

Upper Iowa University
External Degree Program
BA 356-08 Quantitative Decisions in Business

Course Description:

This course is designed for business students who have a good foundation in pre-calculus mathematics, algebra, and elementary statistics. Topics will include an introduction to business quantitative methodology, decision making and planning under conditions of uncertainty, resource allocation, distribution and scheduling, inventory management, and business simulation. This course will be case-driven as part of the learning process. Prerequisites: MATH 105 (or MATH 111), MATH 220, and MIS 101. Three semester credits.

Course Goals:

The major goal of this course is to teach the student to ask the right questions through the use of quantitative methods. Further, utilizing quantitative decision models will enable the student to select the best alternative from many choices available to them. Finally, the student will learn the importance of refraining from making decisions based on “gut instinct” but rather, having the data critical in recommending the best course of action their company should take.

Course Objectives:

After completing Quantitative Decisions in Business, the student should have an understanding of the following:

- **Identify and apply** various modeling concepts and processes through the use of spreadsheets and other modeling techniques to **analyze** numerical data, **interpret** results, **compare** options, **propose** solutions and **make effective decisions** in situations requiring quantitative thinking skills.
- Through the use of probability techniques, decision making techniques, and forecasting, **determine outcomes** and **develop plans** in business applications under uncertainty.
- Through the application of linear programming techniques, **prepare and plan** for the proper allocation of a firm’s resources.
- Through the application of transportation algorithms and PERT/CPM methodology, **solve** distribution, routing, and scheduling of a firm’s resources to meet organizational business objectives.
- Using inventory management models **identify and apply** inventory decision making techniques during period of certainty and uncertainty.
- **Develop and compare** business alternatives using simulation methods and their outcomes.

- **Understand and be able to apply** queuing theory to business problems.

Required Course Materials:

1. Text – Lapin, Lawrence L., and Whisler, William D. Quantitative Decision Making with Spreadsheet Applications. Seventh Edition. Thomson Learning, United States: 2002. ISBN: 0534380247. **Note: Make sure the book includes the CD ROM – you will be frustrated if you do not get a book that includes the CD ROM!!!**
2. Syllabus

Optional Course Materials:

While the following are listed as “optional” they are strongly recommended as they will help you in preparing the problems and in grasping the material:

1. Solutions Manual – Lapin, Lawrence L., and Whisler, William D. Quantitative Decision Making with Spreadsheet Applications: Student Solutions Manual. Seventh Edition. Thomson Learning, United States: 2002. ISBN: 0534387721
2. Microsoft Excel software. Most computers have a spreadsheet application already installed. Check your computer to see if it has Microsoft Excel installed. If not, it is recommended that you find a computer with Microsoft Excel installed or consider purchasing Excel as the textbook references Excel throughout and the CD ROM requires Excel. If you do not have Excel software installed on your computer, and cannot locate a computer with Excel, you can purchase *Microsoft Office Standard for Student and Teacher*. This software application includes full software programs for Microsoft Word, Excel, and PowerPoint. Major retailers such as Best Buy, Circuit City and CompUSA sell this software for around \$150.

Note: If you do not have access to Excel, you can still take this course. Alternative problem and case assignments that can be calculated with a calculator, and that do not require Excel, are listed in this syllabus. Please let me know when you submit your first Unit if you do not have access to Excel.

3. Graphing calculator or similar model. Can be used when you take your exams and in working the assigned problems.

You may purchase your textbook through MBS Direct by calling their toll free number at: 800-325-3252 or through the UIU homepage: www.uiu.edu. Click on the link for current students then select order textbooks from the options in the left hand column. Follow the link and select External Degree for your location.

Writing Proficiency:

It is recommended that all papers and research are done in the APA style. We expect appropriate writing skills of proper grammar, punctuation, sentence structure, paragraph development, and logical sequence of thought in all written work, and exams.

It is recommended that all students purchase the APA guide/manual listed on the UIU website. *Publication Manual of the American Psychological Association*. \$27.00 new.

Citation:

Encyclopedias of any kind, including the very popular Wikipedia, are not primary sources and should not be cited or used in constructing academic papers at the graduate or undergraduate level. They can, however, be useful to help gather some background information and to point the way to more reliable sources.

