



<b>Course Name</b>	<b>A.P. Statistics</b>
<b>Course Description</b>	<p>AP Statistics may look and feel different than other AP courses in that it will be taught in an explorative and interactive manner. Students will be actively constructing their own understanding of the material through discovery and practice. Students will work in interactive groups in the classroom to discover the mathematics. When working in peer groups students are forced to communicate how they will approach a problem, what results they obtain, how they obtained them, and finally how they can be interpreted. These interactive, cooperative learning skills are highly valuable both in college and in life. Structuring a learning environment that requires communication reinforces the use of correct vocabulary and provides greater depth of understanding.</p> <p>Individual concepts and skills will be learned through daily classwork and homework assignments. Integration of those skills and how they connect to other concepts they have previously learned will be expected on activities, projects and exams. These connections will need to be demonstrated in both written and oral assessments. Understanding how to “crunch the numbers” is only a portion of the learning required. Being able to provide justification to your approach and results is just as important. Students must be able to defend the choices they make in designing experiments, and in analyzing their results. Justification as to why their conclusions are valid and significant is always required – simply writing down the answer will not be good enough in this class.</p>

Unit of Study	Grade Level Expectations/Content Standards	Approximate Time Spent	Targeted Date of Assessment
Chapter 1 – Exploring Data	Summarize, represent, and interpret data on a single count or measurement variable	10 days	1 <sup>st</sup> Semester
Chapter 2 – Modeling Distributions of Data	Summarize, represent, and interpret data on two categorical and quantitative variables.	9 days	1 <sup>st</sup> Semester
<u>Chapter 3 – Describing Relationships</u>	Interpret linear models.	11 days	1 <sup>st</sup> Semester
Chapter 4 – Designing Studies	Understand and evaluate random processes underlying statistical experiments.	12 days	1 <sup>st</sup> Semester
Chapter 5 – Probability: What Are the Chances?	Understand independence and conditional probability and use them to interpret data. Use the rules of probability to compute probabilities of compound events in a uniform probability model.	10 days	1 <sup>st</sup> Semester
Chapter 6 – Random Variables	Calculate expected values and use them to solve problems. Use probability to evaluate outcomes of decisions.	12 days	1 <sup>st</sup> Semester
Chapter 7 – Sampling Distributions	Understand statistics as a process for making inferences about population parameters based on a random sample from that population.	9 days	2 <sup>nd</sup> Semester
Chapter 8 – Estimating with Confidence	Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling.	11 days	2 <sup>nd</sup> Semester
Chapter 9 – Testing a claim	Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant.	11 days	2 <sup>nd</sup> Semester



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Chapter 10 – Comparing Two Populations or Groups	Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant.	12 days	2 <sup>nd</sup> Semester
Chapter 11 – Inference for Distributions of Categorical Data	Summarize, represent, and interpret data on two categorical variables.	8 days	2 <sup>nd</sup> Semester
Chapter 12 – More about Regression	Summarize, represent, and interpret data on two quantitative variables.	8 days	2 <sup>nd</sup> Semester

Assessment/Practice Proficiency Levels	
<b>4</b>	Advanced Understanding of the Standard
<b>3</b>	Meets the Standard
<b>2</b>	Approaches the Standard
<b>1</b>	Does not Meet the Standard
<b>M</b>	Failure to display enough knowledge to warrant a score

Course Grade Scale	
<b>A</b>	89.5 - 100
<b>B</b>	79.5 – 89.4
<b>C</b>	69.5 – 79.4
<b>D</b>	59.5 – 69.4
<b>F</b>	0 – 59.4

Grade Reporting Criteria	Weights - Semester 1	Weights – Semester 2
GRC #1: Exploring data: describing patterns and departures from patterns	<b>30%</b>	<b>0%</b>
GRC #2: Sampling and experimentation: planning and conducting a study	<b>10%</b>	<b>0%</b>
GRC #3: Anticipating patterns: exploring random phenomena using probability and simulation	<b>15%</b>	<b>0%</b>
GRC #4: Statistical inference: estimating population parameters and testing hypotheses	<b>5%</b>	<b>60%</b>
GRC #5: Multiple Choice	<b>20%</b>	<b>20%</b>
GRC #6: Procedural Fluency	<b>10%</b>	<b>10%</b>
GRC #7: Practice	<b>10%</b>	<b>10%</b>

**Grades are based on achievement of Content Standards and Grade Level Expectations.**  
**\*Weekly progress grades are posted at <https://ic.adasm12.org/campus/portal/adams12.isp>**

### General Expectations

- Grades are based upon the demonstration of proficiency on units associated within specific grade reporting criteria.
- **Assessment:** Assessments are a means to determine a student’s mastery and understanding of information, skills, concepts, or processes.
- **Practice:** Practice includes opportunities for students to receive clear, specific, and timely feedback as they are developing knowledge and skills, prior to Assessments. Practice may be scored as satisfactory (S), incomplete (I), unsatisfactory (U) or missing (M).
- **Procedural Fluency:** Is a measurement of the basic skills necessary for success in this class.
- Assessments will be graded based on teacher/district/state rubrics.
- **Students are held to the Academic Integrity Policy for Mountain Range High School**

### Class Expectations

**Missing or incomplete assignments/assessments for this course:** Superintendent Policies 6280 Homework and 6281 Make-Up Work will be followed for this course. They state that it is the student’s responsibility to request and obtain missing work. When a student has an excused absence, the student has the same number of days they were absent plus one day to make up assignments. Students who are unexcused may not be able to receive feedback from practice prior to required assessments.

**Plagiarism/Cheating:** Plagiarism means to present, as one’s own, the work, writing, words, ideas, or computer information of someone else. These sources could be either published or unpublished. Cheating is supplying, receiving or using inappropriate devices to improve performance on an assignment or assessment. Students who engage in plagiarism or cheating will be held to the Academic Integrity Policy for Mountain Range High School.