

# INST 314: Statistics for Information Science

Adrienne Bradford (she/her)

Fall 2019 - Section 0103

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Office Hours: TU/TH 2-4pm or by appointment

Office: 1218G LeFrak Hall

Web: [elms.umd.edu](http://elms.umd.edu)

Class Hours: TU/TH 12:30-1:45pm

Class Room: TYD 1132

TA: Mona Swami (she/her)

TA Office Hours: M 3-5pm, W 12-1pm

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TA Office: TBD

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## Official Course Description

Basic concepts in statistics including measure construction, data exploration, hypothesis development, hypothesis testing, pattern identification, and statistical analysis. The course also provides an overview of commonly used data manipulation and analytic tools. Through homework assignments, projects, and in-class activities, you will practice working with these techniques and tools to create information resources that can be used in individual and organizational decision-making and problem-solving.

## Course Description

Advances in hardware and software technologies have led to a rapid increase in the amount of data collected, with no end in sight. Decision making in the coming decades will depend, to an ever greater extent, on extracting meaning and knowledge from all that data. In this class we focus on one branch of statistics, inferential statistics, to help us reason about data. By gathering datasets, formulating proper statistical analyses and executing these analyses, information professionals play a significant role in bridging the gap between raw data and decision making. This course will introduce basic concepts in data analytics including study design, measure construction, data exploration, hypothesis testing, and statistical analysis. The course also provides an overview of commonly used data manipulation and analytic tools. Through homework assignments, projects, and in-class activities, you will practice working with these techniques and develop statistical reasoning skills.

## Learning Objectives

After completing this course, you will be able to:

- Select and evaluate various types of data to use in decision making;
- Use prescriptive and descriptive analyses to reach defensible, data-driven conclusions;
- Select and apply appropriate statistical methods;
- Use R for basic data manipulation and analysis;
- Critically evaluate data analyses and develop strategies for making better decisions.

## Course Materials & Resources

### Computer

You must bring a charged laptop to class every day. Tablet and similar devices are not acceptable as they cannot fully run R. Alternatively, you may partner with a willing classmate to share computer use in class. If you need a computer to study and complete your assignments, LeFrak Hall has computer labs with R installed (and other stats software) - they are located in the basement. In addition, the PCs (not mac workstations) in the UMD Libraries have R installed.

### Website

ELMS-Canvas: <http://elms.umd.edu>

All relevant, required course content will be stored in or linked from ELMS.

### Software

The following software is necessary for you to successfully complete the course activities.

- You must install and use R. R programming language and software is free and available online (<https://www.r-project.org/>).
  - Once you install R, you may wish to install packages that will be used in the in-class labs prior to the labs in which they will be used. You can begin with the tidyverse, using the command `install.packages("tidyverse")`. The tidyverse is a collection of packages that may take 10-15 minutes to install, wait until the command prompt returns before performing other actions in R.
- I strongly encourage you to use RStudio, which I will predominately use during the class. RStudio is an integrated development environment for R and the open source desktop version is free to download and use. (<https://www.rstudio.com/products/rstudio/download/#download>). You must download and install R prior to installing and using RStudio.

### Readings

Completing the required reading for the class is essential to understanding the core statistical concepts. In order to learn, you must review the material multiple times. Any required readings outside of these textbooks will be posted on ELMS/Canvas.

#### Required:

- Radziwill, N.M. (2019), Statistics (The Easier Way) With R, 3rd ed., Lapis Lucera. ISBN-13: 978-0- 9969160-3-5.
  - NOTE: The 3rd edition is the TIDYVERSION. You can buy used versions of the previous editions, however they will not fully integrate the use of the tidyverse.
  - The author offers a free e-book version with proof of purchase of the physical book copy.
- Diez, D., Barr, C., and Cetinkaya-Rundel, M. (2015), OpenIntro Statistics, 3rd ed., OpenIntro. <https://www.openintro.org/stat/textbook.php>
  - Also in a color hardcover or black & white paperback for purchase.
- Verzani, J. (2004), Using R for Introductory Statistics, Chapman & Hall/CRC. ISBN/ASIN: 1584884509 ISBN-13: 9781584884507 <https://cran.r-project.org/doc/contrib/Verzani-SimpleR.pdf>

**Other Resources:**

If you want to learn more about using R for data science within the tidyverse framework, I highly recommend this book:

- Wickham, H. and Golemund, G. (2017) R for Data Science, O'Reilly Media. ISBN-13: 978-1491910399. <http://r4ds.had.co.nz/index.html>
  - This is a free book available in HTML and a physical copy is available for purchase

For many different reasons, not everyone likes the required textbook in a quantitative methods course. Alternatively, some of you may wish to further explore some of the course topics and how to use statistical software. The following books have been recommended or are used by my colleagues, and they address many of the same course topics from varied writing approaches.

