

# Tentative Course Schedule STT 5811

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## General Notes:

1. Direct links for [CrowdGrader](#) assignments will be updated during the course.
2. All due dates are 5 PM Friday for PDS CrowdGrader assignments and 5 PM Tuesdays for ISCAMIII CrowdGrader assignments.
3. All PDS CrowdGrader peer reviews must be completed by 11 PM on Tuesdays and all ISCAMIII peer reviews must be completed by 11 PM on Saturdays.
4. Peer review feedback will close at 8 AM Wednesdays for PDS CrowdGrader assignments and 8 AM Mondays for ISCAMIII CrowdGrader assignments.
5. The class will update the grading rubrics for the PDS assignments two weeks prior to each due date (for STT 2810).
6. Mondays will be devoted to material in PDS, and Wednesdays and Fridays will be devoted to investigations from ISCAMIII.
7. Directions for all **ISCAM PR#** submissions:
  - a. All submissions must be in R markdown.
  - b. Write out all questions you are assigned to answer from ISCAM III.
  - c. Bold or italicize your answers.
  - d. Answer all assigned ISCAM III questions by implementing simulations, exact answers, etc. with R.
  - e. Write a one paragraph summary ( $\leq 1$  page) on what you read in the previous week's assignment in *Reproducible Research with R and RStudio* including what you found most immediately useful or what could have been useful to you in the past.
8. The grading rubric for all **ISCAM PR#** submissions can be found in the [grubric](#) directory.

## Week 1: (Aug 17, 19, 21)

### Monday

- Sign-up for free accounts on [GitHub](#) and [Rpubs](#).
- When you register for a free individual GitHub account, request a [student discount](#) to obtain a few private repositories as well as unlimited public repositories. Please use something similar to **first\_name\_last\_name** as your username when you register with GitHub. For example, my username on GitHub is *alanarnholt*. If you have a popular name such as John Smith, you may need to provide some other distinguishing characteristic in your username. Please use the same **username** for your account on Rpubs.

- Once you have a GitHub account, send an email to [arnholtat@appstate.edu](mailto:arnholtat@appstate.edu) with a Subject line of **STT 5811 - GitHub Username**, and tell me in the body of your email your first name, last name, and your GitHub username. I will then manually add you as a team member to the repository in the STAT-ATA-ASU organization that has your name (**Last\_\_name-First\_\_name**). This repository will be where you store all of your work for this course. I will also change your repository to a private repository.
- Become familiar with the Appstate [RStudio server](#). You will use your Appstate user name and password to log in to the server. You must be registered in the class to access the server.
- Read Chapters 1-3 in Passion Driven Statistics (Light Weight) (PDS), and watch all linked videos in PDS. The PDS text is maintained at [this repository](#). There is also a copy on [RPubs](#) (but it may not be as current as the repository).
- Select a data set you will work with and update your GitHub repository **README** with your chosen data set.
- Complete the Medical Record Assignment, and push your excel spreadsheet to your GitHub account.

Watch the following videos:

- [Creating RStudio projects from Github Repos \(5 min\)](#)
- [Colaboration and time travel: version control with git, github and RStudio \(48 minutes\)](#)
- [Reproducible Reporting \(58 minutes\)](#)
- Test drive RStudio by following the directions from [Jenny Bryan's STAT 545 course](#).

### Optional

- You may want to install [Git](#), [R](#), [RStudio](#), [zotero](#), and optionally [LaTeX](#) on your personal computer. If you do, you will want to follow Jenny Bryan's excellent advice for [installing R and RStudio](#) and [installing Git](#). Note: [Git](#), [R](#), [RStudio](#), and [LaTeX](#) are installed on the [Appstate RStudio server](#).
- Watch the following videos as appropriate:
- [Install R on Mac \(2 min\)](#)
- [Install R for Windows \(3 min\)](#)
- [Install R and RStudio on Windows \(5 min\)](#)

### Wednesday

- Read chapters 1-2 of [Reproducible Research with R and RStudio](#).
- Read and Complete *Investigation B: Random Babies* from ISCAMIII prior to class.
- Submit at least one suggestion for improving the week 3 (**Literature Review / Citation Assignment (PR#1)**) grading rubric on [piazz](#) prior to class.

### Friday

- Read and Complete *Investigation 1.1: Friend or Foe?* from ISCAMIII prior to class.
- Discuss and finalize the week 3 (**Literature Review / Citation Assignment (PR#1)**) grading rubric.

