Course Syllabus – Last Updated: January 31, 2019

Statistics for Information Science

INST 314
Spring 2019

Learning Outcomes

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.

After successfully 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.
- Showcase your statistical skills through a research project that can be used in your portfolio.

Required Resources

Course website: **elms.umd.edu**

OpenIntro Statistics	Using R for Introductory Statistics
Diez, Barr, Çetinkaya-Rundel	Verzani, J. (2004)
CreateSpace, 3rd Edition, 2015	Chapman & Hall/CRC
(ISBN: 978-1943450039)	(ISBN-13: 9781584884507)

The textbooks are freely available online (http://openintro.org/os) and (https://cran.r-project.org/doc/contrib/Verzani-SimpleR.pdf). If you prefer a paperback version of OpenIntro, you can buy it at the cost of printing (~$10) on Amazon. 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. There are a few topics that are beyond the course textbook, readings for these will be posted on Elms/Canvas.
Laptop computer is mandatory - Bring to class everyday
R: Free download at https://cran.r-project.org/index.html (tutorial on ELMS
RStudio: Free download at https://www.rstudio.com/ (instructions on ELMS)

Instructor
Dr. Hernisa Kacorri

Class Meets JMZ 0220
Tuesdays & Thursdays
2:00pm – 3:15pm

Office Hours HBK 2118A
Tuesdays & Thursdays
3:30pm – 5:00pm
(Except: 2/26, 5/7 and 5/9)

TA Office Hours
Abhimanyu Sachdeva
HBK-0215A
abhimanyusachdeva1@gmail.com
Drop-in Thursdays
12:30pm – 1:30pm

Academic Peer Mentors
AMPs**:** Class tutors
Ammanuel Wondwossen
HBK-0215A
nintendofan24@gmail.com
Drop-in Mondays
3pm – 4pm
Schedule Wednesdays
4pm – 5pm

Hardik Dhanak
hdhanak@terpmail.umd.edu
Drop-in Tuesdays
12:30pm – 1:30pm (HBK-0215B)
Schedule Thursdays
8:30am – 9:30am (HBK-0215A)

Course Communication
ELMS announcements or email will be used to send time-sensitive information.

Absences
Attendance for is not mandatory, but not attending class may affect your ability to obtain points for any graded work. Use the form to document when you will be or were absent from a class.
http://ter.ps/inst314abs

Optional Resources

This is a list of books that can be really helpful. Some of them can be even fun. You will not be tested on them but I recommend that you choose one of the books as a side resource.

Compatible with our course and more focused on R:

- **Statistics (The Easier Way) With R** by Nicole Radziwill (2nd Edition)

Not super technical for basic statistics:

- **The Cartoon Guide to Statistics** by Larry Gonick, WoollcottSmith, Woolcott Smith (1st Edition)
- **The Manga Guide to Statistics** by Shin Takahashi and Trend-Pro Co., Ltd

Assumes basics statistics knowledge, explains gotchas and pitfalls:

- **Statistics Done Wrong: The Woefully Complete Guide** by Alex Reinhart (1st Edition)

Not really technical, how statistics are used to deceive in everyday life:
Note: the book is written in the 1950.

- **How to Lie with Statistics** by Darrell Huff

Data science book for those of you who would like to continue in this direction:

- **Practical Data Science with R** by Nina Zumel and John Mount

Tips for success

- Complete the reading before a new week begins, and then review again after the week is over.
- Be an active participant during lectures and group labs.
- Ask questions - during class or office hours, or on the discussion board. Ask me, your TA, your AMPs, your group members, and your classmates.
- Do the problem sets - start early and make sure you attempt and understand all questions.
- Start your project early and allow adequate time to complete it.
- Give yourself plenty of time to prepare a good cheat sheet for exams. This requires going through the material and taking the time to review the concepts that you're not comfortable with.
- Do not procrastinate - don't let a unit go by with unanswered questions as it will just make the following unit's material even more difficult to follow.

Workload

You are expected to put in about 4-6 hours of work/week outside of class. Some of you will do well with less time than this, and some of you will need more.

Teams

To construct highly functional teams of learners, you are asked to complete a short survey (HW0). If you haven't yet done so please complete it as soon as possible. You will be assigned to teams of 3 students based on the results of the survey. Once team assignments have been made there is no option for changing teams, other than under extraordinary circumstances. You will work in these teams during group labs and projects. In addition, your team members will be your first point of contact in this class.
You are encouraged to study with your team members and other classmates. But remember that anything that is not explicitly a team assignment must be **your own work**.

