



NRM 669 Syllabus, spring 2024

TITLE: Survey Research in Human Dimensions of Natural Resources

NUMBER: NRM 669

CREDITS: 3

PREREQUISITES: Graduate standing

LOCATION: Lectures 305 O'Neill, lab 359 O'Neill

MEETING TIME: Lecture M 5:30 to 7:30; lab W. 2 – 5

COURSE TYPE: Lecture/lab

INSTRUCTOR: Dr. Peter J. Fix

OFFICE LOCATION: 323 O'Neill

OFFICE HOURS: Tues. 1:00 - 3:00 p.m., and by appointment

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COURSE DESCRIPTION

Catalog description

Social science concepts applied to survey-based human dimensions research. Survey research methods including operationalizing research questions into measurable variables, designing survey instruments, assessing reliability and validity, developing a sampling plan, data management, data analysis, and reporting results.

Additional course description

Social science surveys are a valuable tool to advance our understanding of the interaction between humans and the environment. As such they are extensively applied to academic research and to pressing management issues. However, obtaining valid results requires careful attention to defining research constructs, design of the questionnaire, sampling, and analysis. This course will provide an advanced exploration of the principles of survey design and analysis, with an emphasis on natural resource-related applications. The course will present an overview of social science research programs that are commonly applied in human dimensions of natural resources survey research, provide insight into their associated measurement concerns, and detail how to appropriately construct a survey and analyze results with respect to study objectives. Lab assignments will incorporate your thesis/dissertation project.

COURSE GOALS

The course will provide students with knowledge of the following topics:

- How survey research can support management decisions
- Social psychology topics most often applied in natural resource management
- Defining study objectives and identifying and integrating social science concepts most applicable
- Developing a quantitative survey instrument to measure research questions/hypotheses
- Assessing the reliability of a survey and validity of results
- Steps to progress from raw survey data to data analysis
- Statistical analysis in SPSS (or stats program of your choice)
- Documenting results in a report
- Institutional Review Board

STUDENT LEARNING OUTCOMES

Upon successful completion of this course, the students will have the skills to:

- Evaluate advanced survey-based research projects (e.g., academic journals, technical reports, scientific presentations) to determine whether the methods utilized resulted in study objectives being met.
- Complete all phases of an original survey-based research project (e.g., a novel research question, advancement of previous research), including developing study objectives, selecting the most appropriate survey method and developing the questionnaire, coding data and conducting statistical analysis, and documenting results.
- Present results in an appropriate format (e.g., APA, The Chicago Manual of Style).
- Contribute to the academic literature (e.g., correctly format methods, results, etc.; respond to reviewer comments)

COURSE READINGS/MATERIALS

Required texts:

- Vaske, J. J. (2019). *Survey research and analysis: Applications in parks, recreation and human dimensions, 2nd*. State College, PA: Venture Publishing.
- Morgan, G. A., Gliner, J. A., & Harmon, R. J. (2006). *Understanding and evaluating research in applied and clinical settings*. Mahway, NJ: Lawrence Erlbaum.

Additional readings will be assigned, and are noted in the class schedule. These readings will be posted to Canvas.

TECHNICAL REQUIREMENTS FOR COURSE

Students must have regular access to a computer and the Internet to access materials in Canvas. Students will be expected to download course material as well as upload assignments.

Lab sessions will use the software program SPSS. It is installed on the computers in 359 O'Neill. Distance students will be required to secure their own copy. SPSS can be rented for six months for \$45.95 + a \$4.99 download fee from: <https://onthehub.com/products/4089c65e-9133-ed11-814e-000d3af41938>

(Google "SPSS onthehub")

INSTRUCTIONAL METHODS

The class will consist of 2 credits of lecture and a 1-credit lab section. The lecture sections will be based on course readings; it is expected you come to class having read the material and are prepared to discuss the material.

The lab will consist of becoming familiar with survey data (level of measurement, coding data, creating data bases, data management), analysis, and creating surveys.

