MATH 311-200 - Topics in Applied Mathematics I - Summer 2014

Instructor: Murtazo Nazarov
    Office: Blocker 608p
    Email: murtazo"AT"math"DOT"tamu"DOT"edu
    Office hours: Mondays-Wednesdays 1:00pm-2:00pm, or by appointments

Course homepage: http://www.math.tamu.edu/~murtazo/teaching/math311/

Class hours: MTWRF, BLOC 161, 10:00 am-11:35 am

Textbook: A customized version of Linear Algebra and Vector Calculus, 1st ed., based on
    1. Leon, S., Linear Algebra with Applications, 8th edt. (2010)
    2. Colley, S., Vector Calculus, 4th edt. (2012).

Course Description: Systems of linear equations, matrices, determinants, vector spaces, linear transformations, eigenvalues and eigenvectors, diagonalization, inner product spaces, orthogonal functions; vector analysis, including gradient, divergence, curl, line and surface integrals, Gauss', Green's and Stokes' theorems.

Prerequisites: MATH 221, MATH 251, or MATH 253; MATH 308.

Objectives: In this class you will get skills to solve linear equations, work with matrices and vectors, linear transformations, calculate eigenvectors and eigenvalues, line and surface integrals, vector analysis.

Schedule:
    Weeks 1-4:
        Chapter 1: Matrices and Systems of Equations.
        Chapter 2: Determinants.
        Chapter 3: Vector Spaces.
        Chapter 4: Linear Transformations.
        Midterm: Wednesday July 23, BLOC 161, 10:00 am-11:35 am.
        Chapter 6: Eigenvalues.
        Chapter 5. Orthogonality.
    Week 5-6:
        Chapter 8: Gradient, divergence, curl, and line integrals.
        Chapter 10: Line integrals and Green's Theorem, parametrized surfaces.
        Chapter 11: Surface integrals, Stokes's and Gauss's Theorems.
        Final: August 12, Tuesday, BLOC 161, 10:30 am-12:30 pm.

Homeworks: Solving the homework problems in time helps you to understand the subject, get more learning experience and get prepared to quizzes, midterm and final exams. The homeworks are not graded but it is highly recommended to solve them in time.

Quizzes: There will be 10 quizzes. Typically a quiz will last 10-15 minutes and cover material similar to assigned problems and/or knowledge of basic facts from the text or lectures. A list of practice problems, help session hours, etc, will be posted on my home page.

Grading Questions: If you have any question about the grading of a quiz or exam **you must contact me within two class days** of the paper's return. One quiz with the lowest grade will be dropped at the end of the course.

Grading:
    Quizzes: 30%
    Midterm: 30%, Wednesday July 23, BLOC 161, 10:00 am-11:35 am.
    Final: 40%, August 12, Tuesday, BLOC 161, 10:30 am-12:30 pm.

Your point total T will be converted to a final grade like this: A if 90% ≤ T, B if 80% ≤ T < 90%, C if 70% ≤ T < 80%, D if 60% ≤ T < 70%, F if T < 60%.

Make-Up Policy: Make-ups for exams will only be given with documented University-approved excuses (see University Regulations). Consistent with [University Student Rules](), students are required to notify an instructor by the end of the next working day after missing an exam. Otherwise, they forfeit their rights to a make-up.

Scholastic Dishonesty: Students may work together and discuss the homework problems with each other. Copying work done by others is an act of scholastic dishonesty and will be prosecuted to the full extent allowed by University policy. For more information on university policies regarding scholastic dishonesty, see [University Student Rules]() .

Copyright Policy: All printed hand-outs and web materials are protected by US Copyright Laws. No multiple copies can be made without written permission by the instructor.

Students with Disabilities: 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 Services for Students with Disabilities, Koldus 126, 845-1637.