MATH 124.B – Linear Algebra / Fall 2012


Class Meets: 001 Kalkin, MWF: 3:00 – 3:50 p.m.

Instructor: Dr. Taras I. Lakoba, Math & Stats Bldg. (16 Colchester Ave.), Room 405
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Office Hours W & F: 1:00 – 2:10; Th: 1:30 – 3:10 p.m.; and by appointment.

Important deadlines: Add/Drop and Pass/no Pass: Monday, September 10; Class withdrawal: Monday, October 29.

Course contents Verbal description: Echelon and reduced echelon forms, consistent linear systems, matrix operations, linear (in)dependence, (non)singular matrices, matrix inverses; properties of vector space $\mathbb{R}^n$, subspaces, bases, coordinates, and dimension, orthogonal bases, linear transformations, least-squares solutions; eigenvalue problems, determinants, eigenvectors and eigenspaces, similarity and diagonalization. By Section: 1.1–1.3, 1.5–1.7, 1.8 (if time permits), 1.9; 3.1–3.5, 3.7, 3.8; 4.1, 4.2, 4.4, 4.5, 4.7.

Homework Homework will be assigned (i.e., posted on the website listed above) at the end of each covered section. The purpose of the homework is to help you master the techniques covered in class. As such, homework problems will be substantially based on examples considered in class, and you should use your notes or the book when you do the homework. See the instructor for help as soon as you find out that you are having difficulty with the homework. Homework will not be graded. However, both quizzes and tests will be substantially based on the homework problems.

Tests, Projects, and Quizzes
(a) There will be 3 (three) in-class tests during the semester. Their dates will be announced in class at least a week before each test. Make-up exams will be given only to those students who have documented excused absence.
(b) The final exam will be on Tuesday, December 11, at 7:30 – 10:15 a.m. in 001 Kalkin.
(c) Five projects will be assigned in this course. Their primary purpose is to show you a connection between the concepts learned in class and some real-life applications.
(d) Quizzes, sometimes unannounced, will be given at the instructor’s discretion, approximately once a week. The quizzes will be based on homework problems assigned at least 2 calendar days ago. You are encouraged to ask which section’s homework will be covered in the next quiz.

The main purpose of the quizzes is to help you monitor how well you are doing in the course. If you receive a low grade on a particular quiz, it is a flag that you need to review the corresponding material. A structured, 3-step process of such a review is posted on the course website. If you receive a few low quiz grades in a row, see the instructor for help as soon as possible.

Grading policy Each in-class test will be worth 15% of the final grade. All quizzes combined will be worth 16% of the final grade. All projects combined will be worth 17% of the final grade. The final exam will be worth 22% of the final grade. Extra credit may be earned, as explained below.

Note: I do NOT drop your lowest grade. Thus, ALL the grades that you earn during the semester will contribute to your final grade, as detailed above.

Academic integrity You are expected to read and understand the UVM Academic Honesty policy, found at http://www.uvm.edu/~uvmppg/ppg/student/acadintegrity.pdf.

Attendance Attendance will be monitored randomly. If the record shows that you have attended at least 90% of monitored classes, you will get a bonus equivalent to one half of your highest quiz grade (starting with Quiz 2) added to the final grade. This is to encourage attendance, which is often positively correlated with good performance.

Extra credit Additional homework, which is considered an extra credit, will be assigned occasionally. These assignments will be graded (on a coarse scale). No penalty will be given if you choose not to do these extra credit assignments. Before you decide to do a particular extra credit assignment, you are encouraged to review more detailed instructions found on the course website.

I also reserve the right, at my sole discretion, to increase the final grade of any student by one level (e.g., from B- to B) for a demonstrated achievement, some examples of which are: active and constructive class participation, regular and active attendance of office hours, excelling on the final exam, being the “most improved” student in terms of performance or attitude, etc.

Special accommodation Students with disabilities who require special accommodation must notify the instructor of their needs within the first two weeks of the semester. They must also provide a formal letter from the Office of Specialized Student Services.