Professor: Joanna Jeneralczuk  
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Lecture: Section 01 – TuTh 4:00PM - 5:15PM, Marcus Hall room 131  
Section 02 – TuTh 2:30 PM – 3:45PM, Marcus Hall room 131

Discussion: Section 01 - every Wednesday (starting Jan 28)  
Section 02 – every Monday (starting Jan 26)

Office Hours: Tu/Th 10-11am and 1-2 pm, and by appointment

Office Hours for TAs in the Statistical Help Center (LGRT 174) –TBA

Prerequisite: Knowledge of high school algebra

Textbook: *Introductory Statistics, by Prem S.Mann, 8th edition, Wiley Custom (selections for University of Massachusetts Amherst)*

Homework: Homework assignments will be assigned and completed through Wiley PLUS. Wiley PLUS is an online homework and course study system. It also contains an e-book of our textbook.

Read the flyer how to register.

- If purchasing the Wiley PLUS code only online, use promo code **UMA15** in the shopping cart to receive online access for $65.00. Discount will be applied at the end of check out. More information at: [www.wiley.com/WileyCDA/Section/id-821994.html](http://www.wiley.com/WileyCDA/Section/id-821994.html)

The campus bookstore offers:

- Set of Custom Mann 8e *Statistics* text plus Wiley PLUS code (ISBN 9781118994436) for $100
- The Mann 8e *Statistics* Wiley PLUS standalone code (ISBN 9781118566718) for $86.75

MOODLE: The MOODLE page is the official web page for this course. Only registered students can access the MOODLE page. Lectures, notes, test reviews, additional homework assignments, and announcements will be posted there

Computing Software: We will experiment with MINITAB, Rcmdr and a graphing calculator.

Calculator: Not required, but it would be good to have a graphing calculator. In general, this class will focus on interpretation and conclusions rather than computation. Each student will be responsible for learning how to generate descriptive (one-or-two variable) statistics from a data set by hand and using technology and calculate probabilities.

Course Description: This is the introductory course in statistics. It fulfills the R2 general education requirement that addresses analytical reasoning. The course also fulfills the Basic Math Skills requirement (R1). Topics covered include descriptive statistics, probability, discrete random variables, the binomial and normal distributions, sampling distributions, simple linear regression, confidence intervals and hypothesis testing.

Upon completion of this course, you should be able to think critically about data, present graphical and numerical summaries of the data, understand basic probability models, and apply standard statistical inference procedures.
Grading: Final averages will be weighted as follows:

1st Exam (Feb 26, in class) - 20%
2nd Exam (April 9, in class) – 20%
Final Exam (University schedule) - 25%
Project -10%
Homework – Wiley Plus - 15 %
Additional homework and Quizzes – 10%

Final grading scale cutoffs: A: 92; A-: 88; B+: 85; B: 82, B-: 76; C+: 72; C: 65; C-: 60; D: 55; F below 51 (no rounding, 91.6% corresponds to A-, and will not be rounded to an A). No extra credit and there is no opportunity to improve a grade after the final exam.

Learning Disabilities: Students with learning disabilities should let me know so that any necessary accommodations can be made

Homework: This is the BEST way to practice the skills needed to succeed in this class. Textbook readings will be assigned so you can read before class on the relevant material. Problem sets will be assigned on Wiley Plus weekly. Additional homework problems will be assigned on Moodle (not every week), the due date will be posted near the homework link and they will be collected during discussions. Solutions will be posted right after the due date and therefore, NO LATE HOMEWORK will be accepted for the additional homework. Please turn in your homework stapled together. Homework must be complete, legible, and include all supporting work. I encourage you to work together. However, know the difference between collaborating and copying. You should write up your own responses separately.

Discussion sections: Basic material will be covered in lectures. The discussion session will provide opportunity for review, solving exercises in greater detail than is possible in the lectures and answering questions on material covered in the lectures and homework’s. Attendance at discussions is mandatory.

Quizzes: A short quiz is given at the discussion meeting and it will be announced.

