

**COURSE:** Math 247 Introductory Statistics  
Meeting days and times: Tues, Thurs 9:00 – 10:50 am

Spring, 2020

CRN: 33625

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**COURSE DESCRIPTION AND OBJECTIVES:** Welcome to Introductory Statistics! Statistics is the science of gathering, organizing, and analyzing data, usually with the goal in mind of gaining insight into something; for example, we apply statistics to understand more about physical and mental health, social patterns and relationships, science of all sorts, risk and patterns in investment...the list is pretty much endless! This course will teach you techniques for organizing and analyzing data, making inferences based on your analysis, and determining the reliability of your inferences. It will also make you aware of some of the pitfalls and misuses of statistical analysis. The topics we will cover include the following: Descriptive Statistics, Probability, Probability Distributions, Sampling Distributions, Point and Interval Estimations, Tests of Hypothesis, Chi-Square Analysis for Goodness of Fit and Association, Analysis of Variance, and Linear Regression.

You will learn how to use statistical software (Statcrunch) to do the computational work that is an important part of statistical analysis.

The course outline for this course can be found at the following URL:  
[http://www.curricunet.com/Cuesta/reports/crs\\_outline.cfm?courses\\_id=7340](http://www.curricunet.com/Cuesta/reports/crs_outline.cfm?courses_id=7340)

### STUDENT LEARNING OUTCOMES

1. Calculate summary measures including point and interval estimators of population parameters and interpret them.
2. Calculate probabilities for various experiments including experiments where counting formulas are required.
3. Describe sampling variability and how it applies to a real-world estimation problem.
4. Perform a hypothesis test to answer a specific research question and interpret the results.
5. Calculate and interpret measures of association between two variables.

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**PREREQUISITE:** Math 127, Intermediate Algebra, or Math 128, Applied Algebra, with a C or better, or the equivalent.

*Note: If you earned a C in the previous course then you very likely have gaps in your knowledge and/or weaknesses in your study habits that will make this course difficult for you. Plan ahead to get tutoring help and also plan to work hard to be successful!*

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**INSTRUCTOR:** Peggy Wright      **Instructor website:** [www.wrightmath.info](http://www.wrightmath.info).  
Course material (notes, test keys, etc.) will be posted on my website.

**Office:** Room 2708    **Phone:** 546 - 3100 ext. 2586    **email:** [pwright@cuesta.edu](mailto:pwright@cuesta.edu)

**Stats Lab Hour (Room 3301):** Thurs 11:00 – 12:00

**Math Lab Hour (Room 3400):** Tues 11:00 – 12:00

**Office Hours (Room 2708) :** Tues, Thurs, 1:30 – 2:00

Thurs 11:30 – 12:30; Thurs: 2:30 – 3:30 pm

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### REQUIRED COURSE MATERIALS:

**Textbook:** Gould/Ryan; Introductory Statistics, 2<sup>nd</sup> edition. ISBN-13: 978-0321978271 ISBN-10: 0321978277  
Having a physical copy of the textbook is necessary for your success in this course.

*Note: You can rent the book on Amazon or Chegg for about \$30 - \$40. You do not need any of the software or access codes (MyStatLab) for this course, so buying a used book or renting a book is fine.*

### Technology:

**StatCrunch:** We will be using StatCrunch (instead of Minitab) for doing statistical calculations. The subscription costs \$13 for 6 months. The link to the subscription page is here:

<https://register.pearsoncmg.com/reg/buy/buy1.jsp?productID=41710>

Subscribing is a requirement for the course (not optional). The reason for the switch from using Minitab is that StatCrunch has a web-based platform so access is easy and not limited to computers that have the software installed.

**Google Docs:** You will need to use your Google Docs account for some of the homework.

**Calculator:** You will need a calculator for this course (scientific or graphing). Bring your calculator to class!

**Electronics:** You are welcome to bring your own laptop to class to use instead of the laptops in the classroom. Phones should be off and away during class. Please do not get up and leave class to answer calls (this is SUPER distracting to other students!).

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**ATTENDANCE/DROP POLICY:** Plan on coming to class every day on the schedule...I'll make it worth your time! I've had students who were doing well, started missing class, then just drifted away and either did much more poorly than they could have or just gave up as the material piled up and became an insurmountable obstacle to them. Because of this, **attendance is actually mandatory** (this isn't a Distance Learning, online course), and, trust me, regular attendance will keep you motivated and on top of the material.

If you have more than 2 absences during the semester, you may be dropped--please send me an email if you must be absent for any reason. Be sure to get at least one other student's phone number so you can contact that person in the event that you miss class and need info about what went on. **You are responsible for anything covered in class** (such as changes in test dates, worksheets distributed in class, additional homework assignments, etc.). The day you come back after an absence, you should check with me on what was covered and whether there were any handouts (come early to class!).

Finally, it is the student's responsibility to drop a class they are no longer attending.

