

# INTRODUCTION TO STATISTICS

MATH 120, SPRING 2018- BLDG. 21, ROOM 157 (4 UNITS)  
SECTION #65414 - TUES 8:00 - 9:50 AM - HYBRID

## INSTRUCTOR



Name	STEPHEN TONER
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Phone	760.245.4271 ext. 2770
Email	Stephen.Toner@vvc.edu or through BlackBoard email
Websites	www.stevetoner.com, www.MathVideos.Net
Office Hours	Tuesdays: 10:00 AM - 11:30 AM Thursdays: 10:00 AM - 11:30 AM

## COURSE

### DESCRIPTION

The use of probability techniques, hypothesis testing, and predictive techniques to facilitate decision-making. Topics include descriptive statistics; probability and sampling distributions; statistical inference; correlation and linear regression; analysis of variance, chi-square tests and t-tests; and application of technology for statistical analysis including the interpretation of the relevance of the statistical findings. Applications using data from disciplines including business, social science, psychology, life science, health science, and education.

### PREREQUISITES

Math 90, Math 90-S, or Math 63 with a grade of "C" or better, or by eligibility by placement on the VVC assessment exam. If you have not met this prerequisite and somehow passed into this class, you will likely be administratively dropped within the first week of class.

### TEXTBOOK / MATERIALS

This semester, we are going without a text. Instead, your lecture notes which you will create from the video lectures will serve as your text. Homework will be assigned in Blackboard and due each week in class. We will also use Fathom software; you may choose to do work in the labs on campus or purchase your own copy for \$5.25 from [www.fathom.concord.org](http://www.fathom.concord.org).

We will be doing some work at the board for extra practice on occasion. I will provide blue dry erase markers. If you wish to have a special color to assert your individuality, please bring one to class.

I will often use the free app **Socrative** (student version, available for free from iTunes or Google Play) to take attendance and quizzes.

### CALCULATORS

A graphing calculator will be required for this class. It is preferred that you have a **TI-84 series** calculator, (preferably a TI-84 Plus, as that will be the calculator I will be teaching from) but the TI-89 is also an option, but a bit more expensive and a bit challenging to navigate. The TI-83 is missing some of the features which we will be using in the course; if you choose the TI-83 or some other graphing calculator, you will be responsible for finding accommodations for the missing features, as well as for training.

I PROMISE you that I will teach you how to use this calculator. It is a key component of this course, so that we can focus on the “how” and “why” of the statistics we learn. Hundreds of past students can attest to the necessity of a graphing calculator in this course.

### THE HYBRID / “FLIPPED” CLASS FORMAT

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“Hybrid” means that your class is partially on-campus and partially online. This class will be different from any of your other math classes because you will be taking your lecture notes and doing your homework at home BEFORE you come to class. In class, we will expand on what you have already learned and practiced online. The goal is to provide an active-learning environment in the classroom rather than a static “listen to the teacher talk” environment. We will do this through review, discussion, classroom exercises and activities.

### HOMEWORK

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PRACTICE is a vital component in learning mathematics. You will find each week’s homework in Blackboard. It will be due in class each week.

### NO LATE ASSIGNMENTS WILL BE ACCEPTED!

**In this technical age, there is no reason for late work.** All work must be submitted by its deadline to receive credit, even if you are absent or out of town. Work that is not completed automatically in Connect Math or collected in class should be submitted as a **single pdf file**. I will **NOT** accept multiple files or zip folders.

If you don’t have a scanner at home or access to one, there is a FREE app available on Google Play and iTunes called **CamScanner**. It is a free app, and if you register using your VVC email address ending in .edu, you will be automatically upgraded to the full version which allows you to create files without any watermarks.

CamS CamScanner allows you to take a picture of each page of your document, crop them and adjust the clarity, and then save them as a single pdf file or email the final file to yourself. You can then email it to me prior to the end of the class meeting time, unless there are extraordinary documented circumstances (hint: don’t procrastinate).

### QUIZZES

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There will be quizzes in class on most days we meet. As an incentive to watch the videos and take the lecture notes before class meets, you will be allowed to use your lecture notes on each of these quizzes!

