NRRT 376 – Human Dimensions Research and Analysis

Semester: Spring, 2015

Professor: Joseph T. O'Leary 491-0436 email: jtoleary@colostate.edu
Office Hours: **Monday 12-1:00** Room: 208 Forestry Bldg.
Feel free to arrange other times

Teaching Assistant:
Office Hours:

Prerequisites: ST 201 (or equivalent)
Location: CNR computer lab (232 Natural Resources Building)
Time: Lecture: Monday / Wednesday 8:00 –8:50
Lab: Monday / Wednesday 9:00 – 9:50

Course Description, Goal, and Objectives

NRRT 376 is predicated on the assumption that the best way to learn about research and analysis is to become directly involved in the process of scientific inquiry. Consequently, a considerable amount of time is devoted to conducting research tasks (e.g., developing surveys, analyzing survey data). In taking this applied approach, the goal is to achieve the following objectives:

1) To understand the relationship between theory and research.
2) To learn the distinction between conceptualization and measurement.
3) To learn how to write survey questions, construct surveys, and understand the advantages and disadvantages of different types of surveys (e.g., on-site, mail, phone, www).
4) To learn how to conduct elementary data analysis using SPSS. The specific data analysis techniques include univariate statistics (e.g., frequency distributions, measures of central tendency, measures of dispersion, Potential for Conflict Index [PCI2]) and bivariate statistics (e.g., Correlations, Regression, Crosstabs, *t*-tests, 1-way ANOVA).
5) To provide guidelines for understanding what types of statistical techniques are appropriate for analyzing selected types of problems.
6) To provide experience interpreting SPSS computer printouts and constructing data tables / figures for journal articles / technical reports.
7) To learn how to think critically about the uses and limitations of research.

Primary Book:

Vaske, J. J. (2008). *Survey research and analysis: Applications in parks, recreation and human dimensions*. State College, Pennsylvania: Venture Publishing Inc.

Additional Class Material:

Electronic data sets for use in class quizzes will be made available to students.

Instructional Methodology: This class is a combination of:

- Online and in-class lectures
- Online and in-class quizzes

Methods of Evaluation – Students will be evaluated on:

- 16 quizzes available via BLACKBOARD
- A survey design assignment
- Class attendance
- A final project/presentation

Each of these evaluation methods is described on the next page.

Methods of Evaluation

1. ***Quizzes:*** Questions for the 16 quizzes will be based on the course content for a given lecture. Some of the quizzes will be based on questions at the end of each chapter in Vaske (2008). Other quizzes involve running SPSS analyses and interpreting the results. The table on the last page of this syllabus outlines the points for each quiz. These quizzes are mostly online multiple-choice questions. Each quiz will be due at 11:59 pm on the day that the quiz is listed (unless otherwise indicated).

2. ***Survey Design:*** In this assignment you will design a one-page survey on a topic of your choice. Students may work alone or in groups of ***no more than 2 individuals***. The specifics will be discussed in class, but in general you will:

		Points
a)	Identify 2 or 3 hypotheses that will be examined in the survey.	20
b)	List the concepts and associated variables measured in the survey.	10
c)	Explain how the hypotheses will be tested (p. 89).	10
d)	Produce a professional typed survey.	30
e)	Present the survey and its logic (i.e., hypotheses, concepts, variables, statistical tests, survey layout) to the class (5 to 10 minute presentation).	30

3. ***Attendance:*** Class attendance is mandatory and will constitute 13% of your final grade. Attendance will be taken at the beginning of each class session. Two class absences (for whatever reason) will be allowed. The third class absence will drop your grade by 13% (100 points). For example, if you have a letter grade of "A" based on your quizzes, assignment, and final project tasks and miss 3 or more classes, your final grade for the course will be a "B". Any absences during the Student Presentations (May 4 – 6) segment of the course will automatically drop your grade by 13%.

   Because the course is taught in a computer lab, some students are tempted to spend class time surfing the web or writing emails. I strongly encourage you to resist this temptation; as such behavior will influence your attendance grade.

3. Final Project: The final project for this course involves the analysis and interpretation of data using SPSS. Students may work alone or in groups of ***no more than 2 individuals***. For the final project, you may use:

a) One of my data sets. All available data sets can be found in the directory:
N:\Classes\Spring-2015\NRRT376_OLeary\3 – Final Project Data
This directory also describes the grading criteria that will be used for the final presentation.

b) A data set of your own choosing.

