

MATH 253/504–506 INFORMATION SHEET

1 Course

Texas A&M University Department of Mathematics Math 253/504–506, Fall 2007

Engineering Mathematics III (3-2), Credit 4, I, II, S. The first part of this course covers three-dimensional analytic geometry and vectors. The second part deals with differential calculus of functions of several variables: partial and directional derivatives, gradient, and multivariable optimization (max/min). The third part covers principles and applications of multiple integration—double and triple integrals in rectangular, polar, cylindrical, spherical, and generalized coordinates. The fourth part deals with vector calculus—line and surface integrals and the principal theorems associated with them. The class meets three times a week in lecture, once in recitation, and once in computer laboratory. In recitation you will discuss homework problems with your teaching assistant (TA) and take quizzes. In computer laboratory, you will use the mathematical software package MATLAB 7 on weekly assignments. Prerequisite: Math 152.

2 Classes/Sessions

- **Lecture:** Monday/Wednesday/Friday, 9:10–10:00 am, HELD 113
- **Recitation (Tuesday) / Computer Lab (Thursday):**
 - Section 504: 3:55–4:45 pm; Tuesday, SCTS 216 / Thursday, BLOC 126
 - Section 505: 8:00–8:50 am; Tuesday, BLOC 160 / Thursday, BLOC 130
 - Section 506: 9:35–10:25 am; Tuesday, HELD 119 / Thursday, BLOC 127
- **MATLAB Help Sessions** in Blocker 131: Monday–Thursday, 7:00–10:00 pm; Sunday, 1:00–10:00 pm
- **Calculus 3 Help Sessions:** See <http://www.math.tamu.edu/teaching/helpsession/> once the term begins.

3 Instructor

Lecturer	Art Belmonte (belmonte@calclab.math.tamu.edu)
Office	BLOC 601J
Phone	845-4299
Class Page	http://calclab.math.tamu.edu/~belmonte/2007c_m253.html
Course Page	http://calclab.math.tamu.edu/docs/math253/
Office Hours	Monday–Friday, 11:30 am–12:00 noon (or by appointment) in Blocker 601J

4 Books

Textbook	<i>Calculus: Early Vectors</i> , ©1999, ISBN 0-534-49348-3
Authors	James Stewart and members of the Texas A&M University Department of Mathematics
Coverage	Chapters 11–14

Lab Manual	<i>A MATLAB Companion for Multivariable Calculus</i> , ©2001, ISBN 0-12-187625-X
Author	Jeffery Cooper
Coverage	Chapters 1–11

5 Evaluations

Grading: A (90–100%), B (80–89.99%), C (70–79.99%), D (60–69.99%), F (0–59.99%)

Type	Number	Weight
Exams	4	60%
Final	1	20%
Homework	lots	0%
Quizzes	10	10%
MATLAB	10	10%
TOTAL		100%

6 Notes

1. This is a third engineering math course with a technology component, the mathematical software package **MATLAB 7**. (You may buy the Student Version of MATLAB for \$110 at the TAMU Bookstore in the MSC.) In my sections you are also expected to use a **TI-89** calculator, which contains a computer algebra system or CAS. (Alternatively, you may use the new **TI-Nspire CAS** calculator if and when it is available.)
2. Please be on time to class. Make sure that you have read the relevant sections in the textbook or lab manual *beforehand*.
3. It is imperative that you spend time doing MATLAB during open hours, in TAMU open access labs, or at home.
4. Make-ups for exams will be given only in the case of absences authorized under University Regulations.
5. Please bring your ID card and a BLUE BOOK to all exams. Exams are administered in HELD 113 during selected lecture periods. (NOTE: These are NOT common exams, but are specific to this class.)
 - **Exam 1:** Friday, 14/Sep/2007; covers Chapter 11; worth 15% of your grade.
 - **Exam 2:** Friday, 05/Oct/2007; covers Chapter 12; worth 15% of your grade.
 - **Exam 3:** Friday, 02/Nov/2007; covers Chapter 13; worth 15% of your grade.
 - **Exam 4:** Friday, 30/Nov/2007; covers Chapter 14; worth 15% of your grade.
6. Also bring your ID card and a BLUE BOOK to the final exam. It will be given on Monday, 10/Dec/2007, in HELD 113 from 8:00–10:00 am. It is comprehensive and worth 20% of your grade.
7. Selected problems from your textbook will be assigned but not graded. See the Web for details. It is imperative that you spend time working these problems. When you have questions, please ask for help.
8. The ten quizzes, each worth 1% of your grade, will be given in recitation.
9. MATLAB assignments for the entire term are posted on the Web.
10. In all aspects of the course, we permit unrestricted use of calculators. That said, you may be required to do certain portions of exam and quiz problems by hand if specified.
11. Lectures for each section covered in the textbook are provided via the Web. This material is copyrighted. I grant you permission to make ONE copy of each document for your personal use.

7 Miscellany

- The American 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 a reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities.
- “An Aggie does not lie, cheat, or steal or tolerate those who do.” You are referred to the Honor Council Rules and Procedures on the Web at <http://www.tamu.edu/aggiehonor>.