### MIDTERM AND FINAL EXAM

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We will a midterm and a final exam in this course, each worth 15% of your total grade. While you may use your graphing calculator for these exams, no notes or cheat sheets will be allowed.

### WEEKLY ONLINE RESPONSE QUIZZES

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You are expected to participate in each of the weekly response quizzes which will be located at the Blackboard site for the class. These will be either short surveys or min-quizzes to keep you focused, or something administrative in nature. Please **read the prompts carefully**; you will only get one attempt to respond. These responses will be due every **Saturday** night at 11:59 PM in Blackboard.

### CLASS PROJECT AND PRESENTATION

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You will be complete a class project, write a report on it, and present what you learned to your class at the end of the term (approx. 3-4 min presentation).

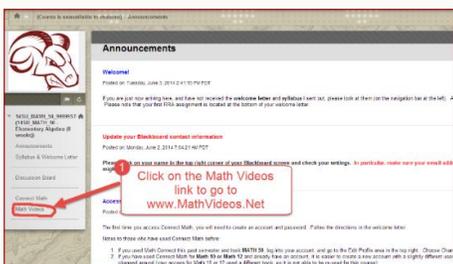
## STUDENT ACCESS

Students with special needs are encouraged to meet with instructors to discuss the opportunity for academic accommodation and be referred to disabled student program and services per Administrative Procedure (AP 3440).

If you have a learning disability or physical need that requires special accommodation, please advise me prior to 02-19-18 (the start of the second week of class).

## LECTURE NOTES AND VIDEOS

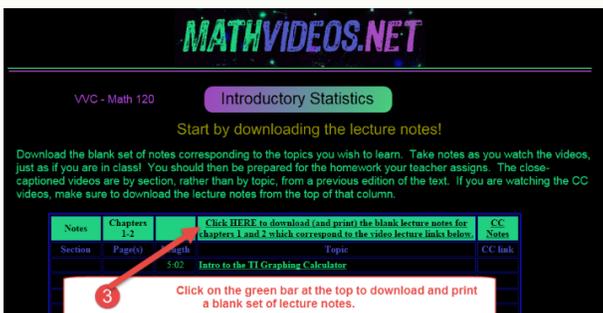
First, you will want to go to [www.mathvideos.net](http://www.mathvideos.net), my video website, and click on the Introductory Statistics button. Above each pair of chapters, there is a link to "download blank lecture notes". Please download and print these out. For each lecture in the table, there is a video lecture I have created to teach you the material. **Watch the videos and take lecture notes just as if you were in class. This is an essential part of the class.**



Within Blackboard, click on the Math Videos link in the Navigation panel.



Enter your class at [www.MathVideos.Net](http://www.MathVideos.Net).



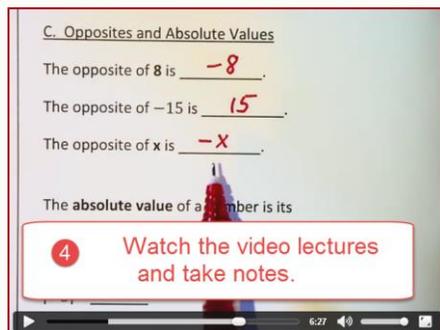
Download a blank set of lecture notes for the current chapters.

Click on the title of each video to watch each video normally. Click on the closed-caption links to watch them closed-captioned (might not work with Internet Explorer).

Notes	Chapters 1-2	Click HERE to download (and print) the Chapters 1-2 notes which correspond to the video lecture links below.	CC link
Section	Length	Topic	
1.1	8:18	Sets of Real Numbers	CC
1.2	22:09	Operations With Real Numbers	CC
1.3-1.4	11:59	Adding and Subtracting Signed Numbers	CC
1.5	16:47	Multiplying and Dividing Signed Numbers	CC
2.4	19:08	Word Problems Involving Real Numbers	CC
2.5	12:36	Percent Sentence Problems	CC
2.6	16:47	Solving Literal Equations; Word Problems Involving Linear Equations and Geometry	CC
2.7	25:40	Mixture Problems; Motion Problems	CC

Regular Links

Closed-captioned Links (CC)



Watch the videos and take notes, just as in class, except that you now can hit pause and rewind!

