

## Techniques in Fisheries and Aquatic Sciences

**Course:** Water 320/520, Fall 2023, 3 credits

**Description:** Field and laboratory techniques for fisheries and aquatic sciences, including methods to work on aquatic systems (e.g., boating) and assess fish, invertebrates, and habitat.

**Lectures:** Online, asynchronous (own pace/time) videos & readings

**Laboratory:** Thursday, 2:00-4:50, 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

**Teaching Assistant:** Jason Lins, jlins@uwsp.edu

**Goal:** My overall goal is for students to understand different options and gain practical skills in field and laboratory techniques to sample water quality, habitat, and organisms.

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

1. Understand how to be safe in, on, and around aquatic systems,
2. Understand different field and laboratory techniques used in fisheries and aquatic sciences,
3. Display proper skills for techniques covered in laboratory exercises,
4. Be able to properly record and enter collected data,
5. Be able to plan a field sampling trip

**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/611131>

**Materials:** There is no dedicated textbook. Materials will be in the form of videos, documents, and website links.

**WATR 520:** Graduate students will be held to a higher grading standard, will give a presentation on the techniques they will be using in their research, and be expected to assist with preparation or clean-up of certain laboratory activities.

## LECTURE COMPONENTS

**Overview:** This is a “hybrid” course, where the lecture materials will be on Canvas in an asynchronous manner, meaning students will work on materials at their own time rather than a live lecture period. Materials will be in the form of videos and readings.

**Topic Quizzes and Surveys (140 points):** To encourage students to watch / read and understand online materials, prepare for laboratory activities, and for me to receive feedback, there will be class surveys & content quizzes covering materials on Canvas. These will be open resources, but timed and students must work on their own.

**Techniques Discussions (60 points):** To encourage learning about techniques used in real world situations, there will be for “techniques discussions” over the course of the semester. Each student will find a peer-reviewed scientific paper or agency report related to a technique in fisheries and aquatic sciences, upload a PDF of the article and a short summary to the Canvas discussion and post under at least two other student papers.

**Final Exam (100 points):** The final exam will be comprehensive covering materials from throughout the semester. Questions will be similar to topic quizzes, but may have some new questions and other components such as planning a field sampling trip. The exam will be open resources, but timed and students must work on their own.

**Due Dates:** Please check Canvas frequently for due dates, as quizzes, discussions, and the final exam will have a date and time that they close and will no longer be available.

## LABORATORY COMPONENTS

**Overview:** An overall goal for this course is for students to gain hands-on experience in a variety of field and laboratory techniques, thus the three hour laboratory period to allow sufficient time to conduct activities and also travel to certain field sites.

**Attendance and Participation (100 points):** Given the focus on gaining hands-on experience, **attendance is required for all laboratories.** Points will be assigned to each laboratory that include both attendance and active participation and completion of activities. There will be NO make-up laboratory periods. If you must miss a laboratory period, please let me know BEFOREHAND. We will try to find you an alternative activity to receive points, but the activities may not be the same.

**Practical Exam(s) (100 points):** A practical exam (or multiple shorter exams) will be conducted to show students have developed basic skills in techniques that were covered during laboratory activities. Certain skills will be assessed for each student, while other skills will be in small groups. Grading will be based on successful completion of skills in a safe (for the equipment) and timely manner and the amount of assistance needed. A list of required activities will be provided to allow students to prepare.

**Grade Breakdown:** Grades will be determined based on student’s total points at the end of the semester. Attitude and effort can be factored in for the student’s benefit.

Category	Points	Grade	Points	Percentage
Lecture		A	465 - 500	93 - 100.0%
Topic Quizzes	140	A-	450 - 464	90 - 92.9%
Technique Discussions	60	B+	435 - 449	87 - 89.9%
Final Exam	100	B	415 - 434	83 - 86.9%
Laboratory		B-	400 - 414	80 - 82.9%
Attendance / Participation	100	C+	385 - 399	77 - 79.9%
Practical Exam(s)	100	C	365 - 384	73 - 76.9%
<b>Total</b>	<b>500</b>	C-	350 - 364	70 - 72.9%
		D+	335 - 349	67 - 69.9%
		D	300 - 334	60 - 66.9%
		F	≤ 299	≤ 59.9%

**Laboratory Environment and Safety:** I want everyone to feel comfortable and willing to participate and will work to keep a positive laboratory environment. Please contact me if you have any issues with a classmate or me, or if there are any activities you are uncomfortable undertaking. 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*:

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

Given we will be working in, on, and around water and with various equipment, students must maintain safe behaviors for themselves, each other, and the equipment. A warning will be provided if a student is doing something unsafe or against protocol, and after that points may be reduced.

**Student Feedback:** To help improve this course and my teaching throughout the semester, I will ask for feedback during class periods, through surveys, and you can always talk to / email me. I also greatly appreciate completed UWSP course evaluations at the end of the semester. <https://www.surveymonkey.com/r/HZCL85X>

**Academic Integrity:** I expect all students to strictly adhere to the high level of conduct and academic integrity at UWSP, and for this course the main aspect will be completing quizzes, discussions, and exams on your own. 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://www3.uwsp.edu/dos/Documents/UWSP14-Final2019.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 if in the TNR use the hallway red emergency phone, offer assistance if trained and willing, guide emergency responders to victim. *Tornado warning:* move to the second floor hallway until advised 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. Additional 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.**