COURSE CALENDAR

Dates	Topics Covered
Week 1 1/16 to 1/19	Course introduction. No lecture (AK Civil Rights Day; videos will be posted). Assignment to introduce yourself in chat.
Lab 1	Introduction to SPSS
Week 2 1/22 to 1/26	Introduction to key topics <ul style="list-style-type: none"> • Manfredo, M. J., Vaske, J. J., & Decker, D. J. (1995). Human dimensions of wildlife management: basic concepts. In R. L. Knight & K. J. Gutzweiller (eds). <i>Wildlife and Recreationists: coexistence through Management and Research</i>. Washington D.C.: Island Press. • USFWS Podcast: Why does it matter? Attitudes and values make a difference for conservation. Link to podcast • Vaske: ch. 2
Lab 2	Level of Measurement and Coding Data <ul style="list-style-type: none"> • Vaske: ch. 5 (pages 79 to 88), ch. 10 • Morgan et al.: chapters 6, 7, & 23
Week 3 1/29 to 2/2	Introduction to Measurement <ul style="list-style-type: none"> • Vaske: ch. 4 • Morgan et al.: chapters 8, 9, 17, 19
Lab 3	Database creation
Week 4 2/5 to 2/9	More on Attitudes <ul style="list-style-type: none"> • Whittaker, D., Manfredo, M. J., Fix, P. J., Sinnot, R., Miller, S., & Vaske, J. J. (2001). Understanding Beliefs and Attitudes About an Urban Wildlife Hunt: Moose Hunting Near Anchorage Alaska. <i>Wildlife Society Bulletin</i>, 29(4), 1114-1124. • Current journal article placeholder
Lab 4	Data management <ul style="list-style-type: none"> • Vaske: ch. 12
Week 5 2/12 to 2/16	Values orientations <ul style="list-style-type: none"> • McFarlane, B. L. & Boxall P. C. (2000). Factors influencing forest values and attitudes of two stakeholder groups: The case of the foothills Model Forest, Alberta, Canada. <i>Society and Natural Resources</i>, 13, 649-661. • Teel, T. L., Dayer, A. A., Manfredo, M. J., & Bright, A. D. (2005). <i>Regional results from the research project entitled "Wildlife Values in the West."</i> (project report No. 58). Project report for the Western Association of Fish and Wildlife Agencies. Fort Collins, CO: Colorado State University, Human Dimension in Natural Resources Unit. Pgs: 1-21; 168-175. • Current journal article placeholder
Lab 5	Reliability analysis and scale construction <ul style="list-style-type: none"> • Vaske ch 18

Week 6 2/19 to 2/23	Writing and conducting surveys <ul style="list-style-type: none"> • Vaske: ch. 7 • Morgan et al.: chapters 11 - 16 Exam 1. Covers material through week 5
Lab 6	Survey design
Week 7 2/26 to 3/1	Writing and conducting surveys, continued <ul style="list-style-type: none"> • Example surveys
Lab 7	Survey design
Week 8 3/4 to 3/8	Writing and conducting surveys, continued <ul style="list-style-type: none"> • Web surveys • Current journal article placeholder
Lab 8	Crosstabs, T-test, & ANOVA <ul style="list-style-type: none"> • Vaske: chs. 13, 14, & 15 • Morgan et al.: chapters 20, 21, 24-28
Week 9 3/11 to 3/15	Spring Break – no class!
Week 10 3/18 to 3/22	Implementation: possible errors, response rate, survey administration <ul style="list-style-type: none"> • Vaske: ch. 8 • Morgan et al.: chapter 18
Lab 9	Sampling
Week 11 3/25 to 3/29	Implementation: sampling, margin of error <ul style="list-style-type: none"> • Vaske: ch. 8 • Morgan et al.: chapter 22
Lab 10	Sampling
Week 12 4/1 to 4/5	Implementation: weighting <ul style="list-style-type: none"> • Vaske: ch. 8
Lab 11	Weighting <ul style="list-style-type: none"> • Vaske: ch. 8
Week 13 4/8 to 4/12	Project evaluation <ul style="list-style-type: none"> • Yale Program on Climate Change Communication: Global Warming’s Six Americas: http://climatecommunication.yale.edu/about/projects/global-warmings-six-americas/ Exam 2. Covers material from week 6 through week 12
Lab 12	Cluster Analysis <ul style="list-style-type: none"> • Vaske: ch. 22
Week 14 4/15 to 4/19	Writing up results, IRB and your responsibilities as a researcher
Lab 13	Exploratory Factor Analysis <ul style="list-style-type: none"> • Vaske: ch. 21 • Morgan et al.: chapter 33

Week 15 4/22 to 4/26	Case study <ul style="list-style-type: none"> • TBA • Morgan et al.: chapters 34 & 37
Lab 14	Linking survey design to analysis Mediation and Moderation <ul style="list-style-type: none"> • Vaske: ch. 20
May 2	Final exam due

COURSE POLICIES

This course will adhere to the following policies.