Course Overview:

Unit 1 – Consists of the following:

- Read chapters 1-4

Unit 2 – Consists of the following:

- Read chapters 5-9

Take the Midterm Exam – Covering chapters 1, 2, 3, 4, 5, 6, 7, 8, and 9

Unit 3 – Consists of the following:

- Read chapters 10-14

Unit 4 – Consists of the following:

- Read chapters 15-18

Take the Final – Covering chapters 10, 11, 12, 13, 14, 15, 16, 17, and 18

Study Unit Information:

The best way to study for this course is to utilize the following plan:

- Read unit/chapter overview
- Review the unit/chapter objectives
- Read the first chapter of the unit
- Review the unit/chapter objectives to ensure comprehension
- Complete the study guide questions (it is recommended that you keep the study guide questions handy as you read through the chapters and answer the questions “as you go”),

assigned problems, and case study or alternative research paper (if assigned for that particular chapter).

- Move on to the next chapter and repeat the process
- E-mail me – escott6@msn.com or rescott@ssalle.com – or call me with any questions regarding the unit or chapter

After each unit is fully completed (please do not e-mail or mail assignments from partially completed units), submit your work to me (mail or e-mail are both acceptable).

Examination Information:

There will be two proctored exams for this course. Each exam will consist of a combination of True/False questions, multiple choice questions, problem solving (similar to problems assigned in the Units) and short essay questions that will **not** require the use of Excel. Students will be allowed **up to four hours** to complete each exam. Each exam covers the chapters specified only. Exams will reinforce concepts you have learned throughout the specific units and will not include concepts, terms, models, etc. that have not been covered in the units. **It is recommended that you wait until you have your graded Unit assignments back in your possession prior to taking the exam.** A study guide is included for each exam – located further down in this syllabus and you **can** (and should) use a calculator when taking your exam – however the use of notes, textbook, and solutions manual are not permitted. ***You must pass at least one proctored exam to pass the course.*** Remember: **Exams should be requested a minimum of 3 weeks prior to the exam date.**

NOTE: In order to pass this course, you must get a passing grade (“D” or better), on at least one of the exams and have enough cumulative points to earn a passing grade.

Study Guide Questions:

A total of 5-10 multiple choice and true/false study guide questions have been included for each chapter of each Unit. An answer sheet is provided for those who will be mailing their assignments. It would be a good idea if you answered the “open book” questions as you read through the chapters as most questions are set-up sequentially to follow the concepts/objectives as they are laid out in the chapter. **NOTE: The study guide questions will be a useful “study guide” for you in preparing for your exams.**

End of Chapter Problems:

You will be assigned some of the problems at the end of each chapter. The problems reinforce the concepts learned in the chapter. In some cases, you will need to set-up the problem in Excel in order to determine the answer. In other cases, you will be able to calculate the answer through using a calculator. Some of the problems assigned will be those where the solutions are provided in the *Student Solutions Manual*. It is strongly recommended that you attempt to answer the question before checking the answer in the manual. In addition, feel free to work problems not assigned if you feel that it will help you understand the concepts better (for practice only – no points credited). Please show your work in order to earn full credit for the problems.

Chapter Cases or Alternative Research Papers:

Since this course involves quantitative decisions in *business*, completing the assigned business related case studies will reinforce the concepts you learned in the chapter and will help prepare you for the exams. The cases will involve answering questions about the case and completing various scenarios within Excel. A total of five cases have been assigned for this course. In recognition of the fact that the cases are designed more to be completed in a group format, and are thus very challenging, students have the choice of skipping the case(s) and completing research papers as noted in the specific units.

Submission of Units:

As previously stated, you can submit your assignments in one of two ways:

1. By mail (it is suggested that you make a copy – or store a copy on your computer prior to mailing) to the following address:

Randy Scott
4152 Spruce Wood Drive
Beavercreek, OH 45432

2. Or – by e-mail to escott6@msn.com or rescott@ssallc.com. When sending via e-mail, please include the following information in the body of your e-mail:

Name: _____ ED student number or center: _____

Address: _____

Home Phone: _____ Work Phone: _____

Course number and title and assignment number: _____

The department and course number and unit number should always appear in the subject line of your e-mail messages (i.e. BA 356-08 U-1).

