1 General Information

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MWF 1–2 PM,
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2 Text


3 Goals

This course primarily serves Business Administration and Accounting majors by preparing them for BUS 383, Management Science. Thus, we are under an obligation to cover and master a certain amount of content. In particular we will learn the basics of three areas of mathematics fundamental to business and finance:

- The mathematics of linear models. These models along with a technique called 'linear programming', offer ways for managers to optimize productivity, profit, etc.
- Basic mathematics of finance: compound interest, annuities, and amortization. Exponential functions, logarithms, and geometric sums are used to determine the correct monthly payments on a loan or to calculate the present value of money that will be received in the future.
- The basic mathematics of risk: counting and probability.

Every student will be evaluated on his or her ability to successfully demonstrate mastery of key concepts relating to these three areas. Specific objectives pertaining to content will be given at the beginning of each chapter.

This course is also part of the General Education program of LVC. As such, it must contribute to your edification as a person of “broad vision, capable of making informed decisions...” The General Education program endeavors to “establish a foundation for their [students'] continuing education”. It is with this goal in mind that we focus on reading and writing. Therefore, every student will be evaluated on his or her ability to read and write mathematics.

4 Participation and Homework

Your Participation is expected and will be closely monitored. You receive credit for Participation in one of four ways:

1. Handing in a complete and correct Homework assignment on or before the day it is due.
2. Sending a detailed email outlining meaningful questions you had from the Reading assignment before we discuss the section in class.
3. Coming to my office to ask me meaningful questions regarding the assigned Reading or Homework before we discuss the section in class.
4. Asking a meaningful question or making a meaningful comment which advances the discussion in class.
Homework is assigned at the beginning of the semester and collected at the beginning of class on the date indicated on the assignment sheet. **Note: This is a tentative assignment and may be changed as the the semester unfolds.** Students will **not** be allowed to submit late homework. A complete and correct Homework assignment is one where all graded problems receive a G or M and all problems are attempted. (The marks of G and M are explained below.)

A *meaningful question* is one that relates to the material assigned for the day and pinpoints the point of confusion. “I just don’t get the section. Could you explain it all?” is *not* a meaningful question. “The definition of a function is given on page 7, but I don’t see how matched problem 2 on page 8 is an example of a function. Could you explain this?” is an example of meaningful question. “Is the test going to be next week?” is a good question but it is *not* a meaningful one.

The Participation is worth 5% of the class grade. If you want to ensure that your records agree with mine regarding your Participation grade, you must see me and provide the relevant documentation in your Portfolio (see below) **before** the next exam.

5  **Quizzes and Exams**

The primary evidence students will provide on their learning in the class will come on Quizzes and Exams. By doing Homework problems students learn and practice what they have learned. Quizzes and Exams provide students an opportunity to display mastery of concepts. The number of Concept questions on Quizzes and Exams on which a student earns a G divided by the total number of concept questions on Quizzes and Exams will give the percentage for the overall Concepts score. The Concepts score will account for 80% of the total grade in the class.

6  **Reading and Writing Evaluations**

Certain problems on Quizzes and Exams will be designated by the letter \(R\). This indicates that the problem is a Reading/Writing Evaluation. Such a problem may present you with new, possibly related, material that you must first read and then to which you must respond. Regardless of whether the problem introduces new material or not, students must follow the given instructions, write out their answers in complete English sentences, and correctly use the appropriate mathematical vocabulary. Each Evaluation problem also counts as a Concepts problem for purposes of the final grade. The sum of the number of Evaluations for which a student earns a G and 0.75 of the number of Evaluations for which a student earns a M all divided by the total number of Evaluations gives a percentage for the Evaluations score with the proviso that the lowest 10% of Evaluation scores will not be considered in the final grade. The Evaluation score will account for 15% of the total grade in the class.

7  **Portfolio**

Students will keep a Portfolio of all their work related to the class. Students are expected to bring their Portfolios with them to each class. Students must have their Portfolio with them when they wish to discuss their progress in the course. Failure to keep a Portfolio and present it at midterm will result in the loss of half a letter grade. Failure to keep a Portfolio and present it at the end of the course will result in the loss of a letter grade. The Portfolio will contain the following sections:

- **In Front** – Syllabus followed by Homework/Participation Grade Sheet.
- **Section I** – Notes and corresponding Homework.
- **Section II** – Quizzes, Tests, and Corrections.
- **Section III** – Reading and Writing Evaluations.
8 Grading

I will grade individual Concept problems on Homework, Quizzes, and Exams using the following problem-solving rubric:

- **G** stands for “Complete work” and indicates that it is clearly written and that appropriate solution strategies were selected and correctly implemented to solve the problem. The answer was clearly correct.