## Week 2: (Aug 24, 26, 28)

### Monday

- Read Chapters 4 and 5 of PDS (Conducting a Literature Review and Writing About Empirical Research).
- Using [zotero](#) will be covered.
- Work on your personal Code Book. You will show the instructor your folder in class. The instructor will record your folder in the grade book as either a GO or NOGO.
- Watch the first 22 minutes of [Speaking Analytics: RStudio, Shiny, and RMarkdown Webinar](#).
- Work on the citation assignment.
- [Fork](#) this repository.
- Watch [creating RStudio projects from Github Repos \(5 min\)](#)
- Clone the repository to your local machine using RStudio by following these instructions:
  1. Fork the repository.
  2. Copy the clone URL to the clipboard.
  3. Click **File > New Project > Version Control > Git**
  4. Paste the clone URL (<https://github.com/YourUserName/STAT-ATA-ASU/STT2810ClassRepo.git>) in the **Repository URL**: box.
  5. Type a name (suggestion `UserNameSTT2810`) in the **Project directory name**: box.
  6. Change if needed the location in the **Create project as subdirectory of**: box.
  7. Click the **Create Project** box. You should now have a local copy of the forked repository on your local machine. Congratulations!
- Set the upstream remote in your fork to this repository with the command

```
git remote add upstream https://github.com/STAT-ATA-ASU/STT2810ClassRepo.git
```
- Verify with

```
git remote -v
```
- To obtain updates from the upstream repository type

```
git pull upstream master
```
- If there are conflicts, you will need to resolve them before proceeding.
- Submit ISCAM PR#1 (*Investigation B: Random Babies* parts i and o; *Investigation 1.1: Friend or Foe?* parts a, f, g, h, l, and m; RR chapters 1-2.)

### Wednesday

- Read chapter 3 of [Reproducible Research with R and RStudio](#).
- Read and Complete *Investigation 1.2: Do Names Match Faces?* from ISCAMIII prior to class.
- Submit at least one suggestion for improving the week 4 (**Research Plan Assignment (PR#2)**) grading rubric on [piazzza](#) prior to class.

### Friday

- Read and Complete *Investigation 1.3: Heart Transplant Mortality* from ISCAMIII prior to class.
- Discuss and finalize the week 4 (**Research Plan Assignment (PR#2)**) grading rubric.

## Week 3 (Aug 31, Sep 2, 4)

### Monday

- Read/reread Chapters 4-5 of PDS and take notes as needed.
- Practice with <http://www.crowdgrader.org/>.
- Integrating [zotero](#) with [RMarkdown](#) will be discussed during the first part of the week. Example document will be stored in this folder.
- You may find these [videos](#) helpful.
- Students will continue to work on the Literature Review / Citation assignment.
- Submit the **Literature Review / Citation Assignment** to <http://www.crowdgrader.org> no later than 5 pm Friday (Sep 4). The direct link for this assignment is <http://www.crowdgrader.org/>
- In the YAML, use the title **Literature Review / Citation Assignment**, and leave the author field blank.

```
title: "Literature Review / Citation Assignment"
author:
```

### Grading Rubric for Literature Review / Citation Assignment (PR#1)

1. Does the document open without problems? Is the grammar and punctuation acceptable? 0/1
2. How convincing is the written document that further work can be performed on the chosen topic? 0/1
3. Does the author have at least five references? 0/1

A well-written paper that convinces you the author has reviewed the literature, has a topic that will expand the knowledge in the area, and has used at least five references should receive a 3. A submission that satisfies two of the three criteria perfectly or most but not all of the three criteria should receive a 2. A submission that satisfies only one of the three criteria should receive a 1. If the submission does not render or the submitter did not submit the correct assignment, they should receive a 0.

- Submit ISCAM PR#2.

### Wednesday

- Read chapter 4 of [Reproducible Research with R and RStudio](#).
- Read and Complete *Investigation 1.4: Kissing The Right Way* from ISCAMIII prior to class.
- Submit at least one suggestion for improving the week 6 (**Data Management Assignment (PR#3)**) grading rubric on [piazza](#) prior to class.

### Friday

- Read and Complete *Investigation 1.5: Kissing The Right Way (cont.)* from ISCAMIII prior to class.
- Discuss and finalize the week 6 (**Data Management Assignment (PR#3)**) grading rubric.