- I **will** accept file attachments and you can use Word files, Excel files, or a combination (I would ask that you complete a virus scan before sending me attachments). If utilizing Excel, please do not use a different spreadsheet (several attachments) for every problem or each chapter as it takes a lot longer to grade your Unit. Instead, utilize the tabs at the bottom and you can use a different tab for each chapter if you prefer – or place them all on the same tab. Please save the file as “Your **first and last name – BA 356-08** and the specific **Unit number.**”
- **Clearly identify** the chapter number, problem or case number next to your answer. As an example, “Problem 1-12.” Or – “Case 3-1.”
- **Make sure your first and last name, along with the Unit number, is included at the top of the attached files (utilize the “header” function if you know how).** As an example, “Randy Scott – Unit 1.”
- The following is a partial example of Unit answers entered into Excel – then copied into a Word document:

Randy Scott
 BA 356-08 – Quantitative Decisions in Business
 Unit 1 Answers
 March 10, 2008

Chapter 2 - End of Chapter Questions

Quest.	Ans.
6	A
7	B
8	B
9	C
10	T

Chapter Problems

Pro. 2-1

(a. - c.)

Activity	Points
Midterm 1	84
Midterm 2	76
Final Exam	89
Homework 1	8
Homework 2	9
Homework 3	10
Homework 4	7
Homework 5	10
Homework 6	8
Homework 7	10
Homework 8	7
Homework 9	7
Homework 10	6
Project	94
	425

(d.) 425

E
X
A
M
P
L
E

Reminder: Do not submit partial units for grading – wait until you have completed all assignments in the entire unit before submitting for grading.

Composition of Grade:

Unit 1 consists of the following:

Chapter	Number of Study Guide Questions	Points	Number of Chapter Problems	Points*	Number of Cases or Research Papers	Points*	Total Points
1	5	5	3	30	0	0	35
2	5	5	4	40	0	0	45
3	10	10	3	30	1	100	140
4	10	10	7	70	0	0	80
TOTAL	30	30	17	170	1	100	300

*Partial credit will be given if you answer parts of the assigned problems correctly

Unit 2 consists of the following:

Number of Study Guide	Number of Chapter	Number of Cases or	Total
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Chapter	Questions	Points	Problems	Points*	Research Papers	Points*	Points
5	10	10	3	30	1	100	140
6	10	10	6	60	0	0	70
7	10	10	6	60	0	0	70
8	10	10	3	30	0	0	40
9	10	10	6	60	1	100	170
TOTAL	50	50	24	240	2	200	490

*Partial credit will be given if you answer parts of the assigned problems correctly

Midterm Exam (440 points)

Unit 3 consists of the following:

Chapter	Number of Study Guide Questions	Points	Number of Chapter Problems	Points*	Number of Cases or Research Papers	Points*	Total Points
10	10	10	4	40	0	0	50
11	10	10	4	40	0	0	50
12	10	10	5	50	1	100	160
13	10	10	5	50	0	0	60
14	10	10	5	50	0	0	60
TOTAL	50	50	23	230	1	100	380

*Partial credit will be given if you answer parts of the assigned problems correctly

Unit 4 consists of the following:

Chapter	Number of Study Guide Questions	Points	Number of Chapter Problems	Points*	Number of Cases or Research Papers	Points*	Total Points
15	10	10	4	40	1	100	150
16	10	10	6	60	0	0	70
17	10	10	4	40	0	0	50
18	10	10	4	40	0	0	50
TOTAL	40	40	18	180	1	100	320

*Partial credit will be given if you answer parts of the assigned problems correctly

Final Exam (440 points)

Grading:

Unit 1:	300 points
Unit 2:	490 points
Midterm:	440 points
Unit 3:	380 points
Unit 4:	320 points
Final:	440 points
TOTAL	2,370 points

Points Allocation:

Activity	Total Points	Percent of Total
Study guide questions	170	7.2%
Chapter problems	820	34.6%
Chapter cases/research papers	500	21.1%

Exams	880	37.1%
TOTAL	2,370	100%

Upper Iowa University uses a standard grading system: A, B, C, D, and F will be followed.

Percent/Grade	Total Points Earned
90 – 100% = A	2,121 – 2,370
80 – 89% = B	1,884 – 2,120
70 – 79% = C	1,647 – 1,883
60 – 69% = D	1,410 – 1,646
≤59% = F	≤1,409

A = All work is excellent, shows exceptional understanding of materials; logical, clear, and insightful written and oral work, incorporates knowledge from other sources and moves easily to the next level of understanding, works well beyond minimum requirements.

