

# Animal Parasitology Syllabus

**Important Note:** This syllabus, along with course assignments and due dates, are subject to change. It is the student's responsibility to check Canvas for corrections or updates to the syllabus. Any changes will be clearly noted in a course announcement or through email.

## Course Information

### Instructor Information

**Instructor:** Dr. Sarah A. Orlofske

**Office:** TNR 446

**Face to Face Office Hours:** Monday 12-1PM and Thursday 1-2PM

**Other appointments available via ZOOM:**

Please schedule your appointment 24 hours in advance, by contacting me through the Canvas **Inbox** or **Help** menu located along the purple navigation bar on the left side of the screen. Please make the subject of the email Online Office Hours and Your Name.

**E-mail:** [Sarah.Orlofske@uwsp.edu](mailto:Sarah.Orlofske@uwsp.edu) (Email is my preferred contact method)

### Course Information

**Course Description:** Structure, classification, and life histories of animal parasites. 2 hrs lec, 4 hrs lab per wk.

**Lecture – Asynchronous online**

**Lab 1 – 9-10:15 AM Monday and Wednesday TNR 460**

**Lab 2 – 10:30-11:45 AM Monday and Wednesday TNR 460**

**Credits:** 4

**Prerequisite:** One of the following: BIOL 101, BIOL 111, or BIOL 160

### Expected Instructor Response Times

- I will attempt to respond to student emails within 48 hours or by Monday if you email over the weekend. If you have not received a reply from me after 48 hours during the work week, please resend your email.
  - \*\*\*If you have a general course question (not confidential or personal in nature), please post it to the Course Q&A Discussion Forum found on the course homepage. I will post answers to all general questions there so that all students can view them. Students are encouraged to answer each other's questions too.

- I will attempt to reply to and assess student discussion posts within 48 – 72 hours of discussions closing.
- I will attempt to grade written work within 1 week, however longer written assignments may take me longer to read and assess.

## Textbook & Course Materials

**Required Text:** *Foundations of Parasitology*, 9<sup>th</sup> Ed. Roberts & Janovy  
ISBN-13:978-0073524191. Available from UWSP Text Rental

**Required Laboratory Manual:** *Animal Parasitology Laboratory Manual* by Taft, Huspeni & Orlofske. Please go to the UWSP bookstore to purchase your lab manual before the first lab.

**Other Readings:** Primary scientific articles for the discussions will be provided directly in CANVAS.

## Course Learning Outcomes

- Identify the major groups of animal parasites: Trematoda, Cestoda, Nematoda, Acanthocephala, Protozoa, Insecta, etc.
- Describe general parasite life cycles, geographic distribution, and patterns of host use.
- Apply knowledge of parasite biology to fundamental questions in ecology and evolution.
- Distinguish parasitism as a life history strategy.
- Design treatment or management strategies based on parasite biology in the context of wild and domestic animal and human health.
- Integrate scientific resources to evaluate real-world problems including the role of parasites in host conservation, invasive species establishment and persistence, food web stability and spillover between domestic and wild animals.

You will meet the outcomes listed above through a combination of the following activities in this course:

- View recorded lectures and read textbook chapters to gain knowledge of basic parasite biology and detailed information on key examples
- Complete a virtual parasite collection and conduct virtual labs focused on diagnostics and parasite identification
- Simulate control and disease management scenarios using research-grade agent-based modeling software
- Participate in small group, online discussions of peer-reviewed scientific literature

- Develop your own scientific research question, compose a professional grant proposal, provide and incorporate feedback from peer-review
- Identification of microscope images of parasite specimens through virtual microscope tools and on practical exams
- Address real-life scenarios through short answer and essay questions on take-home exams

## Topic Outline/Schedule

**Important Note:** Refer to the Canvas course home page for pertinent information. Activity and assignment details will be explained in detail within each corresponding Module. As tasks come due, they will appear in your “to do” list. If you have any questions, please contact your instructor.

