

CCMA107 – Statistics
Spring, 2014
Moravian College Comenius center
Wednesdays, 6:30-9:30pm, 112 PPHAC

Instructor Information:

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Blackboard: <http://blackboard.moravian.edu/>

Course Description

Introduction to statistical concepts and methods without the use of calculus. Topics include descriptive statistics, elementary probability, discrete and continuous probability distributions, correlation and regression, estimation, and hypothesis testing

General Description

This introductory course in statistics will provide you with an understanding of the correct and incorrect ways that data can be collected and used to support or to discredit opinions that are held by you or others and to use data effectively to support recommendations that are made in a wide range of human endeavors. You will also gain an understanding of the nature of chance and probability and how these concepts can be combined with collected data to precisely characterize the range of potential outcomes that uncertain events and human decisions may have had in the past or will have in the future. Special emphasis will also be placed on using regression and other statistical techniques in forecasting applications, particularly in business forecasting..

The priority in this course will be on the understanding of and correctly applying the concepts and tools of statistics. Mathematical formulas will frequently be used in this course but will not need to be memorized. The course's overall objective is to make you comfortable with and confident in your ability to recommend, for yourself and future colleagues, the statistics concepts and tools that will best serve you both professionally and as an informed citizen.

Student Learning objectives

In completing this course you will:

Gain an understanding of the effective and ineffective ways that data can be collected, analyzed and displayed.

Be able to calculate and interpret "statistics" that can be used to effectively characterize a whole set of data.

Understand the nature of chance and probability and their roles in analyzing data and drawing conclusions.

Be able to state a precise degree of confidence about a specific range of possible future outcomes.

Learn how to correctly draw or discredit inferences or conclusions by correctly analyzing sample data that you or others have collected.

Understand how measure the degree to which one type of data is associated with or influences another type data.

Be able to establish regression forecast equations, judge their quality as a predictive tool and use them to forecast future results.

Use EXCEL tools and statistical tables to analyze & display data, determine confidence levels & draw inferences.

Program Learning Objectives Related to this Class:

Analyzing: Develops basic skills in analyzing economic, business, social science & natural science data.

Required text, calculator and EXCEL tools

Peck, R., Olsen, C., & Devore, J. *Introduction to Statistics and Data Analysis*, 4th edition, Cengage Learning, 2012 (ISBN 978-0-8400-5490-6).

Student will need to obtain and be able to use a basic pocket calculator, A pocket calculator with additional capability of performing basic statistical functions may be helpful – if the student is willing to familiarize him or herself with the use of such functions on their own. In general, an inexpensive calculator that adds subtracts multiplies, divides and that can square numbers and find the square root of numbers will do. Calculators with a y^x function (i.e. exponential function) capability will also work nicely because squaring and finding square roots is easily done using the y^x function key on such calculators.

We will also be using EXCEL software, particularly for in class problem labs and occasionally for homework assignments.

Students totally unfamiliar with basic EXCEL spreadsheet software may wish to buy a “how to” book or take a half day course somewhere locally in early September. This is not required but if you have never used EXCEL the time investment will speed your progress, once the course gets underway.

Assignments:

Students will achieve the learning objectives for this course through a mix of lectures, weekly in class practice problem reviews/labs, homework problems and two exams.

Grades:

Grading will be done by adding the scores earned for the following course deliverables. The usual 100 point based grade scoring will be observed (e.g. 83-86 points = B, 87-89 = B+, 90-92 = A-, etc.)

2 exams (25 points each)	50 points max
Written homework problems	50 points max
Missed classes (>2 absences)	2 points deducted per absence

Homework assignments will be graded S satisfactory (full credit - submitted on time and reflecting a respectable level of effort) or S-satisfactory minus (incomplete or lacking a respectable level of effort).

Homework assignments turned late (after midnight of the date they were due) receive an S-satisfactory minus or half credit if submitted for > 1 but < 2 classes late Homework submitted two or more classes late without prior permission of the instructor will be graded unsatisfactory (0 points).

