Course and Contact Information

Instructor: Chad Kempel, M.A.

Important Message: Technological issues cannot be used as an excuse for not turning in work on time.

Office Location: DMH 230

Telephone: 510-470-4022 (I prefer that you email me)

Email: chad.kempel@sjsu.edu

Office Hours: Online on Mondays 7:00 PM to 8:00 PM, or by appointment

Class Days/Time: Online (no in person meetings)

Classroom: Online only

Prerequisites: Satisfaction of ELM requirements and 2 years of H. S. Algebra.


Course Format

Online

This course will take place 100% online. In order to successfully complete this course you will need access to an up-to-date computer/tablet and a reliable and consistent internet connection throughout the semester. Your computer/tablet will need to be equipped with a webcam, microphone, and speakers so that you can take your exams using ProctorU. For specifications, see the Requirements Page at ProctorU at http://www.proctoru.com/tech.php. You can check that your PC is properly equipped for this course at ProctorU’s Testing Site located at http://www.proctoru.com/testitout/

Course Website

All course material will be distributed via Canvas at https://sjsu.instructure.com. I will also use Canvas to communicate with you so make sure that your Canvas messages are forwarded to your email address if you think you will get your messages quicker that way. You are responsible for checking Canvas daily for announcements.

Online tutorials for how to use Canvas can be found online at www.sjsu.edu/at/ec/canvas/student_resources/index.html. If you have issues with Canvas, including logging in, contact the University Help Desk at http://www.sjsu.edu/helpdesk.
Course Description
In this course you will learn hypothesis testing and predictive techniques to facilitate decision-making; organization and classification of data, descriptive and inferential statistics, central tendency, variability, probability and sampling distributions, graphic representation, correlation and regression, chi-square, t-tests, and analysis of variance.

Required equipment/material requirements

Textbook
There is no required textbook. All concepts, formulas, and computational tutorials can be found through the resources provided in the course’s Canvas shell. However, there are a variety of free online resources that can supplement the course content. These are just a handful of the plethora of resources available online:

Example Resource 1: http://cnx.org/content/col10522/latest/
Example Resource 4: http://www.statsoft.com/textbook/
Example Resource 5: http://vassarstats.net/textbook/

Regular and reliable access to a computer and internet connection that can support typical multimedia applications (e.g., streaming audio/video). This is essential for an online class. Unless the entire university network of Learning Management system is down, technological issues cannot be used as an excuse for not turning in work on time. So, plan ahead and do have a backup plan should you experience issues with your primary computer. SJSU provides a lot of computer support for students should you be having issues with your primary computer.

Computer Support
Academic Technology Computer Center at http://www.sjsu.edu/at/hd/
Information Technology Support Services (ITSS) at http://www.sjsu.edu/at/its/
Library Student Computing Service Center at library.sjsu.edu/student-computing-services/student-computing-services

Calculator. The calculator should be handheld and must have the square root and exponent buttons. A graphing calculator is not necessary (but you may use one if you like). For exams, you will need to use a handheld calculator. You will not be allowed to use your cell phone or computer apps.

Spreadsheet app such as Excel, Numbers, or Google Docs.

Notebook paper, pencils. Do computations for assignments “long hand” (on paper) so that you can be sure you have completed each step and can check your work should you get the incorrect answer. Expect to make mistakes, so use a pencil when working through problems.

Professional Communication
As a University student, you are encouraged to engage in professional communication with faculty, staff, and your fellow students.

Piazza
All questions about course materials, due dates, and things of that nature that do not need to remain private should be asked on Piazza. I will not respond to these types of questions in private messages. This ensures a
more timely response to your question and prevents me from answering the same question multiple times. Piazza should also be a place where you go to look for answers to your questions before you ask them because it is likely that someone else already had the same question. If you have any problems or feedback for the developers, email team@piazza.com. To use Piazza, make sure your web browser accepts pop-ups and third-party cookies.

**Canvas Messaging**

All private communication should be done through the Canvas messaging feature (not SJSU email). This allows me to keep all of my class messages in one location and each message automatically includes your name and the class you are in. Again, all questions about course materials, due dates, and things of that nature should be asked using Piazza.