Activities, Learning Assessments, & Expectations for Students

Readiness Quizzes (50 points – 5%)

Quizzes will be given at the beginning of (approximately) every week right before the class on ELMS and will correspond to reading material for that week. You are welcomed, and encouraged, to work with your team on the quiz questions but you must answer **your own quiz**. Since quizzes are submitted online via ELMS, they will be unaffected by campus closures or changes in the classroom schedule.

There are a total of 10 quizzes (each 5 points). The last quiz (Quiz 11) is optional and gives you an opportunity for extra points.

Problem Sets: Homework + Practice Problems (150 points – 15%)

These will be assigned (approximately) biweekly and will be comprised of problems from the textbook. Each homework will list roughly seven to 8 problems from the book to be turned in for grading, and roughly 10 practice problems. You do not need to turn in the practice problems, and the solutions can be found in the back of the book. The objective of the problem sets is to help you develop a more in-depth understanding of the material and help you prepare for exams and the project. Grading of the homework problems will be based on completeness as well as accuracy. In order to receive credit you must show **all** your work. You are welcomed, and encouraged, to work with each other on the problems, but you must turn in **your own work**. If you copy someone else's work, both parties will receive a 0 for the problem set grade as well as being reported to the Office of Student Conduct (https://studentconduct.umd.edu/). Work submitted on ELMS/Canvas will be checked for instances of plagiarism prior to being graded. Since homeworks are submitted online via ELMS, they will be unaffected by campus closures or changes in the classroom schedule.

There are a total of 50 problems (each 3 points) distributed across 7 homeworks. The last homework (HW8) is optional and gives you an opportunity for extra points.

Individual DataCamp Labs (50 points – 5%) [A DataCamp account is required]

Only a limited amount of time is spent teaching you how to use R. In addition to the group labs, we will use DataCamp to help get you started. The content for these labs is almost aligned with the one in the group labs. Each exercise in your DataCamp assignments has an associated point value called XP. DataCamp will show you how much total XP you earned. I will use internal reports to calculate your final points based on your XPs once you've completed all labs at the end of the course. I recommend that you first complete these before you complete and submit your group lab. You can join our DataCamp course (allowed email domains @umd.edu,@terpmail.umd.edu, @gmail.com) https://www.datacamp.com/groups/shared_links/d962c3c7174a86009c8701b8efe6aa8f62063c18. Since labs are submitted online, they will be unaffected by campus closures or changes in the classroom schedule.

Group Labs (50 points – 5%)

Each major topic covered in class will have an accompanying lab activity. These lab assignments are designed to teach you more about how R works within the context of the topics being taught in class. You will need your laptop to complete the lab assignments. You will work with on the labs in class as time permits and complete any unfinished work with your team. There will be only one lab submission per team. Completed labs will be submitted via Elms/Canvas due by 11:55pm on the scheduled due date. Since labs are submitted online via ELMS, they will be unaffected by campus closures or changes in the classroom schedule.

There are a total of 10 group labs (each 5 points).

Group Project (200 points – 20%)

Either alone or in groups of up to 3, you will work on a final project where you explore existing datasets, create an experiment, collect data, analyze it, and present your results. There will be a few assignments specific to the group project, including a project proposal, a data collection report, a project analysis report, a presentation, and a final paper. Additional details about the group project will be provided in ELMS/Canvas and discussed in class.

Exams (450 points – 45%)
There will be 2 midterms each worth 15% of the course grade and a cumulative final exam (also 15%). These exams provide an opportunity for you to test your understanding of the concepts, techniques, and problems associated with statistical reasoning. In order to learn and understand the material fully it is important to review and revisit it multiple times.
The two midterms will be take-home and the cumulative final is going to be in class. The in-class portion will be taken in ELMS using the Respondus Lockdown browser; you may use both sides of a single page of paper for your notes. The take-home practical portion will be open-book style to be completed in ELMS.

Participation (50 points – 5%)
This will be based on in-class activities, peer responses on discussion board, and peer review tasks.

Additional opportunities for extra credit (40 points - 4%)
As mentioned above, you will have many opportunities to score extra points (e.g., extra homework, extra quiz, etc.)

R markdown: In addition to those points, you can gain up to 10 extra points (1%) for submitting your group labs using the R markdown files and up to extra 10 points (1%) for accompanying your final project report with a R markdown report. Here are some resources and examples on using R markdown: https://rpubs.com/.

Review statistics in practice: As well as learning statistical theory and applying the techniques, you are encouraged to attend events where statistics play an integral role. The statistics used in the event must be more than simple descriptive statistics, such as averages and proportions; there must be some form of detailed analysis that uses statistics to test a hypothesis, conduct exploratory research, and/or predict one or more activities.

