QUANTITATIVE/QUALITATIVE METHODS IN GEOGRAPHY: COURSE SYLLABUS

GEOG 16350: FALL 2020
MONDAY/WEDNESDAY, 3:30-4:45, ROBINSON 306

INSTRUCTOR/CONTACT INFORMATION

Richard Federman
Lecturer, Department of Geography, Planning & Sustainability
Robinson Hall, 3rd Floor
Instructor's Email: federmanr@rowan.edu
Instructor's Cell: 215.876.5891

OFFICE HOURS

Monday/Wednesday, 9:30-10:45 (or by appointment)

COURSE DESCRIPTION

This course introduces and explains basic concepts of descriptive and inferential statistics and examines the application of these methods to geographic research. It also offers an introduction to techniques designed especially for analysis of spatial patterns and distribution.

In addition this course introduces and examines the basic elements of qualitative research including focus groups, interviews, participant observation, ethnography, case study and grounded theory.

COURSE CURRICULUM

The following chart summarizes the topics to be covered in both the Quantitative and Qualitative portions of the course:

UNIT/CHAPTER	TOPICS TO BE COVERED
QUANTITATIVE METHODS	
1	Descriptive vs. inferential stats; primary vs. secondary data; discrete vs. continuous data; levels of measurement; precision & accuracy; data classification methods & techniques; frequency diagrams
2	Measures of central tendency (mode, median, mean); measures

	of variability (range, deviation, standard deviation, variance); skew; kurtosis
3	Mean center; center of population; Euclidean distance; spatial median; standard distance; dispersion; Manhattan distances
4	Processes & patterns; basic probability formulas; probability distributions; binomial distribution; Poisson distribution; normal distribution
5	Point & interval estimation; the central limit theorem; finite population correction; confidence intervals; how to build a confidence interval; estimating total population; estimating population proportions; selecting a sample size
6	Classical hypothesis testing; null & alternate hypotheses; one-sample difference of means test; Z-scores; p-values; directional vs. non-directional tests; t-statistic; drawing conclusions
7	Observed vs. expected; chi-square; chi-square examples & applications
8	Relationships between variables; scatterplots; the correlation coefficient; dependent and independent variables; the least squares regression line; the regression coefficient; plotting the regression line; strength and error
QUALITATIVE METHODS	
1	Defining qualitative research; significance of qualitative research; comparison to quantitative methods; limitations; designing a qualitative study; ethical concerns
2	Defining a focus group; when to use a focus group; focus group methodologies; examples; the interview in qualitative methods; advantages and limitations of focus groups; questionnaires
3	Introduction to field research; participant observation; examples; ethnography; new methods in field research
4	Defining a case study; types of case studies; designing a case study; strengths and limitations; examples; photographic research
5	Defining grounded theory; how to use grounded theory; strengths and weaknesses; applications of grounded theory; basics of coding; examples of coding; coding in qualitative methods
6	Mixed methods research; qualitative and quantitative methods; strengths and weaknesses of mixed methods; examples; conclusions

COURSE MATERIALS

There are no materials that need to be purchased by the student for this class. All course materials – including Power Points, study guides and assignments will be provided to you by the instructor.

ONLINE COMPONENT

This course will be supplemented by a class Canvas web page. Lecture materials including the four Power Point presentations, study guides and assignments will be posted to the class Canvas site. <u>You are responsible for accessing and utilizing the class materials posted on the Canvas site</u>.

CLASS PREPAREDNESS

You will be spending quite a bit of class time working on numerical exercises. As such you will need access to the following each class period:

>> class materials (slides or chapters)
>> statistical tables (available on Canvas)
>> a calculating device

EMAIL

Your official Rowan email is an essential form of communication in this course. You are expected to check your email every day, in case of any announcements or other urgent course information. Email is my preferred form of communication for any course or topic questions, or any issues that arise during the semester. I prioritize student emails and generally aim to respond in less than one business day (<24 hours during the work week, perhaps longer on the weekend or other announced period).

Please feel free to contact me with any queries: federmanr@rowan.edu

COURSE STANDARDS

Students are expected to be attentive and respectful of others in the classroom.

Texting is discouraged during lectures or discussions. Any use of a cell phone during these activities should take place outside the classroom. Laptops should not be open during lectures or discussions except for the purpose of taking notes or other class-related activities.

Academic integrity is paramount. Academic dishonesty, in any form, will not be tolerated. According to Rowan University policy, students committing any act of academic dishonesty may fail the course, be suspended from the university, or both.