Week	Day	Lecture Topic	Textbook	Assignments	Lab Manual	Quiz	Lab Materials
1	24-Jan	Course Introduction. Learning outcomes and careers			Protocols		<b>Biosafety Instructions, Microscopy Online Demo (No in-person lab today) Pick up Lab Manual ALL Students!!!</b>
1	26-Jan	General principles, definitions (Lec. 1)	Chap 1 & 2		Lab: 1-10		Lab 1: Turbellaria, Monogenea & Aspidobothrea
2	31-Jan	Begin Platyhelminthes (Lec 2)	Chap.13-14,19		Lab: 30-35	Quiz 1 (Biosafety + Microscopes)	Lab 4: Larval Digenea & Life Cycles
2	2-Feb	Digenea: schistosome distribution, & life cycle (Lec 3)	Chap. 3, 15-16	DNA based Identification Activity			Collection Projects: In-person - Molecular ID Part 1, Online - Unknown Specimen IDs
3	7-Feb	Digenea: schistosome pathology, immunology, control methods (Lec 3 Cont.)	Chap. 3, 15-16		Lab: 11-17	Quiz 2 (Labs 1,4)	Lab 2: Digenea I (Adult worms)
3	9-Feb	Other medically important trematodes (Lec 4)	Chap. 17 & 18				Collection Projects: In-person - Slide Making Part 1, Online students - iDigBio Project
4	14-Feb	Grant Proposal Assignment Intro		Online Paper Discussion 1 Snail Infections	Lab: 18-29		Lab 3: Digenea II (Adult worms)

4	16-Feb	Cestoda intro: Cestodaria, Pseudophyllidea (Lec 5 part 1)	Chap. 20		Lab: 36-42	Quiz 3 (Labs 2,3)	Lab 5: Cestodaria & Major eucestode orders
5	21-Feb	Medically important Cestodes (Lec 5 part 2)	Chap. 21		Lab: 43-53		Lab 6: Cyclophyllideans
5	23-Feb	Parasite-host energetics, <i>Hymenolepis</i> competition (Lec. 5 part 3)		ELISA based Identification Activity			Collection Projects - In- person - Molecular ID Part 2 Online students - GloBi Project
6	28-Feb	Nematodes: General features (Lec 6 Part 1)	Chap. 22		Lab: 54-64	Quiz 4 (Labs 5,6)	Lab 7: Nematodes I (Cochroach Dissection)
6	2-Mar	Geohelminths (Lec 6 Part 2)	Chap. 23 - 28 (in part)		Lab: 65-84		Lab 8: Nematodes II (Cochroach Dissection)
7	7-Mar	Nematodes: Guinea worm, filarial worms (Lec 6 Part 3)	Chap. 29- 30	Topic and Annotated Bibliography DUE	Lab: 85		Lab 9: Fecal analysis & Egg ID
7	9-Mar	Acanthocephala & Annelida (Lec 7)	Chaps. 31- 32		Lab: 86-96	Quiz 5 (Labs 7,8,9)	Lab 10: Acanthocephala, Mollusca, Annelida & Pentastomida
8	14-Mar	Parasitic Crustacea (Combined with Lab 11)	Chaps. 33,34		Lab: 97- 101		Lab 11: Parasitic Crustacea
8	16-Mar	<b>Take Home Exam DUE</b>					Collection Projects - Staining and Mounting Nematodes
	21-Mar	<b>Spring Break!</b>					
	23-Mar	<b>Spring Break!</b>					
9	28-Mar	Introduction to the Arthropods (Lec. 8)	Chaps. 33, 41, 38		Lab:102- 109		Lab 12: Mites, Ticks & Siphonaptera
9	30-Mar	Chelicerates (mites & ticks) (Lec 8 Cont.)	Chaps. 33, 41, 38		Lab:110- 114	Quiz 6 (Labs 10,11,12)	Lab 13: Insecta: Phthiraptera (Mallophaga & Anoplura)
10	4-Apr	Insecta: Siphonaptera & Phthiraptera (Lec. 9)	Chaps. 36				Collection Projects - Staining and Mounting Mites & Lice (Part 1)

