

### Basic Course Information

Semester:	<b>Fall 2021</b>	Instructor Name:	<b>Ruben Varela</b>
Course Title & #:	<b>Elementary Statistics/Math119</b>	Email:	<b>ruben.varela@imperial.edu</b>
CRN #:	<b>10776</b>	Webpage (optional):	
Classroom:	<b>Online</b>	Office #:	
Class Dates:	<b>Aug 16 – Dec 11/2021</b>	Office Hours:	
Class Days:	<b>Online</b>	Office Phone #:	
Class Times:	<b>Online</b>	Emergency Contact:	<b>Silvia Murray (760) 355 6201</b>
Units:	<b>4</b>	Class Format:	

**Embedded Tutor:** Soknin Whitmer (G00712350). Email: soknin.whitmer@imperial.edu

### Course Description

Graphical representation of statistical data, calculations, and uses of various averages, measures of variability, introduction to probability, probability distributions, confidence intervals, sample size determination and hypothesis testing, ANOVA, linear regression and Chi-square analysis. Students will learn to use technology to find confidence intervals, test statistics, regression lines, and to produce graphics. This course also provides supervised practice in the appropriate use of technology designed to assist students in calculations required in beginning statistics. (CSU, UC).

### Course Prerequisite(s) and/or Corequisite(s)

MATH 098 or MATH 091 with a grade of “C” or better or appropriate placement.

### Student Learning Outcomes

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

1. Determine and interpret a confidence interval for a population mean. (ILO2, ILO4)
2. Apply statistical inference to conduct formal significance tests concerning single populations. (ILO2)
3. Demonstrate the ability to use technology in computing and interpreting basic descriptive or inferential statistics. (ILO2, ILO4)
4. Apply techniques of linear modeling to explore the relationship between two numerical variables. (ILO2).

## Course Objectives

Upon satisfactory completion of the course, students will be able to:

1. Distinguish the various ways of organizing, displaying, and measuring data.
2. Derive the numerical relationship that exists between bivariate data sets.
3. Demonstrate an understanding of the theory of probability and proficiency in solving problems of this nature.
4. Compute and interpret expected values and variance, and learn about the binomial distribution for discrete random variables.
5. Compute and interpret expected values and variance, and learn about the normal distribution or continuous random variables
6. Examine the joint probability structure of two or more random variables and understand the limiting behavior of the sum of independent random variables as the number of the sample becomes larger.
7. Use the various types of distributions that are derived from the normal distribution.
8. Calculate and interpret confidence intervals for a population mean to show how probability connects to this type of statistical inference.
9. Use hypothesis testing as a formal means of distinguishing between probability distributions on the basis of random variables generated from one of the distributions.
10. Compare the means of the data from experiments involving more than two samples, including the single factor analysis of variance (ANOVA).
11. Fit a straight line to the given data in graphical form.
12. Make use of Chi-square distributions to analyze counts

## Textbooks & Other Resources or Links

**Recommended Textbook:** Elementary Statistics Using Excel, 6th Edition, by Mario Triola, Pearson Publisher.

The textbook is available at the bookstore or online. There are also numerous online resources in Canvas.

Calculator: A basic calculator, like a TI-30 (costs around \$10) is recommended, or you can go with a graphing calculator, like the TI-83 or TI-84, and there are also various apps that you can use instead; it really depends on what other math or science classes you plan on taking later on. You NEED a calculator of some sort to do the work on the tests.

## Course Requirements and Instructional Methods

This course is Online. The textbook is very important, because you need to study from the textbook. I will send you the lesson plan every week and you have to send me the corresponding activity of each session via Canvas (No google docs). Turn in each activity in a timely manner.

***What will I have to do to be successful in an online learning environment?***

- It will be imperative you keep up with the course and stay disciplined.
- Dedicate a time each day to watch videos, do the activities, and exams, and send me them in a timely manner. It is best if you break it up into multiple small intervals. This gives your brain some rest time.
- Attend our virtual “zoom” meetings. These are not mandatory and will be recorded. At the beginning of the course, we will have a doodle poll – and I will try to make hours that will accommodate everyone’s schedule. Make certain you come to class prepared by watching the videos in advance.
- It is your responsibility to drop before the W deadline: **Nov 6, 2021**  
**Important dates: Last day to add:** August 28, 2021. **Census date:** August 30, 2021  
**Holidays:** September 6, 2021 (Labor Day)  
November 11, 2021 (Veterans Day)  
November 22 - 27, 2021 (Thanksgiving)

How am I expected to act in an online “classroom?”