**Course Structure**

**Modules**

This course is divided into modules which cover specific statistical concepts, formulas, and computational steps. Generally speaking, to complete each module you will:

- View video segment(s) describing or demonstrating a concept. You should take hand-written notes during all videos and problem sets. These videos were developed by Drs. Sean Laraway and Ronald Rogers in a partnership with a private company called Udacity. Please note that:
  - You do NOT need to subscribe to Udacity’s services use these videos. They can be accessed directly through Canvas.
  - The person delivering the information in the Udacity videos, Katie Kormanik, is NOT your instructor. She was a Udacity employee who recorded the materials developed by Drs. Laraway and Rogers.
- Answer brief questions associated with many of the segments by right-clicking the “Answer the question” link that appears below the video segment.
- Complete problem set(s) for each module.
- Complete final quiz or quizzes for each module.
- Complete exam for sets of modules.

**Assignments and Grading**

SJSU classes are designed such that in order to be successful, it is expected that students will spend a minimum of forty-five hours for each unit of credit (normally three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and so on. More details about student workload can be found in [University Policy S12-3](http://www.sjsu.edu/senate/docs/S12-3.pdf).

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<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Points</th>
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<tbody>
<tr>
<td>Exams</td>
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<td>175</td>
<td>700</td>
</tr>
<tr>
<td>Final Quizzes</td>
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<td>10</td>
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</tr>
<tr>
<td>Problem Sets</td>
<td>15</td>
<td>2</td>
<td>30</td>
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<tr>
<td>Analysis Assignment</td>
<td>1</td>
<td>25</td>
<td>25</td>
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<tr>
<td>Engagement Week</td>
<td>5</td>
<td>4</td>
<td>20</td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>925</strong></td>
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</table>
### Grading Scale

<table>
<thead>
<tr>
<th>Grade and Percent</th>
<th>A+ = 100 – 97.5</th>
<th>A = 97.4 - 92.5</th>
<th>A- = 92.4 - 90.0</th>
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</thead>
<tbody>
<tr>
<td>B+ = 89.9 - 87.5</td>
<td>B = 87.4 - 82.5</td>
<td>B- = 82.4 - 80.0</td>
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</tr>
<tr>
<td>C+ = 79.9 - 77.5</td>
<td>C = 77.4 - 72.5</td>
<td>C- = 72.4 - 70.0</td>
<td></td>
</tr>
<tr>
<td>D+ = 69.9 - 67.5</td>
<td>D = 67.4 - 62.5</td>
<td>D- = 62.4 - 60.0</td>
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<tr>
<td>F = &lt;60.0</td>
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**University policy F69-24** at http://www.sjsu.edu/senate/docs/F69-24.pdf states, “Students should attend all meetings of their classes, not only because they are responsible for material discussed therein, but because active participation is frequently essential to insure maximum benefit for all members of the class. Attendance per se shall not be used as a criterion for grading.”

### Exams (700 points)

There will be four examinations for this course. The exams are meant to assess your knowledge of the statistical concepts and calculations we cover in class.

**Content.** Exams will consist of ~30 multiple choice and computational questions and are worth 175 points each.

**Administration.** Exams will be completed on Canvas while also logged in to ProctorU at http://www.proctoru.com/. Each Exam will be available online during a specific window of time (6 a.m. to 10 p.m.) on the dates scheduled below using Canvas. Each exam is 75 minutes in duration. You may not pause the exam once you begin, so be prepared to complete each exam in a single sitting at the schedule time. More details about taking exams will be provided on Canvas prior to the first exam.

**Emergencies/Extenuating Circumstances.** No extensions or make-up exams will be given except in cases of reasonable and documented academic reasons, emergencies, serious illness, or similar seriously disruptive events. If such a circumstance should arise, you must notify me before the end of the exam period (i.e., by 10 p.m. on the exam day). provide written documentation for the reason you could not take the exam. At my discretion, I may allow you to make up the exam, but this is not guaranteed.

### Problem Sets (30 points)

Each module (or “lesson) has a Problem Set associated with it. At the end of each lesson, you should complete the Problem Set to test your knowledge of the material and practice for the exams.

**Self-assessment in preparation for the exam.** These problem sets are meant to help you self-assess your knowledge of the concepts covered in each module. If you have any questions about problems, post them to Piazza (discussion board).