B = Understanding of material is good to very good, demonstrates good grasp of material, good oral and written skills, produces more than the minimum requirements, quality of all work is high.

C = Satisfactory understanding of the material, submits only the minimum requirements, communicates adequately in oral and written formats, displays an adequate understanding of all basic concepts.

D = Quality and quantity written and oral work is below average and barely acceptable.

F = Quality and quantity written and oral work is unacceptable.

Cheating, Academic Dishonesty and Plagiarism:

Because cheating, academic dishonesty and plagiarism are affronts to the University community as a whole and a denial of the offender's own integrity, they will not be tolerated. Cheating includes but is not limited to:

- the use of unauthorized books, notes or other sources in the giving or securing of help in an examination or other course assignments,
- the copying of other students' work or allowing others to copy your work,
- the submission of work that is not your own or allowing others to submit your work as theirs,
- the submission of the same work for two or more classes without the approval of any instructors involved.

Academic dishonesty includes, but is not limited to:

- sharing academic materials knowing they will be used inappropriately,
- having access to another person's work without permission,
- providing false or incomplete information on an academic document,
- changing student records without approval.
- obtaining and using texts intended for instructor use only.

Plagiarism includes, but is not limited to:

- the presentation of another's published or unpublished work as one's own,
- taking words or ideas of another and either copying them or paraphrasing them without proper citation of the source,
- using charts, graphs, statistics or tables without proper citation.

Detected cheating, academic dishonesty, or plagiarism will result in consequences that may, at the instructor's discretion, include course failure. In addition, an offender may be reported to the Senior Vice President for the Extended University, the Dean of the Extended University, or designee for possible disciplinary action, which may include suspension or dismissal from the University. Upper Iowa University may make use of various plagiarism detection services. Individuals, by enrolling in courses offered by the University, consent to submission by the University of course-related assignments to such services and the retention of a copy of such assignments by the service.

Cheating, academic dishonesty and plagiarism infractions are tracked by the Dean of the Extended University, and cumulative evidence collected from multiple incidents will be considered when making suspension or dismissal decisions.
Extended University Catalog 2007/08 page 97.

http://www.uiu.edu/catalogs/eu/html/univ_policies.html#cheating

Attendance:

Even though a student does not attend a regular classroom in the traditional sense and keep up with a set schedule of assignments, it should be pointed out how important it is to keep yourself on a regular timely schedule if possible to complete and send in units. It is too easy to set work aside and decide to do it later. Suddenly, the need to complete assignments and get them in by deadlines can become stressful and, at times, impossible. The key would be to set time aside on a regular basis and submit work in a timely manner.

Library Resources:

As a student of Upper Iowa University, you have access to the resources of the Henderson-Wilder Library on the Fayette campus. If travel to the campus is not feasible, you can access the library through the University's website. Go to: www.uiu.edu and click on the Library option located on the left side of the home page. If you would like to use InfoTrac, please contact the UIU Library staff at library@uiu.edu.

Other Helpful Websites:

Research and Writing: www.ipl.org/teen/aplus. Contains tips on how to write a research paper.

Bartleby.com: www.bartleby.com/reference. This site has excellent references, such as *American Heritage Dictionary*, *Roget's Thesaurus*, *Elements of Style* and *Bartlett's Quotations*.

Britannica.com: www.britannica.com. Plug in any subject, get articles and related Web sites.

Google: www.google.com. This site is a great all-purpose search engine on the Web.

The Internet Public Library: www.ipl.org. A great site to start research and has reference, newspaper, and magazine links. Also contains archives of academic papers and tutorials on how to improve writing.

The Blue Book of Grammar and Punctuation: <http://www.grammarbook.com/>. A great site to utilize when you are not sure about proper grammar and/or punctuation.

Withdrawal:

If you wish to withdraw prior to the last day of the enrollment period you must contact the External Degree office by phone or in writing. After your original six month enrollment period you no longer have the option to withdraw from the course. You must finish the course or have a final grade assigned based on the coursework submitted.

Special Needs:

If you require accommodation for special needs, please provide documentation to: Director of External Degree.

This syllabus is tentative and subject to change.