

Biology 490: Pathogenic Mechanisms of Bacteria (Section 8)

Fall 2016

Class Syllabus

Course and Instructor Information

Lecture: T, R 4:00 – 4:50, TNR 461

Professor: Dr. Matt Rogge

Office: TNR 435

Phone: 346-2506

Email: mrogge@uwsp.edu

Office hours: MW 3:00 – 3:50

Other times by appointment

Course Description

This seminar will explore recent scientific research concerning the mechanisms that pathogenic bacteria use to colonize and cause disease in host organisms. There are a myriad of molecular mechanisms that bacteria employ to enter a host, replicate, evade immune responses, and eventually cause the signs and symptoms associated with sickness. The goal of this class is for the student to learn how to acquire information from written scientific communication and to develop the ability to communicate scientific information in written and oral formats.

Course Learning outcomes

Students will be able to:

1. Locate, critically read, synthesize, and discuss the primary literature dealing with multiple aspects of pathogenic mechanisms of bacteria.
2. Demonstrate the ability to write and orally present biological information that is articulate and grammatically correct with properly documented and organized ideas and data, appropriate to the specific audience.
3. Evaluate your own and others' written and oral communication skills by providing and applying useful feedback.

Required Texts

- Hofmann, A. H. *Writing in the Biological Sciences: A Comprehensive Resource for Scientific Communication*, Second Edition. Oxford University Press, New York, New York.
Available in the bookstore or online.

Attendance

Students are expected to attend all sessions. If you are aware ahead of time of a conflict with the period, a meeting with the instructor is required at least a week in advance of the period to discuss the situation, and any makeup work that will be required.

Grading

Assignments

- Topic choice: 5 pts
- Thesis statement: 10 pts
- Lead a group discussion for two scientific research articles: 15 pts each
- Annotated bibliography: 15 pts
- Oral presentation of thesis: 15 pts
- First draft of a scientific review article focused on a chosen topic: 15 pts
- Peer review of first draft: 15 pts

- Revised draft of a scientific review article focused on the chosen topic: 20 pts
- Peer review of second draft: 15 pts
- Final scientific review article focused on the chosen topic: 50 pts
- Oral presentation summarizing and explaining the written review article: 50 pts
- Class participation (attendance, literature discussion, peer review, etc): 60 pts

TOTAL CLASS POINTS: 300

Grades will be calculated by dividing the total points received by the total points possible and multiplied by 100. The following scale will be used to assign a final grade. Grades will not be curved. If you feel an error has been made in the grading of any exercise, you have 48 hours from the time you received the grade to submit in writing to the instructor your reasoning for belief of an error.

93 to 100%	A	80 to 82%	B-	67 to 69%	D+
90 to 92%	A-	77 to 79%	C+	60 to 66%	D
87 to 89%	B+	73 to 76%	C	<60%	
83 to 86%	B	70 to 72%	C-		

Satisfactory completion of this 490 course **REQUIRES** the completion of the Biology Department's comprehensive exam. *The test is optional for Biochemistry majors.* Test scores are used to compare class averages among various populations of biology majors to assess general student learning. Scores will not be made available to you nor your instructor and **will have no bearing on your grade for the course.** However, your 490 grade will be withheld until the exam is taken. The exam will take approximately 60 minutes and will be offered at the following times:

Wednesday Dec 7 6:00 p.m. TNR 120

Thursday Dec 8 6:00 p.m. TNR 120

If you cannot attend either of these examination times please contact your instructor.

Expectations

You are responsible for attending all classes in order to ensure exposure to all the material covered. You are responsible for asking questions for clarification of topics that you do not fully understand. If you feel that you are falling behind in the class and not understanding the material as it is being presented, GET HELP IMMEDIATELY! Do not risk falling so far behind that catching back up is impossible.

UWSP values a safe, honest, respectful, and inviting learning environment. In order to ensure that each student has the opportunity to succeed, we have developed a set of expectations for all students and instructors. This set of expectations is known as the *Rights and Responsibilities* document, and it is intended to help establish a positive living and learning environment at UWSP. Visit here for more information:

<http://www.uwsp.edu/stuaffairs/Pages/rightsandresponsibilities.aspx>

Academic integrity is central to the mission of higher education in general and UWSP in particular. Academic dishonesty (cheating, plagiarism, etc.) is taken very seriously. **Don't do it!** The minimum penalty for a violation of academic integrity is a failure (zero) for the assignment. For more information, see the UWSP "Student Academic Standards and Disciplinary Procedures" section of the *Rights and Responsibilities* document, Chapter 14, which can be accessed here:

<http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/SRR-2010/rightsChap14.pdf>

Access for all Students

The Americans with Disabilities Act (ADA) is a federal law requiring educational institutions to provide reasonable accommodations for students with disabilities. For more information about UWSP's policies, visit:

<http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/ADA/rightsADAPolicyInfo.pdf>

If you have a disability and require classroom and/or exam accommodations, please register with the Disability and Assistive Technology Center and then contact me **AT THE BEGINNING OF THE COURSE**. I am happy to help in any way that I can, but you need to be registered. For more information, please visit the Disability and Assistive Technology Center, located on the 6th floor of the Learning Resource Center (the Library). You can also find more information here:

<http://www4.uwsp.edu/special/disability/>

TENTATIVE SCHEDULE

Week	Date	Assignments Due	Class Topic
1	Sept 6 Sept 8		Class introduction; Class expectations; Finding and Evaluating Review and Research Papers Review vs Research Papers
2	Sept 13 Sept 15		Written Communication in the Sciences (Chapters 1 and 2) Written Communication in the Sciences (Chapter 3)
3	Sept 20 Sept 22	Paper topic chosen	Written Communication in the Sciences (Chapters 4 and 5) Reading, Summarizing, and Critiquing a Scientific Paper (Chapter 10)
4	Sept 27 Sept 29		Reading, Summarizing, and Critiquing a Scientific Paper (Chapter 10) Research Paper Discussion (Instructor)
5	Oct 4 Oct 6	Thesis statements due	Student Led Research Paper Discussions (1, 2, 3) Student Led Research Paper Discussions (4, 5, 6)
6	Oct 11 Oct 13		Student Led Research Paper Discussions (7, 8, 9) Student Led Research Paper Discussions (10, 11, 12)
7	Oct 18 Oct 20	Annotated bibliography due	Oral Presentations (Chapter 13) Student Thesis Oral Presentations (1, 2, 3, 4)
8	Oct 25 Oct 27		Student Thesis Oral Presentations (5, 6, 7, 8) Student Thesis Oral Presentations (9, 10, 11, 12)
9	Nov 1 Nov 3		Term Paper and Review Articles (Chapter 11) Revising and Editing (Chapter 8)
10	Nov 8 Nov 10	Review article 1 st draft due	Student Led Research Paper Discussions (12, 11, 10) Student Led Research Paper Discussions (9, 8, 7)
11	Nov 15 Nov 17	Peer Review 1 st draft Due	Student Led Research Paper Discussions (6, 5, 4) Student Led Research Paper Discussions (3, 2, 1)
12	Nov 22 Nov 24		Oral Presentations (Chapter 13) NO CLASS – THANKSGIVING BREAK
13	Nov 29 Dec 1	Review article 2 nd draft due	Oral Presentations (12, 11) Oral Presentations (10, 9)
14	Dec 6 Dec 8	Peer Review 2 nd draft due	Oral Presentations (8, 7) Oral Presentations (6, 5)
15	Dec 13 Dec 15		Oral Presentations (4, 3) Oral Presentations (2, 1)
16	Dec 20 Dec 22	Review article final draft due	FINALS WEEK