**Credit/No Credit.** All problem sets will be multiple-choice or short answer, and will be graded on a credit/no credit basis. Set, you will receive full credit, no matter how well you did on the questions. If you do not answer all of the questions, you will not receive credit for that Problem Set. **You may use any support materials (textbook, videos, notes, calculator, spreadsheet apps) when completing the problem set.**

### Final Quizzes (150 points)

Each 20 minute quiz has between 5-10 questions and is worth 10 points. Quizzes will be assigned in Canvas. You may use any support materials (textbook, videos, notes, calculator, spreadsheet apps) when taking your quiz.
- All work should be your own. You may not communicate with any other person (except for your instructor) while you complete the quiz. Getting help from someone else and/or sharing answers with classmates will be considered academic dishonesty and will subject you to the sanctions described in the section below titled “Academic Integrity.”
- You may take each quiz twice. You will earn the higher of the two scores.
- You may complete the quiz at any time before the due date. Missed quizzes cannot be made up.

**Analysis Assignment (25 points)**

This project will involve applying the skills you learn in this class to the analysis and interpretation of a dataset. You will be provided with a research hypothesis and dataset that tests the hypothesis. After analyzing the data, you will write a brief report (approximately 500 words) of your statistical analysis, a graphical depiction of the data, and a conclusion as to whether the data support the hypothesis. More details are provided in Canvas.

**Engagement Week (20 points)**

Engagement Week is your opportunity to make sure you’re ready for online education, and if so, that you are also ready to meet the challenges, responsibilities, and expectations of this class in particular. The week will involve six activities; each designed to get you ready to succeed in our class and help us improve the class. More information will be provided on our Canvas site.

**Please note that you must complete all five Engagement Week activities by the posted due date in order to remain in the class. Failure to submit these assignments will be grounds for being dropped from the class, unless other arrangements are made with the instructor prior to the due date.**

**Late Assignments**

Assignments are due as indicated in Canvas. No extensions will be given except in cases of reasonable and documented academic reasons, emergencies, serious illness, or similar seriously disruptive events. If such a circumstance should arise, please contact me as early as possible and be ready to provide documentation.

**Extra Credit**

Extra credit assignments are given at the instructor’s discretion. Should extra credit opportunities be extended, the total amount of extra credit points earned by a student will not exceed 1 – 2 % of the total number of points available in the course.

**Course Goals and Learning Objectives**

**GE/SJSU Studies Learning Outcomes (GELO)**

Upon successful completion of this program, students will be able to:

GELO 1 - Use mathematical methods to solve quantitative problems, including those presented in verbal form.
GELO 2 - Demonstrate the ability to use mathematics to solve real life problems.
GELO 3 - Arrive at conclusions based on numerical and graphical data.

**Course Learning Outcomes (CLO)**

Upon successful completion of this course, students will be able to:

CLO 1 - The University requires students to write a minimum of 500 words in a manner appropriate to quantitative analysis. The writing requirement will be met via an essay assignment where statistical software (e.g., SPSS) will be used to analyze data (details will be posted on Canvas). This assignment must be completed in order to receive a passing grade in this class. Writing will be assessed for grammar, clarity, conciseness, and coherence.
CLO 2 - In terms of Mathematical Concepts (Area B-4), Stat 95 will focus on:
   a. Basic mathematical techniques for solving quantitative problems and elementary numerical calculation.
   b. Organization, classification, and representation of quantitative data in various forms (e.g., tables, graphs, percentages, measures of central tendency, and spread).
   c. Applications of mathematics to everyday life.
   d. Applications of mathematical concepts to statistical inference.

Program Learning Outcomes (PLO)
Upon successful completion of the psychology major requirements…

PLO1 – Knowledge Base of Psychology – Students will be able to identify, describe, and communicate the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.

PLO2 – Research Methods in Psychology – Students will be able to design, implement, and communicate basic research methods in psychology, including research design, data analysis, and interpretations.

PLO3 – Critical Thinking Skills in Psychology – Students will be able to use critical and creative thinking, skeptical inquiry, and a scientific approach to address issues related to behavior and mental processes.

PLO4 – Application of Psychology – Students will be able to apply psychological principles to individual, interpersonal, group, and societal issues.

PLO5 – Values in Psychology – Students will value empirical evidence, tolerate ambiguity, act ethically, and recognize their role and responsibility as a member of society.

University Policies

SJSU Technology Intensive Courses
Technology intensive instruction is an educational model still under development. Nevertheless, SJSU has established guidelines that specify the rights and responsibilities of students and faculty involved in technology intensive instruction titled University Policy, Technology Intensive, Hybrid and Online Courses and Programs Policy F13-2 located at http://www.sjsu.edu/senate/docs/F13-2.pdf.

