

Professor: Dr. Thomas Fisher

Office: 348 McVey Data Science Building

Telephone: (513) 529-2176

Email: fishert4@miamioh.edu (best)

Office Hours: MW 4:10-4:20 (immediately after class)

F 1:30-2:30 (McVey DSB 348)

TuTh afternoons (generally 1:30-3:00, [by appointment](#))

Personal <https://tjfisher19.github.io/>

Website: and Canvas site

Class Structure: On MW we will be covering the theoretical and conceptual concepts of regression analysis. You can typically expect written notes but may also include data examples. On Fridays we will meet in UPH 320 (SCALE-UP Space) where we will be applying the material we learn. We will primarily use the statistical software R (RStudio) but I may include some elements of SAS as well.

Class Materials: Notes on MW. Occasionally your textbook or laptop will be handy.
A laptop is necessary on Fridays

Textbook: Applied Linear Statistical Models by Nachtsheim, Neter and Kutner (recommended, not required)

Supplemental [Introduction to Statistical Modeling](#) by Hughes & Fisher (STA 363 textbook)

Material: Several textbooks are available online for free (PDF)

Bulletin Linear regression model, theory of least squares, statistical inference procedures, general linear hypothesis,
Description: partial F tests, residual analysis, regression diagnostics, comparison of several regressions, model adequacy, and use of statistical computer packages.

Exams: Two midterms (each worth 15%) and cumulative final exam (worth 20%) will be given. Exams may consist of an in-class and take-home portion. Planned dates:

Exam 1 - Monday, March 4 (in class), October 4-6 (take-home)

Exam 2 - Monday, April 22 (in class), April 22-24 (take-home)

Final - Monday, May 13, 3:00-5:00 (in-class), finals week (take-home)

Assignments: Assignments will be given throughout the semester primarily in the form of homework assignments. I expect to give about a half-dozen assignments during the semester. The assignments will cover both theoretical and application perspectives of the covered material. STA 563 students can expect extra problems and material.

Data Analysis A project will be assigned in the next few weeks which involves a full analysis of some interesting data.

Project: There will be several milestones/grades comprising this project with some parts composed of group work.

Attendance, While attendance does not directly factor into your grade, we will regularly have in-class **Group-work,** assignments/worksheets/group-work that may be assessed for grade. You are expected to be an active **worksheets &** participant for the entire 80-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, **Check-ins:** etc.

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.

Letters of Accommodation: Miami University is committed to ensuring equal access to students with disabilities. Miami's Office of Student Disability Services (SDS) assists students with determining eligibility for services and accommodation planning. Miami's AccessMU provides resources and guidance toward equal opportunity for all individuals. Refer to Miami University's [Accessible Technology Policy](#) for definitions and additional information.

Students who are entitled to disability-related academic adjustments, auxiliary aids, etc., must register with SDS to receive accommodations in university courses. Please understand that formal communication from SDS must be presented prior to the coordination of accommodations for this course. For more information, see [Student Disability Services](#) and/or [the Rinella Learning Center](#). Students may also contact SDS at (513) 529-1541 or via email at sds@miamioh.edu.

If you have a disability, please contact me, and I will be glad to make any necessary accommodations.

Prerequisites: [MTH 222](#) with a grade of C or better and [STA 363](#) with a grade of C or better and [STA 401/STA 501](#) with a grade of C or better (or equivalent, STA 664).

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>

Notable Dates:

Date(s)	Topic
Mon, Jan 29	Classes begin
Thu, Feb 15	Last day to drop without a “W”
Fri, Feb 16	MAYBE a sub – Dr Fisher might be out
Mon, Feb 19	MAYBE a sub – Dr Fisher might be out
Mon, Mar 4	First midterm evaluation scheduled
Mon, Mar 11	Midterm Grades available in this window
Mon-Fri, Mar 25-29	Spring Break – no class
Fri-Sun, Apr 5-7	DataFest (through CADS)
Mon, Apr 8	Last day to drop with a “W” Total Solar Eclipse
Mon, Apr 22	Second midterm evaluation scheduled
Tue, Apr 30	Last day to apply for December/January Graduation
Fri, May 10	Last day of classes
May 13-17	Final Exam week (Monday, May 13, 3:00-5:00)

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

Source	Amounts
Assignments	20%
In-Class Assignments/Labs	10%
Data Analysis Project	20%
Midterm Exams	30%
Final Exam	20%
Total	100%

Grades will be assigned based on:

[98, 100)	A+	[92, 98)	A	[90, 92)	A-
[88, 90)	B+	[82, 88)	B	[80, 82)	B-
[78, 80)	C+	[72, 78)	C	[70, 72)	C-
[68, 70)	D+	[62, 68)	D	[60, 62)	D-
		[0, 60)	F		