University of New Haven

COLLEGE OF ARTS AND SCIENCES

Department of Mathematics and Physics

Course: MATH 2228- 04
Title: Elementary Statistics
Credit Hours: 4

Semester: Fall 2019
Classroom: KAPL 106
Meeting Times: MWF 925-1040a

Instructor: Daniel Cicala
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Webpage: https://danielmichaelcicala.github.io/teaching

Office: Maxcy 323
Office Hours: M 2-4 // W 12-2 // F 11-1

§ II: Instructors Addendum
For MATH 2228- 04 Elementary Statistics

Disclaimer

I reserve the right to make changes to this syllabus. All changes will be announced in a timely manner through email or classroom announcements.

Required Textbook

Introduction to the Practice of Statistics, by David Moore, 8e, ISBN 9781464158971 (2014).

Course Website

I will only use Blackboard to email the class and to make announcements. Be sure that you have emails from Blackboard whitelisted. All other course information is on the course website listed above.. In particular, I will not post grades on Blackboard, but I am always happy to discuss your grade in-person during office hours.

Statistical programming projects

In this class, we will use the statistical programming software RStudio. For this, you will occasionally need to bring a laptop into class (see the schedule below). If you do not have your own laptop, you can loan one from the library.

To download RStudio, visit https://www.rstudio.com/products/rstudio/download/ and select either the *RStudio Desktop* or the *RStudio Server* option. Then select the link for your operating system. See me during office hours if you are having difficulty.

We will integrate RStudio into class by way of a number of projects posted on the class website listed above. Each project is associated to one section or chapter of the text. Each project will be completed and turned in induvidually, but after we complete each chapter, there be 30 minutes of class time where you may collaborate on the projects with your classmates and ask me questions. Completed project reports are to be placed in the folder hung outside my office or handed to me in class before 4pm on the due date posted on the class website. No late assignments will be accepted without a university approved reason. They must be typed and all data visuals must be generated by R. Reports with no names or unstapled will not receive credit. Every project will be given a grade of 0-10.

Project reports are worth 15% of your grade.

Class Participation

During class, please keep a separate clean sheet of paper accessable. Throughout the lectures, I will pose questions, for example, asking you to guess the answer to something I haven't taught yet. I will provide a short time for you, ideally in collaboration with your classmates, to consider the question. In this time, write down your thoughts on that paper. You will hand in this paper at the end of class; it counts as your attendance.

It is otherwise not graded as it is meant for you to play with your ideas, no matter how stupid *you* think they are.

The reason we'll do this is because the ability to make predictions about material demonstrates a deeper understanding than simply recalling facts. But, like anything, this requires practice.

Class participation is worth 5% of your total grade.

Homework

On my website listed above, you will find a number of homework problems and their due date. They are to be handed in to me or placed in the folder outside my office by 4pm on the due date. Late assignments will not be accepted without a university approved reason. Assignments that are not stapled or without names will not receive credit.

Each homework will be given a score between 0 and 10 that corresponds with the percentage of the assignment you completed. For a question to count as "complete", you must either have provided a full, though not necessarily correct, answer. In lieu of a full answer, you can either (1) discuss the question with me in my office hours prior to the due date of the related assignment, or (2) write a short paragraph that examines exactly why you had difficulty and what you tried to do when you got stuck.

Math is a *skill* that can be developed and like all skills, it requires practice. It is impossible to get better without making and learning from mistakes. By developing the ability to recognize your mistakes, then soon enough you will catch them in real-time and prevent making them all together. This homework is to allow you to be wrong while not hurting your grade. I will offer vague comments to direct your attention to areas of your work where I think you can do better. You should study these areas to better understand them. I encourage you to come to office hours to discuss any of my comments.

Homework contributes 10% of your total grade.

Quizzes

On each day when a homework is due, there will be a short quiz. This quiz will consist of questions pulled *directly* from the assigned homework. You may not use your text, notes, or any electronics apart from a scientific calculator. Phone calculators are not allowed. Each question, graded for correctness and clarity, will be given a score between 0 and 10.

These quizzes are to practice your ability to recall mathematical information. This ability—which, again, is a skill to be developed—serves as a frame onto which new knowledge is built. Also, to solve a problem, recall is needed for you to sythesize the information into a solution. You cannot synthesize information held in a second-brain, e.g. a notebook or the internet. Quizzes are a low-stakes way for you to practice your ability to access information.

Quizzes are worth 10% of your total grade.

Exams

There are two exams during the semester and one final exam. All exams are closed notes and closed books. Scientific calculators are permitted but all other electronics are not allowed. Any attempt to cheat will be dealt with according to the misconduct code. Students found to have violated the rules governing academic integrity will receive a 0 grade on the associated exam and may be subject to further penalties as allowed by the University.

Not only are exams meant to measure the breadth of knowledge you've obtained, but they are actually an important part of *enhancing* your knowledge.

Each midterm exam contributes 15% your total grade. The final exam contributes 30% of the total grade.

Grade Calculation

The total grade will be calculated using the formula

$$0.15(\text{reports})0.05(\text{class part.}) + 0.10(\text{hw}) + 0.10(\text{quizzes}) + 0.30(\text{midterm exams}) + 0.30(\text{final exam})$$

Scoring and Course Grades

The letter grade is based on the student's total point score for the semester. The class letter grade is assigned based on

Points	Grade
97.5–100.0	A +
92.5–97.5	A
90.0–92.5	A –
87.5–90.0	B +
82.5–87.5	B
80.0–82.5	B –

Points	Grade
77.5–80.0	C +
72.5–77.5	C
70.0–72.5	C –
67.5–70.0	D +
62.5–67.5	D
60.0–62.5	D-
0–60	F

Course Outline Schedule

Fall 2019 classes are from Monday, 26 August to Wednesday, 18 December. The last day to drop classes without any financial penalty is Tuesday, 3 September, and the last day to withdraw from the class, i.e., to request a W grade is prior to Tuesday, 29 October. All requests for a W must be sent to the registrar.

The following is a tentative schedule. The exam dates are also noted on the schedule. These dates are subject to change; this includes the exams.

Dates	Section
Week 1	1.1, 1.2, 1.3
Week 2	1.3(cont.),
Week 3	2.1, 2.2, 2.3
Week 4	2.3, 2.4, 2.5
Week 5	2.5 (cont.), 2.6, 3.1
Week 6	3.2, 3.3, 3.4
Week 7	4.1, 4.2, 4.3
Week 8	4.4, 4.5, exam1
Week 9	5.1, 5.2, 6.1
Week 10	6.2, 6.3, 6.4
Week 11	7.1, 7.2, 7.3
Week 12	exam2, 8.1, 8.2
Week 13	9.1, 9.2, 9.3, 10.1, 10.2
Week 14	11.1, 11.2, 12.1, 12.2, 13.1, 13.2
Final Exam	Friday, 13 December, 8-10a