## Week 4: (Sep 7 (no Class), 9, 11)

### Monday—On your own

- Read/review Chapters 4-5 of PDS as needed.
- Work on **Research Plan Assignment** PDS.
- Peer reviews for **Literature Review / Citation Assignment** are due NLT 11 PM Tuesday.
- **Research Plan Assignment** PDS is due NLT 5 PM Friday (Sep 11).

### Grading Rubric for Research Plan Assignment (PR#2)

1. Does the document open without problems? (0.25)
2. Is the grammar and punctuation acceptable? (0.25)
3. Is the title a concise statement of the main topic? (0.25)
4. Does the title identify the actual variables under investigation and the relationship between them? (0.25)
5. Does the introduction describe the question the author intends to investigate and how their research relates to other work in the field? (0.25)
6. Does the literature review justify the proposed research by identifying a hole in existing scholarship? (0.25)
7. Does the introduction build to and conclude with the research questions or study objectives the author proposes to address? (0.25)
8. Is the literature review supported with at least five citations? (0.25)
9. Is there a **Methods** section that describes how the research was conducted? (0.25)
10. Does the **Methods** section include a discussion of the *sample*, *measures*, and *procedures*. (0.50)
11. Is there an **Implications/Predicted Results** section that discusses real implications linked to possible results? (0.25)

A well-written paper that convinces you the author can fill a gap in the existing scholarship, has a title that is a concise statement of the main topic and identifies the actual variables under investigation and the relationship between them, has an introduction supported with at least five references, has a Methods section that describes the sample, measures, and procedures, and has a section that discusses real implications linked to possible results should receive a 3. A submission that satisfies two of the three criteria perfectly or most but not all of the three criteria should receive a 2. A submission that satisfies only one of the three criteria should receive a 1. If the submission does not render or the submitter did not submit the correct assignment, they should receive a 0.

- Submit ISCAM PR#3.

### Wednesday

- Read chapter 5 of [Reproducible Research with R and RStudio](#).
- Read and Complete *Investigation 1.6: Improved Baseball Player* from ISCAMIII prior to class.
- Submit at least one suggestion for improving the week 7 (**Univariate Graphing Assignment (PR#4)**) grading rubric on [piazz](#) prior to class.

### Friday

- Read and Complete *Investigation 1.7: Reese's Pieces* from ISCAMIII prior to class.
- Discuss and finalize the week 7 **Univariate Graphing Assignment (PR#4)** grading rubric.
- After action review of **Literature Review / Citation Assignment (PR#1)**.

## Week 5: (Sep 14, 16, 18)

### Monday

- Read Chapters 6 and 7 of PDS (Working with Data and Data Management).
- This week you will “work with data”.
- Complete peer reviews of **Research Plan Assignment** by 11 PM Tuesday
- Revise your Research Plan Assignment as needed
- Watch the [Data Wrangling with R and RStudio \(55 minutes\)](#) video.
- Watch the first 30 minutes of [The Grammar of Graphics and Data Science](#).
- Watch the [Working with Data video](#) (41 min)
- Watch the [Data Management video](#) (39 min).
- Complete your peer grading evaluations for the **Research Plan Assignment** NLT 11 PM Tuesday.
- Submit ISCAM PR#4.

**The Data Management Assignment is Challenging and will require many hours of your time—so please start now — not next week when it is due**

### Wednesday

- Read chapter 6 of [Reproducible Research with R and RStudio](#).
- Read and Complete *Investigation 1.8: Is ESP real?* from ISCAMIII prior to class.
- Submit at least one suggestion for improving the week 8 (**Bivariate Graphing Assignment (PR#5)**) grading rubric on [piazza](#) prior to class.

### Friday

- Read and Complete *Investigation 1.9: Halloween Treat Choices* from ISCAMIII prior to class.
- Discuss and finalize the week 8 **Bivariate Graphing Assignment (PR#5)** grading rubric.
- After action review of **Research Plan Assignment (PR#2)**.

