

## Fisheries Research

**Course:** Water 483/683, Fall 2023, 3 credits

**Description:** Introduction to field and laboratory fishery research. Principles of designing research projects, testing hypotheses, sampling fish, analyzing fishery data, reporting results in both written and oral forms, and defending research.

**Lectures:** Wednesday and Friday, 11:00-11:50, TNR 252

**Laboratory:** Wednesday, 2:00-3:50, TNR 351

**Instructor:** Joshua K. Raabe, PhD

**Contact Information:** jraabe@uwsp.edu, TNR 174, 715-346-2689 (office phone)

**Office hours:** Monday, 10:00-11:45; also by appointment (e-mail first) or just stop by my office whenever door is open

**Goal:** My overall goal is for students to increase their understanding of the fisheries research process and to further develop their writing and oral communication skills.

**Objectives:** By the end of the semester, students should be able to:

1. Design a fisheries research project with appropriate methods and analyses
2. Critique and discuss scientific papers
3. Prepare a scientific paper in the format of a professional fisheries journal
4. Prepare and present an oral presentation on the topic of their research in the format of a scientific meeting
5. Orally defend research in the format of a thesis defense

**Communication:** Students are expected to routinely check their UWSP e-mail and Canvas course site for updates and materials.

**Canvas:** <https://uwstp.instructure.com/courses/612250>

**Textbooks:** 1. Zale, A.V., D.L. Parrish and T.M. Sutton, editors. 2012. Fisheries Techniques, Third Edition. American Fisheries Society, Bethesda, Maryland.  
2. Jennings, C.A., T.E. Lauer and B. Vondracek, editors. 2012. Scientific communication for natural resource professionals. American Fisheries Society, Bethesda, Maryland.

**Additional Materials:** Additional lecture and lab materials will be available on Canvas. Text and handouts are to be read *prior* to attending lecture and lab.

**Grade Breakdown:** Grades will be determined based on each student's total points from assignments at the end of the semester. The table below shows point totals broken down by category and associated grades with +/- determinations.

Category	Points	Grade	Points	Percentage
<b>Paper</b>				
Title & Objectives	15	A	744 - 800	93 - 100.0%
Introduction	40	A-	720 - 743	90 - 92.9%
Methods	40	B+	696 - 719	87 - 89.9%
Results	40	B	664 - 695	83 - 86.9%
Discussion	40	B-	640 - 663	80 - 82.9%
Abstract	15	C+	616 - 639	77 - 79.9%
Final	150	C	584 - 615	73 - 76.9%
Peer Reviews	40	C-	560 - 583	70 - 72.9%
<b>Research Proposals</b>				
Submission (Group)	40	D+	536 - 559	67 - 69.9%
Presentation (Group)	50	D	480 - 535	60 - 66.9%
Reviews (Individual)	10	F	≤ 479	≤ 59.9%
Assignments	100			
Activities / Discussions	40			
Oral presentation	100			
Oral defense	80			
<b>Total</b>	<b>800</b>			

**Research Paper (340 points):** Each student will write a scientific research paper that examines a fisheries or related dataset. The paper will be edited as if it were submitted to a scientific, peer-reviewed journal. Each portion of the manuscript will be turned in separately over the course of the semester. In addition to a grade for each section, detailed feedback will be provided so the student can incorporate those comments into the final version. The paper will be graded on its completeness of thought, clarity of writing, organization and formatting, appropriateness of data analysis, interpretation of results, depth of discussion, use of literature, and that the student challenged themselves.

**Research Paper - Peer Reviews (40 points):** Students will be assigned a partner (or group of 3) to discuss projects and review each other's research papers during the semester. This provides an opportunity to improve papers, learn about other projects and providing constructive feedback, and help each other through the process. Grades will be based on timeliness (i.e., submit draft and review by deadline), review thoroughness, and student evaluations of the quality of the review.

**Oral Presentation (100 points):** Each student will give an oral presentation on their research paper. I will use a modified American Fisheries Society criteria for evaluating oral presentations, including organization, clarity of visual aids, verbal presentation, and length. The critique will be returned to the student for use in preparing future presentations.

**Oral Defense (80 points):** During the final exam week, each student will orally defend their research with me during a 30-minute period that resembles a Master's thesis defense.