- **M** stands for “Minor Error(s)”. It indicates appropriate solution strategies were clearly written but an error or errors were made implementing those strategies. In other words, the solution strategy was conceptually correct, but errors were made in the procedure. Students must find the error and correct it.

- **S** stands for “Significant Error(s)” and indicates appropriate solution strategies were clearly written but a significant error or significant errors were made in the course of the solution.

- **I** stands for “Incomplete work” and indicates that there is not enough work that leads to the solution or that the work provided does not justify or lead to the solution.

- **N** stands for “Inappropriate Strategy or No attempt” and it indicates that the idea(s) relating the question were not understood and an inappropriate solution strategy was implemented or that no attempt was made.

I will grade individual Evaluation questions on Quizzes and Exams and Test Corrections using the following rubric:

- **G** stands for “Complete explanation” and indicates that appropriate mathematical vocabulary was used. The explanation was specific and concisely identified the point(s) raised for discussion. The explanation was entirely correct.

- **M** stands for “Minor Error(s)”. It indicates that there is a minor error(s) in use of vocabulary or in articulating the point raised for discussion. The error is easy to identify. Otherwise the explanation was specific and concisely identified the point(s) raised for discussion. With the correction of the minor error, the explanation would be entirely correct.

- **S** stands for “Significant Error(s)” and indicates that the student may have correctly identified the point(s) raised for discussion, but the writing was unclear or insufficient. It may also indicate that the appropriate vocabulary was avoided or that inappropriate vocabulary or concepts were used.

- **N** stands for “Inappropriate Writing or No attempt” and it indicates that the student misused the vocabulary, clearly did not understand the question, used an inappropriate format for the correction, or did not attempt the problem.

When exams are handed back an extra copy of the exam will be provided for you on which you can make your corrections. The corrections will be due at the beginning of class one week after the exams are handed back. They may be handed in earlier. I will follow the rubric for written work (Evaluations) when grading your corrections. If, and only if, you receive a “G” or “M” on your corrections will your corrections be acceptable and you will be given the opportunity to raise your grade on that exam. If you do not do your corrections for an exam, you will not be given the opportunity to raise your grade on that exam and your final grade will be lowered by one letter grade for each set of missing corrections.

The purpose of the exam corrections is for you to understand your error patterns and improve your understanding of the Concepts you have not mastered. This is why you must articulate the missed concepts in words to receive credit for the exam corrections. A good question to ask yourself and answer on the test corrections is “What will I do to not make the same mistake?”

If you complete your test corrections satisfactorily and on time, you will be allowed the opportunity to change M’s, S’s, I’s, and N’s to G’s. The deadline for showing mastery of Concepts for each exam is by the next exam. These changes will be recorded in my grade book the week before the final exam. To show mastery on Concepts for which you earned an M, S, I, or N and then gave an acceptable correction:

First, practice and/or get help with those Concepts on which you have scores of M, S, I, or N. You may see me or another student for help. Then you have three options:
• The concept may resurface on a subsequent quiz or exam. If it does and you score a G on it, you will be able to record it on the test where you missed the concept earlier.

• The concept may arise in a class discussion or in group work. If I observe that you have mastered the concept, I will make a note on your quiz or exam. You will not receive credit this way if you do not have your Portfolio with you. This is why you need to keep your Portfolio organized and with you.

• You may come to my office to show mastery of missed concepts. You do not need to make an appointment for office hours. If you want to meet at a time that is mutually agreeable, we can set up an appointment for another time. In that meeting I will devise a problem that tests the given Concept and you will present a solution that shows your mastery of the Concept. Make sure you are confident in your ability to answer questions on that Concept because I will not offer second chances for problems I construct in the office.

Remember that the deadline for showing mastery of Concepts for each exam is by the next exam.

To calculate the final grade in the course I will calculate your Participation score, your Concepts score, and your Evaluations score in the manners explained above. I will then grade your Final Exam and compare your performance on it with your Final Analysis which you will hand in at the beginning of the Final Exam period. Your Final Analysis will be a portion of your Portfolio as follows:

**Final Analysis—Finite Mathematics**

1. Assemble all quizzes and exams in chronological order from beginning to end.

2. In the upper right corner of each quiz and exam observe the original numbers of G’s, M’s, S’s, I’s and N’s given for Concept questions and for Reading and Writing Evaluations.