- Online Statistics Education: A Multimedia Course of Study (<http://onlinestatbook.com/>). Project Leader: David M. Lane, Rice University.
  - This is a free, online stats book available via HTML, pdf, and e-pub.
- Imai, K. (2017), Quantitative Social Science: An Introduction, Princeton Press. ISBN-13: 9780691175461
- Salkind, N.J. (2013), Statistics for People Who (Think They) Hate Statistics, 5th ed., Sage Publications, Inc. ISBN-13: 978-1452277714
- Hinton, P. (2004) Statistics Explained: A Guide for Social Science Students, 2nd ed., Routledge. ISBN-13: 978-0415332859

**Course Activities/Assessments****Quizzes**

There will be 12 quizzes. The quizzes will be short (5-10 questions) and will serve as knowledge checks. You can refer to your notes and course materials while completing these. You will complete the quizzes in ELMS prior to the beginning of Tuesday class (by 12:29pm) - the quizzes will cover the previous week's material. There will not be a quiz every week (such as the week of the midterm) - refer to the syllabus for the dates of the quizzes. Your lowest two quiz grades will be dropped. There will be no makeup quizzes - missed quizzes will count toward your lowest two.

**Labs/Homework**

There will be 10 lab assignments throughout the course. Each lab assignment will cover one topic. The labs will serve as both in-class labs and homework assignments. The labs will be comprised of coding notebooks (R notebooks). These notebooks will include commentary and code blocks that take you through examples of the topics covered in the lecture - the lab portion. The notebooks will also include checkpoints - the homework portion - that will ask you to conduct analysis with different data (provided) and interpret the resulting output. Lab checkpoints will be due prior to the class meeting (12:29pm) after that topic ends. Dates listed on the syllabus and are subject to change.

**Projects**

You will complete 5 projects throughout the course. For each project you will use your own chosen data source to address a research question of interest to you, perform appropriate analyses utilizing

statistical techniques taught in the course, and compose a 2-3 page summary paper describing your data, research question, hypothesis, and findings. You will turn in both the summary paper and the code you wrote to conduct your analysis (either in a .R script or .rmd notebook).

For Project 0 (Due Thursday, September 5th by 12:29pm) you will identify a dataset that you will utilize for your projects. Ideas and parameters for what these datasets should include will be provided in a document on ELMS. While Project 0 will not be graded, it is an opportunity for you to receive feedback on if your chosen data will be appropriate for the subsequent projects.

## Exams

The course will include two exams. The midterm will be administered in class on Thursday, October 10th and will cover the material from the beginning of the course through and including Two Sample z- and t-tests. The final will be administered during the official final exam period - tentatively scheduled for Monday, December 16th from 1:30-3:30pm. I will update you on the date when the university releases the confirmed dates. The final exam will cover the material from one-way ANOVA through the end of the course. You may bring one 8.5" by 11" sheet of notes with you to refer to during the exam.

Students whose class schedule requires them to take more than three final examinations on the same day have the right to reschedule examinations so they have no more than three on a given day. Please contact me as soon as possible following the release of the final examination schedule if you will require alternate scheduling.

## Extra Credit

You have the opportunity to earn extra credit by composing your projects utilizing `rmarkdown` in RStudio. `rmarkdown` allows you to create documents that weave together your code, the output of that code, and your commentary into one document. For this option, you will turn in both the R notebook (.rmd) used to conduct your analysis and build your paper and the resulting document in either .html or .pdf. More details on this option will be provided in ELMS.

## Grading

Your grade is determined by your combined performance on course activities and is assigned individually (not curved). The instructional team will post all graded activity to the course ELMS page. Note that Canvas does not always calculate grades properly. 'Final' grades posted in ELMS may vary substantially before the end of the term. If you are concerned about any part of your grade, please come see me.

If you have questions about anything graded, please check with the member of the instructional team that graded the work for clarification. If you believe the work was not graded correctly, please see the re-grading policy below. See below for the grade policy on late work submissions.

