WATER 483/683
FISHERIES RESEARCH – SECTION #2
FALL SEMESTER 2019, 3 CREDITS

Instructor: Justin A. VanDeHey, Ph.D.
Office: 178 CNR
Office Hours: Mondays 10:00 – 11:00; Tuesdays 11:00-12:00; or by appointment
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Lectures: Mondays and Wednesdays 2:00–2:50 (TNR 252)

Lab: Monday 3:00–4:50 (TNR 351 or alternative locations as discussed)

Objectives: At the completion of the class project, students will be able to: (1) prepare a scientific paper in the format of a professional fisheries journal; (2) gain skills in reviewing scientific papers; (3) prepare and present an oral seminar on the topic of their research in the format of a scientific meeting; and (4) defend their research in the format of a mock-thesis defense. Students will also gain a basic understanding of designing studies, field collection methods, and data analysis. Finally, students will gain hands-on experience related to electrofishing, and tagging and fish marking methods.

Textbook: Jennings, C.A., T.E. Lauer and B. Vondracek, editors. 2012. Scientific communication for natural resource professionals. American Fisheries Society, Bethesda, Maryland.

Zale, A.V., D.L. Parrish and T.M. Sutton, editors. 2012. Fisheries Techniques, Third Edition. American Fisheries Society, Bethesda, Maryland.

In addition to the chapters listed from your textbook, additional scientific manuscripts will be posted on Canvas associated with various lecture and laboratory topics to enhance your learning.

CANVAS: https://uwstp.instructure.com/courses/222342

Format: Weekly lectures will discuss fisheries research methods, field techniques and study design that are covered by the textbook chapters and associated readings. Weekly laboratory periods will provide hands-on field experiences, practical exercises on the lecture subjects, information on scientific writing and presenting and will also be used for working on the class project. The class project will include laboratory and statistical analysis of a real fishery research problem, a written scientific manuscript, an oral presentation, and an oral defense of your research. Fishery data for the class project should be obtained in the previous summer as part of summer employment or internship or will be provided by Dr. VanDeHey. This class is designated as a writing emphasis course by the University and expectations for your scientific writing are high. The written report will conform to the Guide for Authors for the *North American Journal of Fisheries Management*. The oral presentation will conform to standards for presentations at annual meetings of the American Fisheries Society. Information on both of these (paper and presentation guidelines) will be provided on CANVAS and in class. The oral defense will mimic a master's level thesis defense. Assignments should be turned into the appropriate CANVAS dropbox.

Grading: Assignments will not be accepted if they are turned in after the due date, other than for extenuating circumstances such as a family or health emergency. Final grades for the course will be awarded as follows:

A	93.0-100%	B+	87.0-89.9%	C+	77.0-79.9%	D+	67.0-69.9%
A-	90.0-92.9%	B	83.0 -86.9%	C	73.0-76.9%	D	60.0-66.9%
		B-	80.0-82.9%	C-	70.0-72.9%	F	<60%

There will be a total of 810 points in this class:

400 pts Scientific paper–The scientific paper will be turned in one section at a time. Detailed feedback will be provided to as the student can incorporate those comments into the final draft of the paper. The scientific paper will be graded on its completeness of thought, clarity of writing, organization and formatting, appropriateness of experimental design and data analysis, interpretation of results, depth of discussion, and use of literature. The manuscript will be edited as if it were submitted to a scientific, peer-reviewed journal.

120 pts Assignments–a series of exercises related to each weekly lecture topic is intended to provide practical experience in the use and interpretation of fishery statistics and to the process of scientific writing. Each exercise either involves a simple mathematical problem and several interpretive questions or involves an exercise teaching you how to write scientifically. Eight weekly exercises will count toward this portion of the grade.

40 pts Peer reviews – Each student will be assigned a partner (or a group of 3) to review their scientific paper at two different times during the course. Grades will be based on timeliness and thoroughness of the review.

100 pts Oral Presentation–the oral presentation will be graded on organization, clarity of visual aids, verbal presentation, and length and will be based on the criteria for evaluating oral presentations by the American Fisheries Society. Critiques will be returned to the student for use in preparing future presentations.

100 pts Oral Defense–each student will provide an oral defense of their project during the week of final exams. The defense will be forty-five minutes in length and will mimic a master's thesis defense.

50 pts Class Participation-Participation in lectures, laboratories (especially field-based labs), case studies and paper discussions.

**Schedule*: The schedule below identifies subjects to be covered in the two weekly lectures followed by the topic of the exercise to be covered during the lab period. Textbook chapters from the Techniques book are in *italics*. Weekly lab periods will also be devoted to working on projects. Readings from the textbook provide background for the lectures and should be read before the lecture on that subject. Sections of the written project report will be turned in, beginning in the seventh week, so you need to invest time during the first six weeks working on your project. Sections of the written report will be edited and returned within 7-14 days, for use in preparing the final report. Oral presentations that summarize the class project and that include visual aids will be given during the final two weeks of class. Oral defenses of the project research will be conducted during the week of final exams.