Exams: All exams are closed book. There are no scheduled make-up exams. Make-up exams will be offered to students with legitimate conflicts or unanticipated emergencies that can be documented in advance (when possible) or after the fact. Unpreparedness or a heavy work load are not legitimate excuses for requesting a make-up exam. If you cannot make it to an exam, contact me in person or by telephone or send me an e-mail as early as possible. On your return, bring documentation regarding the situation. Missing an exam without a legitimate, documented excuse will result in a 20% penalty on the make-up score. Except under extremely extenuating circumstances, if a student misses a exam and does not contact me within 24 hours, no make-up exam will be given and score 0 will be assigned.

Group Project: A group project will be introduced after the first midterm exam. More details will be provided at that time. The project is designed to give you a better understanding of the statistical processes you learn about in class. Ideally you’ll be working in groups of 2-5.

Attendance: Although attendance is not taken at lectures, it is considered mandatory in the following sense: every student is responsible for knowing what goes on in the lecture: that is, for obtaining lecture notes, for knowing any announcements. Note that exams and quizzes are sometimes based on material presented in class but not in the textbook. Occasionally I may give some extra-credit questions in class to “reward” students who come to class and complete reading assignments.
We will be covering a large amount of unfamiliar material in a short period of time. The course is structured so that each new section builds on the material from the previous sections. It is important, therefore, that you attend and participate in all lectures and discussion sessions, do reading assignments, and homework’s. Don’t fall behind.

**Academic Honesty:** All work submitted by the student is expected to be his or her own. While students may collaborate on homework assignments, the final version should represent the students’ own effort and understanding. Quizzes and exams will be proctored diligently to assure fairness. Any violation of these policies will be addressed according to the procedures laid out in the booklet.

**Classroom Etiquette:** My goal is to have a classroom atmosphere that allows the class to learn the material without distractions. The following behaviors will help achieve this:

- Please arrive in class on time.
- Please do not leave class early unless you have to. If you plan to leave early, sit near the door so as to disturb as few people as possible.
- Please turn off your cell phones before coming to class.
- Students are expected to avoid any behavior that can be constructed as disrespectful or disruptive, such as text messaging or talking during the lecture.
- Each student is responsible for keeping up with the course presentation, for taking notes, for completing the reading assignments on time, for preparing for quizzes and exams, and for completing tests and quizzes in the allotted time. The teaching assistants are instructed to enforce time limits on quizzes. They are also instructed not to assist students during tests or quizzes.

**Course Schedule:**

I plan to cover chapters 1 – 10 and part of chapter 13 from the textbook **Lecture notes will be posted before each lecture, please print and bring them to class.** The handouts will show the basic topics, definitions, stated problems but details are missing. These, of course, are filled in during class.

**We will cover:**

1. What is statistics, types of statistics, population and sample, basic terms, types of variables (Chapter 1)?
2. Organizing and Graphing Qualitative and Quantitative Data (Chapter 2).
3. Numerical Descriptive Measures for ungrouped and grouped data. (Chapter 3).
4. Bivariate Data: Bivariate data scatter-plots of for two variables, correlation coefficient, best fitting line (notes and part of Chapter 13)
5. Probability and Probability Distribution: Event, sample space, event composition, calculating probabilities, counting rules, mutually exclusive (or disjoint) events, conditional probabilities and independent events, tree diagram. (Chapter 4).
6. Discrete Random variables and their probability distributions : random variables, mean and standard deviation of a discrete random variable, factorials ,combinations and permutations, binomial and hypergeometric distribution.(Chapter 5)
7. Normal Distributions: Normal probability distribution, use of standard normal distribution tables, applications of the normal distribution (Chapter 6).
8. Sampling Distributions: Random sampling, sampling plans and experimental designs, sample mean, the Central Limit Theorem, distribution of sample proportion. (Chapter 7)
9. Estimation of the mean and proportion (Chapter 8)
10. Hypothesis tests about the mean and proportion (Chapter 9)
11. Estimation and hypothesis testing – two populations (Chapter 10).