Attending a virtual meeting can be a challenge when there are many students on one conference call. Participating in such meetings may count as class attendance, but disruptive behavior may also result in you not being admitted to future meetings. Follow the tips below for best results:

- Be RESPECTFUL, Be READY TO LEARN, Be READY TO PAY ATTENTION
- USE YOUR MUTE BUTTON WHEN IN LOUD PLACES OR FOR DISTRACTIONS
- Your written, verbal, and non-verbal communications should be respectful and focused on the learning topics of the class.
- If possible, find a QUIET LOCATION & SILENCE YOUR PHONE (if zooming)
- If you eat during “class” make sure your mute button is on – else you may be called out
- ADJUST YOUR LIGHTING SO THAT OTHERS CAN SEE YOU
- It is hard to see you in dim lighting so find a location with light.
- If your back is to a bright window, you will be what is called “backlit” and not only is it hard on the eyes (glare) but you look like a silhouette.
- POSITION THE CAMERA SO THAT YOUR FACE AND EYES ARE SHOWING
- If you are using the camera, show your face; it helps others see your non-verbal cues.
- (NOTE: I am okay if you show up in your pajamas – this is language set by the district....but keep your shirts on You may be at home, but meeting in pajamas or shirtless is not appropriate so dress suitably. Comb your hair, clean your teeth, fix your clothes, etc. before your meeting time to show self-respect and respect for others. Keep this in mind when you go to the work force, And, if you are in the work force – it will be best if you follow these guidelines. Appearance does matter outside education.
- Catch up on other emails or other work later.
- If you are Zooming, PLEASE silence your phone and put it away.
- If you are in a room with a TV – please turn it off.
- Follow your instructor’s directions about using the “raise hand” icon or chat function to be recognized and to speak, but make sure you have unmuted your device.
- Do not speak when someone else is speaking.
- REMAIN FOCUSED AND PARTICIPATE IN THE MEETING

- Especially when the camera is on YOU, we can all see your actions. Engage in the meeting. Look at the camera. Listen to instruction. Answer questions when asked.
- Do not use the Zoom meeting to meet with your peers or put on a “show” for them.
- PAUSE YOUR VIDEO IF MOVING OR DOING SOMETHING DISTRACTING
- Emergencies happen. If you need to leave the room or get up and move about, stop your video.

Out of Class Assignments: The Department of Education policy states that one (1) credit hour is the amount of student work that reasonably approximates not less than one hour of class time and two (2) hours of out-of-class time per week over the span of a semester. WASC has adopted a similar requirement.

### What if I need to borrow technology or access to WIFI?

1. To request a loaner laptop, MYFI device, or other electronic device, please submit your request here: <https://imperial.edu/students/student-equity-and-achievement/>
2. If you'd like access the WIFI at the IVC campus, you can park in parking lots "I & J". Students must log into the IVC student WIFI by using their IVC email and password. The parking lots will be open Monday through Friday from 8:00 a.m. to 7:00 p.m.

#### Guidelines for using parking WIFI:

- Park in every other space (empty space BETWEEN vehicles)
- Must have facemask available
- For best reception park near buildings
- Only park at marked student spaces
- Only owners of a valid disabled placard may use disabled parking spaces
- Only members of the same household in each vehicle
- Occupants **MUST** remain in vehicles
- Restrooms and other on-campus services not available
- College campus safety will monitor the parking lot
- Student code of conduct and all other parking guidelines are in effect
- Please do not leave any trash behind

#### **-No parking permit required**

If you have any questions about using parking WIFI, please call Student Affairs at 760- 355-6455.

