

## Syllabus Math 140H (Honors Statistics) Spring 2020 / Teachout / Section #45421

**Instructor:** Matt Teachout

**Contact Information:** Email Address: [matt.teachout@canyons.edu](mailto:matt.teachout@canyons.edu)  
Supplemental Materials Website: [www.matt-teachout.org](http://www.matt-teachout.org)

### **Class Time and Place:**

- Math 140 Honors (section #45421) is a sixteen week MW class meeting February 10<sup>th</sup> to June 3<sup>rd</sup> from 11:00 am to 1:25 pm Mondays and Wednesdays in Hasley Hall 305 at the Valencia campus next to the cafeteria.

**Office Hours:** My office hours are Monday through Thursday from 1:25-2:25 pm in Hasley Hall 305 at the Valencia campus next to the cafeteria. If you cannot make it at that time, feel free to make an appointment.

**COC Campus Resources and Information:** [Campus Resource Guide Fall 2018](#)

**Drop Policy:** If you have four absences or more, you may be dropped from the class for lack of attendance. It is your responsibility to drop if necessary. You need to drop, please process the drop online or fill out the necessary paperwork and process it in the Admissions office. Here are the drop deadlines for Spring 2020.

02/10/2020 End: 06/04/2020
Add Deadline.....: 02/23/20
Drop w/o "W".....: 02/23/20
Drop Deadline.....: 05/10/20
Drop Refund.....: 02/23/20

**Student Learning Outcomes:** Here are two over-arching goals for Math 140.

1. Apply basic statistical procedures, including the collection, analysis, and reporting of data designed to test a research hypothesis.
2. Demonstrate the appropriate use of computer-based statistical software.

**Math 140H Honors Statistics Course Outline:** For more detailed information about the class material, click on the following link to access the updated course outline of record.

[http://teachoutcoc.org/files/math\\_140H\\_COR\\_updated\\_11\\_15\\_19.pdf](http://teachoutcoc.org/files/math_140H_COR_updated_11_15_19.pdf)

<b>Grading Scale:</b>	<b>90 – 100</b>	<b>A</b>	<b>60 – 69</b>	<b>D</b>
	<b>80 – 89</b>	<b>B</b>	<b>59 or below</b>	<b>F</b>
	<b>70 – 79</b>	<b>C</b>		

**Grade Summary:** **Four Exams: 60% of your grade**  
**Homework and Classwork Points: 10% of your grade**  
**Four Projects: 15% of your grade**  
**Final Exam: 15% of your grade**

**Textbook:** We will be using the following free online textbook for Math 140. The sections and problem sets for the book can be found at [www.matt-teachout.org](http://www.matt-teachout.org) under the “statistics” tab.

Introduction to Statistics for Community College Students by Matt Teachout (1<sup>st</sup> edition)

**Supplemental Materials:** Notes on various topics, affective domain assignments and data sets can be found at [www.matt-teachout.org](http://www.matt-teachout.org) under the “Statistics” tab.

## Syllabus Math 140H (Honors Statistics) Spring 2020 / Teachout / Section #45421

**Statistics Software:** Best practices for statistics education is to learn to solve real world problems by analyzing data with statistics software. No statistician calculates statistics with a calculator and a formula especially with large data sets. With that being said, we will primarily be learning to use the following statistics software programs: Statcato & StatKey.

- **StatKey:** This software is free and does not need to be downloaded. Just go to [www.lock5stat.com](http://www.lock5stat.com) and click on the “StatKey” button.
- **Statcato:** We will also occasionally use another free program called Statcato. Computers in class and in the TLC have Statcato saved already. You just need to click on the Statcato icon on the in-class or TLC computers. If you wish to use Statcato on your laptop or home computer, go to [www.statcato.org](http://www.statcato.org) and use the Java Web Start function to open the program on your computer. Statcato does not need to be saved. There are Java Web Start instructions for MAC or PC on my website [www.matt-teachout.org](http://www.matt-teachout.org) at the top of the “Statistics” page. MAC laptops often have difficulty downloading Statcato. **Note: You do not have to save Statcato on your home computers. Problem sets in the textbook already have the Statcato printouts and graphs.**

**Optional Calculator and optional Flash Drive:** Any small calculator is useful in math 140, but not required. Calculators are rarely needed. All difficult calculations will be calculated with a statistics software like StatKey or Statcato. Also, a small inexpensive flash drive is useful for saving your work on, but again not required.