   Example (After the Exam):

<table>
<thead>
<tr>
<th>Rubric</th>
<th>[R(8)]</th>
<th>G</th>
<th>[R]</th>
<th>M</th>
<th>G(20)</th>
<th>M</th>
<th>SIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
<td>5</td>
<td>1</td>
<td>12</td>
<td>3</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   Notice that in this example there were 20 items that were evaluated on this exam. Eight of those 20 items were Reading/Writing Evaluations.

3. During the week before the final exam, below the original numbers, write any changes you claim have been made as a result of showing mastery of the Concepts.

   Example (Just before the Final Exam):

<table>
<thead>
<tr>
<th>Rubric</th>
<th>[R(8)]</th>
<th>G</th>
<th>[R]</th>
<th>M</th>
<th>G(20)</th>
<th>M</th>
<th>SIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
<td>5</td>
<td>1</td>
<td>12</td>
<td>3</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final</td>
<td>5</td>
<td>1</td>
<td>15</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. If you claim, for example, that a previously missed Concepts was mastered on a subsequent exam, then be sure to indicate on the corrected exam exactly where your evidence for the mastered Concept is. If you claim mastery of a previously missed Concept by work done in class or in my office, be sure to attach supporting evidence to the exam where the Concept was missed.

5. A Final Analysis sheet will be provided on the last day of class. Be sure to answer any questions on it and attach it as the first item of your final packet of quizzes, exams, and other supporting evidence documenting your progress in the course. The final packet is due at the beginning of the final exam period on Monday May 8, 2006.
When I review your Final Analysis packet, I will deduct those concepts that were missed on the final exam and give credit for those concepts that were mastered on the final exam. I will weight the Participation score to 5% of the total grade, the adjusted Concepts score to 80% of the total grade and the Reading/Writing Evaluations to 15% of the total grade. The grading scale is: 92% for an A, 90% for an A-, 88% for a B+, 82% for a B, 80% for a B-, 78% for a C+, 72% for a C, 70% for a C-, 68% for a D+, 62% for a D, 60% for a D-, and less than 60% earns an F. After calculating the grade from these scores, I will apply the following:

- Failure to present a complete Final Analysis package will result in the loss of a letter grade.
- Each test correction not handed in on time will result in the loss of a letter grade.
- Failure to keep and present a Portfolio at midterm will result in the loss of half a letter grade.
- Failure to keep and present a Portfolio at the end of the term will result in the loss of a letter grade.
- Failure to take the final exam will result in an F for the course.

9 Policies and Procedures

Students will adhere to all Procedures, Policies, and Codes given in the 2005-2006 Student Handbook. This includes but is not limited to policies on Academic Honesty.

It is academically honest to ask questions of fellow students and discuss problems from the homework and reading. It is not honest to look upon what someone intends to hand it and pass the work off as your own. It is honest to look in the back of the book for odd numbered questions and indicate on your paper that you looked there. It is not honest to copy what is written in the back of the book. It is honest to help a fellow classmate with a question. It is not honest to hand them your homework. You may share ideas, but not answers. If you do work with someone, you must indicate at the top of your homework who you worked with. That includes me as well. Just as you would cite a book you quoted from or from which you used an idea for a paper, so must you cite folks you work with.

If a student is found committing academically dishonest acts in this class, those acts will be reported to the administration and sanctions may include, but are not limited to, a reduction in grade or even failure of the course.

Disabilities and Medical Conditions: If you have a documented disability that requires accommodation, please let me know. In order to ensure that your learning needs are appropriately met, you must provide documentation of your disability or medical condition to the Coordinator of Disability Services in Humanities 206-D, 867-6071. The Office of Disability Services will then provide me with a letter of verification of disability.

10 Tutors

If you need help, you should first come to see me. If you desire to get a tutor, you can go to the Mathematics Secretary in Lynch 283 A or call her at extension 6080. She will then put you in contact with a tutor.