Final letter grades are assigned based on the percentage of total assessment points earned. Grades will be rounded to the nearest 10th of

Activity	Number	Each	Percent
Quizzes	10 of 12	0.5%	5%
Labs/Homework	10	1%	10%
Projects	5	10%	50%
Midterm	1	15%	15%
Final	1	20%	20%
<b>TOTAL</b>			<b>100%</b>
<i>Extra Credit</i>	5	1%	5%

a percent. Final letter grades will be assigned based on the total percent of points earned, using the following rubric.

To be fair to everyone I established clear standards and apply them consistently. Do not ask me at the end of the term to consider you for a higher grade based on your hard work and effort. It would be unethical to make exceptions for some and not others. If you want an extra edge on your grade, complete the extra credit option. Please come and talk to me early if you think that there might be a problem.

	range
A	93.0-100%
A-	90.0-92.9%
B+	87.0-89.9%
B	83.0-86.9%
B-	80.0-82.9%
C+	77.0-79.9%
C	73.0-76.9%
C-	70.0-72.9%
D+	67.0-69.9%
D	63.0-66.9%
D-	60.0-62.9%
F	0-59.9%

## Communication

### Email

My email address is [abradfor@umd.edu](mailto:abradfor@umd.edu) - please note there is **NO d** on the end of my username. Do not hesitate to email me if you have any questions that cannot be answered by reading the syllabus or posting on the discussion board. It is especially important that you are proactive to email me or meet with me early if you are concerned about your progress in the course. Do not send me messages via ELMS or rely on assignment comments for anything other than notes related to your assignment submission.

It is essential that we all conduct ourselves as professionals, so please visit [ter.ps/email](http://ter.ps/email) for some friendly guidance on writing emails. As the title says, **what you write matters.**

### Office Hours

Please visit me during office hours! I enjoy talking to my students. Open hours will be regularly scheduled for anyone to drop in. Regular office hours may have multiple students present. Individual and group office hours are available by request. Email me to schedule an individual appointment for one-on-one discussions. All office hours are safe spaces to discuss anything related to our class, other iSchool & UMD studies, professional development, or anything else that you'd like to discuss. If you are having trouble in the course, please talk to me as soon as possible. If you do poorly or lower than you expected on an exam, assignment, or anything else, it is imperative that you come to office hours so that we can figure out the problem early.

### Discussion Board

This class makes heavy use of the Discussion Board (DB) on ELMS to address all questions about assignments, lectures, how to use R, and similar topics. **DO NOT email questions to me or others on the instructional team that can be answered on the DB.** If you do, we will reply to post your question to the DB, and you will lose valuable time. DB appropriate questions include all questions about the course that do not pertain to your individual concerns, progress, or grades.

Posting to the DB allows 1) a common location to answer questions that many of you might have, and 2) provides an opportunity for your classmates to respond and assist in both of your learning. Before you post, check the DB to see if someone else has already asked your question. The instructional team regularly monitors the DB to respond in a timely manner — ideally within a couple of hours during the day and early evening.

**To encourage you to start working on your assignments early, do not expect the instructional team to reply to posts about the assignments on the nights they are due.**

When asking about calculations that use R, you must post the lines of code so that others can replicate your work. Either copy/paste your code into the DB post, or attach an R script file containing your code. Include any other relevant lines of code — **including recoding, subsetting**, etc. If this exceeds 10 lines of code, please attach your R script file on the post.

Do not hesitate to post on the DB because of shyness or concerns that you might feel like you are asking a ‘stupid question.’ My experience is that many of your fellow students are similarly shy and have the same questions you do. No questions asked are stupid since learning is both of our goals, and the instructional team can only help you if we know your questions. Some of you may be hesitant to post R code on the DB for fear that others will copy it. This is normal, but I encourage posting code to the DB. It will help others learn to troubleshoot your challenges, and perhaps share different ways that R can be used to obtain the same answer.

## Announcements

I make frequent use of ELMS announcements - including announcements about cancelling and/or rescheduling class or office hours. I advise you to set your ELMS account notifications to receive course announcements by email. “I did not see the announcement.” is not a valid excuse.

