, with emphasis on taxonomic, ecological and preventive aspects. Particular attention will be paid to medical and veterinary implications of parasites. Option A (Molecular-Cellular) and Option B (Organismal) Biology majors may receive upper-level animal biology credit with this course. Option C (Pre-Professional) Biology majors will receive upper-level biology credit, and will benefit from the medical and veterinary slant presented in the material. Students seeking the Master's Degree in Biology may take BIOL 4524 for graduate credit. Students will be able to apply this information in all pre-professional areas as well as in nursing, clinical lab science, or graduate school.

**V. Prerequisites:**

One year (8 hours) of Biology

**VI. Student Expectations:**

Students are expected to attend all scheduled class meetings and are expected to be on time. Class attendance is crucial for maximum performance. Excessive absences may result in a student dropped from the course. Students should refer to the current MSU Handbook and Activities Calendar for university policy on academic dishonesty, class attendance, student rights and activities.

## VII. Detailed Schedule:

<b>Date</b>	<b>Topic</b>	<b>Chapter</b>
Tue Aug 29	Introduction to Parasitology	1
Thur Aug 31	Basic Principles and Concepts	2
Tue Sept 5	Basic Principles and Concepts	3
Thur Sept 7	Introduction to Nematoda; Trichinellida	22-23
Tue Sept 12	Trichinellida, Strongyloididae & Hookworms	23-25
	<i>Case 1</i>	
Thur Sept 14	Ascarids & Pinworms	26-27
Tue Sept 19	Filarial Worms & Dracunculids	29-30
Thur Sept 21	<b>Exam 1</b>	
Tue Sept 26	Introduction to Platyhelminthes; Trematoda	13, 15
Thur Sept 28	Echinostomatiforms & Opisthorchiforms	17-18
Tue Oct 3	Schistosomes	16
Thur Oct 5	Schistosomes	16
	<i>Case 2</i>	
Tue Oct 10	Cestoidea	20-21
Thur Oct 12	Cestoidea	21
Tue Oct 17	Introduction to Arthropoda; Phthiraptera	33,36
Thur Oct 19	<b>Exam 2</b>	
Tue Oct 24	Hemiptera, Siphonaptera	37-38
	<i>Case 3</i>	
Thur Oct 26	Diptera	39
Tue Oct 31	Diptera	39
Thur Nov 2	Parasitic Arachnids	41
	<i>Case 4</i>	
Tue Nov 7	Parasitic Arachnids	41
	<b>Exam 3 (Take Home)</b>	
Thur Nov 9	Parasitic Protozoa: Form and Classification	4
Tue Nov 14	Kinetoplasta: Trypanosomes	5
Thur Nov 16	Other Flagellated Protozoa	6
Tue Nov 21	Amebas	7
	<i>Case 5</i>	
Thur Nov 23	<b>Thanksgiving Break – No Classes</b>	
Tue Nov 28	Apicomplexa: Coccidia; Malaria Organisms	8-9
Thur Nov 30	Apicomplexa: Malaria Organisms	9
Tue Dec 5	Ciliated Protozoans	10
Thur Dec 7	<b>Exam 4</b>	
Thur Dec 14 (10:30 am)	<b>Lab Exam</b>	

## VIII. Grade Determination and Exams:

The major lecture exams (4) will cover material presented in the lecture and any assigned readings in your text or additional sources. The third of the exam will be a take home exam in which you can use any material as a resource (but not your fellow classmates). The grade for this class will be based on the major lecture exams, a laboratory final exam, and case studies. The breakdown for the grade is as follows:

<b>Lecture Exams (4)</b>	-	<b>60%</b>
<b>Laboratory Exam</b>	-	<b>25%</b>
<b>Case Studies (5)</b>	-	<b><u>15%</u></b>
		<b>100%</b>

The final grade will be based on the following system:

<b>90 - 100 =</b>	<b>A</b>
<b>80 - 89 =</b>	<b>B</b>
<b>70 - 79 =</b>	<b>C</b>
<b>60 - 69 =</b>	<b>D</b>
<b>Below 60 =</b>	<b>F</b>

## IX. Case Studies:

There will be 5 case studies assigned during the semester on topics of Parasitology, each in a separate handout, with light discussion during the class period in which they are returned. Case studies are due one week after they are assigned.

## X. Laboratory Grade:

The laboratory exercises will consist of learning the identifying characteristics, classification, and life cycles of parasites from approximately 100 prepared slides. Only one exam will be given in the laboratory, and it is scheduled for finals week (Thur Dec 14 at 10:30 am).

Senate Bill 11 passed by the 84<sup>th</sup> Texas Legislature allows licensed handgun holders to carry concealed handguns on campus, effective August 1, 2016. Areas excluded from concealed carry are appropriately marked, in accordance with state law. For more information regarding campus carry, please refer to the University's webpage at <http://mwsu.edu/campus-carry/rules-policies>.