> To obtain extra credit related to events, you must provide proof of attendance at both the beginning and ending of the event, e.g. selfie photos capturing you and the event/speakers with timestamps. You must also provide a summary of the event, no more than ½ to 1-page in length, describing the event, its purpose, and how statistics were used in the event, presentations, etc. Go into detail about what data was used, if there were any interesting aspects of the data (e.g. how it was collected, privacy or missing data concerns), how the data was processed for the event, and so on. You must also include a discussion about what statistical methods were used; it is alright if you are unfamiliar with the specific techniques, but obtain the names of the techniques and discuss how/why they were used. Detail what results were found and what, if any, implications the results may carry (e.g. affect policy decisions, develop new applications). Gaining sufficient information may require you to ask the event speaker(s) or other attendees more familiar with the statistical methods used. You are encouraged to participate and ask questions before, during, and after the event. Bonus: this can help you develop a professional network. Your completed summary report must be written in a Word document and emailed to me(hernisa@umd.edu) using the file name convention:
>
> EC_LastName_FirstName_EventName.docx
>
> You may perform this type of extra credit twice—once for an event that occurs on campus and once for an event that occurs off-campus. An on-campus example is an iSchool faculty or guest research presentation; an off-campus example is a data or policy seminar. Each event report extra credit is worth 10 points (1.0%) towards your final grade; so, a total of 20 extra points (2%) is possible with this method.

Campus Policies

It is our shared responsibility to know and abide by the University of Maryland's policies that relate to all courses, which include topics like:

- Academic integrity
- Student and instructor conduct
- Accessibility and accommodations
- Attendance and excused absences
- Grades and appeals
- Copyright and intellectual property

Please visit www.ugst.umd.edu/courserelatedpolicies.html for the full list of campus-wide policies and follow up with me if you have questions.

Course-Specific Policies

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 penalized by 50% if they are turned in within one week of the due date and not accepted if they are more than one week late. (Please note that ELMS will mark your assignments as late if submitted **a few seconds** past the deadline. I would recommend that you submit your assignments not later than 5 minutes prior to the deadline.) Oops" and "the system lagged" are not valid excuses.

Devices

I expect you to make the responsible and respectful decision to refrain from using your cellphone or other devices in class for tasks that are not related to in-class activities. If you have critical communication to attend to, please excuse yourself and return when you are ready. For more information about the science behind the policy watch: http://youtu.be/WwPaw3Fx5Hk

Office Hours

Please visit me during office hours. This is an opportunity to ask questions about the material covered in the reading materials or in lecture. I anticipate that I will meet at least once with each team as you start working on your projects. 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 the midterm, 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 homeworks, lectures, labs, R, and similar topics. DO NOT email questions to me or others on the 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.
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 (**except weekends**).

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.

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 activities. You are expected to complete them in class and the activities' files are to be turned in at the end of each session, so that I can identify problem areas. 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. If you are absent: fill out this form: http://ter.ps/inst314abs

Excused Absences

If you are absent for any reason, you should complete the absent form linked above. Depending the reason for your absence, it may be excused (e.g. religious observance).

- You are given two (2) excused absences for regular class days without question.

- If you miss class on an exam day or any other non-regular class day on the schedule, you will need documentation to excuse your absence.
- Any work from an unexcused absence will be given a score of zero (0).
- Any work from an excused absence must be made up within one (1) week of the original deadline—anything during the last week of class may require a sooner makeup.
- Missed exams without a documented, excused absence cannot be made up and will receive a score of zero (0).

If you have a prolonged sickness/injury or other event that affects your ability to complete assignments, you MUST obtain a signed note from a doctor or similar qualified representative AND that note MUST identify:

1) if you are well enough to attend class or not,
2) if you are well enough to complete assignments in or out of class, and
3) the dates for your excused absence. Upload a copy of the doctor's note to absent form. I reserve the right to contact that doctor's office to only verify the authenticity of your note and its contents.

If you have a death in the family, have a family member with a severe injury or illness, or have a similarly grave situation—come discuss it with me. You will be granted an excused absence for the first instance, but any other instances or if additional time will be considered on a case-by-case basis. Be aware of how any time lost in class may affect your ability to complete your studies.

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 regarded, and your score may go up or down.

