

Syllabus For Math 1530
Fall 2020 PROBABILITY AND STATISTICS

INSTRUCTORS: JOHN HICKS

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OFFICE HOURS: Available by Email or Zoom Chat.

TEXT: Basic Practice of Statistics by David S. Moore, William I. Notz, and Mickhael A. Fligner, 8th Edition SaplingPlus W.H. Freeman

GOALS & OBJECTIVES FOR THIS COURSE:

To develop a basic understanding of probability and statistics and how they relate to the world around us. Topics are illustrated by using current newspaper, magazine articles, and the world wide web.

See the **Chapter Summary** sections at the end of each chapter or the course Web page; these, with appropriate deletions, serve as specific course objectives. In addition, the following topics will be incorporated into the course (See: Utts, J. (2003), "What Educated Citizens Should Know About Statistics and Probability," *The American Statistician*, 57, 74-79.) Seven topics that she lists that are important are the following

1. When can it be concluded that a relationship is one of cause and effect and when it cannot.
2. The difference between statistical significance and practical significance, especially when using large sample sizes.
3. The difference between finding "no effect" or "no difference" and finding no statistically significant effect or difference, especially when using small sample sizes.
4. Common sources of bias in surveys and experiments.
5. The idea of coincidences and seemingly rare events are not uncommon because there are so many possibilities.
6. Conditional probability in one direction is confused with the conditional probability in the other direction.

7. Understanding that variability is natural, and that “normal” is not the same as “average.”

Web sites for course resources

- <http://math.etsu.edu/1530>
In which to find supplemental material and practice problems
- D2L: <http://elearn.etsu.edu>
For notes posted daily and to find all assignments and quizzes of the like
- AWS App Stream 2.0: <https://etsu.awsapps.com/start>
Here you can find the software minitab for free use to enrolled students at ETSU. It requires the same username and password as your D2L site. A description of Minitab is listed in the next section
- Website associated with textbook: <http://www.saplinglearning.com/login>

TECHNOLOGY REQUIRED OF STUDENTS:

- MINITAB, a statistical software package, will be introduced and used in the class. It is a spread sheet format software to do statistical analysis with. It will be used quite frequently through the course.
- A calculator that does basic math is sufficient.

PREREQUISITE:

Two years of high school algebra

TUTORING:

Please never hesitate to send me an email for any questions you may have and I will respond to you as quickly as possible. I will post notes on D2L for each chapter and have videos posted as well to help guide you.

- **Center for Academic Achievement (CFAA):** Provides free individual tutoring seven days a week. The tutoring for Fall 2020 will be on-line. Visit their website (<http://www.etsu.edu/uged/cfaa/default.aspx>) for instructions about how to schedule and participate in an on-line tutoring session. For assistance you can contact their front desk on the first floor of the Sherrod Library in room 144 via phone (423-439-7111) or email (learning@etsu.edu).
- Please never hesitate to send me an email for any questions you may have and I will respond to you as quickly as possible or stop by office hours listed above. Please check with services that may apply to you in terms of tutoring such as disability services, athletics, ect., .

COVID Safety

All members of the ETSU community, including visitors, are required to wear face coverings in public spaces. Read COVID-19 Policy on Face Coverings for details. Wearing a mask that covers your nose and mouth communicates the care and respect you have for yourself, the care and respect you have for those you live with, and the care and respect you have for other members of this community. The best evidence we have, from public health professionals, is that wearing masks is one of the best ways to protect against the spread of COVID-19 and other airborne illnesses. For more information on ETSU's COVID procedures and information, please visit <https://www.etsu.edu/coronavirus/>.

Text Package

- CP ETSU Basic Practice of Statistics, by David S. Moore, William Notz, and Michael Fligner, 8th Ed., Freeman.
- This package contains SaplingPlus which includes standard interactive ebook, extensive resources and is available via at <https://www.saplinglearning.com/ibiscms/login/>

Evaluation for the Course

The course will be based out of 1000 points summarized below.

- A Comprehensive departmental final examination will be administered. A grade of 40% must be met on this final. Failure to meet this requirement will constitute an automatic Failing Grade for the Course. The Final will count as 200 points for your final grade.
- Three chapter tests worth 100 points a piece. See Schedule for dates.
- A Capstone assignment that will be worth 100 points, where you will be asked to demonstrate your knowledge of the Minitab and how it applies to the material covered in the course. I will give you examples and labs to help with this program.
- Quizzes through Learning Curve found through Sapling Plus for 50 points. Each quiz is worth approximately 2.5 points and there should be no time commitment and unlimited attempts. Certain Chapters will be due by certain dates to coincide with the Chapter tests.
- A total of 350 points will be determined via assigned homework and quizzes. There will be 5 homework assignments worth 50 points a piece and a series of 10 quizzes worth 10 points a piece found on SaplingPlus.

Grading Scale for the Course

The grade will be based on a possible 1000 points (see below))

A 950-1000	A- 900-949	B+ 880-899	B 820-879
B- 800-819	C+ 780-799	C 720-779	C- 700-719
D+ 650-699	D 600-649	F Less Than 600	