MANA 6000
Mathematics Foundations
Spring 2016

Instructor: Bob Collins
Office: DS 228
Phone: 414-288-3412 e-mail: robert.collins@marquette.edu

Office Hours: Tuesday: noonish-12:45, 5:00–8:00 (5:00-7:00 on 3/1, canceled 3/15)
Thursday: noonish-12:45, 8:30-9:30 (late hour may be in room 288)
Also by appointment or by chance

TEXT:
Required: Choose the eText OR the hardcover text:
May be purchased at the BookMarq (818 N 16th St) or www.cengagebrain.com
Hardcover text: Mathematical Applications for the Management,
Life, and Social Sciences (Eleventh Edition), Harshbarger and Reynolds,
ISBN: 9781305108042

eText: Enhanced WebAssign for Mathematical Applications for the Management,
Life, and Social Sciences (Eleventh Edition), Harshbarger and Reynolds,
Once the access code is purchased, follow the instructions to
www.webassign.com
Instructor: Robert Collins
Section: MANA 6000, section 701
Class Key: marquette 9706 0567

MANA 6000 Class Notes for Spring 2016 (available on class d2l page)

Optional: Student Solutions Manual for Mathematical Applications for the Management, Life,
and Social Sciences (Eleventh Edition), Harshbarger and Reynolds,
ISBN: 9781305108066

d2l:
To access the MANA 6000 d2l page go to http://d2l.mu.edu
To log in to d2l, use your checkmarq/emarq username and password.
Choose our class.
If you click on Content, you will find the class notes, lectures, and additional resources including
directions for using Excel for chapters four and six. Later in the semester under Content you will
also find the tests and the test and quiz keys.
ASSESSMENT STATEMENT and COURSE DESCRIPTION:
Students in our MBA programs are assessed on their competency to communicate effectively, reason ethically and apply critical thinking, as well as their capacity to comprehend the global strategic issues of firms and perform fundamental activities of business managers.
The purpose of this Foundations-level course is to prepare MBA students to knowledgeably and effectively use quantitative modeling and other quantitative tools to solve business problems. We will begin the semester by reviewing algebra with an introduction to modeling. We will next discuss the basics of linear programming: Minimizing or maximizing a function in two variables given a set of constraints. Exponential and logarithmic functions will be discussed with applications to Economics and Finance. The second half of the course will be an introduction to calculus, including limits, derivatives, and integrals. The applications of calculus discussed most often will be Economics examples of marginal cost/revenue/profit and the maximization or minimization of a function.

GRADES:
Your grade will be based on Test One March 10
Test Two May 9
Top 5 of 7 quizzes

Scale:
A  93-100
AB  88-92
B   83-87
BC  78-82
C   73-77
F   -72 there is no curve

Final grade: The two highest of the three grades (two test grades and the quiz grade) will count as 40% each. The lowest of the three grades will count as 20% of the final grade.

Quizzes:
Your quiz grade is the sum of the top five of the seven quiz grades. Quizzes may not be made up. You must work alone on all quizzes, including the take-home quiz. In-class quizzes will be given at the END of class and are closed-book. You may use a calculator on most of the in-class quizzes. The calculator must be a pure calculator. You may not use a calculator that is a communications device. You may not access a communications device during a quiz. Please use the restroom before starting a quiz. Once you start a quiz, you may not leave the room until you have completed the quiz. If you have a medical condition that makes this impossible, please let me know at least one week before the quiz.

Exams:
You must work alone on the take-home tests. I will keep your second exam until May 1, 2017. You may view your test (and the test two key) in my office during my office hours until then.
EXPECTATIONS:
I will teach the class assuming that you have never taken a calculus course. I must assume that you are working to become comfortable with basic algebra.
If you must miss a class, let me know one or two weeks ahead of time. You are responsible for getting class notes from your classmates. If you miss one or more classes or quizzes and your course grade ends up between grades (ex. 92.9 is between A and AB), your grade will be rounded down.
I suggest that you try as many of the assigned homework exercises as you need in order to feel comfortable with the material. The answers to the odd-numbered exercises are in the back of the text. Homework will not be collected.
I suggest that you print the entire set of class notes. The class notes give you cues for when to play a discussion (ideas and definitions) or to play the solution to the exercises. The best way to go through a chapter/section is to play the discussion, try the exercises in the notes, then play the solution to the exercises for the chapter/section (to make sure that I got them right). Next try the text homework for the chapter/section. If you get stuck in the homework, read through the text for the section, listen to the discussions again, and try the homework again. If there is still a homework example that does not make sense, make that part of our Thursday class.

ACADEMIC HONESTY:
Students, faculty, and staff at Marquette University developed a Statement on Academic Integrity that recognizes the importance of integrity, both personal and academic, and includes an Honor Pledge and Honor Code applicable to all.