Getting Help

Taking personal responsibility for you own learning means acknowledging when your performance does not match your goals and doing something about it. I hope you will come talk to me so that I can help you find the right approach to success in this course, and I encourage you to visit http://tutoring.umd.edu to learn more about the wide range of campus resources available beyond our instructional team. In particular, everyone can use some help sharpen their communication skills (and improving their grade) by visiting the https://www.gradschool.umd.edu/graduate-school-writing-center and schedule an appointment with the campus Writing Center. Finally, if you just need someone to talk to, visit counseling.umd.edu.

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 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 of your fellow students.

Grades

Grades are not given, but earned. Your grade is determined by your performance on the learning assessments in the course and is assigned individually (not curved). If earning a particular grade is important to you, please speak with me at the beginning of the semester so that I can offer some helpful suggestions for achieving your goal.

All assessment scores will be posted on the course ELMS page.

Learning Assessments	#	Points Each	Category Total	Category Weight
Readiness Quizzes	10	5	50	5%
Exams	3	150	450	45%
Problem sets	7	21-24	150	15%
Group Project	1	200	200	20%
Group Labs	10	5	50	5%
Individual DataCamp Labs	8	Based on XPs per lab	50	5%
Participation	5	10	50	5%
		Total Points:	**1000**	**100%**

Final letter grades are assigned based on the percentage of total assessment points earned. To be fair to everyone I have to establish clear standards and apply them consistently, so please understand that being close to a cutoff is not the same this as making the cut (89.99 ≠ 90.00). It would be unethical to make exceptions for some and not others.

Final Grade Cutoffs								
+	97.00%	+	87.00%	+	77.00%	+	67.00%		
A	94.00%	B	84.00%	C	74.00%	D	64.00%	F	<60.0%
-	90.00%	-	80.00%	-	70.00%	-	60.00%		

(see last page for sample course schedule)

Course Schedule

Readings: OpenIntro Statistics, 3rd Edition (see errata)
DataCamp: Join at https://www.datacamp.com/groups/shared_links/d962c3c7174a86009c8701b8efe6aa8f62063c18
All deadlines are at 11:55pm local time.
Project Deadlines will be added soon.

WEEK	LECTURE, ASSIGNMENTS, AND ACTIVITIES
WEEK 1	Tue 1/29 **Lecture 1**: Intro + Data Basics Group Lab 1: Intro to R and RStudio [time permitting] Thu 1/31 **Lecture 2**: Data Collection + Sampling Strategies + Observational studies & experiments *Due: Wed 1/30* Short Survey (HW0): https://goo.gl/forms/Htfrd14smsJDheyV2 Readings: 1.1, 1.2, 1.3, 1.4, 1.5 *Due: Mon 2/4* Data Camp: Introduction to R *Due: Thu 2/7* Group Lab 1
WEEK 2	Quiz 1 Tue 2/5 **Lecture** 3: Exploratory Data Analysis Thu 2/7 **Lecture** 4: More Exploratory Data Analysis Group Lab 2: Introduction to Data [time permitting] Readings: 1.6, 1.7 *Due: Mon 2/11* Data Camp: Introduction to Data Practice Problems: 1.1, 1.3, 1.11, 1.13, 1.31, 1.39, 1.41, 1.45, 1.63, 1.67 *Due: Mon 2/11* Graded Problems (HW1): 1.2, 1.6, 1.12, 1.20, 1.34, 1.44, 1.66. 1.68 *Due: Thu 2/14* Group Lab 2
WEEK 3	Quiz 2 Tue 2/12 **Lecture** 5: Case Study Group Lab 3: Probability [time permitting] Thu 2/14 **Lecture** 6: Distributions Readings: 1.8, 3.1, 3.2, 3.4, 3.5 *Due: Mon 2/18* Data Camp: Probability [Extra points] *Due: Mon 2/25* Data Camp: Foundations for inference: sampling distributions *Due: Thu 2/21* Group Lab 3

