

# MCKENDREE UNIVERSITY

## BUS 310: Quantitative Analysis for Business Decisions

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**Course Description:** This course introduces the use of quantitative techniques to make business decisions. Topics we will study include probability, linear programming, forecasting, decision analysis and inventory models.

**Prerequisites:** MTH 310 Statistics and a good understanding of algebra.

### Learning Objectives:

After successful completion of this course, students are expected to –

1. Develop and apply analytical, critical thinking, and problem solving skills.
2. Demonstrate an understanding of the major concepts in the functional areas of business.
3. Demonstrate knowledge and skills required in the functional areas of Business.
4. Apply critical thought regarding the environment of business.
5. Identify and apply economic and financial analyses in professional situations.
6. Perform and communicate econometric analysis.
7. Make decisions about the presentation of financial data

**Textbook:** David R. Anderson, Dennis J. Sweeney, Thomas A. Williams, Jeffrey D. Camm, James J. Cochran, Michael J. Fry, Jeffrey W. Ohlmann, **Quantitative Methods for Business**, 12th edition. South-Western, 2013, ISBN 978-0-8400-6233-8. (*Do not buy access code*).

**Evaluation:** Students will be evaluated on the basis of the followings –

Exams: (20% x 3)	60%
Homework/Discussion Board participation:	40%

### Grading Scale:

$\geq 94 = A$	$\geq 76-79 = C+$
$\geq 90-93 = A-$	$\geq 73-75 = C$
$\geq 87-89 = B+$	$\geq 65-72 = C-$
$\geq 83-86 = B$	$\geq 58-64 = D$
$\geq 80-82 = B-$	$< 58 = F$

## Instruction methods:

I. *Modules*: Students are expected to go through the modules. And also read the textbook chapters in detail. See the “Readings and Assignment” section for chapter handouts. Then see the “Video Introduction” section for the video explanation of the same handouts.

II. *Homework Assignments*: Because the best way to learn how to apply quantitative methods is to use them, we place an emphasis on working problems. A great way to learn is through an interactive environment! Homework is assigned from the text for each module. You are expected to discuss your answers and methods of finding the solutions using the Discussion Boards for each module. By sharing, you will all learn from each other; explaining your answers will help re-enforce your learning.

III. *Examinations*: During the course of the semester, there will be three examinations. I will upload the exam question in blackboard and you will have certain limited time to answer and upload in Blackboard. I will provide detail method later. There will be no extra make up exam. Late responds will be penalized by 15% each day of delay.

IV. *Discussion Board*: I will assign leaders for each chapter, who will submit the answer and method in discussion board by Thursday noon. I ask others to regularly participate in the discussion board. You discuss the method, understanding of the problems and other concerns in the discussion board. I will be regularly visiting the discussion board and look for your participation for grading, will also participate time to time. This is an effective way to learn this course content.

V. *Communications*. I will visit discussion board every night and will answer the questions you posted as much as I can. Also I am available through e-mail and will respond as soon as possible.

Make sure you check your McKendree e-mail as I e-mail there regularly.

## Course Outline:

Module	Reading/Test	Topic	Problems
1	Chapter 1	Introduction	3, 5, 8, 15
1	Chapter 2	Introduction to Probability	10, 11, 17, 21, 25
2	Chapter 3 <i>Exam 1</i>	Probability Distributions	4, 8, 10, 13, 15, 19, 25, 27
3	Chapter 4	Decision Analysis	2, 3, 5, 7, 13, 15
4	Chapter 5	Utility and Game Theory	3, 8, 9, 12, 13
5	Chapter 6 <i>Exam 2</i>	Time Series Analysis and Forecasting	1, 4, 7, 8, 20, 24
6	Chapter 13	Project Scheduling: PERT/CPM	3, 4, 6, 8
7	Chapter 14	Inventory Models	3, 4, 5, 12
8	Chapter 15 <i>Exam 3</i>	Waiting Line Model	1, 2, 3, 5

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**Note:**

1. The instructor reserves the right to change the above schedule in order to accommodate student/instructor needs.
2. All students are responsible for checking their McKendree email accounts regularly and are accountable for information disseminated to their email accounts. Failure to read university communications sent to McKendree email accounts does not absolve students from knowing and complying with the content of these communications.
3. Students are responsible for checking Blackboard for information and announcements regarding this class. Quizzes, class readings, documents and other class information will be posted there on a regular basis.

**Academic honesty:** Plagiarism of written work, in whole or in part, whether from printed sources or from the internet, is a serious offense which carries a severe penalty – up to and including failing the course. The McKendree University policy on dishonesty is in full force for this course. Please refer to the McKendree University Undergraduate Catalog. You do not want to become part of this process.