

DVC – MATH 142L SYLLABUS



*“You can’t
direct the wind –
but you can adjust
the sails.”*

<i>Course:</i>	Math 142L, <i>Statistics</i> w/Support (Lots of it!) Sec. 8009
<i>Location:</i>	Math Bldg - 108
<i>Instructor:</i>	Mr. Narin
<i>Term:</i>	Fall 2024, Aug 27 nd – Dec 12 th
<i>Time:</i>	Tu, Th 6:30pm – 9:35pm
<i>Class Website:</i>	MathWithSteve.com
<i>Email:</i>	SteveNarin314@gmail.com
<i>Office Hours:</i>	T, Th 5:30 – 6:30, in the classroom

DVC Math/Engineering Student Tutoring Center Hours

M–Th: 8am to 8pm

Friday: 10am to 2pm



Academic Proctoring Center (Make-up Tests)

By appointment

Required

1. **MyLab Statistics** software (includes E-book and StatCrunch)
\$55.00

This item can be purchased directly from **Pearson Publishing (ISBN: 9780135401569)**, and I believe the DVC Book Center has it (at a higher cost).

2. The **Python** Programming Language (FREE!)

[Python](#)

3. **Piazza**, Q&A platform (FREE!)

[Piazza](#)

Piazza -- Italian for open public square.

4. A 3-ring **binder** with 10 dividers (I like [Amazon Dividers](#))

5. A simple scientific or graphing calculator.

6. You must also bring to every class meeting a **laptop computer** – tablets and cellphones will not suffice. You can borrow a Chromebook for the semester by linking to

[Student Technology Loan Program](#)

7. Platform: **www.MathWithSteve.com** [No username or password required]. Here you will find the Online Practice (part of the homework), the Syllabus, the Schedule, the Grade Sheet, an Algebra book, and various other links. I do not use Canvas.

8. Email: As a DVC college student, you are required to check your school email account (or personal email account, if you let me know) regularly — that means at least a few times each day.



Grading Components

We will use a point system for this class, so that the grade sheet can display your percentage at any point in the semester. The points will be allocated in *approximately* the following way:

Activities:	Roughly 12 activities at 10 pts each
Logic & Lying:	Miscellaneous point values
Python:	Miscellaneous point values
Quizzes:	Roughly 24 quizzes at 10 pts each
Tests:	4 tests at 100 pts each
Projects:	2 projects, one observational and one experimental, at 50 pts each

Homework

Homework will be assigned from our textbook, MyLab Statistics (at Pearson Publishing), and the Online Practice link at the class website.



The problems I assign are designed to inform you as to what skills and concepts you are supposed to be gaining from this class. In other words, you need to do as much homework as you need to — whatever it takes to achieve the degree of success you desire. In short, it's up to you to discover the homework strategy that suits your personal learning style. Because of this policy, homework is *not* counted toward your grade.

However, if circumstances warrant, I reserve the right to check your homework at any time, and possibly assign you some “individualized instruction.”

Activities

These are miscellaneous assignments that you will hand in for points. One method is that they will be assigned toward the end of the week, and will be due Tuesday at the start of class (10 pts). Another method is to have an in-class Activity (Part A, 5 pts) followed by a weekend Activity (Part B, 5 pts).

Quizzes

A quiz will be given at the end of every class meeting (except for the four test days). The quizzes cover primarily the previous lecture, and quite possibly previous quizzes. If a quiz does cover earlier material, it will be made clear in the Homework part of the Schedule. I will drop the four lowest quizzes, but neither of the last two. Assume that there will be NO make-ups on quizzes.



Tests

There will be **four** major tests. The tests will contain some T/F, multiple-choice, and matching questions, but mostly “*show your work*” questions (with partial credit quite possible).



Our class time in Stats is three hours per session, which I believe is too long for either a review or a test, so on review days and test days the first 60 to 90 minutes will be spent covering new material (which is not on the test).

Letter Grades

A – 90% and up

B – 80% to 89%

C – 70% to 79%

D – 60% to 69%

F – below 60%

*Live as if you were to
die tomorrow.*

*Learn as if you were to
live forever.*

Mahatma Gandhi

Academic Dishonesty

Click the following link: [*Academic Integrity Policy*](#)

That document should answer all your questions regarding this issue.



Please note that — if you are caught cheating — the consequences I impose will be as harsh as the DVC policy allows.

Student Learning Outcomes and Course Content

Course Outline

Course Content

In lecture and laboratory



1. Descriptive statistics
 1. Discrete and continuous data and its organization
 2. Levels/scales of measurement
 3. Histograms and charts
 4. Measures of central tendency (mean, median, mode)
 5. Measures of dispersion (range, variance, standard deviation)
 6. Measures of location (quartiles and percentiles)
 7. Linear regression models and coefficients of correlation and determination
2. Design of experiments
 1. Sampling techniques; observational studies and controlled experiments
 2. Sampling vs. non-sampling errors
3. Basic probability
 1. Sample spaces and definition of probability
 2. Addition rule
 3. Complement rule
 4. Multiplication rule
 5. Conditional probability laws
4. Sampling
 1. Probability histograms and the normal curve
 2. Random variables and expected value
 3. Binomial distribution (including mean and variance)
 4. (Optional) Poisson distribution
 5. Distributions involving the sample means and sample proportions
 6. The Central Limit Theorem
 7. Determining normality
5. Estimation and inference
 1. Confidence intervals and hypothesis testing (for one and two populations) using the normal distribution (including p-values)

2. Confidence intervals and hypothesis testing using student's t-distribution
3. Tests of independence and goodness of fit using the chi-square distribution
4. Analysis of Variance (ANOVA)
6. Use of graphing calculators or statistical software
7. Topics from prealgebra and beginning algebra
 1. Order of operations
 2. Performing arithmetic operations on signed numbers, including fractions and decimals
 3. Graphing signed numbers, including fractions, decimals, and percentages on a number line
 4. Graphing in a Cartesian Coordinate System
 5. Significant figures and rounding
 6. Scientific notation
 7. Equivalent forms for proportions, including fractions, decimals, and percentages
8. Topics from intermediate algebra
 1. Evaluating expressions
 2. Scatterplots
 3. Solving linear equations
 4. Manipulating formulas to isolate a specified variable
 5. Linear functions, slope as a constant rate of change, graphing, interpreting slope, and y-intercept in context
 6. Interval notation and compound inequalities, in reference to confidence intervals and hypothesis test claims
9. Contingency tables: marginal and conditional probabilities
10. Measures of center and associated measures of spread: mean, variance, standard deviation, median, quartiles, percentiles

"Wisdom
begins
in wonder."

Socrates