The Honor Pledge
I recognize the importance of personal integrity in all aspects of life and work. I commit myself to truthfulness, honor and responsibility, by which I earn the respect of others. I support the development of good character and commit myself to uphold the highest standards of academic integrity as an important aspect of personal integrity. My commitment obliges me to conduct myself according to the Marquette University Honor Code.

Student Obligations Under the Honor Code
1. To fully observe the rules governing exams and assignments regarding resource material, electronic aids, copying, collaborating with others, or engaging in any other behavior that subverts the purpose of the exam or assignment and the directions of the instructor.
2. To turn in work done specifically for the paper or assignment, and not to borrow work either from other students, or from assignments for other courses.
3. To give full and proper credit to sources and references, and to acknowledge the contributions and ideas of others relevant to academic work.
4. To report circumstances that may compromise academic honesty, such as inattentive proctoring or premature posting of answers.
5. To complete individual assignments individually, and neither to accept nor give unauthorized help.
6. To accurately represent their academic achievements, which may include their grade point average, degree, honors, etc., in transcripts, in interviews, in professional organizations, on resumes and in the workplace.
7. To report any observed breaches of this honor code and academic honesty.
ACCOMMODATIONS:
Please inform me during the first week of class if you have any conditions that may limit or affect your ability to participate in this course so that we can make necessary arrangements. You may also contact the Office of Student Educational Services (OSES), in AMU 317 (8-3270) for more information (see also: http://www.marquette.edu/oses/).

EMERGENCY PLAN:
Every Marquette University campus building has emergency shelter and evacuation plans. Please familiarize yourself with the plans of each building in which you take classes or attend meetings. Make sure to note the routes to the lowest level of the buildings for shelter during inclement weather, as well as exits from the buildings in the event of fire or other emergency.

LECTURE SCHEDULE:

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Activity</th>
<th>Chapter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 21</td>
<td>6:30-7:30</td>
<td>Course introduction</td>
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<td></td>
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<td>questions from:</td>
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<td></td>
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<td>Chapter 0</td>
<td>Algebraic Concepts</td>
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<td>January 28</td>
<td>6:30-8:30</td>
<td>questions from:</td>
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<td></td>
<td></td>
<td>Chapter 0</td>
<td>Algebraic Concepts</td>
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<td></td>
<td></td>
<td>Chapter 1</td>
<td>Linear Equations and Functions</td>
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<td><strong>quiz one</strong></td>
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<tr>
<td>February 4</td>
<td>6:30-8:30</td>
<td>questions from:</td>
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<td></td>
<td></td>
<td>Chapter 2</td>
<td>Quadratic and Other Special Functions</td>
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<td><strong>quiz two</strong></td>
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<tr>
<td>February 11</td>
<td>6:30-7:30</td>
<td>questions from:</td>
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<td>Chapter 4</td>
<td>Inequalities and Linear Programming</td>
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<tr>
<td>February 25</td>
<td>5:30-6:30</td>
<td>questions from:</td>
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<td>Chapter 5</td>
<td>Exponential and Logarithmic Functions</td>
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<td><strong>quiz three due</strong></td>
<td>Chapter Six Mathematics of Finance</td>
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<td>(<strong>quiz three can be found on the last page of your class notes</strong>)</td>
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<td>March 3</td>
<td>5:30-6:30</td>
<td>questions from:</td>
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<td>Chapter 9 (9.1-9.3)</td>
<td>Derivatives</td>
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<tr>
<td>March 10</td>
<td>5:30-6:30</td>
<td>questions from:</td>
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<td>Chapter 9 (9.4-9.9)</td>
<td>Derivatives</td>
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<td><strong>TEST ONE DUE (Ch. 0,1,2,4,5)</strong></td>
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<td><strong>quiz three due</strong></td>
<td>Chapter Six Mathematics of Finance</td>
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<tr>
<td>April 7</td>
<td>6:30-8:30</td>
<td>questions from:</td>
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<td>Chapter 10 (10.1-10.3)</td>
<td>Applications of Derivatives</td>
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<td><strong>quiz four</strong></td>
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<td>April 14</td>
<td>6:30-8:30</td>
<td>questions from:</td>
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<td>Chapter 10 (10.4,10.5)</td>
<td>Applications of Derivatives</td>
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<td><strong>quiz five</strong></td>
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<td>April 15</td>
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<td>Last day to withdraw from a class</td>
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</table>
21  6:30-8:30  questions from:  
   Chapter 11  Derivatives Continued  
   quiz six
28  6:30-7:30  questions from:  
   Chapter 12  Indefinite Integrals
29  Test two is available on d2l at 6:00 pm

May
5  6:30-8:30  questions from:  
   Chapter 13  Definite Integrals: Techniques of Integration  
   quiz seven
9  TEST TWO DUE (Ch. 9-13) by 6:00 pm (note that there is no class meeting on 5/9)  
You may get your second test to me by:  
   a. dropping it in my mailbox on the first floor  
   b. slipping it under my office door  
   c. uploading an electronic copy of the test to the Dropbox on the class d2l site