Special help options regarding lecture notes and homework problems

If any student finds that the content of a specific part of the week’s lecture or homework assignment remains unclear after the lecture is complete or after the student has examined the homework problem answer sheets provided weekly, he/she is invited to contact the instructor through the week and ask for consulting help by e-mail or to schedule an appointment to go over the material. Note though that this special help will not be offered to students who miss class and would like a one-on-one “lecture do over”.

Other Important Information

Academic Honesty

Students are expected to comply with Moravian College’s policy on academic honesty as found in the “Moravian College Comenius Center Graduate Academic Policies Handbook” when preparing assignments and reports, or taking quizzes and exams. Please make yourself familiar with that policy. If you do not have a copy of the Handbook please request one from the Comenius Ctr. Office.

Moravian's cheating and plagiarism policies will be followed for both homework assignments as well as exams. This instructor has experienced students copying each other's homework several times since I began teaching at Moravian in 1994, so I will be on the lookout for such infractions.

Attendance Policy

Missing any class will expose the student to significant risks. An attendance sign in sheet will be circulated in each class. Each student is permitted two unexcused absences from class to allocate as they see fit. After two absences, each further absence, for any reason, penalizes the student two points out of the potential one-hundred point total used to determine the final grade.

PLEASE NOTE CAREFULLY. IF YOU ARE ABSENT FROM CLASS FOR ANY REASON YOUR HOMEWORK ASSIGNMENTS ARE STILL DUE ON THE DATE THEY ARE SCHEDULED TO BE TURNED IN. IF YOU CAN'T DELIVER THE ASSIGNMENT IN HARD COPY FORMAT TO CLASS THE DAY IT IS DUE YOURSELF, LEAVE IT IN MY MAILBOX IN BENIGNA OR FAX IT TO 610-861-1466.

Attendance at all exams is mandatory. Students missing an exam without prior notification and permission from the instructor will receive a grade of zero for that exam. Students who do not stay for the video after the midterm will be scored for one class absence but their exam grade will count.

Blackboard

All students must enroll for the course on Blackboard. There is no access code. All class lecture notes, homework assignments and exam study guides will be put into the Course Information section of Blackboard, ahead of their due dates. Students are strongly encouraged to print out the day's lecture notes ahead of each class so they can follow the discussion more easily and add their own margin notes as needed. Also, students will be notified of any class cancellations or assignment schedule revisions through Blackboard, so it should be checked prior to every class.

WHEN YOU ENROLL IN BLACKBOARD PLEASE MAKE SURE YOU ENTER AN E-MAIL ADDRESS THAT YOU CHECK FREQUENTLY, SO YOU CAN BE REACHED QUICKLY IN SNOW OR OTHER CLASS CANCELLATION EMERGENCIES

When there is a conflict regarding assignments posted in Blackboard and the class schedule at the end of this syllabus, **Blackboard should be regarded as definitive.**

Cancelled Classes

Class may be canceled due to weather or for some other reason

Copyrights

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Disabilities

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 1307 Main Street or by calling 610-861-1510. Accommodations cannot be provided until authorization is received from the Academic Support Center.

e2Campus

In the event of an emergency the system called e2Campus allows Moravian College to send text messages to the cell phones of registered members of the campus community with information about what is happening and/or what precautions should be taken. Up to two cell phone numbers and two e-mail addresses per user may be registered. This service is an integral part of the College's emergency response system. If you are not already registered on the system, please do so as soon as possible. To register for e2Campus visit <http://intranet.moravian.edu/e2campus/index.asp> from a computer on Moravian's campus.

Expectations of Students

As a matter of courtesy and professionalism, students are expected to make every effort to be on time for class and to participate in discussions in a manner appropriate for mature adults. Classes will generally start on time and late arrivals will be expected to catch up with the discussion on their own, without disrupting other students.

