Final exam. Friday, May 8, 3:30–5:30pm.

Course description and prerequisites. This is a linear algebra course for engineering majors, computer science majors, and mathematics education majors. The emphasis is on applications and problem solving, but students will also be asked to do simple proofs. The course covers matrices and systems of equations, determinants, vector spaces, linear transformations, orthogonality, and eigenvalues. A word of warning: The course gradually grows more abstract, so please do not grow complacent!

From the catalog. Introductory course in linear algebra covering abstract ideas of vector space and linear transformation as well as models and applications of these concepts, such as systems of linear equations, matrices and determinants. MATH 323 designed to be a more demanding version of this course.

Prerequisites. MATH 148, MATH 152, or MATH 172; junior or senior classification.

Learning outcomes. At the end of the course, students should:

1. be able to use matrices and Gaussian elimination to solve systems of equations,
2. be able to compute determinants and understand properties of determinants,
3. be comfortable with abstract vector spaces, subspaces, linear independence, basis, and dimension,
4. be able to do simple proofs about abstract vector spaces (e.g., verify that a given set is or is not a subspace or show that the intersection of two subspaces is a subspace),
5. be able to verify whether a given map is a linear transformation and to find its matrix representations,
6. understand orthogonality and inner products,
7. have a conceptual understanding of eigenvalues,
8. be able to compute the eigenvalues of a given linear transformation and, if possible, find its diagonalization.

Textbook. Linear Algebra with Applications by Steven J. Leon, 8th edition.

Calculator policy. No calculator is required for the course and calculator use will not be permitted during exams.

Help sessions. The math department offers help sessions for Math 304. They begin on the third class day and the schedule will be posted at http://www.math.tamu.edu/courses/helpsessions.html by the end of the first week.

Web site. The course website is http://math.tamu.edu/~dbaskin/math304-spring15/index.html.
Grading policies.

- On most Wednesday class meetings, there will be a quiz at the beginning of class. The quizzes account for 10% of your course grade. The lowest two quiz scores will be dropped.
- Homework will also be due on Wednesdays at the beginning of class. Taken together, the homework accounts for 10% of your course grade.
- There will be two in-class exams. The first will be on Monday, February 16 and the second on Monday, March 30. Each accounts for 25% of your course grade.
- The final exam is on Friday, May 8, 3:30–5:30pm and accounts for 30% of your course grade.

Your minimum grade will be A, B, C, or D for 90%, 80%, 70%, or 60%, respectively. Due to fluctuations in the difficulty of exams from semester to semester, I reserve the right to curve scores upward at the end of the semester.

Homework.

- Homework will be collected once per week.
- Late homework is generally not accepted. It will not be possible to grade all assigned problems but a few will be corrected and graded each week. You are nonetheless required to hand in all assigned problems.
- The two lowest homework scores will be dropped before computing your grade.
- Homework is due each Wednesday at the beginning of class.

Attendance and Make-up policies. You are expected to attend every class meeting and to be engaged. I further expect you to read the assigned section before coming to class and to come to class ready with questions about what you do not yet know. After class, re-read the text and your notes and do exercises to further your mastery of the material.

I hope and expect you to ask questions (and many of them) during class.

If you have an excused absence for a major grade, I will give you a make-up exam. It is easier for all involved if this can be arranged before the exam. Please see student rule 7 at http://student-rules.tamu.edu/rule07 for further information about excused absences. Missing an exam without a valid reason will result in a score of zero on the exam.

Course Topics, Calendar of Activities, Major Assignment Dates. The dates of the exams are below:
- Exam 1: Monday, February 16.
- Exam 2: Monday, March 30.
- Final Exam: Friday, May 8, 3:30–5:30pm.

A tentative weekly schedule of topics for the course is available on the math department website for Math 304. http://www.math.tamu.edu/courses/math304/currentsyl.html

The first exam will cover sections 1.1–1.5 and 2.1–2.3 (tentative), while the second exam will cover sections 3.1–3.6 and 4.1–4.3 (tentative). The final exam is cumulative.

Americans with Disabilities Act (ADA). The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information, visit http://disability.tamu.edu.

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