General Expectations, Rights and Responsibilities of the Student
As members of the academic community, students accept both the rights and responsibilities incumbent upon all members of the institution. Students are encouraged to familiarize themselves with SJSU’s policies and practices pertaining to the procedures to follow if and when questions or concerns about a class arises. To learn important campus information, view University Policy S90–5 at http://www.sjsu.edu/senate/docs/S90-5.pdf and SJSU current semester’s Policies and Procedures at http://info.sjsu.edu/static/catalog/policies.html. In general, it is recommended that students begin by seeking clarification or discussing concerns with their instructor. If such conversation is not possible, or if it does not address the issue, it is recommended that the student contact the Department Chair as the next step.

Dropping and Adding
Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness, etc. Add/drop deadlines can be found on the current academic year calendars document on the Academic Calendars webpage at http://www.sjsu.edu/provost/services/academic_calendars/. The Late Drop Policy is available at http://www.sjsu.edu/aars/policies/latedrops/policy/. Students should be aware of the current deadlines and penalties for dropping classes.
Information about the latest changes and news is available at the Advising Hub at http://www.sjsu.edu/advising/.
Consent for Recording of Class and Public Sharing of Instructor Material

University Policy S12-7, http://www.sjsu.edu/senate/docs/S12-7.pdf, requires students to obtain instructor’s permission to record the course and the following items to be included in the syllabus:

- “Common courtesy and professional behavior dictate that you notify someone when you are recording him/her. You must obtain the instructor’s permission to make audio or video recordings in this class. Such permission allows the recordings to be used for your private, study purposes only. The recordings are the intellectual property of the instructor; you have not been given any rights to reproduce or distribute the material.”
  - It is suggested that the greensheet include the instructor’s process for granting permission, whether in writing or orally and whether for the whole semester or on a class by class basis.
  - In classes where active participation of students or guests may be on the recording, permission of those students or guests should be obtained as well.

- “Course material developed by the instructor is the intellectual property of the instructor and cannot be shared publicly without his/her approval. You may not publicly share or upload instructor generated material for this course such as exam questions, lecture notes, or homework solutions without instructor consent.”

Academic integrity

Your commitment, as a student, to learning is evidenced by your enrollment at San Jose State University. The University Academic Integrity Policy S07-2 at http://www.sjsu.edu/senate/docs/S07-2.pdf requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The Student Conduct and Ethical Development website is available at http://www.sjsu.edu/studentconduct/.

Campus Policy in Compliance with the American Disabilities Act

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 at http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf requires that students with disabilities requesting accommodations must register with the Accessible Education Center (AEC) at http://www.sjsu.edu/aec to establish a record of their disability.

Accommodation to Students’ Religious Holidays

San José State University shall provide accommodation on any graded class work or activities for students wishing to observe religious holidays when such observances require students to be absent from class. It is the responsibility of the student to inform the instructor, in writing, about such holidays before the add deadline at the start of each semester. If such holidays occur before the add deadline, the student must notify the instructor, in writing, at least three days before the date that he/she will be absent. It is the responsibility of the instructor to make every reasonable effort to honor the student request without penalty, and of the student to make up the work missed. See University Policy S14-7 at http://www.sjsu.edu/senate/docs/S14-7.pdf.

Student Technology Resources

Computer labs for student use are available in the Academic Success Center at http://www.sjsu.edu/at/asc/ located on the 1st floor of Clark Hall and in the Associated Students Lab on the 2nd floor of the Student Union. Additional computer labs may be available in your department/college. Computers are also available in the Martin Luther King Library. A wide variety of audio-visual equipment is available for student checkout from Media Services located in IRC 112. These items include DV and HD digital camcorders; digital still cameras;
video, slide and overhead projectors; DVD, CD, and audiotape players; sound systems, wireless microphones, projection screens and monitors.

**SJSU Peer Connections**

Peer Connections’ free tutoring and mentoring is designed to assist students in the development of their full academic potential and to inspire them to become independent learners. Peer Connections tutors are trained to provide content-based tutoring in many lower division courses (some upper division) as well as writing and study skills assistance. Small group and individual tutoring are available. Peer Connections mentors are trained to provide support and resources in navigating the college experience. This support includes assistance in learning strategies and techniques on how to be a successful student. Peer Connections has a learning commons, desktop computers, and success workshops on a wide variety of topics. For more information on services, hours, locations, or a list of current workshops, please visit Peer Connections website at http://peerconnections.sjsu.edu for more information.