### Course Grading Based on Course Objectives

#### GRADING SCALE

90 – 100 =	A
80 – 89 =	B
70 – 79 =	C
60 – 69 =	D
00 – 59 =	F

#### GRADE DISTRIBUTION

Exam one	=	12%
Exam two	=	12%
Exam three	=	12%
Exam four	=	12%
Final exam	=	25% (Mandatory)
Activities	=	27%

## Course Policies

### ATTENDANCE

- A student who fails to attend the first meeting of a class or does not complete the first mandatory activity of an online class will be dropped by the instructor as of the first official meeting of that class. Should readmission be desired, the student's status will be the same as that of any other student who desires to add a class. It is the student's responsibility to drop or officially withdraw from the class. See [General Catalog](#) for details.
- Regular attendance in all classes is expected of all students. A student whose continuous, unexcused absences exceed the number of hours the class is scheduled to meet per week may be dropped. For online courses, students who fail to complete required activities for two consecutive weeks may be considered to have excessive absences and may be dropped.
- Absences attributed to the representation of the college at officially approved events (conferences, contests, and field trips) will be counted as 'excused' absences.

### What does it mean to "attend" an online class?

Attendance is critical to student success and for IVC to use federal aid funds. Acceptable indications of attendance are:

- Student submission of an academic assignment
- Student submission of an exam
- Student participation in an instructor-led Zoom conference
- Documented student interaction with class postings, such as an interactive tutorial or computer-assisted instruction via modules
- A posting by the student showing the student's participation in an assignment created by the instructor
- A posting by the student in a discussion forum showing the student's participation in an online discussion about academic matters
- An email from the student or other documentation showing that the student has initiated contact with a faculty member to ask a question about an academic subject studied in the course.

Logging onto Canvas alone is NOT adequate to demonstrate academic attendance by the student.

### Classroom Etiquette

- Electronic Devices: Cell phones and electronic devices must be turned off and put away during class, unless otherwise directed by the instructor.
- Food and Drink are prohibited in all classrooms. Water bottles with lids/caps are the only exception. Additional restrictions will apply in labs. Please comply as directed by the instructor.

- Disruptive Students: Students who disrupt or interfere with a class may be sent out of the room and told to meet with the Campus Disciplinary Officer before returning to continue with coursework. Disciplinary procedures will be followed as outlined in the [General Catalog](#).
- Children in the classroom: Due to college rules and state laws, only students enrolled in the class may attend; children are not allowed.

### How do I act differently if I have an on-ground class during COVID?

- 1. DO NOT COME TO CAMPUS OR ATTEND AN OFF-CAMPUS CLASS IF YOU FEEL SICK, HAVE A FEVER, OR HAVE A COUGH**
  - a. Even if your symptoms are mild, stay home.
  - b. Email your instructor to explain why you are missing class.
  - c. [If you are sick with COVID-19 or think you might have COVID-19](#), provides CDC guidance.
  - d. If you have tested positive for COVID-19, you must self-quarantine for 14 days and then be without symptoms for at least 72 hours. Clearance is required prior to returning to any face-to-face interaction. It is recommended that you undergo a final COVID-19 test to confirm that you are no longer infected.
  - e. If you are exposed through direct contact with a person known to be COVID-19 positive, then you must submit negative COVID-19 test results prior to returning to any face-to-face interaction.
- 2. ARRIVE AT CAMPUS EARLY (at least 15 minutes early is advised).**
  - a. All people entering the IVC campus will need to pass a screening process, which will occur at the gates as your drive onto campus. You will need to take a short questionnaire and get your temperature taken (the screening is completely touchless and will take place while you remain in your car).
- 3. BRING A MASK TO CLASS (and always wear it).**
  - a. Be sure that your mask covers both your nose and mouth. If your mask is cloth, then wash it each day. If your mask is disposable, then use a new one each day.
- 4. GO DIRECTLY TO YOUR CLASSROOM.**
  - a. The IVC campus is mostly closed so you should not visit other areas or seek any face-to-face services. Services are available to students online and can be accessed through [www.imperial.edu](http://www.imperial.edu).
- 5. WASH YOUR HANDS FREQUENTLY (and use the provided sanitation supplies).**
  - a. Your classroom is equipped with cleaning supplies. Use them as needed.
- 6. BE SURE TO SOCIAL DISTANCE (stay at least 6 feet from other).**
  - a. The number of students in a classroom at any one time is very limited so you have plenty of space to spread and ensure that you stay at least 6 feet from others.
- 7. BRING YOUR OWN FOOD AND DRINKS.**
  - a. There is no food service currently offered on campus.