10	6-Apr	Insecta: Diptera (Lec 10)	Chaps. 37, 39 & 40			Collection Projects - Staining and Mounting Lice (Part 2)
11	11-Apr	Insecta: Biological control and Hymenoptera (Lec 11)		Grant Proposal Draft DUE	Lab: 115-126	Lab 14: Insecta: Diptera II: sand flies, mosquitoes, black flies, etc...
11	13-Apr	Cnidaria (Myxozoa), Protista: Microspora & Amoebae (Lec 12)	Chap. 4, 11 & 7		Lab: 127-135	Lab 15: Insecta: Diptera II, Hemiptera, Hymenoptera, & Coleoptera
12	18-Apr	Gut and Reproductive Tract Flagellates (Lec 13)	Chap. 6		Lab: 136-142	Quiz 7 (Labs 13,14,15) Lab 16: Myxozoa & Amoebae
12	20-Apr			Grant Proposal Peer-reviews DUE		Waterfowl Dissection Lab
13	25-Apr	Hemoflagellates I: New World Sleeping Sickness (Lec. 14)	Chap. 5		Lab: 143-148	Lab 17: Gut Flagellates & Opalineae
13	27-Apr	Hemoflagellates II: Leishmaniasis (Lec 15)	Chap. 5		Lab: 149-154	Quiz 8 (Labs 16, 17) Lab 18: Hemoflagellates & Ciliates
14	2-May			Online Paper Discussion 2 Avian Malaria		Mammal Dissection Lab
14	4-May	Apicomplexa I: Gregarines & Coccidia, Toxo (Lec. 16)	Chap. 10, 8		Lab: 155-164	Lab 19: Apicomplexa: Gregarines & Coccidians
15	9-May	Malaria life cycle & pathology (Lec. 17)	Chap. 9		Lab: 165-176	Lab 20: Malaria
15	11-May			Final Grant proposal Due		Quiz 9 (18, 19, 20) Collection Assignments DUE
16	19-May	<b>Take Home Exam DUE</b>				

## Student Expectations

In this course you will be expected to complete the following types of general tasks in addition to specific requirements outlined in assignment instructions.

- communicate via email
- download and upload documents to the LMS
- read documents online
- view online videos
- professionally participate in online discussions
- complete quizzes/tests online
- upload documents to Canvas to submit an assignment

Student email communication should be professional – please include a greeting, closing, a specific subject line, and the body of the email written in complete sentences. If you do not send a professional email, I will remind you of these expectations and if you continue to not follow these guidelines, I may ask you to re-write your email and resend before I respond.

## Course Structure

This course will be delivered as a hybrid course. There is one section of the course entirely online and two lab sections that will meet face-to-face during your designated lab time. All course materials will be coordinated through the course management system Canvas. You will use your UWSP account to login to the course from the [Canvas Login Page](#). If you have not activated your UWSP account, please visit the [Manage Your Account](#) page to do so.

Lecture, laboratory materials and recordings for BIOL 362 are protected intellectual property at UW-Stevens Point. Students in this course may use the materials and recordings for their personal use related to participation in this class. Students may also take notes solely for their personal use. If a lecture is not already recorded, you are not authorized to record my lectures without my permission unless you are considered by the university to be a qualified student with a disability requiring accommodation. [Regent Policy Document 4-1] Students may not copy or share lecture materials and recordings outside of class, including posting on internet sites or selling to commercial entities. Students are also prohibited from providing or selling their personal notes to anyone else or being paid for taking notes by any person or commercial firm without the instructor's express written permission. Unauthorized use of these copyrighted lecture materials and recordings constitutes copyright infringement and may be addressed under the university's policies, UWS Chapters 14 and 17, governing student academic and non-academic misconduct.

## Technology

## Protecting your Data and Privacy

UW-System approved tools meet security, privacy, and data protection standards. For a list of approved tools, visit this website.

<https://www.wisconsin.edu/dle/external-application-integration-requests/>

Tools not listed on the website linked above may not meet security, privacy, and data protection standards. If you have questions about tools, contact the UWSP IT Service Desk at 715-346-4357.

Here are steps you can take to protect your data and privacy.

- Use different usernames and passwords for each service you use
- Do not use your UWSP username and password for any other services
- Use secure versions of websites whenever possible (HTTPS instead of HTTP)
- Have updated antivirus software installed on your devices

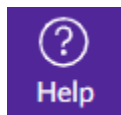
## Course Technology Requirements

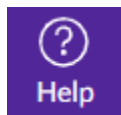
- View this website to see [minimum recommended computer and internet configurations for Canvas](#).
- You will also need access to the following tools to participate in this course.
  - o webcam
  - o microphone
  - o printer
  - o a stable internet connection (don't rely on cellular)