**Tutoring:** Feel free to make an appointment to see me if you need any help. The TLC labs are also available for tutoring. The Valencia campus TLC (LTLC) is located next to the Library and the Canyon Country TLC is located in CCC-306. Not all math tutors can tutor Math 140, so it is advisable to ask if a math 140 tutor is available. MESA and DSPS also have tutoring available if you qualify for those programs. Note: A valid COC student ID is required to use the TLC. Here are the TLC hours for the spring semester.

**The Learning Center (TLC)**  
**Expanded Spring 2020 Hours**

**Valencia Campus**  
Monday-Thursday 8:00am-8:00pm  
Friday & Saturday 9:00am-3:00pm

**Canyon Country Campus**  
Monday-Thursday 9:00am-7:00pm  
Friday & Saturday Closed

**Exam Policy:** There will be four exams worth 60% of your grade in the class. If you know ahead of time that you will be absent on an exam day, make arrangements with me to take the exam early at the TLC. One exam score may be replaced by the final if the final is better. If you are absent on an exam day, that exam will be the one that is replaced by the final. Try not to miss any exams. Anyone caught cheating on an exam will receive a zero for that exam and be reported to the office of the dean of students.

**Final Exam:** The final exam is cumulative and will be worth 15% of your grade in the class. It will be given on the last day of class during regular class time.

## Syllabus Math 140H (Honors Statistics) Spring 2020 / Teachout / Section #45421

**Homework and Classwork:** Homework and Classwork points are lumped together into your “HW/CW” grade. Homework and Classwork points are worth 10% of your grade.

- **Classwork:** Each day we will be going over material and work on problems during class. You will get classwork points each day for your work in class. If you are absent, leave early, come to class late, or are not working on the assignment during class, you will lose classwork points. If you are in class and complete the in-class assignment, then you do not need to turn it in to me. You will have already received your classwork points. If you are absent, late, leave early or are not working on the assignment during class, then you will need to turn in the classwork assignment to me for half credit.
- *Note: Do not work ahead. The classwork problems are meant to be done in class after you have been taught the material. Working ahead results in you doing the problems wrong and not having problems to work on during classwork time.*
- *Note: When making up missed classwork assignments, do not print the odd answer keys to turn in. You will not receive credit for this. The problems should be hand written or typed and not the exact same as the answer keys.*
- **Homework:** Part of your homework will be to finish any unfinished classwork. You will also be assigned journal assignments and honors assignments as part of your homework. These are small writing assignments. They can be typed or hand written and will need to be turned in for credit. The honors assignments involve reading and analyzing scientific literature.

**Attendance, Tardiness and Work Ethic:** It is very important to your success in the class that you come to every scheduled class meeting and work on the material. Missing classes, coming to class late, leaving early, or not working on the material during class, will cause you to fall behind, lose classwork points, and greatly reduce your chances of succeeding in the class.

**Formulas:** A key part of modern statistics is using technology to solve problems, and not do complicated statistics calculations with formula and calculator. Whenever possible, we will use statistics software to calculate statistics and create graphs. Formulas are useful to study so that we can better understand and explain the concepts.

**Math 140 Projects:** You will be doing four individual projects during math 140 worth a total of 15% of your overall grade. See homework schedule for due dates. These are not group projects and need to be completed by each student individually. Do not copy other peoples work or plagiarize. Projects can be corrected for more credit, though corrected projects can only receive a maximum score of 90%.

- Project 1: The first project is to collect data, put the data into an excel spreadsheet and write an essay about how much bias is in your data.
- Project 2: The second project is to use your collected data to estimate population parameters with confidence intervals. You must also check assumptions and write sentences to explain the confidence intervals.
- Project 3: The third project is to use your collected data to perform a hypothesis test. You will also need to check assumptions and write sentences to explain the hypothesis test.
- Honors “Famous Statistician” Poster Presentation: Each student will be required to create a poster describing a famous statistician and presenting the information to the class. The poster should have information about the life of the statistician and what they are famous for. All information should be placed on the poster. A separate report is not necessary. Presentations will be at the beginning of class. A sign-up sheet will be provided for students to pick the statistician and the date of their presentation.

## **Syllabus Math 140H (Honors Statistics) Spring 2020 / Teachout / Section #45421**

**Laptops:** If you have a laptop, you are welcome to use it during class. A laptop is not required. We have computers in the classroom for you to use.

