



EARLY ENROLLMENT PROGRAM
RHODE ISLAND COLLEGE AND TIMES² STEM ACADEMY
MATH 240: STATISTICAL METHODS (4 CREDITS)
INSTRUCTOR: Mrs. Childress
2017-2018

EMAIL:	nchildress@times2.org
ROOM:	202
OFFICE HOURS:	TBD

COURSE DESCRIPTION/OVERVIEW:

This course is an introduction to probability and statistics. It covers methods used in the collection, presentation, analysis, and interpretation of data. Topics include frequency distributions, measures of central tendency and dispersion, probability, and sampling.

Upon successful completion of the course, students will be able to

- Demonstrate understanding of sampling techniques, experimental design, mean and standard deviation, probability, normal probability distribution, confidence intervals, and hypothesis testing.
- Study basic statistical, analytical methods and employ them on assessments, projects, and activities.
- Recognize the use and misuse of statistics in everyday life.
- Visualize data using graphical and numerical techniques.
- Explore the concepts of basic probability theory in the decision making process.
- Develop skills in interpreting results and writing conclusions in context.

TEXTBOOK/MATERIALS:

Elementary Statistics: Picturing the World 6th Edition, Larson and Farber, 2015, Pearson
TI-84 Plus Texas Instrument Graphics Calculator

COURSE REQUIREMENTS:

Students are required to have successfully completed Geometry and Algebra II.

As this is a college level course, students are expected to be academically mature and strictly follow the guidelines in the student handbook.

Students are required to keep a notebook/binder which should include all class notes, examples, handouts, and all assignments. Students should know how to use a graphing calculator. Students are responsible for all assignments, tests, quizzes, group activities, projects and performance assessments. Make up procedures outlined below will be strictly enforced. Students in this class are strongly advised to be present for all classes.



In class, as students participate in class discussions and make presentations in order to meet course learning targets, students will work independently, collaboratively, and as an entire class. Students will need to be able to explain concepts mathematically, as well as demonstrate understanding of the fundamental concepts of statistics, through homework problems, in-class activities, tests, and extended projects. In order to provide different and unique ways of assessing and presenting information/topics, various activities and projects will be integrated into the curriculum. In addition to several smaller projects, students will complete a final project. This project will allow students to demonstrate and integrate understanding of all aspects of the statistical process and vocabulary.

HOMEWORK:

Homework is a very important component of this class. When doing homework, it is best to focus on the process of getting the answer more than just getting the answer. Please seek extra help as soon as it is needed. Forming study groups that meet regularly is strongly encouraged.

Homework will not be collected unless stated beforehand. Therefore, it is imperative for students to check answers as will be discussed on the first day of class.

Make-Up Work – due to absences:

It is the student’s responsibility to acquire and make up any missing work within three days of the absence. Tests and quizzes are to be made up the day of return to class with a written excuse.

Assignments due to no completion will receive a grade of zero.

GRADING POLICY:

- Homework 25% (Includes classwork.)
 - Quizzes 25%
 - Tests 40%
 - Projects 10%
 - Exams 20% (grades listed above count as 80% of overall grade)
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$$(Q1 = 20\%) + (Q2 = 20\%) + (Q3 = 20\%) + (Q4 = 20\%) + (\text{Mid-Term Exam} = 10\%) + (\text{Final Exam} = 10\%) = 100\%$$



COURSE SYLLABUS

TENTATIVE COURSE CALENDAR:

DATE	SECTION	TOPIC(S)
Q1 (45 days)		
Unit 1		DESCRIPTIVE STATISTICS
9/5 1 day		Introduction/Collect Summer Math Packet/Pass out textbooks
9/6 – 9/20 11 days	Chapter 1	Introduction to Statistics
9/25 – 10/16 15 days	Chapter 2	Descriptive Statistics
10/17 – 10/23 5 days	Review	Unit 1 Test
Unit 2		PROBABILITY AND PROBABILITY DISTRIBUTIONS
10/24 – 11/9 13 days	Chapter 3	Probability
Q2 (44 days)		
11/13 – 11/27 9 days	Chapter 4	Discrete Probability Distributions
11/28 – 12/14 13 days	Chapter 5	Normal Probability Distributions
12/15 – 12/21 5 days	Review	Unit 2 Test
1/3 – 1/9 5 days	Review	Mid-Term Exam: Units 1 and 2
1/10 – 1/26 12 days	Project	Extended Project
Q3 (47 days)		
Unit 3		STATISTICAL INFERENCE
1/29 – 2/15 14 days	Chapter 6	Confidence Intervals
2/16 – 3/12 15 days	Chapter 7	Hypothesis Testing with One Sample
3/13 – 3/29 13 days	Chapter 8	Hypothesis Testing with Two Samples
4/2 – 4/6 5 days	Review	Unit 3 Test
Q4 (44 days)		
Unit 4		MORE STATISTICAL INFERENCE
4/9 – 4/30 11 days	Chapter 9	Correlation and Regression
5/1 – 5/14 10 days	Chapter 10	Chi-Square Tests and the F-Distribution
5/15 – 5/21 5 days	Review	Unit 4 Test
5/22 – 5/29 5 days	Review	Final Exam: Units 3 and 4
5/30 – 6/8 8 days (tentative)	Project	Final Extended Project
6/11 – 6/15 5 days	TBD	End of Year