## Week 6: (Sep 21, 23, 25)

### Monday

- Read/review Chapters 6 and 7 of PDS as needed.
- This week you will “Manage your Data” based on your research proposal.
- Submit via <http://www.crowdgrader.org> the **Data Management Assignment** NLT 5 PM Friday (Sep 25). Directions: Select three *secondary* categorical variables from the data set you are using. Recode your data to create factors with appropriate labels. Create a barplot for each of your factors, and write a sentence or two explaining each barplot. Show all R code used to manage your data and used to create your barplots with R code chunks in your \*.Rmd file. Submit the resulting \*.html file to CrowdGrader. The direct link for the **Data Management Assignment** is <http://www.crowdgrader.org/>.

### Grading Rubric for Data Management Assignment (PR#3)

1. Does the \*.html file include three categorical variables? 0/1
2. Is there a barplot for each categorical variable with appropriate labels and R code? 0/1

3. Are original variables recoded to readable names and numeric values recoded appropriately? 0/1

- Push your “Research Proposal” to your private repository NLT 5 PM Friday (Sep 27) and resulting \*.html files.

I will use the same grading rubric (below) you used in the peer evaluation phase of the research proposals. I will also check to make sure the document compiles based on the \*.Rmd and \*.bib files in your **Research Proposal** folder.

### Grading Rubric for Research Proposal

1. Does the document open without problems? (0.25)
2. Is the grammar and punctuation acceptable? (0.25)
3. Is the title a concise statement of the main topic? (0.25)
4. Does the title identify the actual variables under investigation and the relationship between them? (0.25)
5. Does the introduction describe the question the author intends to investigate and how their research relates to other work in the field? (0.25)
6. Does the literature review justify the proposed research by identifying a hole in existing scholarship? (0.25)
7. Does the introduction build to and conclude with the research questions or study objectives the author proposes to address? (0.25)
8. Is the literature review supported with at least five citations? (0.25)
9. Is there a **Methods** section which describes how the research was conducted? (0.25)
10. Does the **Methods** section include a discussion of the *sample*, *measures*, and *procedures*. (0.50)
11. Is there an **Implications/Predicted Results** section that discusses real implications linked to possible results? (0.25)

A well-written paper that convinces you the author can fill a gap in the existing scholarship, has a title that is a concise statement of the main topic and identifies the actual variables under investigation and the relationship between them, has an introduction supported with at least five references, has a Methods section that describes the sample, measures, and procedures, and has a section that discusses real implications linked to possible results should receive a 3. A submission that satisfies two of the three criteria perfectly or most but not all of the three criteria should receive a 2. A submission that satisfies only one of the three criteria should receive a 1. If the submission does not render or the submitter did not submit the correct assignment, they should receive a 0.

- Submit ISCAM PR#5.

### Wednesday

- Read chapter 7 of [Reproducible Research with R and RStudio](#).
- Read and Complete *Investigation 1.10: Kissing the Right Way (cont.)* from ISCAMIII prior to class.

### Friday

- Read and Complete *Investigation 1.11: Heart Transplant Mortality (cont)* from ISCAMIII prior to class.
- After action review of **Research Plan Assignment (PR#3)**.

## Week 7: (Sep 28, 30, Oct 2)

### Monday

- Read Chapter 8 of PDS (Graphing One Variable at a Time).
- Watch [Graphing 1 Video](#).
- Work on **Univariate Graphing Assignment** PDS.
- **Univariate Graphing Assignment** due NLT 5 PM Friday (Oct 2). Submit assignment via <http://www.crowdgrader.org>. The direct link for the **Univariate Graphing Assignment** is (<http://www.crowdgrader.org/>).

**Grading Rubric for Univariate Graphing Assignment (PR#4)** Does the document have sections that explain the Purpose of the Study (0.25), the Variables used in the study (0.25), and how the data was managed (0.25)?

Have the variables proposed for use in the project been labeled and renamed? (0.25)

Are there graphs for at least two of the categorical variables? (0.25) Is there a sentence or two describing what the reader is viewing? (0.25) Have the  $x$ - and  $y$ -axes been labeled appropriately? (0.25)

Is there either a histogram or density plot of one of the numeric variables proposed in the study? 0.5

When describing the distribution of the reported histogram or density plot, does the author describe the shape (0.25) and use appropriate statistics to characterize the center (0.25) and spread (0.25)?

- Submit ISCAM PR#6.

### Wednesday

- Read chapter 8 of [Reproducible Research with R and RStudio](#).
- Read and Complete *Investigation 1.12: Sampling Words* from ISCAMIII prior to class.
- Submit at least one suggestion for improving the week 10 (**ANOVA Assignment (PR#6)**) grading rubric on [piazza](#) prior to class.