## ACADEMIC SUPPORT

You are strongly encouraged to get tutoring or go to the Math Success Center, study in groups, and see me for help outside of class. All of these are free! Students that get help outside of class are typically much more successful than those that do not.

Regular Math Success Center hours are (Spring 2018):

Monday - Thursday: 9:00 AM - 8:00 PM

Fridays: 9:00 AM - 5:30 PM

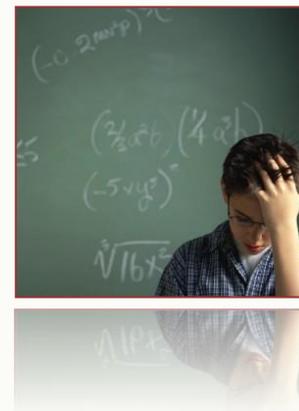
The Math Success Center is located in building 21, room 146.

There will be special workshops with math professors for help in Math 120 in 21-145:

Tuesdays from 2:00-4:00 (with Mr. Wilson and Mr. Syed)

Wednesdays from 3:15-5:15 (with myself and Prof. Ridge)

My office hours are listed at the start of this syllabus. Appointments are also available if you are unable to meet me at those times. Online office hours are also available...



## SCHOLASTIC DISHONESTY

While students may work together on the researching of any assignment, it is expected that each of their writing assignments reflect substantial individual effort. Any student who commits plagiarism or is found to have cheated on a scheduled exam is subject to a zero score for that specific exam which may result in a term grade of "F" for this course. Students should be aware that cases of cheating and/or plagiarism will be forwarded to the appropriate college administrator promptly. The college administration has a range of sanctions that may be imposed including, but not limited to, academic suspension or expulsion from the college.



## ATTENDANCE

YOU ARE REQUIRED TO ATTEND CLASS EVERY DAY. AFTER 4 HOURS OF ABSENCE (2 CLASSES), YOU MAY BE DROPPED FROM THIS CLASS. IT IS **YOUR RESPONSIBILITY** TO KEEP YOUR ENROLLMENT STATUS CURRENT. YOU RISK AN "F" IF YOU STOP ATTENDING WITHOUT OFFICIALLY WITHDRAWING. DO NOT BRING FRIENDS OR CHILDREN TO CLASS. PLEASE PUT AWAY ALL MP3 PLAYERS AND TURN ANY CELL PHONES TO SILENT MODE DURING CLASS TIME. NO CELL PHONES WILL BE ALLOWED ON YOUR DESK DURING EXAMS. WE ARE HERE TO LEARN; PLEASE REFRAIN FROM TEXTING DURING CLASS.

*Class attendance is not a measure of performance or proficiency. Whether a student is just physically present in the class is not a valid basis for grading. Reference Title 5 Section 55002 of the California Code of Regulations: (A) Grading Policy. The course provides for measurement of student performance in terms of stated course objectives and culminates in a formal, permanently recorded grade based upon uniform standards in accordance with section 55758 of this Division. The grade is based on demonstrated proficiency in the subject matter and the ability to demonstrate that proficiency, at least in part, by means of written expression that may include essays, or, in courses where the curriculum committee deems them to be appropriate, by problem solving exercises or skills demonstrations by students.*

## IMPORTANT NOTES ABOUT TECHNOLOGY

This course requires reliable computer access. Please ensure your computer is in good repair at the start of the semester. You will need to be able to watch my lecture videos (in mp4 format) and open pdf files on your computer using Adobe Acrobat. While documented outages may occur, it is the student's responsibility to meet all deadlines in this course. If your internet service at home is unreliable, do not wait until the last day to start assignments. There are plenty of computers that you are able to use on campus.

