URP 6231: Quantitative Data Analysis for Planners

Sections: 8187 & 19EF

Fall 2025 | Course URL: https://ufl.instructure.com/courses/544061

Instructor:	Dr. Emre Tepe Assistant Professor	**Email:** **Office:**	emretepe@ufl.edu Architecture Building 444
Section:	19EF	**Time:**	No designated meeting time
Delivery:	Online (100 %) - asynchronous	**Place:**	Virtual
Section:	8187	**Time:**	Tuesday 3:00 PM – 6:00 PM
Delivery:	In-person	**Place:**	Architectural School 423
TA:	Fuhao Li	**TA Email:**	fuhao.li@ufl.edu

Course Communication: Instructors can be reached through the Canvas inbox or by email. You can expect a response within 24 hours, excluding holidays and weekends.

Office Hours: The instructor will offer office hours to answer students' course-related questions and concerns over Zoom or in-person meetings. Students are expected to schedule office hours to avoid any time conflicts. Please sign up for an available time slot using the link.

Course Materials: All course materials, including slides, class notes, assignment instructions, and video recordings, will be available on the Canvas course page: https://elearning.ufl.edu. It's highly recommended that you regularly check the designated course page on Canvas for updates and new course materials.

Textbook: The following book will be used as the textbook for this class: Andy Field (5th Edition) Discovering Statistics Using IBM SPSS Statistics, SAGE Publications Ltd.

Main References: In addition to the textbook, you may consider reading the following references if you want to learn more about quantitative analysis and statistics:

- Klosterman, Richard E., Community Analysis and Planning Techniques, Roman and Littlefield Publishers. Savage: Maryland, 1990.
- Kutner, M., Nachtsheim, C., and Neter, J., Applied Linear Regression Models, 4th Edition, McGraw-Hill, Irwin, 2004.
- Meier, K. J., Brudney, J. L., Bohte, J., Applied Statistics for Public and Nonprofit Administration, 7th Edition, Thomson Wadsworth, 2009.
- Moore, D. S. and Notz, W. I., Statistics Concepts and Controversies, 7th Edition, W.H. Freeman and Company, New York, 2009.
- Newbold, P., Carlson, W. L., Thorne, B. M., Statistics for Business and Economics, 8th Edition, Pearson.

Course Description: This course is designed to equip students in the Urban and Regional Planning program with fundamental data analysis techniques and statistical skills required by the UF Urban and Regional Planning program for use in thesis and dissertation research, as well as by the planning profession. The course provides analysis skills that enable planning students to test hypotheses and apply general planning principles within the areas of specialization offered by the department. In addition, an effort has been made to include examples and assignments that provide an opportunity to utilize statistical analysis as a problem-solving/analysis methodology for planning and decision-making. Ultimately, the course aligns with the department's mission as a core component of its curriculum.

Prerequisite Knowledge and Skills: Students taking this course do not need prior knowledge of statistics and quantitative analysis; however, a basic understanding of algebra is necessary. Please contact the instructor as soon as possible to discuss appropriate strategies if you don't have enough prior knowledge about algebra.

Purpose of This Course: Urban and rural areas are complex systems, and quantitative methods are required to analyze such systems. In recent years, an unprecedented amount of data about the built environment has been generated. Therefore, working with data is an integral part of our job and an inevitable aspect of it. This course aims to provide students with an understanding of the widely used quantitative analysis and statistical techniques employed in urban and regional planning.

Course objectives: By the end of this course, students will be able to:

- Module 1
    - Recall basic concepts of statistics and quantitative data analysis.
    - Locate widely used secondary data sets in urban planning.
    - Repeat the basic operations in the statistical software
- Module 2
    - Identify data types
    - Conduct and interpret Descriptive Statistics
    - Conduct data visualization
- Module 3
    - Recall basic concepts of hypothesis
    - Apply hypothesis testing in one-sample and two-sample cases
    - Apply F and T tests
- Module 4
    - Apply and interpret correlation analysis
    - Apply multiple linear, logistic, and Poisson regressions
    - Interpret regression model results
- Module 5
    - Analyze historical trends in population data
    - Apply linear and nonlinear regression models to population data
    - Apply the Cohort-Component method for population projection

Instructional methods: The course will feature a weekly lecture that presents concepts and techniques for quantitative data analysis and statistics. Several homework assignments will test students' understanding of the lecture presentations.

Important dates:

- Classes Begin ..... August 26, 2025
- End of Classes ..... December 2, 2025

Course modules:

- Module # 1: Fundamentals of Statistics
- Module # 2: Describing Data
- Module # 3: Testing Hypothesis
- Module # 4: Regression
- Module # 5: Population Projections

Grade distribution:

- Questionnaires and Feedback Surveys – 1%
  - Create your Student Profile –graded
  - Initial assessment of your statistical knowledge – not graded
  - Stop/Start/Continue Feedback Survey – not graded
- Assignments– 99%
  - Module 1: Assignment #1
  - Module 1: Assignment #2
  - Module 2: Assignment #3
  - Module 2: Assignment #4
  - Module 3: Assignment #5
  - Module 4: Assignment #6
  - Module 4: Assignment #7
  - Module 4: Assignment #8
  - Module 5: Assignment #9 (draft presentation)
  - Module 5: Assignment #10 (final presentation)

Note: Assignment deadlines will be posted on Canvas.

Letter grade distribution:

>= 93.00	A	73.00 - 77.99	C
90.00 - 92.99	A-	70.00 - 72.99	C-
88.00 - 89.99	B+	68.00 - 69.99	D+
83.00 - 87.99	B	58.00 - 67.99	D
80.00 - 82.99	B-	55.00 - 57.99	D-
78.00 - 79.99	C+	<= 55.99	E

Submissions: Students must submit their assignments to the assignments in Canvas in the format identified in the instructions. You are expected to complete multiple assignments throughout the semester in this class. Completing assignments on time is critical to keep both you and us on track. However, life can sometimes be complicated. Therefore, you are allowed to submit two of your assignments three days late. We will deduct 20% points from your next late assignments if you submit more than two late submissions. Any assignment submitted more than three days after the due date won't be graded. If you encounter unexpected circumstances, please do not hesitate to contact the instructor.

Course policies:

Make-up policy: Up to 2 late submissions are accepted. Please review the late submission policy for details. Please feel free to contact me for emergency issues.

Course Technology: In this course, we will utilize the latest version of IBM SPSS, UF Apps System, Canvas, and VoiceThread. You can learn more about these tools in the Start Here module and contact the UF Help Desk for additional assistance at (352)392-4357, option 2.

UF Policies:

Please use the following link to access university-wide student resources, academic policies, and campus resources: https://go.ufl.edu/syllabuspolicies.