### **Key Elements of Math 140**

**Critical Thinking and Growth Mindset:** One of the main goals of math 140 will be to develop real world critical thinking skills. Remember intelligence, critical thinking, and math proficiency are not fixed quantities. Even if you think of yourself as not a math person, you are not stuck in this mindset. Our brains can grow and change. Any student can become a critical thinker. It just takes effort and the belief that we can change. Therefore there will be “exploring” exercises in almost every class, that help us not only develop critical thinking skills, but will help us understand statistics at a much higher level.

**Teamwork:** You will be required to work with your fellow classmates to solve problems and analyze data. Working as a team is another important real world life skill that employers consistently want from their employees. Many points in the class are designed around working as a team to solve something that is difficult. If you do not work with your team or do not do your share of the work, you will not get full credit for assignments or projects.

**In-class discovery based activities and problem solving:** In most math courses, you listen to a lecture, then go home, and try to do problems that are similar to what the teacher taught in lecture. Math 140 is a little different. The emphasis of the course is not to do problems by yourself for homework. Instead, you will be expected to work with your fellow students to solve problems during class. In addition, the activities are meant to challenge you and teach you the topics at a higher level. In other words, the in-class activities are really the most important part of the class. That is where the real learning begins.

**Productive Persistence:** Studies show that students who are allowed to struggle and work through problems do much better than those who are given the answers right away. With this in mind, you will need to work hard and figure out material during activities. You will eventually get the answers, but I will not always give you answers to questions right away. I know this is hard on you, but we have seen huge gains in problem solving and critical thinking skills because we allow you to struggle some. Think of it this way. In the workplace, your employer is going to ask you to be able to work through situations and figure things out on your own. In real life, you do not have someone with an answer key standing by to help you.

**Reading/Writing/Presenting:** Math 140 is designed to teach you to apply statistics to the world around you. The study of statistics is really the study of information. Employer’s number one request is that their employees can look over information, critically think to help find a solution, and then be able to present their solutions in written reports and verbal form. With that being said, Math 140 will incorporate a lot of reading, writing assignments and verbal presentations to your classmates. These are the real world skills that you need to succeed.

## **Syllabus Math 140H (Honors Statistics) Spring 2020 / Teachout / Section #45421**

### **Behavior Policy:**

I like my classes to have a fun, encouraging environment. I expect you to come to class with a commitment to learn, take good notes and participate in discussions and classwork. I like group learning in my class. I expect my students to work together and encourage each other. With that being said, I do expect students to abide by the code of conduct in the COC college handbook. Please do not disrupt the class by talking during lecture or using profane language.

Laptops and computers can also be a distraction during class and should only be used for course-approved materials. Do not go on any websites or video games during class, as it is a distraction to other students. Also, keep your cell phones off or on silent and put away. I do encourage you to talk and work together during classwork time, but please keep your conversations to a whisper and make sure they are statistics related. I will have students change seats if they cannot get along with their neighbors.

### **Cheating Policy:**

**Cell phones are not allowed on exams. They must be turned off and put on top of your desk. I have had problems with students attempting to cheat by hiding their cell phones under their desk. I reserve the right to change people's seats at my discretion. You must keep your eyes on your own papers during exams. Notes and books are not allowed on exams. Projects must be done by the students in the class. Do not plagiarize or copy other peoples work.**

**Anyone caught cheating on an exam, assignment or project, will get a zero on that exam, assignment or project. The information about the cheating episode will also be forwarded to the Office of the Dean of Students, whose personnel will determine appropriate sanctions.**

### **MANAGEMENT OF STRESS AND MENTAL HEALTH:**

Often the pressure on our students is very strong, involving academic commitments, relationships, outside jobs and family pressure to name a few. The staff and faculty of College of the Canyons are here to see you succeed academically and care about your emotional and physical health. You can learn more about the broad range of confidential student services, including counseling and mental health services available on campus by visiting the Student Health & Wellness Center in the Student Services Building (across from the bookstore) or by clicking on <http://www.canyons.edu/offices/Health/Pages/default.aspx> . The phone number is **661-362-3259**. At the Canyon Country Campus the Health Center is in 1B adjacent to Administration, Admissions and Records.

Also, the **National Suicide Lifeline number is 1-800-273- 8255(TALK)**. All students at COC are encouraged to enter that phone number in their cells. You can call it when you, or someone you know, is having thoughts of suicide or is in severe distress.

You can also now use the **Crisis Text Line**: Just text "**Courage**" to **741741**. Someone will get back to you immediately. Its free , 24/7, and confidential.