## VVC CALENDAR



Feb 12	First Day of classes
Feb 19	Campus Closed - President's Day Holiday
Feb 25	Last day to drop without receiving a "W" grade
Mar 31	Last day to drop and receive a "W" grade
Apr 9-15	Spring Break
May 28	Campus closed - Memorial Day
June 9	Last day of fall term (June 5 <sup>th</sup> for our class)

## OUR CLASS SCHEDULE

	Video preparation	Homework to complete before class meets	In-class activity	
T	2.13	--	--	Introduction
T	2.20	50 min (3 videos)	HW Chapter 1; read articles	Q&A; activity; quiz
T	2.27	32 min (1 video)	HW Chapter 2	Q&A; activity; quiz
T	3.06	84 min (4 videos)	HW Chapter 3	Q&A; activity; quiz
T	3.13	80 min (3 videos)	HW Chapter 5	Q&A; activity; quiz
T	3.20	80 min (3 videos)	HW Chapter 6	Q&A; activity; quiz
T	3.27	75 min (2 videos)	HW Chapter 7	Q&A; activity; quiz
T	4.03		Review for Midterm	<b>Midterm -Chapters 1-3, 5-7</b>
Spring Break Week - Campus Closed !!				
T	4.17	75 min (2 videos)	HW Chapter 8	Q&A; activity; quiz
T	4.24	75 min (3 videos)	HW Chapter 9	Q&A; activity; quiz
T	5.01	75 min (3 videos)	HW Chapter 10 & 11; assign project	Q&A; activity; quiz
T	5.08		Tests & Intervals Overview	
T	5.15	55 min (2 videos)	HW Chapter 4 & 13	Q&A; activity; quiz
T	5.22	45 min (3 videos)	HW Chapter 12 & 14	Q&A; activity; quiz
T	5.29	--	Prepare presentation	Project Presentations to class
T	6.05	--	Review for Final	<b>Final Exam -Chapters 4, 8-14</b>

\*\*\* Weekly online response quizzes will be due every **Saturday** night at 11:59 pm in Blackboard.

## GRADING

It is your responsibility to be aware of your grade. Your final grade will be determined as follows:

Homework*	20% of your grade
Online Weekly Response Quizzes*	10% of your grade
Classroom Activities*	12% of your grade
On-campus Quizzes*	8% of your grade
Class Project	15% of your grade
Midterm Exam, Final Exam	35% of your grade

A	90.00% - 100%
B	80.00% - 89.99%
C	70.00% - 79.99%
D	65.00% - 69.99%
F	0% - 64.99%



\* The lowest score in these first four grade categories will be dropped prior to calculating the term grade.

## EMAIL

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I do my best to answer all emails as quickly as I can, but sometimes it can be difficult.

You would not believe how many unidentified emails I receive on a regular basis... as a result, I have established this policy to help me provide you with the quickest, most reliable response.

**Send all emails to [Stephen.Toner@vvc.edu](mailto:Stephen.Toner@vvc.edu) or use the BlackBoard email system.**

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### Prof. Toner's Email Policy

*Please read carefully the set of rules applicable to all emails you may send me.*

**The subject line (title) of the email must include the following information:**

1. Your first and last name
2. Your class name, meeting days and times
3. The reason for the email

#### Examples:

- Jessica Jones, Math 90 online, about my chapter 3 test
- Jessica Jones, Math 120 TTh at 8 am, out sick today

**Do not email asking questions that can be answered by reading the syllabus.** For example, please do NOT email me questions such as "Can I take the test at a later date?" or "When is the final exam?"

Write emails using **proper grammar, punctuation and capitalization**. In other words, do not text me.

Emails that don't follow these guidelines may not be answered quickly.

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#### Prof. Toner's Schedule

I make every effort to respond to emails as quickly as I can, however some days are rather busy, especially on Tuesdays and Wednesdays.

Emails received after 9:30 or so in the evenings may not receive responses until the next day. On weekends, I generally try respond to emails in the morning and evenings, but response time may be a bit slower in the middle of the day.

Additionally, I will do my best to respond while at conference or traveling, but please understand that there may be delays for such.

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### STUDENT LEARNING OUTCOMES

Upon completion of the course the student can:

1. Calculate measures of central tendency and variation for a given data set.
2. Calculate probabilities using normal and t-distributions.
3. Interpret the output of a technology-based statistical analysis.
4. Formulate hypothesis tests involving samples from one and two populations.