- Points, equivalent to one letter grade per day late, will be deducted for late assignments (unless arrangements have been made, see below).
- Due dates for assignments can be adjusted and exams can be rescheduled/made up for legitimate reasons (illness, family issues, UAF athletic travel, conference travel) if prior arrangements are made. If absolutely unforeseen circumstances occur and prior arrangements have not been made, exceptions might be granted on a case by case basis.
- It is expected that you attend all lectures, complete all lecture-based assignments, attend lab, and participate in all lab assignments.

EVALUATION POLICIES

Students will be evaluated on weekly lecture-based assignments (viewing/reading supplemental material and posting to discussion forums, written assignments, and quizzes), lab assignments, and three exams. Exams and assignments will be evaluated in comparison to the correct answer as indicated by the course readings and lecture material. Discussion forums will be evaluated based on evidence of critical thinking about the topic, contribution to the overall discussion, and respect for other students. Successful participation will require you to complete the discussions in a timely and professional manner. Lecture-based assignments will vary in tasks and expectations, see last page for a list of assignments. A general rubric is on the next page, the ratio of critical thinking to written communication will be posted with each assignment/discussion.

Plus and minus grades will be used. Grades will not be curved. The components of the final grade and their contribution to the overall grade are as follows.

Weight for final grade ¹		Requirements for letter grade			
Weekly lecture-based assignments ²	35%	A + > 96 ⁵	B+ 87 to 89	C+ 77 to 79	D+ 67 to 69
Lab assignments ³	35%	A 93 to 96	B 83 to 86	C 73 to 76	D 63 to 66
Exams ⁴	30%	A- 90 to 92	B- 80 to 82	C- 70 to 72	D- 60 to 62

¹It is important to note the weights are applied to your average score within each category. Thus, the absolute point value is not the appropriate metric to determine the relative worth of any one assignment.

²Includes discussions, written assignments, and quizzes. While there will be weekly assignments, the assignments on weeks with exams will be less intense than other weeks.

³Each lab will have an assignment.

⁴There will be two exams during the semester and a final exam.

⁵These numbers represent percentages.

	Assignment Rubric and General Letter Grade (specific points will be determined based on the degree meeting the standards for the letter grade) Evaluated			
	A	B	C	D
Critical thinking - applies to discussions and written assignments	Issue/problem based on a synthesis of existing research; multiple perspectives presented; position is soundly supported with external literature; problem identified and supporting material correctly follow from lecture materials and external sources; highly novel.	Issue/problem based on synthesis of existing research, with minor gaps; position is adequately supported with external literature; problem identified and supporting material follow from lecture materials and external sources with few errors; application is moderately novel.	Issue/problem statement not based on synthesis of existing literature; position has weak support in external literature; problem identified and supporting material loosely follow from lecture materials and external sources with some errors; lacks novelty.	No reference to existing research; position lacks support in external research; problem identified and supporting material loosely follow lecture materials; errors present; lacks novelty.
Written Comm. for discussion post	Adheres to scientific writing standards; response is constructive, relevant, respectful, and contributes to the class's understanding of the topic.	Mostly adheres to scientific writing standards; response is constructive, relevant, respectful, and moderately contributes to the class's understanding of the topic.	Does not follow scientific writing standards; response to posts not fully developed, limiting the class's understanding of the topic.	Contains many errors and is difficult to follow; response to posts mostly irrelevant with limited contribution to the class's understanding of the topic.
Written Comm. for written assignments	Adheres to scientific writing standards; highly effective organization; positions are clearly identified; no extraneous material; wide breadth of literature appropriately cited.	Mostly adheres to scientific writing standards, but with some errors; effective organization; positions are clearly identified, but might contain some extraneous material; narrow range of literature used, but appropriately cited.	Loosely follows scientific writing standards; organization limits presentation of arguments; contains irrelevant material; few sources and inconsistent citations.	Loosely follows scientific writing standards; arguments are not clear; lacks organization; few sources and/or not cited.
Lab assignments	Completed all sections; calculations accurate; write up is concise, error free, and follows scientific writing protocol; conclusions follow from data/results and demonstrates an advanced understanding of the topic.	Completed all sections; minor errors in calculations; lab write up is concise, error free, and follows scientific writing protocol; conclusions mostly follow from data/results and demonstrates an advanced understanding of the topic.	Missed some sections, but mostly complete; several errors in calculations or following instructions; lab write up lacks connection to data/results and may contain grammatical errors; limited understanding of topic.	Few sections completed or responses indicate misapplication of procedures; write up lacks connection to data/results or is not complete; does not demonstrate understanding of topic.