**SJSU Writing Center**

The SJSU Writing Center is located in Clark Hall, Suite 126. All Writing Specialists have gone through a rigorous hiring process, and they are well trained to assist all students at all levels within all disciplines to become better writers. In addition to one-on-one tutoring services, the Writing Center also offers workshops every semester on a variety of writing topics. To make an appointment or to refer to the numerous online resources offered through the Writing Center, visit the Writing Center website at http://www.sjsu.edu/writingcenter. For additional resources and updated information, follow the Writing Center on Twitter and become a fan of the SJSU Writing Center on Facebook. (Note: You need to have a QR Reader to scan this code.)

**SJSU Counseling and Psychological Services**

The SJSU Counseling and Psychological Services is located on the corner of 7th Street and San Carlos in the new Student Wellness Center, Room 300B. Professional psychologists, social workers, and counselors are available to provide confidential consultations on issues of student mental health, campus climate or psychological and academic issues on an individual, couple, or group basis. To schedule an appointment or learn more information, visit Counseling and Psychological Services website at http://www.sjsu.edu/counseling.
### Tentative Course Schedule***

<table>
<thead>
<tr>
<th>Week</th>
<th>Start Date**</th>
<th>End Date</th>
<th>Topics, Readings, Assignments, Deadlines</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>2/1</td>
<td>2/5</td>
<td>Pre-class surveys</td>
</tr>
<tr>
<td></td>
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<td>Engagement Week activities (<strong>Required to avoid being dropped from course!</strong>))</td>
</tr>
<tr>
<td>2</td>
<td>2/8</td>
<td>2/12</td>
<td>Module 1: Introduction to Statistics &amp; Scientific Studies</td>
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<td>Module 2: Frequency Distributions &amp; Visualizing Data</td>
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<td>3</td>
<td>2/15</td>
<td>2/19</td>
<td>Module 3: Central Tendency</td>
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<td>Module 4: Variability</td>
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<td>Problem Sets 1-4</td>
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<tr>
<td>4</td>
<td>2/26</td>
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<td><strong>Exam 1 (Modules 1 – 4), 6am – 10pm</strong></td>
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<td>5</td>
<td>2/29</td>
<td>3/4</td>
<td>Module 5: Standardized Scores (z-scores)</td>
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<tr>
<td>6</td>
<td>3/7</td>
<td>3/11</td>
<td>Module 6: The Normal Distribution</td>
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<td>7</td>
<td>3/14</td>
<td>3/18</td>
<td>Module 7: The Sampling Distribution of the Mean</td>
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<td>8</td>
<td>3/21</td>
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<td>Module 8: Estimation (Confidence Intervals)</td>
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<td>Module 9: Hypothesis Testing</td>
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<td>Problem Sets 5-9</td>
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<td>9</td>
<td>3/28</td>
<td>4/1</td>
<td><strong>------------------- SPRING BREAK &amp; CESAR CHAVEZ DAY ------------------</strong></td>
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<tr>
<td>10</td>
<td>4/8</td>
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<td><strong>Exam 2 (Modules 5 – 9), 6am – 10pm</strong></td>
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<td>12</td>
<td>4/18</td>
<td>4/22</td>
<td>Module 11: Using <em>t</em>-Tests to Compare Means, continued</td>
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<td>5/6</td>
<td><strong>Exam 3 (Modules 10-13), 6am – 10pm</strong></td>
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<tr>
<td>15</td>
<td>5/9</td>
<td>5/13</td>
<td>Module 14: Correlation</td>
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<td>Module 15: Simple Regression</td>
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<td>Problem Sets 14-15</td>
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<td><strong>Exam 4 (Modules 14 – 15), 6am – 10pm</strong></td>
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<td></td>
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<td><strong>Analysis and Interpretation Project</strong></td>
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</tbody>
</table>

*Schedule is subject to change with fair notice. The schedule **WILL** be altered as the semester progresses. Be sure to check Canvas regularly.

**Modules ("lessons") will be posted by the start date (Mondays) and, in general, due dates will be by the end date (Fridays). In practice, modules will usually be posted well in advance of the start date, allowing students to work ahead.