Math 230  
Matrices and Linear Programming  
Fall- 2004

Instructor: Dr. Amal Mostafa  
Tel: (505) 646-5396 ; 646-3901(leave message)  
Office: Walden Hall 117  
Email: ammostaf@nmsu.edu

Office Hours: If you need help feel free to email (or call) me. Don't forget to leave your contact information. Normal response is within 48 hours (M-F) via email.  
WebCT: http://salsa.nmsu.edu/  
(There's no www on this address)

Prerequisite: Math 115 or higher school algebra and an adequate score on the Mathematics Placement Exam

Required Text

Finite Mathematics by Margaret Lial, Raymond Greenwell, and Nathan Ritchy. This text book contains eleven chapters. The following website provides additional text specific resources for the students including additional applications, tutorials, and quizzes: www.aw.com/LGR. You don't need to purchase this book.

Finite Mathematics by Margaret Lial, Raymond Greenwell, and Nathan Ritchy, published by Addison Wesley as a custom edition for NMSU. This is a soft cover version containing only the first four chapters and appendix A (answers to odd-numbered questions). This is the required text book you need to purchase.

Reference Readings
2. Matrices and Linear Programming by Abe Mizrahi and Michael Sullivan ,Wiley Custom Services 1996
Other Required Materials

Software: We will concentrate on using

1. *Microsoft Word, Excel* spreadsheets (2000 or higher) and Excel add-ins.

2. We shall use EXCEL SOLVER to solve linear programming problems OR


Graphing Calculator

A graphing calculator is required. You need to use your graphing calculator manual that contains useful information on how to work with matrices. TI-83 is the recommended graphing calculator for this course.

This section of Math 230 is a web-based course. There are no lectures. Students must be self-motivated in order to be successful in this section. Previous experience with computers, e-mail and World Wide Web (the "web") is required. This section will include all the skills and concepts you would see if you took the course in a traditional classroom. You will have homework, tests, quizzes and other assignments just like all the other sections of Math 230. The big difference is that we're going to meet face to face (f2f for you computer buffs) only 2 times.

Course Objectives

1. This is a problem solving class. The mathematics of matrix algebra and linear programming will be applied to solving business-oriented "word" problems
2. Practicing algebra skills and concepts
3. Making the graphing calculator work for you as an aid in visualizing and solving problems
4. Manipulating data to solve problems
5. You will learn how to formulate a given problem, use the calculator to solve it, and how to interpret the output
6. To teach the basics of linear programming, from formulations through to computer solution
7. To teach various forms of the Simplex Algorithm for solving linear programs, from tableau formats through to matrix-based implementations
8. To consider application areas such as transportation

Orientation

Orientation sessions will be conducted in Walden Hall 27, 8/28 and 10/9.

Quizzes

There will be several web-based quizzes over the reading materials. You can use the book or other study materials while taking a quiz. Check the schedule on the WebCT site for quiz deadlines. WebCT automatically makes each quiz unavailable after the deadline so it is not possible to submit a quiz late.

**Start reading and taking quizzes on time!**

**Late quizzes are not allowed**

Quizzes will use a combination of multiple choice, true/false, and short answer questions. All of the quiz questions come from materials in the textbook.
Exams
There will be 3 exams and a final comprehensive exam.

Double check the schedule for exam days and times
   Write them in your calendar or planner

Assignments
Assignments can be submitted by WebCT email or in person (Walden Hall 117). You should plan your WebCT email submissions carefully to ensure that they arrive no later than the due dates. Late homework assignments will not be accepted.

Policy on Failure to Complete Assignments
Any student who has not completed any assignment or has not taken any quizzes or exams as of October 10, 2004 will be dropped from the course.

Evaluation
Grades will be based on the total number of points that you earn during the course. The points associated with each of the graded areas, and the total points required to earn the various grades, are shown below.

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<th>Points</th>
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<tr>
<td>Quizzes</td>
<td>100</td>
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<tr>
<td>Homework</td>
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<tr>
<td>Exam 1 over (2.1, 2.2, 2.3, 2.4, 2.5, 2.6)</td>
<td>100</td>
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<td>Exam 2 over (3.1, 3.2, 3.3)</td>
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<tr>
<td>Exam 3 over (4.1, 4.2, 4.3, 4.4)</td>
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<tr>
<td>Final Comprehensive Exam</td>
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<td><strong>Total</strong></td>
<td>600</td>
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Grading follows the traditional grading scale of 90-100 is an A, 80-89 is a B, 70-79 is a C, etc.

Grade Availability
Grades will be available via the My Grades tool in WebCT.

Course Procedure
Since this a web-based course, there is no required attendance. Assignments MUST be completed on or before the due dates. All assignments will be available online, and planned class interactions will occur via a web-based method.

Withdrawals
It is the responsibility of the student to know important dates such as university drop dates. Moreover, it is the responsibility of the student to officially withdraw from any class that he or she intends to drop.

Due Dates
All assignments will be turned in electronically and are due at the specified date and time on the schedule.

Students with Disabilities
If you have or believe you have a disability that interferes with your academic progress, you may contact...
Services for Students with Disabilities at 646-6840 (V) or 646-1918 (TTY) for an appointment. Services for Students with Disabilities is located in Garcia Annex, Room 102. Current and appropriate documentation will be required in order to receive services. If you have general questions about the American with Disabilities Act (ADA), call the ADA Coordinator at 646-7795.

Other Information

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<th>Key Dates/Events</th>
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<tbody>
<tr>
<td>Date</td>
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<td>9/1</td>
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<td>11/15</td>
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<td>12/10</td>
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Getting Started with WebCT

1. From your web browser, access the web page at http://salsa.nmsu.edu/ (there is no www in the address!)
2. If you are viewing the WebCT page from a campus computer lab, you do not need to change any settings.
   If you are viewing the WebCT page from somewhere other than a campus computer lab, you probably need to change some of the settings on your browser software. Click on the “Test Your Browser” link and make sure that your web browser will work properly with WebCT.
3. Click the link “Login Help” to create your NMSU Global LoginID, PIN, and Password and follow the instructions.
4. Log on by entering your NMSU Global LoginID and your NMSU Global Password.

Not knowing your NMSU Global LoginID or your NMSU Global Password is not an excuse for missing work in this class!

5. Once you have logged in to WebCT, you should see a link on the left labeled “Math 230: Matrices and Linear Programming”. Click on that link. You will now see several icons. You can browse the syllabus online, see the latest news from the instructor, and check out other information about the course, etc.

Getting Started with the class

- To get started with the class, go to the online schedule and do everything listed in the schedule for instruction. You'll want to begin every class session by visiting the online schedule.
- The syllabus and schedule are ready, but assignment instructions will all have to be written, so I'll be working on those throughout the semester.
If you are new to online learning, it will probably take a few weeks to get used to how I do things. Plan to spend a little extra time at first and don't hesitate to email or call if you feel lost.