WEEK 4	Quiz 3 Tue 2/19 Lecture 7: Variability in estimates and CLT Group Lab 4: Sampling distributions [time permitting] Thu 2/21 Lecture 8: Confidence Intervals Group Lab 5: Confidence intervals [time permitting] Readings: 4.1, 4.2, 4.4 *Due: Mon 2/25* Data Camp: Foundations for inference: confidence intervals Practice Problems: TBD *Due: Mon 2/25* Graded Problems (HW2): TBD *Due: Thu 2/28* Group Lab 4, 5
WEEK 5	Quiz 4 Tue 2/26 **Lecture** 9: Hypothesis Testing (z-test) *Guest Instructor: Shawn Janzen Group Lab 6: Inference for numerical data [time permitting] Thu 2/28 **Lecture** 10: More on Hypothesis Testing (z-test) Readings: 4.3, 4.5 *Due: Mon 3/4* Data Camp: Inference for numerical data *Due: Thu 3/7* Group Lab 6
WEEK 6	Quiz 5 Tue 3/5 **Lecture** 11: Sample Size & Power Thu 3/7 **Review** 1 (Midterm 1: take home) Readings: 5.4 (Review: Week 1- 6) Practice Problems: TBD *Due: Mon 3/11* Graded Problems (HW3): TBD *Due: Mon 3/11* Midterm 1
WEEK 7	Tue 3/12 **Lecture** 12: One sample t-test Thu 3/14 **Lecture** 13: Two sample t-test Readings: 5.1, 5.2, 5.3 *Due: Mon 4/1* Data Camp: Inference for numerical data Practice Problems: TBD *Due: Mon 3/25* Graded Problems (HW4): TBD
WEEK 8	Tue 3/19 Spring Break Thu 3/21 Spring Break

WEEK 9		Quiz 6
	Tue 3/26	**Lecture** 14: ANOVA
	Thu 3/28	**Lecture** 15: More on ANOVA
		Group Lab 7: (More) inference for numerical data
		Readings: 5.5
		Practice Problems: TBD
	Due: *Mon 4/1*	Graded Problems (HW5): TBD
	Due: Thu 4/4	Group Lab 7
WEEK 10		Quiz 7
	Tue 4/2	**Lecture** 16: Chi-Square test of Goodness of Fit
	Thu 4/4	**Lecture** 17: Chi-Square Test of Independence
		Group Lab 8: Inference for categorical data [time permitting]
		Readings: 6.1, 6.2, 6.3, 6.4
	Due: Mon 4/8	Data Camp: Inference for categorical data
	Due: Thu 4/11	Group Lab 8
WEEK 11		Quiz 8
	Tue 4/9	**Lecture** 18: Introduction to regression
	Thu 4/11	**Lecture** 19: Inference for regression
		Group Lab 9: Introduction to linear regression [time permitting]
		Readings: 7.1, 7.2, 7.4
	Due: Mon 4/15	Data Camp: Introduction to linear regression
		Practice Problems: TBD
	Due: Mon 4/15	Graded Problems (HW6): TBD
	Due: Thu 4/18	Group Lab 9
WEEK 12		Quiz 9
	Tue 4/16	**Lecture** 20: Outliers for regression
	Thu 4/18	**Review** 2 (Midterm 2: take home)
		Readings: 7.3 (Review: Week7-12)
	Due Mon 4/22	Midterm 2
WEEK 13	Tue 4/23	**Lecture** 21: Introduction to multiple linear regression
	Thu 4/25	**Lecture** 22: Model selection & diagnostics for MLR
		Group Lab 10: Multiple linear regression [time permitting]
		Readings: 8.1, 8.2, 8.3
	Due: Mon 4/29	Data Camp: Multiple Linear Regression
		Practice Problems: TBD
	Due: Mon 4/29	Graded Problems (HW7): TBD
	Due: Thu 5/2	Group Lab 10

WEEK 14		Quiz 10
	Tue 4/30	**Lecture** 23: Factorial ANOVA
	Thu 5/2	**Lecture** 24: More on Factorial ANOVA
		Readings: TBD
		Practice Problems: TBD
	Due: Mon 5/13	Graded Problems (HW8 Extra): TBD
WEEK 15		Quiz 11 Extra
	Tue 5/7	**Project Presentation** 1: Peer review (Hernisa: remotely; TA and AMPs: present)
	Thu 5/9	**Project Presentation** 2: Peer review (Hernisa: remotely; TA and AMPs: present)
		Readings: Review: Week 1-15
	Due: Mon 5/13	Extra Events
	Due: Mon 5/13	Final Project Report
WEEK 16	Tue 5/14	**Review** 3
	Thu 5/16	Cumulative Final Exam (in class)

Note: This is a tentative schedule, and subject to change as necessary – monitor the course ELMS page for current deadlines. In the unlikely event of a prolonged university closing, or an extended absence from the university, adjustments to the course schedule, deadlines, and assignments will be made based on the duration of the closing and the specific dates missed.

Acknowledgements

The materials for this course were compiled drawing from previous iterations of related courses taught by Mine Çetinkaya-Rundel, Yla Tausczik, Jen Golbeck, and Shawn Janzen.

This class is supported by DataCamp, an intuitive learning platform for data science, where you can practice and submit your R labs. Beyond the assignments for this course, you can take over 100+ courses by other instructors on topics such as importing data, data visualization or machine learning and learn through feedback on their exercises.