## UWSP Technology Support

- Visit with a [Student Technology Tutor](#)
- Seek assistance from the [IT Service Desk](#) (Formerly HELP Desk)
  - o IT Service Desk Phone: 715-346-4357 (HELP)
  - o IT Service Desk Email: [techhelp@uwsp.edu](mailto:techhelp@uwsp.edu)

## Canvas Support



Click on the  button in the global (left) navigation menu and note the options that appear:

Support Options	Explanations
<p><a href="#">Ask Your Instructor a Question</a> Submit a question to your instructor</p>	Use <b>Ask Your Instructor a Question</b> sparingly; technical questions are best reserved for Canvas personnel and help as detailed below.
<p><a href="#">Chat with Canvas Support (Student)</a> Live Chat with Canvas Support 24x7!</p>	<b>Chatting with Canvas Support (Student)</b> will initiate a <i>text chat</i> with Canvas support. Response can be qualified with severity level.
<p><a href="#">Contact Canvas Support via email</a> Canvas support will email a response</p>	<b>Contacting Canvas Support via email</b> will allow you to explain in detail or even upload a screenshot to show your particular difficulty.
<p><a href="#">Contact Canvas Support via phone</a> Find the phone number for your institution</p>	Calling the Canvas number will let Canvas know that you're from UWSP; phone option is available 24/7.
<p><a href="#">Search the Canvas Guides</a> Find answers to common questions</p>	<b>Searching the Canvas guides</b> connects you to documents that are searchable by issue. You may also opt for <b>Canvas video guides</b> .
<p><a href="#">Submit a Feature Idea</a> Have an idea to improve Canvas?</p>	If you have an idea for Canvas that might make instructions or navigation easier, feel free to offer your thoughts through this <b>Submit a Feature Idea</b> avenue.

*All options are available 24/7; however, if you opt to email your instructor, s/he may not be available immediately.*

- Self-train on Canvas through the [Self-enrolling/paced Canvas training course](#)

## Grading Policies

### Graded Course Activities

Click the **Assignments** link in Canvas to access assignment listing, categories and point values as applicable. Click the **Syllabus** link to see a chronological listing of assignments. Click the **Grades** link to see current grades. Overall assignments and accompanying points are listed below:

Lecture	Points	Laboratory	Points
Take Home Exams (2 X 60)	120	Lab Practical Quizzes 9 X 15 pts (Drop Lowest Quiz)	120



Grant Proposal Topic and Annotated Bibliography	20	Scientific Paper Readings 2 X 15 pts	30
Grant Proposal Draft & Peer Review	50	Virtual Labs	30
Grant Proposal Final	60	Physical or Virtual Collection	70
<b>TOTAL</b>	<b>250</b>	<b>TOTAL</b>	<b>250</b>

## Participation

Students are expected to participate in all online activities and face-to-face activities in the lab sections as listed on the course calendar. Face-to-face students will be expected to use the online materials to prepare for face-to-face labs and this includes viewing introductory lecture material prior to coming to lab. Course work, with the exception of the in-person labs will be conducted asynchronously and all materials with the exception of the printed lab manual will be made available online.

This course should be expected to require the same time commitment as an in person, face-to-face course. Therefore, past experience indicates there is a strong positive correlation between the amount of time a student spends in class and her/his final grade. There are materials like lectures and lab introductions that will represent the in-class portion of the course but students will still be expected to spend additional time studying and completing assignments and activities as they would for an in person, face-to-face course. It is recommended that students access course materials at a minimum of 2-3 times a week and more often for online discussions.

In addition to monitoring the online discussion assignments, I will be checking weekly that students are accessing laboratory materials. Laboratory materials are designed to make up 2/3 of the in class material and 50% of the course grade. If you do not consistently access laboratory material (at least once per week) you will be given a warning. If there are 2 or more weeks you do not access laboratory materials at least once you will receive a 5% penalty on the associated practical exams.

**Quarantine and Isolation Requirements:** If you are required to miss in-person lab activities due to COVID-19 isolation or quarantine you must notify

your instructor as soon as possible to make arrangements for missed work. It is expected that you complete online lecture material during your quarantine unless you specifically request an extension due to illness. If you miss in-person labs you may not be able to make up lab in class and will have to complete an alternative online or virtual lab activity to meet the course learning objectives. Deadlines for these alternative activities will be set up on an individual basis in consultation with the instructor.

