NRES 771- Introduction to Natural and Social Science Research

Spring Semester, 2023

ONLINE

COURSE SYLLABUS

Instructors:

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Course Description:

This course examines how social science and natural science research is used in natural resources decision-making, the experimental designs, and assumptions that underlie this research, and the proper analytical techniques applied to these types of data. This understanding will allow the student to evaluate research findings so as to more effectively interpret and make use of published studies.

Learning Outcomes:

At the end of this course the students will be able to:

1. Evaluate the testability of research hypotheses.
2. Evaluate and critique experimental design as used in social science and natural science research.
3. Correctly interpret the various types of statistical analyses commonly used in social science and natural science research.
4. Identify the limitations and generalizability of published applied research based on the assumptions of common statistical methodologies.
5. Apply study results in natural resource decision-making.

Required Texts:

Guthery, F.S. (2008) A Primer on Natural Resource Science. Texas A&M University Press
O'Leary, Z. (2017) The essential guide to doing your research project (3rd ed.) Los Angeles, CA: SAGE

Course Structure:

Students enrolled in this course are expected to read or watch weekly summaries, complete readings from various texts, participate in discussions through Canvas and apply their learning to a program or setting they are familiar with. The course will alternate between pertinent topics in Social Science (led by M. Rader) and Natural Science (led by J. VanDeHey) so you can compare and contrast methods, philosophies and applications. We are tentatively planning to have two "group" sessions where we have a simultaneous webcast where we can interact and discuss in

"real time". All course information and announcements will be posted to Canvas, our course management software.

Course Grading:

Points Distribution

Course Activity	% of final grade
Discussion posts & responses	40
Weekly assignments	35
Participation in synchronous meetings	10
Student introductions & check in	5
Final Project	10
Total	100

Grading Scale

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

Assignment Submission & Late Policy

Reading discussion posts and responses are due to Canvas by 11:59 PM on Sundays. Most assignments are also due by 11:59 PM on Sundays. Due dates will be posted on the Canvas calendar. Late discussion posts and responses will only be accepted for one week after they are due and will earn up to half credit. Other assignments will be accepted late with the following deductions: first week = -10% of possible points, second week and after = -20% of possible points.

UWSP Community Bill of Rights & Responsibilities

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. More information on expectations and your rights and responsibilities as a student can be found on the Dean of Students page at https://www.uwsp.edu/dos.

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 https://www.uwsp.edu/dos/Pages/Student-Conduct.aspx.

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. 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 Resource Center, located in room 108 of the Collins Classroom Center (CCC). You can also find more information here: https://www.uwsp.edu/datc.

Support for Online Students

UWSP Online-Online Student Support - The UWSP Online-Student Support page is the go-to resource for online students. On the page you will find technology instruction sheets, support videos, and more.

UWSP Online Student Orientation - This self-paced tool is a great starting point for online students who want to assess and build their online learning skills. Use this link to access the tool.

Technology Support

If you have Canvas related questions, click on the Help button located at the bottom of the main left navigation column in Canvas and contact Canvas directly with your question. For all other technology support, please contact the IT Technology Service Desk by calling (715)-346-HELP (4357).

Inclusive Environment

This course (and our university!) is an inclusive environment. This course might foster discussion, with respectful exchange of ideas and opinions. Disrespect and disparagement will not be tolerated. We have a great opportunity to learn from each other, and to appreciate and understand our differences. See also the CNR Principles of Professionalism.

Week of	Theme	Topics	Reading
23-Jan	Introduction	Introduction to Natural & Social Science Research	Kagan; Boutellier et al.
30-Jan	Perspectives & Theories	Research & Evaluation in your Profession	O'Leary Ch 6; eeResearch
6-Feb		Guest Speaker (synchronous)	TBD
13-Feb		The Nature of Science/Hypotheses	Guthery Ch. 1,2,3
20-Feb		Social Science Research Paradigms & Research Questions	O'Leary Ch 3; Henderson et al.
27-Feb		Being Humans/Creativity / Critical Thinking	Guthery Ch. 5,6,7
6-Mar		Choosing a Sample & Collecting Survey Data	O'Leary Ch. 12, Patten
13-Mar	Experimental Design, Methods & Statistics	Experimental design & Quantitative analysis	TBD
20-Mar		**Spring Break**	
27-Mar		Mathematics & Statistics	Guthery Ch. 9,10
3-Apr		Guest Speaker (synchronous)	TBD
10-Apr		Conducting Interviews and Focus Groups	O'Leary 12; Merriam
17-Apr		Analyzing and Reporting Qualitative Data	Saldana & Omasta
24-April	Applications & Interpretations	Model Selection/Interpreting Models	Guthery Ch. 11,12,13
1-May		Publishing and Critiquing Published Articles	Guthery Ch. 15; McGregor
8-May		Final Project	

Weeks highlighted in blue will be taught by M. Rader. Weeks highlighted in green will be taught be J. VanDeHey. Weeks highlighted in yellow will be taught by both professors. Readings by authors other than Guthery and O'Leary will be scanned and posted on Canvas.

VERY IMPORTANT→ the content in the schedule above is subject to change. Check Canvas to note syllabus changes to readings and/or assignments throughout the semester.