Overview of the Final Project: In this final project you will be asked to:

a) Select a data set for analysis.
b) Generate specific hypotheses regarding variable relationships in that data set. These hypotheses should be based on past empirical research (a minimum of 10 citations). The directory: "**N:\Classes\HD Reference Articles**" contains about 15,000 articles sorted by topic area to get you started.
c) Test those hypotheses using appropriate analysis strategies (e.g., Crosstabs, *t*-tests, ANOVA).
d) Prepare a 10 minute presentation summarizing your project.
e) You should turn in via email: (a) the presentation, and (b) the computer printout including the SPSS commands used to generate the printout.
h) To facilitate your efforts on the final project, you should complete the following tasks by each due date. You are ***strongly encouraged*** to discuss your final project with me and show me drafts of your work. ***Final project tasks that are turned in late will not receive the allotted points***.

Final Project Tasks	Due Date	Points
1. Select data base	Mar. 11	25
2. Identify hypotheses	Apr. 8	50
3. Give presentation to class	May 4-6	100

Course Topics / Module Schedule:

Date	Day	Topic	Quiz / Assignment / Final Project
Jan. 21	W	Class outline review The science of survey research – Part 1 (Chapter 1)	
		Theory and Research	
Jan. 26	M	The science of survey research – Part 2 (Chapter 2)	Quiz 1
Jan. 28	W	Linking theory to survey research – Deductive logic (Chapter 3)	
Feb. 2	M	Linking theory to survey research – Inductive logic (Chapter 3)	Quiz 2

Feb. 4	W	Conceptualization and measurement (Chapter 4)	Quiz 3
Feb. 9	M	Level of measurement (Chapter 5) Selecting the appropriate statistic	Quiz 4 Quiz 5
Feb. 11	W	Hypothesis testing and Effect size (Chapter 6)	Quiz 6
		Survey Research	
Feb. 16	M	Survey research – Writing questions (Chapter 7)	
Feb. 18	W	Survey research – Construction / Implementation (Chapter 8)	
Feb. 23	M	Survey research – Student presentations	**Survey Assignment**
		Data Analysis and Interpretation	
Feb. 25	W	An introduction to SPSS (Chapter 9)	Quiz 7
Mar. 2	M	Constructing SPSS data files (Chapter 10)	Quiz 8
Mar. 4	W	Frequencies and Descriptives (Chapter 11)	Quiz 9
Mar. 9	M	Topic to be announced	
Mar. 11	W	Data manipulation (Chapter 12)	**Final Proj: Select data set**
Mar 14-22		**SPRING RECESS**	
Mar. 23	M	Data manipulation (Chapter 12)	Quiz 11
Mar. 25	W	Correlation (Chapter 16)	Quiz 12
Mar. 30	M	Regression (Chapter 16)	Quiz 13
Apr. 1	W	Reliability analysis (Chapter 18)	
Apr. 6	M	Reliability analysis (Chapter 18)	Quiz 14
Apr. 8	W	Crosstabs (Chapter 13)	**Final Proj: Hypotheses / References**
Apr. 13	M	Crosstabs (Chapter 13)	Quiz 15
Apr. 15	W	Means and *t*-tests (Chapter 14)	
Apr. 20	M	Means and *t*-tests (Chapter 14)	Quiz 16
Apr. 22	W	Analysis of Variance (Chapter 15)	
Apr. 27	M	Analysis of Variance (Chapter 15)	Quiz 17
Apr. 29	W	Group project – work day	
May. 4	M	Student presentations	**Final Proj: Presentation**
May. 6	W	Student presentations	**Final Proj: Presentation**

Quiz points

Exercise	Topic	Points
1	Science and survey research	10
2	Deductive and inductive logic	25
3	Conceptualization and measurement	20
4	Levels of measurement	15
5	Selecting the appropriate analysis strategy	50
6	Hypothesis testing & Effect size	15
7	Introduction to SPSS	20
8	Understanding SPSS variables	20
9	Frequencies and Descriptives	10
11	Data manipulation	20
12	Correlation	20
13	Regression	30
14	Reliability	20
15	Crosstabluations & chi-square	35
16	Means & t-tests	30
17	Analysis of variance	30
	Total	370

Course Grading

Grading Summary	% of Grade	Total Points
Quizzes (16)	51	370
Survey Design Assignment	13	100
Attendance	13	100
Final Project	23	175

Total	100%	745

Grades will be based on the total points accumulated:

Grade	Percent	Points
A	100 – 90%	745 – 670
B	89 – 80%	669 – 596
C	79 – 70%	595– 521
D	69 – 60%	520 – 447
F	59 or less	< 446

File locations

Most files for this course are available from BLACKBOARD. The files can also be found on the WCNR network:

- N:\Classes\Spring-2015\NRRT376_OLeary\1 – Lectures\
- N:\Classes\Spring-2015\NRRT376_OLeary\2 – Final Project Data\
- N:\Classes\Spring-2015\NRRT376_OLeary\3 – Sample Presentations\

All students must have a WCNR computer lab account. If you do not currently have an account, please obtain one as soon as possible.