## When & How to Contact the Instructional Team

Communication	Email	DBoard	IndAppt	OfficeHours
Absent from class (if requesting excused absence)	X			
Assignment questions		X		X
Need in-depth help		X	X	X
Exam grading review			X	
General performance review			X	
Identify or resolve classmate conflicts	X		X	
Just want to chat			X	X

## Course Policies

### Electronic Devices

I do not forbid the use of electronic devices in class as long as they do not interfere with the lecture or distract other students. I will caution that there is empirical evidence<sup>1</sup> that non-academic use of electronic devices during lectures is associated lower exam performance. It is of note that the authors found that students who used devices had good comprehension of material during the lecture (and therefore thought they were “getting it”), but had poorer long-term recall of the material.

### Attendance

Attending class is not mandatory; however, your attendance in class is expected. Missing class is likely to influence on your class performance and grade. Class sessions will involve hands-on lab

<sup>1</sup>Arnold L. Glass & Mengxue Kang (2019) Dividing attention in the classroom reduces exam performance, *Educational Psychology*, 39:3, 395-408, DOI: 10.1080/01443410.2018.1489046

activities that you can complete with classmates. If you miss class, it is your responsibility to make the effort to find out what you missed and to make up any in-class work. DO NOT email me if you are unable to attend class UNLESS you need to request an excused absence for an exam. Any other assignments (even the in-class labs) are available on ELMS and can be turned in on ELMS regardless of your attendance in class.

**Excused Absences**

I do not track class attendance, so excused absences only need to be requested for the exams. Requests for excused absences should be made via email and accompanied by appropriate documentation. Excused absences and subsequent makeup exams will only be granted for non-avoidable situations, such as religious observance, illness, death in family, etc. Your email requesting exam makeup should be sent prior to the exam - as soon as you know. That means that if you know at the beginning of the semester you have a religious observance, mandatory military obligation, etc. let me know within the first two weeks of the course.

Missed exams with an excused absence must be made up within 2 weeks of the original date. Missed exams without a documented, excused absence cannot be made up and will receive a score of 0.

**Late Work**

Timely submission of the completed assignments is essential. The due date of each assignment will be stated clearly in the assignment description. Late assignments will be increasingly penalized for each day it is late. Late work will be accepted up until one week after the original assignment deadline or the last day of class — whichever comes first, after which you will receive a zero (0) score.

Late penalties are automatically applied in ELMS. There may be time delay from when you submit and when it is received in ELMS, plus ELMS counts seconds. DO NOT WAIT to submit till the last minute. Try to submit no less than 5 minutes before the due time. “Oops” and “the system lagged” are not valid excuses.

**Penalties for Late Submission:**

	Less than 1 day	1 day	2 days	3 days	4 to 7 days	> 7 days
penalty	10%	20%	30%	40%	50%	0% on the assignment

**Extensions for Assignments**

I will not grant extensions for assignments unless you have a prolonged sickness/injury or other situation that affects your ability to complete assignments outside of class. Documentation of prolonged sickness/injury from a doctor or other medical professional is required and should indicate if you are well enough to complete assignments out of class. You are afforded ample time to complete assignments outside of class so that a 1-2 day routine illness should not preclude timely submission. Proactively contact me if a situation arises during the semester so that we can make appropriate arrangements.

**Re-grading**

Fair, accurate, and consistent grading is very important to me. If you receive a grade different than what you believe you should have received, then within one week of receiving the assigned grade, you must submit a written document in which you include the graded work, an explanation of what you believe was improperly graded, and an explanation for why you think it should be

given a different score. For any re-grade requests, the entire assignment will be regraded, and your score may go up or down.

## Getting Help

You are expected to take personal responsibility for your own learning. This includes acknowledging when your performance does not match your goals and doing something about it. If you need help with the course content, please visit me in office hours or email me to set up an individual appointment.

Everyone can benefit from some expert guidance on time management, note taking, and exam preparation, so I encourage you to consider visiting <http://ter.ps/learn> and schedule an appointment with an academic coach.

Sharpen your communication skills (and improve your grade) by visiting <http://ter.ps/writing> and schedule an appointment with the campus Writing Center.

Finally, if you just need someone to talk to, visit <http://www.counseling.umd.edu>.

Everything is free because you have already paid for it, and **everyone needs help...** all you have to do is ask.

## Names/Pronouns and Self Identifications

The University of Maryland recognizes the importance of a diverse student body, and we are committed to fostering equitable classroom environments. I invite you, if you wish, to tell us how you want to be referred to both in terms of your name and your pronouns (he/him, she/her, they/them, etc.). The pronouns someone indicates are not necessarily indicative of their gender identity. Visit [trans.umd.edu](http://trans.umd.edu) to learn more.