## Complete Assignments

**All assignments for this course will be submitted electronically through Canvas unless otherwise instructed.** Assignments must be submitted by the given deadline or special permission must be requested from instructor *before the due date*. Extensions will not be given beyond the next assignment except under extreme circumstances. NO Exceptions will be provided for the Grant Proposal Draft assignment or the student will forfeit the points associated with the peer-review because members of the class need sufficient time to complete quality peer-reviews.

All discussion assignments must be completed by the assignment due date and time. Late or missing discussion assignments will affect the student's grade.

## Late Work Policy

Be sure to pay close attention to deadlines—there will be no make-up assignments or quizzes, or late work accepted without a serious and compelling reason and instructor approval before the deadline.

## Viewing Grades in Canvas

Points you receive for graded activities will be posted to Grades. Click on the Grades link to view your points. Your instructor will update the online grades each time a grading session has been complete—typically 72 hours to 1 week (in the case of extensive writing assignments) following the completion of an activity. You will see a visual indication of new grades posted on your Canvas home page under the link to this course.

## Letter Grade Assignment

Final grades will be assigned based on the following **minimum** cutoff percentages:

Letter Grade	Percentage
A	93-100%
A-	90-92%
B+	87-89%

B	83-86%
B-	80-82%
C+	77-79%
C	73-76%
C-	70-72%
D+	67-69%
D	60-66%
F	0-59%

## Course Policies

### Netiquette Guidelines

Netiquette is a set of rules for behaving properly online. Your instructor and fellow students wish to foster a safe online learning environment. All opinions and experiences, no matter how different or controversial they may be perceived, must be respected in the tolerant spirit of academic discourse. You are encouraged to comment, question, or critique an idea but you are not to attack an individual. Working as a community of learners, we can build a polite and respectful course community.

The following netiquette tips will enhance the learning experience for everyone in the course:

- Do not dominate any discussion.
- Give other students the opportunity to join in the discussion.
- Do not use offensive language. Present ideas appropriately.
- Be cautious in using Internet language. For example, do not capitalize all letters since this suggests shouting.
- Popular emoticons such as ☺ or / can be helpful to convey your tone but do not overdo or overuse them.
- Avoid using vernacular and/or slang language. This could possibly lead to misinterpretation.
- Never make fun of someone's ability to read or write.
- Share tips with other students.
- Keep an "open-mind" and be willing to express even your minority opinion. Minority opinions have to be respected.
- Think and edit before you push the "Send" button.
- Do not hesitate to ask for feedback.
- Using humor is acceptable

Adapted from:

Mintu-Wimsatt, A., Kernek, C., & Lozada, H. R. (2010). *Netiquette: Make it part of your syllabus*. Journal of Online Learning and Teaching, 6(1). Retrieved from [http://jolt.merlot.org/vol6no1/mintu-wimsatt\\_0310.htm](http://jolt.merlot.org/vol6no1/mintu-wimsatt_0310.htm)

Shea, V. (1994). Netiquette. Albion.com. Retrieved from: <http://www.albion.com/netiquette/book/>.

## **Build Rapport**

If you find that you have any trouble keeping up with assignments or other aspects of the course, make sure you let your instructor know as early as possible. As you will find, building rapport and effective relationships are key to becoming an effective professional. Make sure that you are proactive in informing your instructor when difficulties arise during the semester so that we can help you find a solution.

## **Understand When You May Drop This Course**

It is the student's responsibility to understand when they need to consider unenrolling from a course. Refer to the UWSP [Academic Calendar](#) for dates and deadlines for registration. After this period, a serious and compelling reason is required to drop from the course. Serious and compelling reasons includes: (1) documented and significant change in work hours, leaving student unable to attend class, or (2) documented and severe physical/mental illness/injury to the student or student's family.

## **Incomplete Policy**

Under emergency/special circumstances, students may petition for an incomplete grade. An incomplete will only be assigned if student participation is impacted by a specific, identifiable, extenuating circumstance that affects a definable amount of work (one written assignment or exam). All incomplete course assignments must be completed within one semester.

## **Inform Your Instructor of Any Accommodations Needed**

If you have a documented disability and verification from the [Disability and Assistive Technology Center](#) and wish to discuss academic accommodations, please contact your instructor as soon as possible. It is the student's responsibility to provide documentation of disability to Disability Services and meet with a Disability Services counselor to request special accommodation *before* classes start.

