RESEC 213: Intermediate Statistics for Business and Economics

Instructor -

<PROF_FIRST_NAME>

<PROF_LAST_NAME>

Spring 2023

Course Objectives

This is the second course in a two-course sequence — successful completion of RESEC 212 or Stat 240 is a prerequisite for this course. In RESEC 212 students learn how to organize and summarize data, create confidence interval estimates, and complete hypothesis tests for a single population. In this course, students will learn how to compare different populations through hypothesis testings and how to estimate relationships among variables through regression analysis. You will develop a greater appreciation for the kinds of information presented daily in the press and the ability to use statistics to interpret and judge survey results and statistics presented in the media.

Lecture/Discussion Section

- Lecture
  - Monday/Wednesday 4:00p-5:15p at Integrative Learning Center S211
- Discussion section
  - RES-ECON 213-01AA: Friday 10:10am-11:00pm at Flint Laboratory room 103
  - RES-ECON 213-01AB: Friday 11:15am-12:05pm at Flint Laboratory room 103
  - RES-ECON 213-01AC: Friday 12:20pm-1:10pm at Flint Laboratory room 103

Instructor

- Name: <PROF_FIRST_NAME> <PROF_LAST_NAME>
- Email: <PROF_EMAIL>
- Office: Stockbridge Hall Room 306A
- Office hours
  - In person or zoom: Wednesday 1-3p

Teaching Assistant

- Name: <TA_FIRST_NAME> <TA_LAST_NAME>
- Email: <TA_EMAIL>
- Office: Flint 210
- Office Hours: Thursday 3:00-5:00p
- Discussion sections will be led by the TA in person and will be used to guide student

application of the methods and tools covered in class. Each week the TA will review key terms and methods and go over examples. Discussion sections will also be available to help prepare students for the coming exams.

Department Learning Objectives

This course contributes to the following student learning objectives for undergraduate students in the Department of Resource Economics:

SLO or EG	Item	Components of the course that meet the objective
Student Learning Objective (SLO)		
SLO #3	Achieve proficiency in the supporting disciplines, such as macroeconomics, mathematics, statistics, and finance.	Statistical methodologies covered in the course
SLO #5-c	Communicate effectively using current digital and multimedia technology.	The visual presentation (graphs, charts, etc.) and interpretations of qualitative and quantitative data using statistical software
SLO #8	Consistently foster safe, fair, open, and diverse professional and social environments.	Classroom environment and communications with students, in-class group discussions, and office hours
SLO #9	Continually integrate new knowledge gained from a variety of sources, with ability to discern the quality of the source, in order to make well- informed decisions.	In-class activities and discussions, integration of historical and current policy events into statistics learning, and provided resources for learning
Experiential Goal (EG)		
EG #1	Enhance teamwork/collaborative skills through group work, activities, assignments, etc.	In-class iClicker exercises individually or with a group
EG #2	Experience active learning strategies: flipped classrooms, debate, field trips, economic experiments and games, presentations, student-response system (e.g., iClicker, Google Forms), etc.	In-class iClicker discussion, discussion section

Class Material

1. **Text**: Applied Statistics in Business & Economics by David P. Doane and Lori E. Seward. An online tool called "***Connect***" comes bundled with the custom edition of the text.
    1. ***Connect*** is an integral part of this course, and everyone must have it. Our course's Connect webpage is <LINK_MHEDUCATION>
2. **iClicker2**: This is required for use during lectures. Students must link their SPIRE ID to their iClicker2 transmitter on the Moodle site for this course. Note that our classroom will not use mobile polling apps (e.g. REEF or TopHat).
3. **Computer/Internet Access**: It is important that students have access to a personal computer and access to the Internet. Homework assignments and quizzes in this course are given over the internet.
4. **Moodle**: Course related announcements will be posted in Moodle, so please check Moodle on a regular basis.
    1. Our course's Moodle page: <LINK_MOODLE>

Work Expectations and Grades

Grades will be determined based on exam grades, class participation, assignments, and quizzes.

Exam (60%)

There will be two midterms and a final exam.

