Math 231 Mathematical Statistics I Fall 2015

Class Meeting: MWF 10:20-11:30 PPHAC 101
Instructor: Fred Schultheis
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Office Location: PPHAC 218
Office Hours: MW 1:30-2:30 pm, T 2:00-3:00 pm, and by appointment.
Required Text: Mathematical Statistics with applications, Wackerly, Mendenhall III, Scheaffer, Seventh Edition, Duxbury Thomson Learning.
Final Exam: Thursday, December 17, 2015.
Course Goals

After completing the course, successful students will be able to apply graphical and numerical approaches to summarizing and characterizing a set of measurements; learn to make transitions between verbal descriptions, symbolic representations, and numerical value of probability; understand a variety of probability distributions and real world situations that give rise to them; understand the connection between probability and statistical inference; understand the basic elements of estimation and statistical inferences; be able to explain clearly, both orally and in writing, how the results of their probability and statistical analysis relate to the context from which they were obtained; understand the influence statistics and mathematics has on society.

Course Topics

Throughout the course, the student will learn to collect, analyze, interpret and present numerical and descriptive data. This is something that is vital in preparing student to make sound professional and personal decisions. Data analysis, inferences, and decision making are situations which probability and statics address. The course will cover chapter 1 through 4 and parts of chapters 6 through 10. The topics to be covered include but are not limited to the following: histograms, measures of central tendency and variability, probability and probability distributions, discrete random variables, continuous random variables, the Central Limit Theorem, point estimators, confidence intervals and an introduction to hypothesis testing.

Homework

As you know math is not a spectator sport. You need to practice what you learn. There will be both graded and ungraded homework assignments. First attempt at homework should be done on your own. If you still need assistance you may ask for a hint from a classmate or work on the problem together. However acquiring an entire solution from a classmate in not acceptable.

Ungraded homework will be assigned daily and should be completed by the next class meeting.

Graded homework will be assigned daily and collected at the beginning of class on the Wednesday of the week after it is assigned. Homework is to be written up individually. Any collaboration must be properly documented. If two or more homework sets look similar, no points will be awarded for the entire homework set (with no warning). Please see the section on academic honesty

policy for more information. You are always welcome to come to office hours to see the instructor. Late homework will not be accepted for a grade. Homework should be neatly written on stapled paper.

– Homework should be neat, legible and on clean paper. Please DO NOT include your scratch paper. Your final version of your homework should NOT be your first draft.

– You should present your homework in the order they are assigned. It should be clear where one problem ends and the next begins.

– You must show your work. Just supplying an answer will receive no credit. You will be graded on your understanding of the tools to SOLVE a problem, not the final answer.

– Your name and date should be on the top of the first page. If there are multiple pages, they should be stapled.

– Homework is to be turned in at the beginning of class on the due date. No late homework will be accepted for a grade.

Quiz

I reserve the right to give quizzes if I feel it is necessary. Quizzes may be given at any time. Quizzes can not be made up.

Grading

Your final grade will be based on weekly graded quizzes (0-100), homework (about 200 points), 3 hourly exams (100 points each), a group project (100 points), and a comprehensive final exam (175-200 points). Exams may be in class, take home, or a combination of the two. The following grading scale is used for assigning your final grade.

		$86 - 89$	$B+$	$76 - 79$	$C+$	$66 - 69$	$D+$	≤ 59	F
$93 - 100$	A	$83 - 85$	B	$73 - 75$	C	$63 - 65$	D		
$90 - 92$	$A-$	$80 - 82$	$B-$	$70 - 72$	$C-$	$60 - 62$	$D-$		

Attendance

Class attendance is strongly recommended. You are responsible for all work covered in class and all assignments, even if absent from class. If you must miss more than one class due to illness or emergency, you should notify the instructor. **There will be no make-up for missed quizzes. Make-up tests are given only in extreme cases. If a student has to miss a test it is the student's responsibility to contact the instructor as early as possible.**

Special Accommodations

Students who wish to request accommodations in this class for a disability should contact Elaine Mara, assistant director of learning services for academic and disability support at the lower level of Monocacy Hall, or by calling 610-861-1401. Accommodations cannot be provided until authorization is received from the Academic Support Center.

ACADEMIC HONESTY POLICY GUIDELINES-MATHEMATICS COURSES

The Mathematics and Computer Science Department supports and is governed by the Academic Honesty Policy of Moravian College as stated in the Moravian College Student Handbook. The following statements will help clarify the policies of members of the Mathematics faculty.

In all homework assignments which are to be graded, you may use your class notes and any books or library sources. When you use the ideas or thoughts of others, however, you must acknowledge the source. **For graded homework assignments, you may not use a solution manual or the help, orally or in written form, of any living being other than your instructor.** If you receive help from anyone other than your instructor or if you fail to reference your sources you will be violating the Academic Honesty Policy of Moravian College. For homework which is not to be graded, if you choose, you may work with your fellow students. You are responsible for understanding and being able to explain the solution of all assigned problems, both graded and ungraded. All in-class or take-home tests and quizzes are to be completed by you alone without the aid of books, study sheets, or formula sheets unless specifically allowed by your instructor for a particular test.

I reserve the right to alter this syllabus at anytime, provided that I inform you in writing of any such alteration.