## Online Netiquette

- What is netiquette? Netiquette is internet manners, online etiquette, and digital etiquette all rolled into one word. Basically, netiquette is a set of rules for behaving properly online.
- Students are to comply with the following rules of netiquette: (1) identify yourself, (2) include a subject line, (3) avoid sarcasm, (4) respect others' opinions and privacy, (5) acknowledge and return messages promptly, (6) copy with caution, (7) do not spam or junk mail, (8) be concise, (9) use appropriate language, (10) use appropriate emoticons (emotional icons) to help convey meaning, and (11) use appropriate intensifiers to help convey meaning [do not use ALL CAPS or multiple exclamation marks (!!!!)].

### How am I expected to act in an online “classroom” (especially Zoom)?

Attending a virtual meeting can be a challenge when there are many students on one conference call. Participating in such meetings may count as class attendance, but disruptive behavior may also result in you not being admitted to future meetings. Follow the tips below for best results:

#### 1) Be RESPECTFUL

- a. Your written, verbal, and non-verbal communications should be respectful and focused on the learning topics of the class.

#### 2) Find a QUIET LOCATION & SILENCE YOUR PHONE (if zooming)

- a. People walking around and pets barking can be a distraction.

#### 3) EAT AT A DIFFERENT TIME.

- a. Crunching food or chugging drinks is distracting for others.
- b. Synchronous zoom times are set in advance so reserve meals for outside class meetings.

#### 4) ADJUST YOUR LIGHTING SO THAT OTHERS CAN SEE YOU

- a. It is hard to see you in dim lighting so find a location with light.
- b. If your back is to a bright window, you will be what is called “backlit” and not only is it hard on the eyes (glare) but you look like a silhouette.

#### 5) POSITION THE CAMERA SO THAT YOUR FACE AND EYES ARE SHOWING

- a. If you are using the camera, show your face; it helps others see your non-verbal cues.
- b. You may be at home, but meeting in pajamas or shirtless is not appropriate so dress suitably. Comb your hair, clean your teeth, fix your clothes, etc. before your meeting time to show self-respect and respect for others.

#### 6) Be READY TO LEARN AND PAY ATTENTION

- a. Catch up on other emails or other work later.
- b. If you are Zooming, silence your phone and put it away.
- c. If you are in a room with a TV – turn it off.

#### 7) USE YOUR MUTE BUTTON WHEN IN LOUD PLACES OR FOR DISTRACTIONS

- a. Pets barking, children crying, sneezing, coughing, etc. can happen unexpectedly. It's best if you conference in a private space, but if you can't find a quiet place, when noises arise **MUTE** your laptop.

#### 8) REMEMBER TO UNMUTE WHEN SPEAKING

- a. Follow your instructor's directions about using the **"raise hand"** icon or chat function to be recognized and to speak, but make sure you have unmuted your device.
- b. Do not speak when someone else is speaking.

**9) REMAIN FOCUSED AND PARTICIPATE IN THE MEETING**

- a. Especially when the camera is on YOU, we can all see your actions. Engage in the meeting. Look at the camera. Listen to instruction. Answer questions when asked.
- b. Do not use the Zoom meeting to meet with your peers or put on a "show" for them.

**10) PAUSE YOUR VIDEO IF MOVING OR DOING SOMETHING DISTRACTING**

- a. Emergencies happen. If you need to leave the room or get up and move about, stop your video.

### Academic Honesty

Academic honesty in the advancement of knowledge requires that all students and instructors respect the integrity of one another's work and recognize the important of acknowledging and safeguarding intellectual property.

There are many different forms of academic dishonesty. The following kinds of honesty violations and their definitions are not meant to be exhaustive. Rather, they are intended to serve as examples of unacceptable academic conduct.

- Plagiarism is taking and presenting as one's own the writings or ideas of others, without citing the source. You should understand the concept of plagiarism and keep it in mind when taking exams and preparing written materials. If you do not understand how to "cite a source" correctly, you must ask for help.
- Cheating is defined as fraud, deceit, or dishonesty in an academic assignment, or using or attempting to use materials, or assisting others in using materials that are prohibited or inappropriate in the context of the academic assignment in question.

Anyone caught cheating or plagiarizing will receive a zero (0) on the exam or assignment, and the instructor may report the incident to the Campus Disciplinary Officer, who may place related documentation in a file. Repeated acts of cheating may result in an F in the course and/or disciplinary action. Please refer to the [General Catalog](#) for more information on academic dishonesty or other misconduct. Acts of cheating include, but are not limited to, the following: (a) plagiarism; (b) copying or attempting to copy from others during an examination or on an assignment; (c) communicating test information with another person during an examination; (d) allowing others to do an assignment or portion of an assignment; (e) using a commercial term paper service.

