



EAST TENNESSEE STATE
UNIVERSITY

College of Arts and Sciences
Department of Math and Statistics

MATH 1530 Probability and Statistics

Course Description & Materials

Prerequisites: Two years of high school algebra.

Presents descriptive statistics and its relevance, including probability, experimentation, measurement, sampling and surveys, informal statistical inference, and hypothesis testing are included.

Required Materials

TEXTBOOK: The Basic Practice of Statistics, by David S. Moore, William Notz, Michael Fligner 8th Ed., Freeman, 2018. ISBN 9781319226145.

TOPICS: Chapters 1, 2, 3, 4, 5, 6, 8, 9, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 25

Topics include:

- Definitions and Producing Data
- Graphical Displays and Descriptive Statistics
- Simple Linear Regression
- Probability
- Normal Theory Tests and Confidence Intervals
- Chi-Square Tests

TECHNOLOGY: A calculator that does basic math is sufficient. MINITAB, a statistical softwarepackage, will be introduced and used in the class. Minitab, a statistical software package, will be introduced and used in the class. Make sure that you can access Minitab from AWS Appstream 2.0 via <https://etsu.awsapps.com/start>. Please refer to D2L for information and steps on accessing Minitab. Most computers on the ETSU campus have Minitab loaded on them. Mintab18 is available using GoldLab or any university computer lab.

Additional Information

TEXTBOOK

GOALS & OBJECTIVES: To develop a basic understanding of probability and statistics and how they relate to the world around us.

LEARNING OUTCOMES: Upon successful completion of this course, students should be able to

- Recall basic statistical terms with the ability to express them in the correct context
- Employ appropriate methods for collecting data in a laboratory experiment
- Apply basic concepts of probability including properties of sampling distributions, the normal distribution, the binomial distribution, and the chi-square distribution.
- Select and apply appropriate descriptive and inferential statistical methods for univariate and bivariate data
- Use statistical software to apply descriptive and inferential statistical analyses
- Effectively explain findings from graphical displays, descriptive statistics, and inferential statistical analyses

GRADING: The course grade will be based on learning curve assignments, homework, capstone assignment, and exams.

LEARNING CURVE ASSIGNMENTS: There will be 19 assignments (one for each chapter) administered through Sapling Learning. They are listed under Learning Curve assignments. You will earn 2.5 points for each assignment that you reach the target score (you will see a score of 5/5 in the Sapling Learning gradebook) and you will earn 2.5 points for completing all the assignments. These learning curve assignments must be completed by Sunday May 3, 2020 at 11:59 p.m.

HOMEWORKS: The homework will be assigned in the class prior to the class that it is due. There will be between 5 to 10 homework assignments. The homework assignments will be problems out of the textbook. You have until I return the graded homework to turn it in. Usually this is the next class period. **THERE WILL BE NO MAKEUP HOMEWORK ASSIGNMENTS.**

CAPSTONE ASSIGNMENT: This will be a Minitab assignment given near the end of the semester. There will also be a class survey associated with the project. Due date to be announced.

EXAMS: There will be in-class 2 exams. The exams will be announced a week prior to being given.

FINAL: A comprehensive departmental final examination will be given. It will be given Thursday May 7, 2020 from 6:00 p.m. to 8:00 p.m.

**** All students MUST have an official ETSU ID at test. ****

SECTION 990 (online): Information on homework, the capstone assignment, and exams is in D2L under Content/Syllabus/Section 990 Course Information.

Your grade will be determined as follows:

LEARNING CURVE ASSIGNMENTS:	50 points
HOMEWORKS:	250 points
EXAMS:	400 points
CAPSTONE ASSIGNMENT:	100 points
FINAL:	200 points

Letter grades will then be assigned according to the following:

950-1000 A 880-899 B+ 800-819 B- 720-779 C 650-699 D+

900-949 A- 820-879 B 780-799 C+ 700-719 C- 600-649 D
Less than 600 F

For extremely low scores on the Final (less than 80 points or 40%), the student will be assigned a semester grade of F.

DEPARTMENTAL ATTENDANCE REQUIREMENTS:

The Department of Mathematics strongly advises students to attend all mathematics classes when physically able. Because there is a positive correlation between attendance and student success in mathematics, the following guidelines will be used in all mathematics courses. Regardless of the reasons for the absences, should a student exceed the following limits, the instructor has the authority to assign a grade of FN or F. This policy takes precedence over the grade assignment policy for MATH 1710 and MATH 1530:

- 7 absences for classes scheduled for MWF.
- 5 absences for classes scheduled for TR classes or any other 2 days/nights perweek.
- 3 absences for classes scheduled for one evening per week.
- 9 absences for all daytime sections of a 4-hour course

BONUS FOR GOOD ATTENDANCE (after the first week)

50 points will be added to the above total before the grade is assigned. However the 50 points may be decreased. After the first week, the bonus will be reduced by 10 points for each absence.

ITV CLASS

This class is being digitally recorded. The instructions for watching the recordings are in D2L in the box titled Zoom Web Conference.

TUTORING: CFAA Sherrod Library(room 144) M-Th 9-8 F 9-4 Sat 11-5 Sun 2-8
220 McCune-Welch to be announced

ITS HELP: 439-4648

SUGGESTED EXERCISES:

The suggested exercises are in D2L under Content/Syllabus.