### Friday

- Read and Complete *Investigation 1.13: Literary Digest* from ISCAMIII prior to class.
- Discuss and finalize the week 10 **ANOVA Assignment (PR#6)** grading rubric.
- After action review of **Research Plan Assignment (PR#4)**.

## Week 8: (Oct 5, 7, 9)

### Monday

- Read Chapter 9 of PDS (Graphing Relationships), and watch all videos in the chapter.
- [Graphing 2 Video](#)
- [Graphing Rules](#)
- [Common Graphing Mistakes](#)



- Work on **Bivariate Graphing Assignment**.
- **Bivariate Graphing Assignment** due NLT 5 PM Friday (Oct 9). Submit assignment via <http://www.crowdgrader.org>. The direct link for the **Bivariate Graphing Assignment** is (<http://www.crowdgrader.org/>)

### Bivariate Graphing Assignment

This is a continuation of the material submitted for the **Univariate Graphing Assignment** assignment submitted in week07. You should revise your assignment as needed from last week and add one bivariate graph of your principal constructs and one one multivariate graph of your principal constructs.

**Grading Rubric for Bivariate Graphing Assignment (PR#5)** Does the document have sections that explain the **Purpose of the Study** (0.25), the **Variables** used in the study (0.25), and how the data was managed (0.25)?

Are there graphs for at least two of the categorical variables? (0.25) Is there a sentence or two describing what the reader is viewing? (0.25)

Is there either a histogram or density plot of one of the numeric variables proposed in the study? (0.25)

Is there a bivariate graph of the principal constructs the researcher is proposing to study? (0.50)

Is there a multivariate graph of the principal constructs the researcher is proposing to study? (0.50)

Do all graphs have the  $x$ - and  $y$ -axes labeled appropriately? (0.25). Do all graphs have descriptive titles? (0.25)

- Submit ISCAM PR#7.

### Wednesday

- Read chapter 9 of [Reproducible Research with R and RStudio](#).
- Read and Complete \*Investigation 1.14: Sampling Words (cont.) from ISCAMIII prior to class.
- Submit at least one suggestion for improving the week 11 (**Chi-Square Assignment (PR#7)**) grading rubric on [piazza](#) prior to class.

### Friday

- Read and Complete *Investigation 1.15: Freshmen Voting Pattern* from ISCAMIII prior to class.
- Discuss and finalize the week 11 **Chi-Square Assignment (PR#7)** grading rubric.
- After action review of **Univariate Graphing Assignment (PR#4)**.

### Week 9: (Oct 12, 14 — Fall Break Oct 15, 16)

#### Monday

- Read Chapter 10 of PDS (Hypothesis Testing), and watch all videos in the chapter.
- Read the documents `SamplingDistributions.html` and `StatisticsTemplate.html` in the `/Statistics` folder.
- Submit ISCAM PR#8.

You should revise your assignment from last week as needed based on peer comments. I encourage everyone to make an appointment with the writing center and to have the writing center review your current assignment.

### Wednesday

- Read chapter 10 of [Reproducible Research with R and RStudio](#)
- Read and Complete *Investigation 1.16: Teen Hearing Loss* from ISCAMIII prior to class.

### Friday

- Break :)

### Week 10: (Oct 19, 21, 23)

### Monday

- Read Chapter 11 of PDS (Analysis of Variance), and watch all videos in the chapter.
- Read the document ANOVA.html in the /Statistics folder.
- Work on the **ANOVA Assignment**
- The **ANOVA Assignment** is due NLT 5 PM Friday (Oct 23). Submit assignment via <http://www.crowdgrader.org>. The direct link for the **ANOVA Assignment** is (<http://www.crowdgrader.org/>).

### ANOVA Assignment

This is a continuation of the material submitted for the **Bivariate Graphing Assignment** submitted in week 09. You should revise your assignment as needed based on peer comments. I encourage everyone to make an appointment with the writing center and to have the writing center review your current assignment.

**Grading Rubric for ANOVA Assignment (PR#6)** Does the document have sections that explain the **Purpose of the Study** (0.1), the **Variables** used in the study (0.1), and how the data was managed (0.1)?