WORKING WITH CLASSMATES

There will be times during the semester when working with one or more classmates is encouraged, such as with in-class exercises, or permitted, as is the case with the homework assignments. Below is a list of what you can and cannot do with respect to collaboration on an assignment.

Permissible
a. helping each other work through questions
b. seeking assistance with concepts or techniques
c. collaborating when called for in a group assignment

Not Permissible
a. handing in one assignment with multiple names on it (unless specifically allowed)
b. copying a classmate's work and putting your name on it
c. copying an electronic file from a classmate

UNIVERSITY-WIDE POLICIES

Important information regarding Rowan's academic and classroom policies is available on the Provost's web site:
http://www.rowan.edu/provost/policies/conduct_OfficeofTheProvostRowanUniversity.htm

GRADING SCALE

Grades on various course assessments and final grades for the course will adhere to Rowan's standard grading scale which is summarized below:

A (94-100%), A- (90-93%)
B+ (87- 89%), B (83- 86%), B- (80- 82%)
C+ (77- 79%), C (73- 76%), C- (70- 72%)
D+ (67- 69%), D (63- 66%), D- (60- 62%)
F (<60%)

GRADING PROCEDURE – WEIGHTS OF VARIOUS COURSE EXERCISES

Quantitative Quizzes (8 – I drop the lowest)	30%
Quantitative Homework Assignments (8)	35%
Qualitative Assignments (5)	15%
Qualitative Exam	15%
Attendance	5%

DESCRIPTION OF VARIOUS COURSE EXERCISES

QUANTITATIVE QUIZZES

There will be a quiz at the end of each unit we cover - eight weekly quizzes in all. I will drop your lowest quiz grade. If you do not take a quiz, it will count as your drop. The quizzes will <u>not</u> require significant calculations and will be based on the content of the Power Points and lectures. A study guide will be available on Canvas.

Quizzes can be made up before the start of our next class meeting. I will make my availability known to you. If you have not taken a quiz by the start of our next class meeting, it will count as your drop. If you miss more than one quiz they will start to count as "zeros" toward your grade.

The Quiz schedule is found on the chart below.

QUANTITATIVE HOMEWORK SETS

There will be eight homework weekly question sets drawing from each of the units we cover. These sets can be found on our Canvas site.

We may have occasional class time for the assignments but they will primarily be completed as homework.

Late assignments will be accepted but reduced in grade.

The Homework due dates are found on the chart below.

QUALITATIVE ASSIGNMENTS

There will be five weekly assignments relating to the first five chapters we cover in Qualitative Methods. These assignments are described in the chapters that I've provided on Canvas. They involve a mixture of group and individual work.

QUALITATIVE EXAM

There will a cumulative exam at the end of the semester covering the Qualitative Methods portion of the course only. Please use the chapters that I provide and lecture notes to prepare for this exam. This exam will take place during our University-scheduled final exam slot.

TENTATIVE CLASS SCHEDULE – KEY DATES

CLASS DATES	MONDAY	WEDNESDAY
S2	No Class	
S7-9	No Class	Unit 1 HW Due
S14-16	Unit 1 Quiz	Unit 2 HW Due
S21-23	Unit 2 Quiz	Unit 3 HW Due
S28-30	Unit 3 Quiz	Unit 4 HW Due
O5-7	Unit 4 Quiz	
O12-14		Unit 5 HW Due
O19-21	Unit 5 Quiz	Unit 6 HW Due
O26-28	Unit 6 Quiz	Unit 7 HW Due
N2-4	Unit 7 Quiz	Unit 8 HW Due
N9-11	Unit 8 Quiz	Chapter 1 Assignment Due
N16-18		Chapter 2 Assignment Due
N23-25		Chapter 3 Assignment Due
N30-D2		Chapter 4 Assignment Due
D7-9		Chapter 5 Assignment Due
TBD	Qualitative Exam	

ATTENDANCE

This portion of your grade will be determined by the percentage of classes that you attend during the semester.

ACADEMIC SUCCESS OUTREACH

Your academic success is very important. If you have a documented disability that may have an impact upon your work in this class, please contact me. Students must provide documentation of their disability to the Academic Success Center in order to receive official University services and accommodations.

The Academic Success Center can be reached at 856-256-4234. The Center is located on the 3rd floor of Savitz Hall. The staff is available to answer questions regarding accommodations or assist you in your pursuit of accommodations.