ACADEMIC INTEGRITY

As described by UAF, scholastic dishonesty constitutes a violation of the university rules and regulations and is punishable according to the procedures outlined by UAF. Scholastic dishonesty includes, but is not limited to, cheating on an exam, plagiarism, and collusion. Cheating includes providing answers to or taking answers from another student. Plagiarism includes use of another author's words or arguments without attribution. Collusion includes unauthorized collaboration with another person in preparing written work for fulfillment of any course requirement. Scholastic dishonesty is punishable by removal from the course and a grade of "F." For more information go to [Student Code of Conduct](#).

EXPLANATION OF NB/I/W GRADES

This course adheres to the UAF regarding the granting of NB Grades *The NB grade is for use only in situations in which the instructor has No Basis upon which to assign a grade. In general, the NB grade will not be granted.*

Your instructor follows the University of Alaska Fairbanks Incomplete Grade Policy:

"The letter "I" (Incomplete) is a temporary grade used to indicate that the student has satisfactorily completed (C or better) the majority of work in a course but for personal reasons beyond the student's control, such as sickness, he has not been able to complete the course during the regular semester. Negligence or indifference are not acceptable reasons for an "I" grade."

Successful, timely completion of this course depends on committing yourself early and maintaining your effort. Failure to submit assignments in a timely manner may result in faculty-initiated Withdrawal from the course, which can result in a **W** on your transcript.

INSTRUCTOR RESPONSE TIME

If you email me with a question during weekday daytime hours I will try to reply promptly. However, I have meetings and other constraints that might delay my response time. Although I do check email and respond to students in the evening and over the weekend, occasionally I purposely do not check email during those times. If I know I will have limited contact during the week (travel, other commitments), I will let you know. My goal is to grade assignments and exams within a week.

EFFORT AND STUDENT INVOLVEMENT

This is a 3 credit lab course, with 2 credits associated with lecture and 1 credit for lab. It is expected that students are engaged in 2 hours of independent work outside of the lecture, per lecture credit. Thus, expectations for this class are 2 hours of lecture, 3 hours of lab, and 4 hours of student work outside of the lecture (9 total hours per week).

A rough approximation as to how you will you will allocate the 9 hours per week is as follows.

- Attending classes and lecture-based assignments: 44%
- Course readings and studying for exams: 23%
- Lab assignments: 33%

PLEASE See Syllabus Addendum for information about student rights and responsibilities and support services.



start	end	Week	Topics Covered	Discussion	Assignment	Quiz	Exam	
			Template for lecture-based assignments					
16-Jan	19-Jan	Week 1	Course introduction	Find complex issue / respond				
22-Jan	26-Jan	Week 2	Common topics in survey-based human dimensions research	Build on complex issue / respond	1. Bears in Anchorage - ID topics 2. Apply topics to your graduate project			
29-Jan	2-Feb	Week 3	Introduction to Measurement		1. Diagram a theory, 2. Diagram the model of your graduate project	Basic concepts		
5-Feb	9-Feb	Week 4	More on Attitudes		Specificity related to issue identified in discussions 1 & 2			
12-Feb	16-Feb	Week 5	Values orientations	What is the utility/mgt. application of the case studies we've looked at?		Id components from case study		
19-Feb	23-Feb	Week 6	Writing and conducting surveys: intro	Find and critique a survey			Exam 1	
26-Feb	1-Mar	Week 7	Writing and conducting surveys: examples		Survey evaluation	Pros and cons of different survey methods		
4-Mar	8-Mar	Week 8	Writing and conducting surveys: web surveys		Transfer lab survey to web			
11-Mar	15-Mar	Week 9	Spring Break – no class!		Have fun :)			
18-Mar	22-Mar	Week 10	Implementation: possible errors, response rate, survey administration	How do these errors compare to other science disciplines? Discussion thread		Errors		
25-Mar	29-Mar	Week 11	Implementation: Sampling, margin of error		1. Sampling situations, 2. Develop sampling plan for your graduate project	Margin of error		
1-Apr	5-Apr	Week 12	Implementation: Weighting	Thoughts on the use of the weights		Concepts of weighting		
8-Apr	12-Apr	Week 13	Project evaluation: Yale Climate change	Strengths / weaknesses, discussion thread	Evaluate a study related to your graduate project		Exam 2	
15-Apr	19-Apr	Week 14	Writing up results, IRB	Discussion about SPE & research ethics	IRB certification			
22-Apr	26-Apr	Week 15	Case study: TBA	Strengths / weaknesses, discussion thread	Additional case study			
			Points assigned					
			9 Discussions @ 40 pts ea.		360			
			12 assignments @ 50 pts ea.		600			
			6 quizzes @ 40 pts ea.		240			
					1200			