An Introduction to Natural and Social Science Research
University of Wisconsin-Stevens Point
Spring Semester, 2018
ONLINE

COURSE SYLLABUS

Instructors:

Kendra Liddicoat, Ph.D.   **Jacob Straub, Ph.D.**

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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 Text:

O'Leary, Z. (2017) The essential guide to doing your research project (3rd ed.) Los Angeles, CA: SAGE

Guthery, F.S. (2008) A Primer on Natural Resource Science. Texas A&M University Press

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 they are familiar with. The course will alternate between pertinent topics in Social Science (led by K. Liddicoat) and Natural Science (led by J. Straub) so you can compare and contrast methods, philosophies and applications. There will be numerous "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 breakdown:

Course Activity	Percentage of Final Grade
Discussion Posts and Responses	40
Weekly Assignments	35
Participation in Synchronous Meetings	10
Final Project	15
Total	100

Academic Integrity

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. Click 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! TurnItIn software may be used in this course to check for plagiarism of written work against work that other students turned in and web based sources. The minimum penalty for a violation of academic integrity is a failure (zero) for the assignment and/or the course. For more information, seethe 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/SRR2010/rightsChap14.pdf

Academic Accommodations

The Americans with Disabilities Act (ADA) is a federal law requiring educational institutions to provide reasonable accommodations for students with disabilities. For more information see
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 the instructor(s) at the beginning of the course. We are happy to help in any way that we can. For more information see http://www4.uwsp.edu/special/disability/.

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

Blue = K. Liddicoat
Green = J. Straub
Yellow = K. Liddicoat and J. Straub

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