The Disability and Assistive Technology Center is located in 609 Albertson Hall and can be contacted by phone at (715) 346-3365 (Voice) (715) 346-3362 (TDD only) or via email at [datctr@uwsp.edu](mailto:datctr@uwsp.edu) or [datctr@uwsp.edu](mailto:datctr@uwsp.edu)

## **Statement of Policy**

UW-Stevens Point will modify academic program requirements as necessary to ensure that they do not discriminate against qualified applicants or students with disabilities. The modifications should not affect the substance of educational programs or compromise academic standards; nor should they intrude upon academic freedom. Examinations or other procedures used for evaluating students' academic achievements may be adapted. The results of such evaluation must demonstrate the student's achievement in the academic activity, rather than describe his/her disability.

*If modifications are required due to a disability, please inform the instructor and contact the Disability and Assistive Technology Center in 609 ALB, or (715) 346-3365.*

## **Commit to Integrity**

As a student in this course (and at this university) you are expected to maintain high degrees of professionalism, commitment to active learning and participation in this class and also integrity in your behavior in and out of the classroom.

## **UWSP Academic Honesty Policy & Procedures**

### **Student Academic Disciplinary Procedures**

UWSP 14.01 Statement of principles

The board of regents, administrators, faculty, academic staff and students of the university of Wisconsin system believe that academic honesty and integrity are fundamental to the mission of higher education and of the university of Wisconsin system. The university has a responsibility to promote academic honesty and integrity and to develop procedures to deal effectively with instances of academic dishonesty. Students are responsible for the honest completion and representation of their work, for the appropriate citation of sources, and for respect of others' academic endeavors. Students who violate these standards must be confronted and must accept the consequences of their actions.

UWSP 14.03 Academic misconduct subject to disciplinary action.

- (1) Academic misconduct is an act in which a student:
  - (a) Seeks to claim credit for the work or efforts of another without authorization or citation;
  - (b) Uses unauthorized materials or fabricated data in any academic exercise;
  - (c) Forges or falsifies academic documents or records;
  - (d) Intentionally impedes or damages the academic work of others;
  - (e) Engages in conduct aimed at making false representation of a student's academic performance; or
  - (f) Assists other students in any of these acts.

- (2) Examples of academic misconduct include, but are not limited to: cheating on an examination; collaborating with others in work to be

presented, contrary to the stated rules of the course; submitting a paper or assignment as one's own work when a part or all of the paper or assignment is the work of another; submitting a paper or assignment that contains ideas or research of others without appropriately identifying the sources of those ideas; stealing examinations or course materials; submitting, if contrary to the rules of a course, work previously presented in another course; tampering with the laboratory experiment or computer program of another student; knowingly and intentionally assisting another student in any of the above, including assistance in an arrangement whereby any work, classroom performance, examination or other activity is submitted or performed by a person other than the student under whose name the work is submitted or performed.

## Religious Beliefs

Relief from any academic requirement due to religious beliefs will be accommodated according to UWS 22.03, with notification within the first three weeks of class.

## Face Coverings

- At all UW-Stevens Point campus locations, the wearing of face coverings is required in all buildings, including classrooms, laboratories, studios, and other instructional spaces. Any student with a condition that impacts their use of a face covering should contact the [Disability and Assistive Technology Center](#) to discuss accommodations in classes. Please note that unless everyone is wearing a face covering, in-person classes cannot take place. This is university policy and not up to the discretion of individual instructors. Failure to adhere to this requirement could result in formal withdrawal from the course.  
Other Guidance:
- Please monitor your own health each day using [this screening tool](#). If you are not feeling well or believe you have been exposed to COVID-19, do not come to class; email your instructor and contact Student Health Service (715-346-4646).
  - As with any type of absence, students are expected to communicate their need to be absent and complete the course requirements as outlined in the syllabus.
- Maintain a minimum of 6 feet of physical distance from others whenever possible.
- Do not congregate in groups before or after class; stagger your arrival and departure from the classroom, lab, or meeting room.
- Wash your hands or use appropriate hand sanitizer regularly and avoid touching your face.
- Please maintain these same healthy practices outside the classroom.