

Alfred State College

Statistical Methods

Instructor: Mr. Zachary Smith
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Office Hours: By appointment
Office: RM 1111

MATH 2124
College Credits: 4
Days: M, T, W, R, F
Contact Time: 225 minutes per week
Pre-requisite: Algebra 2

Textbook: Elementary Statistics by Triola (10th edition)

General Information

This class is being offered at Genessee Valley Central School through Alfred State College. Students can receive college credits by successful completion of the course and accepted registration from Alfred State. Students should have completed Algebra 2 as a pre-requisite to this class and have a working knowledge of the TI-83+ and/or TI-84+ calculator. This is a college course and will be treated as one. Students will be expected to keep up with the work assigned and handle the quick pace of the class. Students will need to read and utilize the textbook as resource in this class. Mr. Smith is available for extra help by appointment during select periods, before or after school.

Student Learning Objectives (as taken from Alfred State)

At the end of the course the student will be able to do the following:

- 1) Calculate the measures of center, spread, and position of samples from a population.
- 2) Calculate the line of best fit to a set of paired data points.
- 3) Calculate probabilities using Venn diagrams, contingency tables, and the addition rule for mutually exclusive events.
- 4) Calculate conditional probabilities.
- 5) Construct valid probability distributions and calculate the mean and standard deviation of a probability distribution.
- 6) Calculate the mean and standard deviation of a binomial probability distribution.
- 7) Calculate the mean and standard deviation of a normal probability distribution.
- 8) Construct confidence intervals for the mean of a population and for the proportion of a population having desired quality from the data resulting from a sample of the population.

- 9) Construct and analyze hypothesis tests about the mean of a population and for the proportion of a population having a desired quality from the data resulting from a sample of the population.

Grading;

Your course grade will be determined based on approximately 700 total points. The grade will be the percentage of points earned out of the total points. The breakdown is approximately as follows.

- Exams (4) 200 points total
- Problem Set HW (5) 200 points total
- Semi Weekly Quiz (10) 200 points total
- Final Exam 100 points

Grade.Reporting;

- The grade reported on each student's report card will be the grade earned plus 5 points (as per Genesee Valle Central School Policy relating to college courses).
- The grade sent to Alfred State will be a letter grade based on the following scale:

Grade.earned.(not.curved)	Grade.earned.(curved)	Grade.sent.to.Alfred.State
90-100	95-105	A
87-89	92-94	B+
80-86	85-91	B
77-79	82-84	C+
70-76	75-81	C
67-69	72-74	D+
60-66	65-71	D
0-59	0-64	F

Exams;

There will be four in-class exams which will be composed of approximately three units each. Each exam is worth 50 points. If you are absent from school, it is expected that you will take the exam the first day you are back in school during a study hall, before or after school. You are responsible for making these arrangements. If it is not done, a zero will be recorded for that grade. Any sharing of information during an exam, electronically or otherwise, will result in a zero for all parties involved.

Weekly.Homework;

Every few weeks a problem set will be assigned. Each assignment is worth 25 points. It is due the day stated by 3:00 PM. An absence will not delay the due date. All homework assignments must be received by Mr. Smith on or before the due date. A 10% penalty is assessed per day for all late work (this includes weekends). Assignments may be submitted electronically. All homework must be neat, organized and easily read. All answers must be accompanied by work or an explanation. A simple numerical answer is insufficient.

Semi_Weekly.Quizzes

The weekly quiz is given on weeks when there is no exam. Each is worth 20 points. They should take no more than 15 minutes at the end of that class. Students will not be allowed to stay longer in that class to finish.

Attendance

Attendance will be taken every day and is essential for success in this class. You are required to set up a time to meet and go over the material with Mr. Smith. This should be in a timely manner, Mr. Smith has the right to move or not move assignment dates. Excessive absences may result in dismissal from this class.

Statistics Timeline Fall 2025

Week of	Topics	Assignments due or on last day of the week		
		Tests	Quiz	HW
<i>September 1st</i>	Intro			
<i>September 8th</i>	CVDOT		1	
<i>September 15th</i>	Rev/Test 1	Test 1		1
<i>September 22nd</i>	Probability: Basics, Mult, Cond		2	
<i>September 29th</i>	Probability Distributions		3	
<i>October 6th</i>	Poisson, Normal		4	
<i>October 13th</i>	Normal Distribution			2
<i>October 20th</i>	Rev/Test 2	Test 2		
<i>October 27th</i>	Normality		5	
<i>November 3rd</i>	Estimating prop and mean		6	
<i>November 10th</i>	Estimating Variance		7	
<i>November 17th</i>	Hypothesis Testing			3
<i>November 24th</i>	Rev/Test	Test 3		
<i>December 1st</i>	Inferences from Two Samples/Correlation		8	
<i>December 8th</i>	Regression/Goodness of Fit		9	4
<i>December 15th</i>	Rev/Test	Test 4		
<i>December 22nd</i>	Winter Break			
<i>December 29th</i>	Winter Break			
<i>January 5th</i>	Contingency/ Anova		10	
<i>January 12th</i>	Make Up/Review for Final			5
<i>January 19th</i>	Final Exam	Final (TBA)		

Expectations;

See the attached sheet with expectations.

Fall 2025 Statistics Expectations

Student Expectations:

The student is expected to:

- Be responsible for their learning.
- Be in class on time.
- To do all assignments.
- Put in their best effort.
- Ask questions.
- Seek additional help when needed.
- Follow all classroom and district rules.
- Not be distracted by their iPad.
- Cell phones, air pods/headphones and smart watches will be left in lockers.
- Help keep a positive learning environment.

Teacher Expectations:

The teacher is expected to:

- Provide efficient and reliable instruction.
- Grade in a timely manner and update Power School weekly.
- Correct behaviors that are inappropriate for the classroom setting.
- Provide additional help or instruction when needed.
- Be in communication with parent/guardian.
- Be professional.
- Help keep a positive learning environment.

Parent/Guardian Expectations:

The parent-guardian is expected to:

- Be supportive of the student's learning.
- Work out any issues that arise with the teacher and/or student.
- Be in communication with the teacher.
- Help keep a positive learning environment.

Signatures:

Student's: _____

Teacher's: _____

Parent's: _____

Email: _____

Phone Number: _____