#### How do I show academic honesty and integrity in an online "classroom"?

- **KEEP YOUR PASSWORDS CONFIDENTIAL.**
  - You have a unique password to access online software like Canvas. Never allow someone else to log-in to your account.
- **COMPLETE YOUR OWN COURSEWORK.**
  - When you register for an online class and log-in to Canvas, you do so with the understanding that you will produce your own work, take your own exams, and will do so without the assistance of others (unless directed by the instructor).

### Examples of Academic Dishonesty that can occur in an online environment:

- Copying from others on a quiz, test, examination, or assignment;
- Allowing someone else to copy your answers on a quiz, test, exam, or assignment;
- Having someone else take an exam or quiz for you;
- Conferring with others during a test or quiz (if the instructor didn't explicitly say it was a group project, then he/she expects you to do the work without conferring with others);
- Buying or using a term paper or research paper from an internet source or other company or taking any work of another, even with permission, and presenting the work as your own;
- Excessive revising or editing by others that substantially alters your final work;
- Sharing information that allows other students an advantage on an exam (such as telling a peer what to expect on a make-up exam or prepping a student for a test in another section of the same class);
- Taking and using the words, work, or ideas of others and presenting any of these as your own work is plagiarism. This applies to all work generated by another, whether it be oral, written, or artistic work. Plagiarism may either be deliberate or unintentional

### IVC Student Resources

IVC wants you to be successful in all aspects of your education. For help, resources, services, and an explanation of policies, visit <http://www.imperial.edu/studentresources> or click the heart icon in Canvas.

### Anticipated Class Schedule/Calendar

Date or Week	Activity, Assignment, and/or Topic	Pages/ Due Dates/Tests
Week # 1 August 16 - 20	Introduction	
Week # 2 August 23 – 27	Chapter 1: Sampling and Data Activities in class after each session	
Week # 3 Aug 30 – Sep 3	Chapter 2: Descriptive Statistics. Sections 2.1 – 2.4 Activities in class after each session	
Week # 4 September 6 – 10	Chapter 2: Descriptive Statistics. Sections 2.5 – 2.8 Exam # 1. Covering Chapters 1, 2	
Week # 5 September 13 – 17	Chapter 3: Probability Topics. Sections 3.1 – 3.3 Activities in class after each session	
Week # 6 September 20 - 24	Chapter 3 & 4: Probability Topics. Sections 3.4 – 3.5 and 4.1 Activities in class after each session	
Week # 7 Sep 27 – Oct 1	Chapter 4 & 5: Discrete Random Variables. Sections 4.2 – 4.3 and 5.1. Activities in class Exam # 2. Covering Chapters 3 & 4	
Week # 8 October 4 - 8	Chapters 5, 6 and 7: Sections 5.2, 6.1, 6.2, 7.1 Activities in class after each session	
Week # 9 October 11 – 15	Chapter 8: Confidence Intervals. Section 8.1 – 8.3 Activities in class after each session	



<b>Date or Week</b>	<b>Activity, Assignment, and/or Topic</b>	<b>Pages/ Due Dates/Tests</b>
Week # 10 October 18 - 22	Chapter 9. Hypothesis testing with one sample. Sections 9.1 – 9.6 Activities in class after each session	
Week # 11 October 25 - 29	Chapter 10: Hypothesis testing with two samples. Sections 10.1, 10.3, 10.4 Exam # 3 Covering Chapters 5, 6, 7, 8	
Week # 12 November 1 - 5	Chapter 12: Linear Regression and Correlation. Section 12.1 – 12.5 Activities in class after each session	
Week # 13 November 8 - 12	Chapter 13: Section 13.1 Activities in class after each session	
Week # 14 November 15 - 19	Review of Chapters 9, 10, 12 and 13 Activities in class after each session	
Week # 15 Nov 29 – Dec 3	Exam # 4 Covering Chapters 9, 10 12 and 13 Activities in class after each session	
Week # 16 December 6 - 10	Final Exam covering all Chapters	

**\*\*\*Subject to change without prior notice\*\*\***