**Research Proposal (100 points):** To gain experience with developing study and sampling designs, grant writing, presenting, and evaluating, groups will submit a research proposal with necessary forms (40 points) and give a presentation to the class (50 points), which each student will evaluate (10 points).

**Individuals Assignments (100 points):** Assignments will be related to lecture topics and analyses to provide practical experience in the use and interpretation of fishery statistics.

**Activities & Discussions (40 points):** As upper level undergraduate and graduate students, I expect you to be prepared and actively participate in lectures and laboratories. Activities and discussions will be related to writing, analyses, and lecture topics to provide practical experience in the use and interpretation of fishery statistics and to the scientific writing process. Often attendance will be required to receive these points, but accommodations can be made if you let me know ahead of time. Please keep in mind that the quality of your educational experience in this course will be directly related to the amount of time you invest in preparation and your overall involvement in class.

**Due Dates / Late Policy:** Research paper and other assignments can be submitted online until midnight on the due date. I will state due dates on each assignment and on Canvas. *All assignments will be 10% for each full day late* (e.g., 2 points/day for 20 point assignment), so please turn in assignments in a timely manner to avoid point reductions or a score of zero.

**Research Paper – Assistance:** In addition to working with me and your peer review partner(s), the Online Writing Lab through the Tutoring-Learning Center (TLC) offers free help with writing, such as reading your paper and providing suggestions (but not proofreading), or you can video chat with questions or tips.

[https://www3.uwsp.edu/tlc/Pages/Online-Writing-Lab-\(OWL\).aspx](https://www3.uwsp.edu/tlc/Pages/Online-Writing-Lab-(OWL).aspx)

**Classroom Environment:** I want everyone to feel comfortable and willing to participate and will work to keep a positive classroom environment. Please contact me if you have any issues with a classmate or me. In addition, UWSP values a safe, honest, respectful, and inviting learning environment to succeed, and they developed a set of expectations for all students and instructors, known as the *Rights and Responsibilities* document:

<http://www.uwsp.edu/dos/Documents/Right%20and%20Responsibilities.pdf>

**Student Feedback:** To help improve this course and my teaching throughout the semester, I will ask for feedback and you can always talk to or email me. You also can provide *anonymous* feedback through an online survey (link below and also on Canvas). I will try to incorporate all constructive, well-stated suggestions and critiques. I also greatly appreciate completed UWSP course evaluations at the end of the semester.

<https://www.surveymonkey.com/r/FWFRKK7>

**Academic Integrity:** I expect all students to strictly adhere to the high level of conduct and academic integrity at UWSP. All forms of plagiarism, cheating, and academic dishonesty are prohibited; violations will follow UWSP procedures. I reserve the right to use plagiarism software on assignments. The minimum penalty for a violation of academic integrity is failure (score of zero) of the assignment, but penalties can be stricter. For more information, please see the UWSP “Student Academic Standards and Disciplinary Procedures” section of the *Rights and Responsibilities*, Chapter 14:

[https://www.uwsp.edu/acadaff/Orientation/AcademicMisconductRulesAndProcedures\\_booklet.pdf](https://www.uwsp.edu/acadaff/Orientation/AcademicMisconductRulesAndProcedures_booklet.pdf)

**Disability Policy:** If you are a student with disabilities, we will work together to accommodate any disabilities according to UWSP policies and the Americans with Disabilities Act (ADA), a federal law requiring educational institutions to provide reasonable accommodations for students with disabilities. Students must register with UWSP Disability Resource Center (DRC), located in room 108 in the Collins Classroom Center (CCC) and the following link: <https://www.uwsp.edu/disability-resource-center/>

**Safety Procedures:** *Medical emergency:* call 911 or use the hallway red emergency phone, offer assistance if trained and willing, guide emergency responders to victim. *Tornado warning:* move to the second floor hallways and remain until told otherwise. *Fire alarm:* calmly evacuate building, meet in courtyard near library stairs, notify me or emergency command personnel of any missing individuals. *Active shooter:* Run/Escape, Hide, Fight. If trapped hide, lock doors, turn off lights, spread out and remain quiet. Follow instructions of emergency responders. More information: [www.uwsp.edu/rmgt/](http://www.uwsp.edu/rmgt/)

**Health situations:** The health and safety of our students, faculty and staff are top priorities. Please monitor your health, including your mental health. If you are truly not feeling well and/or may be contagious, please do not come to class, instead inform me, rest up and if needed reach out to the appropriate medical personnel.

**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.**