Additionally, how you identify in terms of your gender, race, class, sexuality, religion, and dis/ability, among all aspects of your identity, is your choice whether to disclose (e.g., should it come up in classroom conversation about our experiences and perspectives) and should be self-identified, not presumed or imposed. I will do my best to address and refer to all students accordingly, and I ask you to do the same for all your fellow Terps.

## Accommodations

Please come and see me as soon as possible if you think you might need any special accommodations for disabilities. In addition, please contact the Disability Support Services (301-314-7682 or <http://www.counseling.umd.edu/DSS/>). Disability Support Services will work with us to help create appropriate academic accommodations for any qualified students with disabilities. If you experience psychological distress during the semester you can get professional help at the Counseling Center (301-314-7651 or <http://www.counseling.umd.edu/>).

## Academic Dishonesty & Integrity

It is very important that you complete your own assignments, and do not share files (excluding raw data and code posted to the DB), partial work or final work. You may work with your classmates on the lab/homework assignments but each student should submit their own unique file with the answers in their own words.

**I take plagiarism VERY seriously.** It is quite likely that you will use the Internet or class materials to help answer your assignments and exams. I prefer that you summarize or paraphrase



source materials rather than copy & paste content. **If you copy and paste content from ANYTHING you did not write yourself, I expect you to put it in quotation marks and clearly cite the source.** I will heavily enforce plagiarism violation penalties.

Cheating in any form (copying, falsifying signatures, plagiarism, etc.) will not be tolerated. It will result in a referral to the Office of Student Conduct irrespective of scope and circumstances, as required by university rules and regulations. There are severe consequences of academic misconduct, some of which are permanent and reflected on the student’s transcript. If you have any questions regarding the University’s policies on scholastic dishonesty, please see <https://www.studentconduct.umd.edu/academic-dishonesty>.

As a student you are responsible for upholding the academic integrity standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information on the Code of Academic Integrity or the Student Honor Council, please visit <http://shc.umd.edu/SHC/Default.aspx>.

### Class and Campus Closures

If I am physically unable to teach class on campus on a given day, I may either hold or reschedule class online, using Google Meet or WebEx; you will be notified in advance of this change and emailed the link to access the online class session.

Weather and other events may require campus to close. Campus closures will be posted on the UMD homepage ([www.umd.edu](http://www.umd.edu)) and many of its social media channels. You may also call the weather emergency phone line: 301-405-7669. See <https://umd.edu/weather> for more information. **In the event of a campus closure, expect our class to be held online.** I will contact you with instructions for the online class.

### University Policies

Other policies relevant to undergraduate courses are found here: <http://ugst.umd.edu/courserelatedpolicies.html>. Topics that are addressed in these various policies include academic integrity, student and instructor conduct, accessibility and accommodations, attendance and excused absences, grades and appeals, copyright and intellectual property.

### Course Schedule

\*NOTE: Schedule is for planning purposes and is subject to change. Current deadlines will be listed in ELMS.

\*\*Assignments (Labs and Projects) and Quizzes are due **BEFORE** the class (12:29pm) on the date they are listed below - if deadlines change they will be updated in ELMS.

Readings : [0] = OpenIntro Stats; [V] = Verzani; [R] = Radziwill; OPT = optional

Week	Day	Date	Topic	Readings	Lab	Quiz	Due BEFORE class
1	TU	Aug 27	Intro to 314    Inference Part 1: Foundations & Sampling	[R] 1.1, 1.3, 3.1, & 3.2    SKIM: [O] Ch 1    OPT: [V] Sections 1 & 2			