Are there graphs for at least two of the categorical variables? (0.1) Is there a sentence or two describing what the reader is viewing? (0.1)

Is there either a histogram or density plot of one of the numeric variables proposed in the study? (0.1)

Is there a bivariate graph of the principal constructs the researcher is proposing to study? (0.1) Is there a sentence or two describing what the reader is viewing? (0.1)

Is there a multivariate graph of the principal constructs the researcher is proposing to study? (0.1) Is there a sentence or two describing what the reader is viewing? (0.1)

Do all graphs have the  $x$ - and  $y$ -axes labeled appropriately? (0.1). Do all graphs have descriptive titles? (0.1)

Is there a null and alternative hypothesis appropriate for the data? (0.6)

Is there code and output for testing the null hypothesis with an ANOVA? (0.6)

Is there an appropriate explanation of the results including a post hoc test with interpretation if the results from the ANOVA are significant? (0.6)

- Submit ISCAM PR#9.

### Wednesday

- Read chapter 11 of [Reproducible Research with R and RStudio](#).
- Read and Complete *Investigation 1.17: Cat Households* from ISCAMIII prior to class.
- Submit at least one suggestion for improving the week 12 (**Correlation Assignment (PR#8)**) grading rubric on [piazza](#) prior to class.

## Friday

- Read and Complete *Investigation 1.18: Female Senators* from ISCAMIII prior to class.
- Discuss and finalize the week 12 **Correlation Assignment (PR#8)** grading rubric.
- After action review of **Bivariate Graphing Assignment (PR#5)**.

## Week 11: (Oct 26, 28, 30)

## Monday

- Read Chapter 12 of PDS (Chi-Square Test of Independence), and watch the embedded videos.
- Read the document `ChiSquare.html` in the `/Statistics` folder.
- Work on the **Chi-Square Assignment**.
- The **Chi-Square assignment** is due NLT 5 PM Friday (Oct 30). Submit the assignment via <http://www.crowdgrader.org>. The direct link for the **Chi-Square Assignment** is (<http://www.crowdgrader.org/>).

## Chi-Square Assignment

This is a continuation of the material submitted for the **ANOVA assignment** submitted in week 10. You should revise your assignment as needed based on peer comments. I encourage everyone to make an appointment with the writing center and to have the writing center review your current assignment.

**Grading Rubric for Chi-Square Assignment (PR#7)** Does the document have sections that explain the **Purpose of the Study** (0.1), the **Variables** used in the study (0.1), and how the data was managed (0.1)?

Are there graphs for at least two of the categorical variables? (0.1) Is there a sentence or two describing what the reader is viewing? (0.1)

Is there either a histogram or density plot of one of the numeric variables proposed in the study? (0.1)

Is there a bivariate graph of the principal constructs the researcher is proposing to study? (0.1) Is there a sentence or two describing what the reader is viewing? (0.1)

Is there a multivariate graph of the principal constructs the researcher is proposing to study? (0.1) Is there a sentence or two describing what the reader is viewing? (0.1)

Do all graphs have the *x*- and *y*-axes labeled appropriately? (0.1). Do all graphs have descriptive titles? (0.1)

Is there a null and alternative hypothesis appropriate for the ANOVA? (0.1)

Is there code and output for testing the null hypothesis with an ANOVA? (0.1)

Is there an appropriate explanation of the results including a post-hoc test with interpretation if the results from the ANOVA are significant? (0.1)

Is there a null an alternative hypothesis for a Chi-Square test of independence? (0.5)

Is there code and output for testing the null hypothesis with a Chi-Square test of independence? (0.5)

Are there appropriate post-hoc tests if the Chi-Square test resulted in a significant *p-value*? (0.2)

Is there a sentence or two describing the results of the Chi-Square test(s)? (0.3)

- Submit ISCAM PR#10.

### Wednesday

- Read chapter 12 of [Reproducible Research with R and RStudio](#).
- Read and Complete *Investigation 2.1: Birth Weights* from ISCAMIII prior to class.
- Submit at least one suggestion for improving the week 13 (**Regression Assignment (PR#9)**) grading rubric on [piazza](#) prior to class.

### Friday

- Read and Complete *Investigation 2.2: How Long Can You Stand It?* from ISCAMIII prior to class.
- Discuss and finalize the week 13 **Regression Assignment (PR#9)** grading rubric.
- After action review of **ANOVA Assignment (PR#6)**.

