

MATH1502A1, A2, B1, B2, Summer 2007
Course Procedures and Outlines

Instructors: Plamen Iliev (2nd half) and Xingxing Yu (first half)

TAs: Hao Deng (A1 and B1) and Huy Huynh (A2 and B2)

Offices: Skiles 227 (Iliev), Skiles 235A (Yu), French 103A (Deng), French 101A (Huynh)

Office Phones: 5-7496 (Deng), 5-7525 (Huynh), 4-6555 (Iliev), 4-4757 (Yu)

Office hours: 9:30–10:30 on MWF (Yu and Iliev), 11:30–12:30 TR (Deng), 12:00–1:00pm TR (Huynh).

- The class meets from 10:40am to 11:50am on MWF in Physics L1, and recitation classes meet as follows
 - A1 from 8:40 to 9:50am on TR in Skiles 243
 - A2 from 8:40 to 9:50am on TR in Skiles 146
 - B1 from 10:00 to 11:10am on TR in Skiles 243
 - B2 from 10:00 to 11:10am on TR in Skiles 140

Prompt and regular attendance is expected. Students will be responsible for all handouts and information given, and work assigned on days they miss classes.

- Homework will be assigned but not graded. There will be weekly quizzes, two tests and a final exam, all close-book and no calculators. **No** makeup quizzes or tests will be given, but you are allowed to drop one quiz. Quizzes make up 20% of your grade, each test weighs 25%, and the final exam weighs 30%. Georgia Tech Honor Code applies to all quizzes and tests. See <http://www.deanofstudents.gatech.edu/integrity/policies.php>
- This course covers the following subjects: Taylor approximation; infinite series and power series; numerical integration; and the theory of linear functions and equations. The first three topics complete the coverage of single variable calculus, and the fourth is the basis of the calculus of functions of several variables, as well as a fundamental subject in its own right.
- The textbook for the Calculus part is “Calculus” by Salas, Hille and Etgen (SHE), ninth edition. The textbook for linear algebra is “Linear Algebra from the Beginning” by Carlen and Carvalho (CC), 2007 edition.

The material can be roughly divided into five topics:

- Taylor approximation and infinite series (10.5-10.7, and 11.1-11.6 in SHE).
- Power series and numerical integration, and elementary differential equations (11.7, 11.8 and 8.7–8.9 in SHE).
- Introduction to matrices, row reduction and solution of linear systems (Chapters 1 and 2 in CC).
- Linear independence, kernel, range and Least squares (Chapter 3 in CC).
- Determinants, eigenvectors, eigenvalues (Chapters 4 and 5 in CC).

Here is a tentative schedule, which will be altered by the pace at which the material is covered in class:

- Week 1: 11.5, 11.6, 10.5, 10.6, and 10.7 in SHE
- Week 2: 11.1, 11.2, 11.3, 11.4, and 11.7 in SHE
- Week 3: 11.8, 8.8, 8.9, and 8.7 in SHE.
- Week 4: Test 1, and begin Linear Algebra, Chapter 1 in CC
- Week 5: Chapter 1 in CC
- Week 6: Chapters 1 and 2 in CC
- Week 7: Chapters 2 and 3 in CC
- Week 8: Chapter 3 in CC
- Week 9: Test 2, and Chapter 4 in CC
- Week 10: Chapters 4 and 5 in CC
- Week 11: Chapter 5 in CC
- Week 12: Chapters 6 (if time permits)