

Professor: Dr. Thomas Fisher

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Office Hours: MWF 11:00-11:30 (after class)

MF 2:30-3:30

TuTh 10:30-11:30 and by appointment

Personal Website: <http://www.users.miamioh.edu/fishert4/>
and *canvas* site

Class Materials: Notes. Occasionally your textbook, calculator or laptop will be handy

Textbook: [Statistical Inference](#) (2nd edition) by Casella and Berger

References: [Introduction to Probability and Statistics Using R](#) (free pdf) by Kerns
[Probability and Statistics with R](#) (book's site) by Ugarte, Militino and Arnholt

Bulletin Description: Topics from distribution theory, theory of estimation, theory of tests of hypothesis.

Topic Outline: Essentially the first four chapters of the text: Basic probability theory, Transformations and Expectations, Common distributions, multiple random variables. We will likely touch on some topics from chapter 5 as well.

Exams: Four exams will be given in the class (each worth 10%). The premise is more exams with less material/risk on each. A cumulative final exam (worth 20%) will also be given. Scheduled Dates:

Exam 1 - Wednesday, September 21

Exam 2 - Wednesday, October 12

Exam 3 - Wednesday, November 2

Exam 4 - Monday, November 21 (note: Monday before Thanksgiving)

Final - Wednesday, December 14, 10:15am--12:15pm

Homework: Homework will be given throughout the semester and will count for a substantial part of your final grade (40%). I expect to give 10+ homework assignments during the semester (roughly one assignment per week). The homeworks will cover both the theoretical and application (i.e., computing) concepts of the material.

Computing Assignments: Modern Probability and Statistics are performed using computer software. As such, several assignments will involve some light computing. We will be using R.

Attendance: This is a graduate class, you are expected to be here. The pace of this class is such that it will not be advisable to miss any sessions. If you know you will be absent, please inform me in advance. When you are absent, it will be your responsibility to contact another student for the notes and announcements. While attendance does not factor into your grade, I may take attendance for my own records. You are expected to be an active participant for the entire 55-minute class. Indications that this is not happening include sleeping, surfing the web or instant messaging on your laptop, text-messaging on your cell-phone, studying for another class, etc. Please

turn your cell phone to silent before class. Students are expected to wait quietly for 15 minutes after class is scheduled to begin. If I have not yet appeared the students are free to leave.

Letters of Accommodation: If you have a letter stating specific testing accommodations to which you are entitled, please come by my office to discuss the accommodations that you will need and to give me a copy of the letter. Even if you do not anticipate using any accommodations, it is a good idea to turn in the letter as soon as possible. Please note that unless I have at least one week's notice I will be unable to provide any accommodation on an exam

Prerequisites: Graduate standing or permission of instructor. The necessary background includes *Introductory Statistics* and [Calculus III](#).

Student Code of Conduct: Any violations of Academic Integrity within the Student Handbook will not be tolerated. This includes cheating, plagiarism, storing information in a calculator, sabotage of another's work and disrupting class. See the [Handbook](#) for a complete listing of the student code of conduct. All violations will be handled in accordance with established procedures and policies concerning student academic responsibility. See the [Bulletin](#) for additional details:

<http://miamioh.edu/academics/bulletin/>

<http://www.miamioh.edu/handbook>

Final Grades: At the conclusion of the semester, final grades will be compiled using:

Source	Amounts
Homework	40%
Midterms	40%
Final Exam	20%
Total	100%

Grades will be assigned based on:

[97, 100)	A+	[92, 97)	A	[90, 92)	A-
[87, 90)	B+	[82, 87)	B	[80, 82)	B-
[77, 80)	C+	[72, 77)	C	[70, 72)	C-
[67, 70)	D+	[62, 67)	D	[60, 62)	D-
		[0, 60)	F		