Week of:	Lectures/Lab Topics:	Textbook Readings and Assignments:
Sep 2	Course Introduction Lab: **NO LAB THIS WEEK**	
Sep 9	Research Process and Planning Lab: Introduce Research Projects: Scientific Writing Assignment 1 - Writing an Introduction (**In Class Assignment**)	*Chapters 1, 2*
Sep 16	Sampling design Lab: Sampling design and statistical considerations Assignment 2 - Writing a methods section	*Chapter 2*
Sep 23	Electrofishing Methods **Lab – SATURDAY September 21st: †Electrofishing** **(Title, Objectives and Annotate Bibliography Due by Sept. 27th)**	*Chapter 8*
Sep 30	**NO CLASS THIS WEEK – AFS MEETING RENO, NV**	
Oct 7	Active Fishing Methods Passive Fishing Methods Lab: Reviewing Scientific papers (**Introduction Section Due by Oct. 11th)**	*Chapter 7* *Chapter 6*
Oct 14	Size Measurement Methods Lab: Assignment 3 - Size structure and condition	*Chapter 14*
Oct 21	Age and Growth Methods Lab: Assignment 4 – Estimating Growth **(Introduction and Methods Section to Peer Reviewer by Oct. 24th)**	*Chapter 15*
Oct 28	Mark-Recapture Methods Lab: Fish Marking Techniques and Uses **(Peer review due back to author by Oct. 29th)**	*Chapter 11*
Nov 4	Diets, Bioenergetics, Stable Isotope Methods Lab: Assignment 5 - Writing an abstract (**In class assignment)** **(Methods Section Due by Nov. 5th)**	*Chapter 16*
Nov 11	Genetics in Fisheries Research Lab: Assignment 6 - Design a stu180dy	

Week of:	Lectures/Lab Topics:	Textbook Readings and Assignments:
Nov 18	Scientific presentation development Lab: Components and Formatting of Final Paper; Work on presentations and papers **(Results Section Due by Nov. 16th)**	
Nov 25	**No Lecture or Labs this week** – work on your scientific papers and presentations **Happy Thanksgiving** **(Discussion Section Due by Nov. 29th)** **(Draft of entire paper to peer reviewer by Nov. 29th)**	
Dec 2	Monday Lecture: Peer review of papers in class Wednesday Lecture: Oral presentations (n = 3) Lab: Oral presentations (n = 3)	
Dec 9	Lecture: Oral presentations (n = 6) Lab: Oral presentations (n = 7) **(Final Draft of Paper Due by Dec 13th)**	
Dec 16	Schedule time for Oral Defense of Research	

*Schedule is tentative and subject to change if needed.

†Field day: dress appropriately.

The University of Wisconsin – Stevens Point College of Natural Resources Principles of Professionalism

Integrity−Integrity refers to adherence to consistent moral and ethical principles. A person with integrity is honest and treats others fairly.

Collegiality−Collegiality is a cooperative relationship. By being collegial you are respecting our shared commitment to student education through cooperative interaction. This applies to all involved in the process: students, staff, faculty, administration and involved community members. You take collective responsibility for the work performed together, helping the group attain its goals.

Civility− Civility refers to politeness and courtesy in your interactions with others. Being civil requires that you consider the thoughts and conclusions of others and engage in thoughtful, constructive discussion to express your own thoughts and opinions.

Inclusivity–Inclusivity requires you to be aware that perspective and culture will control how communication is understood by others. While many values are shared, some are quite different. These differences in values should be both considered and respected.

Timeliness–Timeliness is the habit of performance of tasks and activities, planned in a way that allows you to meet deadlines. This increases workplace efficiency and demonstrates respect for others' time.

Respect for Property–Respect for property is the appreciation of the economic or personal value an item maintains. Maintaining this respect can both reduce costs (increase the operable life of supplies and equipment) as well as demonstrate respect for others rights.

Communication–Professional norms in communication require that you demonstrate the value of your colleagues, students, professors or others. The use of appropriate tone and vocabulary is expected across all forms of communication, whether that communication takes place face to face, in writing or electronically.

Commitment to Quality–Quality is the ability to meet or exceed expectations. By having a commitment to quality, we intend to provide a learning environment that is conducive to learning. Intrinsic to this commitment to quality is defining expectation (committed to in a syllabus through learning outcomes), implementation (with quality control in place) and assessment (where meeting of learning outcomes is determined).

Commitment to Learning–Learning is a lifelong process. By being committed to learning you are providing a model for all to follow. This model is not only professor to student but involves all combinations of people within our university and broader community.

Important Links and Information

UWSP Community Bill of Rights and Responsibilities

UW-Stevens Point 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. For more information visit:

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

Americans with Disabilities Act (ADA) Statement

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, check here:

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. 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/

Emergency Events

In the event of a medical emergency, call 911 or use red emergency phone located outside TNR room 256. Offer assistance if trained and willing to do so. Guide emergency responders to victim.

In the event of a tornado warning, proceed to the lowest level interior room without window exposure. In this case, stay in TNR 252, it is one of the designated shelter areas.

See https://campus.uwsp.edu/sites/facplan/campus/Evacuation%20Floor%20Plans/CNR%20Sept%20EMERGENCY%20SC%20SECOND%20FLOOR%20(1).pdf

for floor plans showing severe weather shelters on campus. Avoid wide-span rooms and buildings.

In the event of a fire alarm, evacuate the building in a calm manner. Meet at the library. Notify instructor 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.

See UW-Stevens Point Emergency Management Plan at www.uwsp.edu/rmgt for details on all emergency response at UW-Stevens Point."