Statistical Methods II

MATH 536-50-11586 SPRING 2021
08:00a – 08:50a M & W & F
Synchronous – **Zoom** – https://millersville.zoom.us/j/92642475454

Anyone who stops learning is old, whether at twenty or eighty.
Anyone who keeps learning stays young.
The greatest thing in life is to keep your mind young.
Henry Ford

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Office Hours:	* Tuesday 08:30a – 10:30a **Zoom**	**WWW:** http://sites.millersville.edu/krobinson/536/536.html

Office Hours:
* Tuesday 08:30a – 10:30a **Zoom**
* Wednesday 11:00a – 12:00p **Zoom**
* Thursday 08:30a – 10:30a **Zoom**
* https://millersville.zoom.us/j/400438821
* by appointment

Course Description: Prerequisite: MATH 535

Continuation and extension of statistical methods introduced in Statistical Methods I (MATH 535). Survey of statistical methods used in research, education, behavioral science and biomedical applications. Experimental designs and statistical techniques discussed regarding advantages, disadvantages, sampling problems and analysis including Regression and Analysis of Variance. Statistical software packages such as SAS, Minitab, R, … will be utilized throughout the course as well.

Statistics is concerned with finding out about the real world by collecting and then making sense of data and plays a crucial role in the process of investigation. Questions about the world are encountered everyday in areas from Anatomy … Engineering … Politics … Zoology. Statistical thinking and training involve DATA collection, DATA analysis, and DATA interpretation in the face of uncertainty.

Goals/Objectives:
To provide advance knowledge of statistical methods and statistical thinking resulting in statistical understanding.
It is hoped that the student will gain competence in statistical techniques to succeed in data analysis and interpretation.

Upon completion of the course, the student will be able to

A. apply the knowledge of the theory and methods of linear statistical models.
B. determine appropriate context of application and be able to construct an appropriate experimental design for statistical problems.
C. conduct the process of modeling and solving problems using linear statistical models.
D. utilize statistical software and interpret output from this type of computer package.

Texts:

Ott/Longnecker	An Intro to Statistical Methods & Data Analysis 6th	ISBN 9780495017585	Brooks/Cole

Activities/Attendance: Check WWW site regularly for NEWS/UPDATES. Check your Millersville email frequently!!!
Consistent attendance is strongly recommended. The course is based mainly upon the lectures. The student is responsible for obtaining all material missed when absent. Attendance is expected at all class meetings. Much of the material will be hands-on experiences through the class "activities" and is not suitable for make-up or doing on one's own. If a student is absent, he or she is responsible for the missed activities, obtaining notes, and completing assignments or reports on time.

Why are the mean, median, and mode like a valuable piece of real estate?
LOCATION! LOCATION! LOCATION!

All students of statistics just remember that measures of central tendency are all POINTS on the # scale as opposed to measures of variability which are all DISTANCES on the # scale. Understand this maxim and you will always know where you are LOCATED!

It is proven that the celebration of birthdays is healthy.
Statistics show that those people who celebrate the most birthdays become the oldest.

Knock! Knock! --- Who's there? --- Willie Boris. --- Willie Boris who? --- Willie Boris with his stat lecture today?

Making A Name For Yourself – aka Grading:

Your course grade will be based on your performance … out of the 600 points possible in the course.
The following grading scale is anticipated …

A	B	C	D	F
Advanced performance	**Basic** performance	**Concern** about performance	**Deficient** performance	**Seriously Deficient** performance

This corresponds to a scale of approximately -- *A: 90%, B: 80%, C: 70%, D: 60%.*
A plus or minus grade may be given if your total falls just below one of the above cut-offs.

course performance will be distributed as follows:
Exams 1, 2 (100 points each)   *--- 200 points   1/3*
Assignments – scaled to 300 points   *--- 300 points   1/2*
Comprehensive Final Exam   *--- 100 points   1/6*

MU Incomplete Policy: An incomplete (I) grade is used to denote course work that is unfinished due to circumstances beyond a student's control, such as personal illness, accident, or death in the family. It is a privilege granted by the instructor because of circumstances, not a right to be expected by the student. The instructor may assign an incomplete (I) grade if the student is passing the course. A student must petition the course instructor to assign an incomplete grade.

Study Hints:

Before attending class, read, read, read … . – **Synthesizing**.
Always attend class, and actively participate in what is going on, doing your part as best as you can.
Work all the homework problems. Get involved with the course in order to learn.
Review the material at least once a week.
If you are having difficulty with the course, get help immediately! **Make use of office hours.**
      Come with a list of questions and/or homework problems that you were unable to work.

Encouragement:

This course is about the application of statistics and interpreting data. Please come see me if you are having difficulty.