*Last day to drop without a "W": 2/2/2020; Last day to drop with a "W": 4/19/2020*

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### GRADING:

Exams (5, each 100 pts)	500 pts	The grade you earn in the course will be based on your overall percentage score, with the following percent ranges and grades:		
Homework (6, each 20 pts)	120 pts			
<u>Final exam</u>	<u>100 pts</u>	93 – 100% A	90 – 93% A-	86 – 89% B+
Total points possible	600 pts	80 – 85% B	76 – 79% C+	70 – 75 % C
Your grades will be posted on Canvas. Be sure to check that the grades are accurate and let me know ASAP if there's an error so I can fix it!		55 – 69% D	below 55% F	
		Borderline grades (89 – 89.99%, 79 – 79.99%, 69 – 69.99%) may possibly be bumped up to an A-, B-, or C based on overall factors in the course (your attendance, participation, improvement, final exam score, etc..).		

**EXAMS:** There will be 4 exams during the semester. Thsee will be a mixture of in class work and take home work. The keys to the old exams are posted on my website.

**FINAL EXAM:** The final exam will be cumulative. Don't let this intimidate you! The material in the course keeps building on the same core concepts so we will effectively be reviewing for the final throughout the entire semester. The final counts as 100 points in your final grade. **In addition to this**, the percent score on the final will replace the lowest test score (including a missed exam), as long as this helps your grade.

**Final exam day and time:** Tuesday, May 19, 9:45 – 11:45 am

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**HOMEWORK** There will be 4 written homework assignments due at the time of your exams. The homework is all from the text (not online!). The assigned problems will be given on an assignment sheet which will also be posted on the wrightmath.info website. I'll pass it out in class...you don't have to print it! Homework is due in class on the day of the exam.

You will "self-assess" your homework, meaning you will check your own answers, correct the problems as needed, and score each assignment based on the number of problems completed (with correct/corrected answers). Scoring will be based on completion of work, with checked and corrected answers. I will spot check your assessment and if you've been accurate, that's great! However, if you give yourself credit for problems you haven't done, or haven't done correctly, or haven't shown work on then the assignment will lose 1 point for each such problem. Please be accurate and honest in your grading.

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**POLICY ON LATE WORK/MAKE-UPS** (when life gets in the way...)

**Exams:** No make-up exams will be given except possibly in the case of a genuine emergency, in which case you must contact me on the day of the test or before.

**Homework:** For every day late a homework assignment is turned in, it will lose 1 point.

**Quizzes/Group work:** No make-ups will be given, but the lowest score will be dropped.

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**CLASSROOM CONDUCT/ACADEMIC HONESTY:** One word sums it up: Respect. Be respectful to and insist on being respected by anyone and everyone in class. Keep your comments positive, come to class on time, don't wander in and out of class, ESPECIALLY **don't leave early** unless you've cleared it with me beforehand, use your smart phone for class activities only not for personal business, leave your earbuds in your backpack or pocket. Etc.

**Policy On Cheating:** Again, have respect, this time for yourself. Don't let yourself down by selling your integrity for a few points on an exam or an assignment. Consequences for cheating can get ugly, ranging from receiving no credit on homework/quiz/exam in question, to being subjected to academic discipline, to having an annotation put on your transcript labeling you as academically dishonest, to dismissal from the college.

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**STUDENTS WITH DISABILITIES** If you have a learning or physical disability and might need accommodations in this class, please contact Disabled Student Program & Services in Building 3300 to ensure that you receive the accommodations as soon as possible (I can help with this!). I encourage you to come talk to me about any questions, concerns, or needs that you have...I'd like to help!

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**HELP!** There are many resources available to help you to be successful in this class, such as...

**Office/Stats Lab/ Math Lab hours:** Please come to see me for assistance with anything you're having difficulty with (homework problems, a concept you're not understanding, test-taking strategies, etc.)

**Stats Lab, Room 3301:** Cuesta now has a dedicated Stats Lab, directed by statistics tutoring expert, Alysha Nye. Go to <https://www.cuesta.edu/student/resources/ssc/statsClinic.html> for a brief description of services provided by the Lab.

**Hours:**

**Math Lab, Room 3400:** There are tutors for general math in the Math Lab. One of the best statistics tutors available works there (Taylor White), so you can get help there also if you're already in the Math Lab for another math class.

**Tutors:**

**Embedded Tutor:** Kiran Mangsat will be our embedded tutor this semester. This is a huge advantage since Kiran has both been my student and also was my embedded tutor last semester, so she knows precisely what kind of spin I put on the material, as well as how to be successful in this course! She'll be setting up hours for help for our class as well as working in the Stats Lab. (Hours TBA)

**Kiran's Hours:**

**One-on-one:** Tutors (free) are available in the Academic Success Center for one-on-one or group tutoring. Sign up early!

**Private tutors:** The tutoring center also keeps a list of private tutors for hire.

**Study Groups:** Form a study group early and get together regularly! You can message other students on Canvas (or the entire class) to look for study partners or just tap your group-work partners in class.

**Study Group Partners (contact information):**

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