11 Assignments

MAS 150, S06 (tentative)
01/18 Introductions.
01/20 Read 1.1. 1.1: 6, 21, 35, 45, 63.
01/23 Read 1.1. 1.1: 4, 11, 30, 37, 49, 64, 70, 79, 88, 90.
01/25 Read 1.2. 1.1: 5, 34, 74, 81, 83; 1.2: 5, 13, 30, 43, 67.
01/27 Read 1.3. 1.2: 24, 36, 38, 47, 64; 1.3: 3, 8, 15, 25, 34
01/30 Read 1.3. 1.3: 21, 30, 50, 56, 58, 59, 61, 62, 65, 67.
02/01 Read 1.4. 1.3: 55, 57, 60, 68; 1.4: 9, 11, 19, 25, 45.
02/03 Read 1.4 and Quiz 1.4: 10, 14, 34, 51, 55.
02/06 Read 2.2. 2.2: 2, 6, 16, 20, 30, 34, 43.
02/08 Read 2.2. 2.2: 11, 29, 46, 50, 62, 63, 65, 67, 69, 79.
02/10 Read 2.3. 2.2: 2, 18, 35, 68; 2.3: 2, 8, 19, 26, 34, 36, 46, 51.
02/13 Read 2.3 and Review. 2.3: 58, 60, 96; 1.1: 89; 1.2: 48; 1.3: 63; 1.4: 52, 59; 2.2: 68; 2.3: 99.
02/15 Exam 1 on Chapters 1 and 2.
02/17 Read 3.1. 3.1: 2, 6, 10, 18, 20, 23.
02/20 Read 3.2. 3.1: 12, 22, 27, 29, 35; 3.2: 2, 5, 10, 16, 18.
02/22 Read 3.2. 3.2: 4, 8, 15, 20, 24, 26, 28, 29, 38, 43.
02/24 Read 3.3. 3.2: 36, 39, 42, 48, 52 3.3: 3, 6, 9, 12, 16.
02/27 Read 3.4. 3.3: 13, 19, 20, 22, 30; 3.4: 3, 6, 9, 14, 17.
03/01 Read 3.4. 3.4: 4, 5, 10, 16, 19, 21, 23, 27, 30, 31.
03/03 Read 3.4 and Review. 3.4: 13, 18, 33, 36, 37; 3.1: 26; 3.2: 47; 3.3: 25; 3.4: 32.
Spring Break.
03/13 Read 4.1. 4.1: 2, 5, 10, 13, 18, 21, 26, 35, 46.
03/15 Exam 2 on Chapter 3.
03/17 Read 4.2. 4.1: 47, 51, 55, 29, 38, 44, 48, 52; 4.2: 11, 14, 19, 26, 32.
03/20 Read 4.3. 4.2: 24, 31, 37, 46, 55; 4.3: 2, 5, 10, 13, 23.
03/22 Read 4.3. 4.3: 9, 12, 16, 24, 28, 39, 43, 57, 60, 67.
03/24 Read 4.3 and Quiz. 4.3: 40, 48, 51, 55, 69.
03/27 Read 5.1. 5.1: 4, 12, 23, 29, 38.
03/29 Read 5.2. 5.1: 34, 40, 49, 51, 53; 5.2: 2, 6, 9, 13, 21.
03/31 Read 5.2 and Review. 5.2: 23, 28, 29, 31, 33; 4.1: 56; 4.2: 45; 4.3: 63; 5.1: 52; 5.2: 38.
04/03 Read 6.2. 6.2: 1, 4, 10, 16, 23, 26, 32, 41.
04/05 Exam 3 on Chapters 4 and 5.
04/07 Read 6.3. 6.2: 11, 27, 35, 44, 49, 52; 6.3: 4, 14, 16, 20, 28.
04/10 Read 6.4. 6.3: 30, 36, 46, 49, 53; 6.4: 6, 12, 22, 26, 38.
04/12 Read 7.1. 6.4: 28, 30, 40, 47, 50; 7.1: 2, 6, 10, 16, 20.
04/14 Easter Break
04/17 Easter Break
04/19 Read 7.2. 7.1: 24, 36, 52, 58, 75; 7.2: 4, 9, 17, 24, 44, 46.
04/21 Read 7.3. 7.2: 51, 61, 64, 66; 7.3: 4, 9, 14, 18, 19, 22, 27.
04/24 Read 7.3. 7.3: 10, 20, 25, 28, 30, 34, 39, 40, 50.
04/26 Read 7.4 7.3: 37, 41, 51; 7.4: 2, 6, 12, 18, 24, 26, 32.
04/28 Read 7.4 and Rev. 7.4: 8, 14, 29, 37, 43, 45, 47; 6.2: 71, 6.3: 54; 6.4: 60; 7.1: 75; 7.2: 68; 7.3: 51; 7.4: 51.
05/01 Exam 4 on Chapters 6 and 7.
05/03 Review  Penultimate Check of Portfolios.
05/08 (Monday) Final Exam 2:00–5:00 pm.