	Exam Date
Midterm 1	March 8, tentatively 4:00p-6:00p
Midterm 2	April 19, tentatively 4:00p-6:00p
Final	TBD

- Two midterms are worth 35% of student's final grade. Between the two midterm scores, the lowest one will be worth 15% and the highest one will be worth 20% of the final grade.
- The final exam, which is not cumulative, is worth 25% of student's final grade.
- Students will get zero point if they miss an exam.
- Exam related: Note that makeup exams will only be permitted in the case of an unsurmountable situation (unexpected death of a family member, severe illness, university-sponsored trips, etc.), in which case you will have to notify me at least 48 hours in advance and provide supporting documentation (e.g. Physician's note).

In-Class Personal Response (iClicker2) (10%)

Students should use the radio frequency transmitters, iClicker2, to answer questions during each lecture. Participation answering these questions will count for 10% of students' final grade. Full participation credit will be awarded regardless of whether the response is correct — since the aim is to encourage the engagement. However, submitting correct answers for more than 60% of the questions over the course of the semester can result in a 1% bonus and submitting correct answers for more than 80% of the questions over the course of the semester can result in a 2% bonus.

Connect Homeworks (15%)

There will be 10 assignments. Each homework assignment will be posted in ***Connect***. Homework grading will be based on the points that students earn for answering questions correctly. Homework assignments are worth 15% of student's final grade.

Connect Quizzes (15%)

There will be four online quizzes in ***Connect*** posted throughout the semester. Each quiz will remain active for 7 days. Quizzes are timed - you will have 2 hours. Once you click on a quiz, you cannot stop the clock! A quiz will consist of a number of questions - many will be selected from the homework questions. You can make two attempts at each quiz (only the highest attempt per quiz will be counted). Additionally, we will drop your lowest quiz score in calculating your final quiz score.

Course Scores

Course scores are calculated based on the following weightings—

Item	Weight
Lowest Midterm Exam Score	15%
Highest Midterm Exam Score	20%
Final Exam Score	25%
In-Class Personal Response (iClicker2)	10%
Connect Homeworks	15%
Connect Quizzes	15%

Grading Table

Final grades will be calculated according to the following minimum cutoff points:

	A = 93	A- = 90
B+ = 87	B = 83	B- = 80
C+ = 77	C = 73	C- = 70
D+ = 67	D = 60	
F if <60		

Class Schedule and Reading Materials

- Sampling distribution and One sample hypothesis testing (Week 1 - 3)
- Two sample hypothesis testing (Week 4 - 7)
- ANOVA (Week 8 - 11)
- Simple and multiple regression (Week 12 - 15)

Academic Honesty Policy

Since the integrity of the academic enterprise of any institution of higher education requires honesty in scholarship and research, academic honesty is required of all students at the University of Massachusetts Amherst. Academic dishonesty is prohibited in all programs of the University. Academic dishonesty includes but is not limited to: cheating, fabrication, plagiarism, and facilitating dishonesty. Appropriate sanctions may be imposed on any student who has committed an act of academic dishonesty. Instructors should take reasonable steps to address academic misconduct. Any person who has reason to believe that a student has committed academic dishonesty should bring such information to the attention of the appropriate course instructor as soon as possible. Instances of academic dishonesty not related to a specific course should be brought to the attention of the appropriate department Head or Chair. Since students are expected to be familiar with this policy and the commonly accepted standards of academic integrity, ignorance of such standards is not normally sufficient evidence of lack of intent. For more information please check the academic honesty policy.

Diversity and Inclusion

This class aims at promoting diversity of viewpoints in terms of identity, topics, as well as geography covered. It is my intent that students from all diverse backgrounds and perspectives be well served by this course and that students' learning needs be addressed both in and out of class. The diversity that students bring to this class will be viewed as a resource, strength, and benefit. It is my intent to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups.

Accommodation Statement

The University of Massachusetts Amherst is committed to providing an equal educational opportunity for all students. If students have a documented physical, psychological, or learning disability on file with Disability Services (DS), they may be eligible for reasonable academic accommodations to help them succeed in this course. If students have a documented disability that requires an accommodation, please notify me within the first two weeks of the semester so that we may make appropriate arrangements.