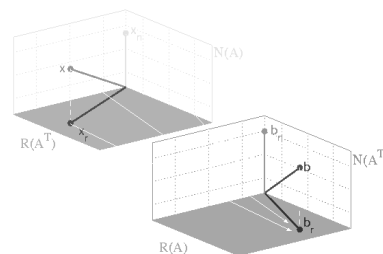


Math 230 Linear Algebra Imperial Valley College Fall 2009

Class Number: 10484 (3 credit units)
Room: 510
MW 4:45pm-6:10pm



Instructor: Rick Castrapel
Phone: (760) 355-6505
Office: Room 3201C
Email: rick.castrapel@imperial.edu
Web Site: <http://www.imperial.edu/rick.castrapel>
Textbook: Linear Algebra and its Applications, Lay 3rd Ed
 ISBN: 0-321-28713-4
Office Hours: MW 10:30-11:30, TTh 12-1, T 5:30-6:30 or by appointment

Student Learning Outcomes:

- 1) Understand and apply the definitions of vector space, subspace, linear independence, span, basis, dimension, and linear transformation.
- 2) Perform matrix operations, and compute determinants, eigenvalues/vectors, and inverses.
- 3) Understand and apply the relationship between linear transformations, matrices and systems of equations.
- 4) Analyze, synthesize, and evaluate theorems in Linear Algebra.

Prerequisites: MATH 194 or equivalent college course with "C" or better, or eligibility determined by math placement process.

Calculator: A TI 83/84/89 is recommended. You may not share calculators during tests. Come to exams prepared. I am not a lending library for calculators.

Cell Phones: Keep cell phones turned off during class. You may not use a cell phone as a calculator during tests.

Keys to Success:

1. Attitude, Attitude, Attitude
2. Attend Class Regularly
3. Do Your Homework
4. Study

Keeping Up: Don't let yourself fall behind. If you feel you are slipping, **SEE ME**. This is **urgent**. It is my goal and that of the Imperial Valley College Math Dept. that you succeed. Sign up for free tutorial service offered by the **Math Lab room 2500**.

Lab: Three labs will be assigned using Matlab software which may be accessed in the Math Lab, room 2500. These are part of the course and mandatory.

Dropping: You may be dropped from this class if you miss the first day or if you miss three or more class sessions total. The last day to drop this class is Nov 13. After that date, I must give you a letter grade. It is your responsibility to drop, not mine.

DSP&S: Any student with a documented disability who may need educational accommodations should notify the Disabled Student Programs and Services (DSP&S) office as soon as possible. Room 2117 Health Sciences Building (760) 355-6312.

Grading: There will be 4 midterm tests, worth 100 points each. There will be a comprehensive final exam worth 100 points. Labs are 150 points total. Your homework is worth 150 points total. A 10% penalty will be assessed for makeup of a missed test.

Grading Policy

Midterm Tests	400 points
Homework	150 points
Labs	150 points
Final Exam	100 points
Total	800 points

Grading Scale

90-100 %	A
80-89%	B
70-79 %	C
60-69 %	D
< 60 %	F

Academic Integrity is assumed and necessary. Disruptive students will be required to leave the class for the day. Continued disruptive behavior, cheating or plagiarism will be reported to the Dean of Student Affairs for disciplinary procedures which may result in severe academic penalty. See the college bulletin for details.

Math 230 Fall 2009 Tentative Schedule

Date	Text	Event	Notes
08/24/09	1.1	Course Introduction	Systems of Linear Equations
08/26/09	1.2		Row Reduction and Echelon Forms
08/31/09	1.3		Vector Equations
09/02/09	1.4		The Matrix Equation $Ax=b$
09/07/09		Holiday	Labor Day
09/09/09	1.5		Solution Sets of Linear Systems
09/14/09	1.7		Linear Independence
09/16/09	1.8		Linear Transformations
09/21/09		Exam 1	Chapter 1
09/23/09	2.1		Matrix Operations
09/28/09	2.2		Inverse of a Matrix
09/30/09	2.3		Characteristics of Invertible Matrices
10/05/09	3.1		Introduction to Determinants
10/07/09	3.2		Properties of Determinants
10/12/09	3.3		Cramer's Rule, Volume, Linear Transformations
10/14/09		Exam 2	Chapters 2.1-2.3 and 3.1-3.3
10/19/09	4.1		Vector Spaces and Subspaces
10/21/09	4.2		Null Spaces, Column Spaces and Linear Transformations
10/26/09	4.3		Linearly Independent Sets: Bases
10/28/09	4.4		Coordinate Systems
11/02/09	4.5		Dimension of a Vector Space
11/04/09	4.6		Rank
11/09/09		Holiday	Veterans Day
11/11/09		Exam 3	Chapter 4.1-4.6
11/16/09	5.1		Eigenvectors and Eigenvalues
11/18/09	5.2		The Characteristic Equation
11/23/09	5.3		Diagonalization
11/25/09	6.1		Inner Product, Length and Orthogonality
11/30/09	6.2		Orthogonal Sets
12/02/09		Exam 4	Chapters 5.1-5.3 and 6.1-6.2
12/07/09	Final Exam	Comprehensive Final	