*(continued)*

Week	Day	Date	Topic	Readings	Lab	Quiz	Due BEFORE class
	TH	Aug 29	R Basics	[R] 1.6 & [V] Section 3 (univariate data)    OPT: Complete an R tutorial (Swirl) or skim Paradis (Ch. 2, 3, 6)	1		Who are you?
2	TU	Sep 3	Descriptive Statistics & Graphs	[R] 1.4 & 1.5    SKIM: [R] Section 2    OPT: [O] 2.1.4 & [V] p. 19-22	2 starts	1	Lab 1
	TH	Sep 5	Descriptive Statistics & Graphs		2 ends		Project 0
3	TU	Sep 10	Inference Part 2: Intro to Hypotheses, Power, and Effect Size	[R] Sections 3.5 p.200-203 (power)    SKIM: [O] Ch 3 (distributions)		2	Lab 2
	TH	Sep 12	Chi-Square: Goodness of Fit	[R] 5.8 & [O] 6.3    OPT: [R] 5.9 & [V] Section 12 p.93-97 (GoF)	3 starts		
4	TU	Sep 17	Chi-Square: Test of Independence	[O] 6.4 & [R] p.204 & 211 (power)    OPT: [V] Section 12 p.97-99 (ToI)		3	
	TH	Sep 19	Chi-Square: Test of Independence    Inference Part 3: Normal Distribution, ZScores & Confidence Intervals	[R] 3.6 & 3.7    SKIM: [O] Ch 4 (inference)    OPT: [V] p.59-60 (d, p, & q functions), p.60-61(z-scores), p. 62 (CLT)	3 end		
5	TU	Sep 24	Inference Part 3: Normal Distribution, ZScores & Confidence Intervals			4	Lab 3
	TH	Sep 26	One-Sample: z & t tests	[R] 4.1, 4.4, 4.6, 5.2, 5.6 & [O] 5.1, 6.1    OPT: [V] Section 9 p.77-79 (conf int), p.80-81 (prop test), p.81-84 (z & t), p.86-87 (one-sample tests)	4 starts		
6	TU	Oct 1	One-Sample: z & t tests		4 ends	5	Project 1

*(continued)*

Week	Day	Date	Topic	Readings	Lab	Quiz	Due BEFORE class
	TH	Oct 3	Two-Sample: z & t tests	[R] 4.2, 4.3, 4.5, 4.7, 5.3, 5.4, 5.5, 5.7 & [O] 5.2-5.4, 6.2 & [R] p.204 -210 (power) & Vaughn 11.5: Nonparametric    OPT [V] Section 11 p.89-93 (two sample) & Vaughn 11.3: Wilcoxon	5 starts		Lab 4
7	TU	Oct 8	Two-Sample: z & t tests		5 ends	6	
	TH	Oct 10	One-Way ANOVA	[R] 5.10, 5.11 & [O] Ch 5.5 & [R] p.204 & 212 (power)    OPT: [V] Section 15 p.116-121 & Vaughn 11.4: Krusal-Wallis	6 starts		Lab 5
8	TU	Oct 15	Midterm				
	TH	Oct 17	One-Way ANOVA		6 ends		Project 2
9	TU	Oct 22	Factorial ANOVA	[R] 5.12 & Vaughn 13.1 Two-Way ANOVA    OPT: [O] 7.5	7 starts	7	Lab 6
	TH	Oct 24	Factorial ANOVA		7 ends		
10	TU	Oct 29	Correlations	[R] 2.9, p.178, p.435-438 & [O] 7.1.4    OPT: [V] p.34-35	8 starts	8	Lab 7
	TH	Oct 31	Correlations    Topic Review		8 ends		Project 3
11	TU	Nov 5	Simple Linear Regression	[R] 4.8, 6.1, 6.3 & [O] Ch. 8 & [R] p.204 & 213 (power)    OPT: [V] Section 4 p.32-34 & 36-40, Section 13 (p.100-108) 7 p.102-103	9 starts	9	Lab 8
	TH	Nov 7	Simple Linear Regression				
12	TU	Nov 12	Simple Linear Regression		9 ends	10	
	TH	Nov 14	Multiple Linear Regression	[R] 6.2 & [O] Ch 9    OPT: [V] Section 14 (p.109-116)	10 starts		Lab 9
13	TU	Nov 19	Multiple Linear Regression			11	Project 4

*(continued)*

Week	Day	Date	Topic	Readings	Lab	Quiz	Due BEFORE class
	TH	Nov 21	Multiple Linear Regression		10 ends		
14	TU	Nov 26	Topic Review			12	Lab 10
	TH	Nov 28	NO CLASS: THANKSGIVING				
15	TU	Dec 3	TBD				
	TH	Dec 5	Final Exam Review				Project 5
Finals	M	Dec 16	Tentative Final Exam Date (1:30-3:30pm)				

### UMD Academic Calendar

**Thanksgiving Recess**<sup>2</sup> = November 27 - December 1 (Wednesday-Sunday)

**Last Day of Classes** = December 9 (Monday)

**Reading Day** = December 10 (Tuesday)

**Final Exams** = December 11-17 (Wednesday-Tuesday)

<sup>2</sup>Right now we're scheduled to do review on the Tuesday of Thanksgiving week, but if we get behind in lectures new content could be presented that day.