Math 107 B Elementary Statistics Fall 2009

Class Meeting: MWF 2:35 - 3:45 PPHAC 232

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Office Location: PPHAC 219

Office Hours: Wednesday: 1:00-2:00, Thursday: 9:30-10:30, 1:45-3:45

Text: *Introduction to Statistics and Data Analysis,* Peck, Olsen, and Devore, 2007, Third Edition, Duxbery

Course Goals: After completing the course, successful students will

- have an understanding of how data is collected and gain experience collecting their own data sets
- be able to effectively summarize data using graphical displays, and interpret data and draw conclusions based on graphical displays of data
- understand that the purpose of collecting and analyzing data is to answer questions and make informed decisions
- understand the role of probability and uncertainty in data analysis
- be able to explain clearly, both orally and in writing, how the results of statistical analysis relate to the context from which they were obtained
- learn to think critically about data and the results of data analysis that occur in their everyday lives
- be able to use technology appropriately as a tool for quantitative analysis

Course Topics: Throughout the course, the student will learn to collect, analyze, interpret and present numerical and descriptive data. The topic covered include collecting data sets, graphically methods for describing data, numerical measures for data, normal distributions, regression and correlation, sampling and design of experiments, basic probability theory, parameter estimation, confidence intervals and inference and tests of hypothesis. These topics are chapters 1 through 10 of the text.

Assignments/Assessment: The following will be used to determine the students grade for the course:

- Homework: As you know math is not a spectator sport. You need to practice what you learn. You are expected to spend **at least 8 hours** outside of class working on calculus. Each homework assignment will have two parts: 1) turn in problems and 2) practice problems. The turn in problems will be collected at

the beginning of every class. Homework can be graded on any combination of completeness and correctness. 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. 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. Late homework is anything turned in **after** the start of class. We will have approximately 35 homework/quiz grades at the end of the semester. I understand that there will be days that you can not turn in your homework on time, so the lowest 4 quiz/homework grades will be dropped when computing your final grade. In preparing your homework, you must following the following guidelines. Failure to do so will result in a deduction in points.

  - 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 are grading 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: Quizzes may be given at any time. Quizzes can not be made up.

- Culture Points: Mathematics is everywhere. Culture points are designed for you to experience the breath of math. Please see the handout on Culture Points for more details.

- Project: There will be a small group bivariate data project. More information on the project will be available at a later date.

- Exams: You will have 3 exams and a cumulative final exam. These exams can not be made up except under extreme circumstances with appropriate documentation, for example a doctors note or an accident report. If a student is going to miss an exam for an extenuating circumstance, they must notify the instructor at least one full week before the exam date. If a make up exam is approved, an individual exam will be made, differently from the class exam, and administered on the next available day. The three tests are tentatively scheduled for Monday September 28,

Friday October 30, and Monday November 23. The final exam is scheduled for Wednesday, December 16, 8:30 - 11:30.

Grading: Final determination of your course grade is subject to the discretion of the professor of the course. You are responsible to keep track of your own grade. Grades will be computed as follows:

Homework, Quiz	25%
Exams	12% each
Project	10%
Culture Points	5%
Final Exam	24%

Class Structure: Class will consist of lecture, group work, individual work, and problem sessions. Please come to class prepared with you text, notes, and calculator everyday. Please be prepared to participate in class. Class will start promptly at 2:35, and class will not end prior to 3:45. Please turn off your cell phones prior to the start of class.

Attendance: Attendance will be taken everyday. There is a very strong correlation between attendance and grades. In order to understand the material, you need to be present in class. Group work also requires everyone to participate. I understand that there are circumstances that you must miss class so the lowest 4 homework and quiz grades will be dropped when computing the final grade. Any student missing more than three classes will lose two percentage points off their final grade for each additional absence. Remember that no late homework or quizzes are accepted for any reason.

Technology: A TI83 or 84 will be extensively used throughout the course. If you do not have one of these calculators, please try to borrow one from a friend. Some quizzes you will not be allowed to use your calculator.

Academic Honesty: For graded homework assignments and projects, you may use your class notes and any books or library sources except a solutions manual. Any resources you use must be documented at the top of the homework assignment. As an example if you get help from the Tutor Center for problem 4 only, please write "Help with problem 4 from Tutor Center". No points will be deducted for honestly acknowledging help. However if you do not document any appropriate resource this is considered cheating.

The College academic honesty policy appears in your Student Handbook; you are expected to be familiar with it. The Academic Honesty Policy Guidelines specific to mathematics classes are reiterated at the end of the syllabus. They apply to work done outside of class as well as to in-class quizzes and tests. Please read them carefully. If you are unsure about the propriety of a particular procedure or approach, please consult with your instructor before continuing with the assignment.

Special Accommodations: Students with disabilities who believe that they may need accommodations in their class are encouraged to contact the Learning Services Office as

soon as possible to enhance the likelihood that such accommodations are implemented in a timely fashion.

Academic Honesty Policy Guidelines
Mathematics Courses

The Department of Mathematics and Computer Science supports and is governed by the Academic Honesty Policy of Moravian College as stated in the Moravian College Students 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 thought 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 an individual 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.

Reminders:

- **Office Hours:** If you are having trouble or are just bored, please come to office hours. We can not cover all the material in depth in 70 minutes. Sometimes hearing an explanation another way is all you need. Be a "regular".
- **Homework:** You must do your homework to succeed in class. You should work on calculus EVERY NIGHT. Set a schedule and stick to it and you will succeed.
- **Other Students:** Get to know the other students in class. This will help if you are absent and will help with understanding the material. Set up times during the week outside of class to meet to work through homework and labs.
- **Tutors:** Take advantage of the Math Tutors in PPHAC 238 in the evening. A schedule will be announced around the second week of classes. Often a student can explain things much clearer than an instructor.