Students are allowed to bring non-alcoholic beverages to class as long as they clean up and dispose of their cups, bottles and cans after class ends. **FOOD OR SNACK CONSUMPTION WILL NOT BE ALLOWED IN THIS CLASS** to avoid burdening other students with the noise and odor disruptions that such eating in class frequently entails.

ALSO, NO TEXT MESSAGING, CELL PHONING, FACEBOOKING, ETC. IS PERMITTED IN THE CLASSROOM WHEN CLASS IS IN SESSION. Offenders will be asked to leave the room and take the rest of the evening off, incurring a full class cut penalty.

On the other hand, if you need to be reachable from work or from home during class you are encouraged to take whatever phone call or respond to whatever text message you need to by simply leaving the class room area after your cell phone rings, if and as often as you need to, and then return to class when your outside communication is concluded.

Grading Judgment

It is within the purview of the instructor to apply qualitative judgment in determining grades for an assignment or for a course.

Inclement Weather

In the case of inclement weather, the instructor will post a message on Blackboard to inform students if the class is canceled. It is the student's responsibility to check Blackboard prior to each class period for cancellations due to inclement weather.

Syllabus Status

This syllabus and the course contents are subject to change at the discretion of the instructor. Generally changes will be finalized only after discussion of the change with students in the class.

Workload

Students can expect to work at least three hours on average outside of class in reading, preparation, and project activities for each hour of class time – in other words 8-12 hours / week

Style guide

Homework problems can be hand written and figures freehand drawn unless the instructions explicitly request that the student's response be a printout of an EXCEL file. **ALL HOMEWORK MUST BE IN HARD COPY FORMAT. E-MAILED HOMEWORK WILL NOT BE ACCEPTED**

CCMA 107 - Class agendas and schedules, Spring, 2014

- 1/15 Syllabus review
Lecture: Topics selected from chapters 1 - 3
In class practice problem lab
Homework due 1/22 – TBA - see blackboard.
Reading assignment - TBA – see blackboard.
- 1/22 Lecture: Topics selected from chapters 3 & 4
In class practice problem lab
Homework due 1/29 – TBA - see blackboard.
Reading assignment - TBA – see blackboard.
- 1/29 Lecture: Topics selected from chapter 6.
In class practice problem lab
Homework due 2/5 – TBA - see blackboard.
Reading assignment - TBA – see blackboard.
- 2/5 Lecture: Topics selected from chapter 6 cont.
In class practice problem lab
Homework due 2/12 – TBA - see blackboard.
Reading assignment - TBA – see blackboard.
- 2/12 Lecture: Topics selected from chapter 7.
In class practice problem lab
Homework due 2/19 – TBA - see blackboard
Reading assignment - TBA – see blackboard.
- 2/19 Lecture: Topics selected from chapter 7 cont. & 8
Midterm Exam study guide review
Homework due 3/12 – TBA - see blackboard
Reading assignment - TBA – see blackboard.
- 2/26 Midterm Exam
Reading assignment - TBA – see blackboard.
- 3/5 Spring Recess
- 3/12 Lecture: Topics selected from chapter 8.
In class practice problem lab
Homework due 3/19 – TBA - see blackboard
Reading assignment - TBA – see blackboard.
- 3/19 Lecture: Topics selected from chapter 9
In class practice problem lab
Homework due 3/26 – TBA - see blackboard
Reading assignment - TBA – see blackboard.
- 3/26 Lecture: Topics selected from chapters 10.
Homework due 4/2 – TBA - see blackboard
Reading assignment - TBA – see blackboard
- 4/2 Lecture: Topics selected from chapters 11
Homework due 4/9 – TBA - see blackboard
Reading assignment - TBA – see blackboard
- 4/9 Lecture: Topics selected from chapter 5 and Forecasting, part 1
Homework due 4/16 – TBA - see blackboard
Reading assignment - TBA – see blackboard

- 4/16 Lecture: Topics selected from forecasting, part 2
Homework due 4/23 – TBA - see blackboard
Reading assignment - TBA – see blackboard.
In class practice problem lab
- 4/23 Final Exam study guide review
- 4/30 Final exam