### Week 12: (Nov 2, 4, 6)

#### Monday

- Read Chapters 13 and 18 in PDS (Correlation Coefficient and Poster Presentation) and watch the embedded videos.
- Work on your poster.
- Work on the **Correlation assignment**
- The **Correlation assignment** is due NLT 5 PM Friday (Nov 6). Submit the assignment via <http://www.crowdgrader.org>. The direct link for the **Correlation assignment** is (<http://www.crowdgrader.org>)

#### Correlation Assignment

This is a continuation of the material submitted for the **Chi Square Assignment** submitted in week 11. You should revise your assignment as needed based on peer comments. I encourage everyone to make an appointment with the writing center and to have the writing center review your current assignment.

**Grading Rubric for Correlation Assignment (PR #8)** Does the document have sections that explain the **Purpose of the Study** (0.1), the **Variables** used in the study (0.1), and how the data was managed (0.1)?

Are there graphs for at least two of the categorical variables? (0.1) Is there a sentence or two describing what the reader is viewing? (0.1)

Is there either a histogram or density plot of one of the numeric variables proposed in the study? (0.1)

Is there a bivariate graph of the principal constructs the researcher is proposing to study? (0.1) Is there a sentence or two describing what the reader is viewing? (0.1)

Is there a multivariate graph of the principal constructs the researcher is proposing to study? (0.1) Is there a sentence or two describing what the reader is viewing? (0.1)

Do all graphs have the  $x$ - and  $y$ -axes labeled appropriately? (0.1). Do all graphs have descriptive titles? (0.1)

Is there a section for the Correlation assignment describing the two numeric variables the author uses? (0.5)

Is there code and output for computing the correlation coefficient? (0.4)

Does the author explain their results following the example in PDS? (0.3)

Does the author explain their results? (Graphs should be used in the explanation.) (0.3)

- Submit ISCAM PR#11.

### Wednesday

- Read chapter 13 of [Reproducible Research with R and RStudio](#).
- Read and Complete *Investigation 2.3: Readability of Cancer Pamphlets* from ISCAMIII prior to class.

### Friday

- Read and Complete *Investigation 2.4: The Ethan Allen* from ISCAMIII prior to class.
- After action review of **Chi-Square Assignment (PR#7)**.

### Week 13: (Nov 9, 11, 13)

**Monday** \* Read Chapters 15 and 17 in PDS (Linear Regression and Confounding and Multivariate Models) and watch the embedded videos. \* Read the document **Regression.html** in the **/Regression** folder. \* Work on your poster. \* Submit ISCAM PR#12.

- Work on the **Regression Assignment**
- The **Regression Assignment** is due NLT 5 PM Friday (Nov 13). Submit the assignment via <http://www.crowdgrader.org>. The direct link for the **Regression Assignment** is (<http://www.crowdgrader.org/>).

### Regression Assignment

This is a continuation of the material submitted for the **Correlation** submitted in week 13. You should revise your assignment as needed based on peer comments. I encourage everyone to make an appointment with the writing center and to have the writing center review your current assignment.

**Grading Rubric for Regression Assignment (PR#9)** Is there a section for the Regression assignment? (0.5)

Is there code and output for testing appropriate models? (1.5)

Does the author describe their results appropriately? (1)

### Wednesday

- Read chapter 14 of [Reproducible Research with R and RStudio](#).
- Read and Complete *Investigation 2.5: Healthy Body Temperatures* from ISCAMIII prior to class.

### Friday

- Read and Complete *Investigation 2.6: Healthy Body Temperatures (cont.)* from ISCAMIII prior to class.
- After action review of **ANOVA Assignment (PR#8)**.

**Week 14: (Nov 16, 18, 20)**

**Monday**

- Read Chapters 16 and 18 in PDS (Sampling and Designing Studies and Poster Presentation), and watch the embedded videos.
- Work on your poster.
- Submit ISCAM PR#13.

**Wednesday**

- Read and Complete *Investigation 2.7: Water Oxygen Levels* from ISCAMIII prior to class.

**Friday**

- Read and Complete *Investigation 2.8: Turbidity* from ISCAMIII prior to class.
- After action review of **Regression Assignment (PR#9)**.

**Week 15: (Nov 23, No Class Nov 25, 26, and 27; Nov 30, Dec 2—Poster Presentation Dec 3)**

- Work on your poster.
- Print out your poster.
- Present your poster (Dec 3).
- Celebrate!