Professor Jenny Baglivo   Office: Maloney Hall, Room 574

Voicemail: 2-3772   Office Hours: M-W-F 10-11AM, 1-2PM

Email: baglivo@bc.edu   and by appointment

Text: *Linear Algebra, and its*   Course webpage:
      Applications, 5th *Edition,*   `http://www2.bc.edu/jenny-baglivo/MT210/MT210.html`
      by David C. Lay, *et al.,*
      Addison Wesley, 2016

Class notes, with room to work out solutions to all class exercises and derivations, are located on the course webpage. The class notes are divided into 4 "notebooks" (notebook1, notebook2, notebook3, notebook4). You should download "notebook1" and bring it to class on Friday.

MATH2210 is an introduction to linear algebra concepts and applications. The course is generally taken by students in mathematics, the natural and social sciences, and management.

The central equations we consider are of the form $A\boldsymbol{x} = \boldsymbol{b}$, where A is an m-by-n ("$m \times n$") coefficient matrix, $\boldsymbol{x}$ is an n-by-1 vector of unknowns, and $\boldsymbol{b}$ is an m-by-1 vector of values. Solutions come at three levels of sophistication: (1) direct solution methods, (2) matrix algebra methods, and (3) vector space methods. Geometric visualization and interpretation will discussed throughout.

The essential requirement for the course is a working knowledge of algebra and analytic geometry. Familiarity with ideas from single variable calculus will also be assumed.

Exams, homework and grading: Your final grade for the course will be a weighted average of three in-class examinations (54%), written homework and class participation (14%), and a comprehensive final examination (32%).

1. *Examination schedule:*

Date:	Material from:
Monday, February 12	Chapter 1, 2
Friday, March 16	Chapters 1, 2, 3
Friday, April 20	Chapters 4, 5
Thursday, May 10, 9AM	Chapters 1 through 7 (comprehensive)

There will be *no makeup examinations.* If you have a serious reason for missing an in-class exam, then you must let me know *prior* to the examination time. If you have a serious reason for missing the final exam, then you must inform the Dean's office *prior* to the final exam time. (The Dean's office will then let me know that you will miss the exam.)

2. *Homework assignments:* There will be about twelve written problem sets. While I expect that students will discuss homework problems with their colleagues, each student must submit his or her own work. You must submit your homework *on time*, and you must *staple* multiple sheets together; ripped, folded, and torn sheets will not be accepted. "Carbon copy" homeworks will *not* be graded.

3. *Class attendance:* Students are expected to come to class and to be *on time.*

4. *Policy on Cheating:* Academic integrity is central to the mission of higher education. Please observe the highest standards of academic integrity in this course. Please review the standards and procedures that are published in the university catalog and on the web, at:

<div align="center">http://www.bc.edu/integrity</div>

Make sure that the work you submit is in accordance with university policies. If you have any questions, please consult with me. Violations will be reported to the Deans' Office and reviewed by the University's Committee on Academic Integrity. This could result in failure in the course or even more severe sanctions.

Syllabus:

Dates:	Topics:	Text sections:
Jan: 17, 19, 22, 24, 26, 29, 31; **Feb:** 2	Linear equations in linear algebra	1.1-1.5, 1.7-1.9
Feb: 5, 7	Matrix algebra	2.1-2.5
Feb: 9	Additional problems	
Feb: 12	**Class exam 1**	
Feb: 14, 16, 19, 21	Matrix algebra, continued	
Feb: 23, 26, 28	Determinants	3.1-3.3
Mar: 2, 12	Vector spaces	4.1-4.7
Mar: 14	Additional problems	
Mar: 16	**Class exam 2**	
Mar: 19, 21, 23, 26, 28	Vector spaces, continued	
Apr: 4, 6, 9	Eigenvalues and eigenvectors	5.1-5.5
Apr: 11, 13	Orthogonality	topics from 6.1-5, 7.1-2
Apr: 18	Additional problems	
Apr: 20	**Class exam 3**	
Apr: 23, 25, 27, 30; **May:** 2	Orthogonality, continued	
May 10, 9AM	Comprehensive final	

Final Notes:

Tutoring is available in Mathematics Department (5th floor Maloney Hall) on a walk-in basis. The tutoring program usually begins in the second week of classes, and ends at the last full week of classes. In addition, the Connors Learning Center, in O'Neill Library, offers tutoring most afternoons and evenings, but you must sign up for those sessions in advance.

If you are a student with a documented disability seeking reasonable accommodations in this course, please contact Kathy Duggan, (617) 552-8093, dugganka@bc.edu, at the Connors Family Learning Center regarding learning disabilities and ADHD, or Paulette Durrett, (617) 552-3470, paulette.durrett@bc.edu, in the Disability Services Office regarding all other types of disabilities, including temporary disabilities. Advance notice and appropriate documentation are required for accommodations.