MATH 01.236.1 Mathematics for Engineering Analysis II – Spring 2012

Instructor:	Guangming Yao	**Course Web:**	Blackboard
Email:	yao@rowan.edu	**Office Hours:**	MW 14:00-15:00, TR 11:10-12:00
Office:	Robinson Hall 229B	**Class Schedules:**	9:25–11:05, T Robinson 105
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Text: Advanced Engineering Mathematics by Erwin Kreyszig, 10th Edition, Wiley, 2011. We will cover various topics in Chapters 6, 11–14, 21, 24, 25.

Course Description: Prerequisite: Math for Engineering Analysis I. This course is a continuation of Mathematics for Engineering Analysis I. Multivariable calculus is presumed to be known.

Course Objectives: Students will demonstrate the ability to: (1) use Laplace transforms to solve ordinary differential equations; (2) solve partial differential equations using the method of separation of variables and Fourier series; (3) analyze data and model statistical experiments in terms of random variables and probability distributions; (4) evaluate derivatives of complex analytic functions and contour integrals over complex domains.

Technology Sources: Mathematica software will be used in this class.

Course Contents:

1. Laplace Transforms, Chapter 6
2. Fourier Series, Chapter 11
3. Partial Differential Equations, Chapter 12
4. Complex Analysis, Chapters 13 and 14
5. Data Analysis and Probability Theory, Chapters 24 and 25
6. Numerical Analysis, Chapter 21

Grading: At any point during the semester, you may determine your standing by computing your grade. This can be done by adding the points in each category.

Homework	50 points
Quizzes	100 points
Two Tests	100 points each for a total of two tests
Final Test	150 points

Grades are awarded according to the following tableaux:

Score	Grade
500 – 450	*A*
450 – 400	*B*
400 – 350	*C*
350 – 300	*D*
≤ 300	*F*

Scores falling on a boundary are at the discretion of the instructor based on the level of effort and commitment shown by the student during the semester.

Attendance Policy and Makeup work: Full attendance is expected at every class meeting. Absence will affect your grade. Makeup tests/quizzes/etc., without an excused absence, are unacceptable. If you must miss class, you must email or phone my office on the day of the missing class, providing information of your name and phone number, the reason for your absence and the date you anticipate returning. You must also produce documentation supporting your absence. When you miss class it is your responsibility to find out what material you missed from

your peers and be prepared for upcoming class elements. No private lessons can be given. Any assignment turned in past the specified due date and time will receive a score lowered by 5 point for each day it is late.

Homework and Quizzes: All assignments are expected to be completed by the next class meeting unless a due date is specifically announced. Students are expected to visit Blackboard after every class to check for updates of assignments and due dates for assessments.

Short quizzes will be given. Quizzes will generally cover material on homework assignments. Tutoring and study groups: I encourage you to work together on homework assignments, to look at each other's solutions, and to explain answers to each other. This is not the same thing as copying each other's homework. You take the tests alone and without help, so if you cannot explain to your tutor, classmate, or teacher how to solve the problem, then you have not learned how to solve it, and you need to study it more (perhaps by visiting me during my office hours).

Tests: There will be two 60-minute tests, the dates will be given at least a week before the tests. The materials covered in the tests will be as follows:

> **Test 1:** Chapters 13 and 14
> **Test 2:** Chapters 6, 11, and 12
> **Final:** comprehensive.

Tests are not multiple-choice. The final exam will be held during final week (May 1 through May 5, 2012). Specific date, time and location will be announced when it becomes available. All exams is based entirely on the examples given in class, homework and quizzes. It is in closed book and notes, thus students who cannot master the basic homework problems will be unlikely to do well on exams.

Note: The deadline to drop a full-semester course without academic penalty is 11PM, Monday, January 23rd, 2012.

Academic Honesty: Dishonesty includes cheating on a test, falsifying data, misrepresenting the work of others as your own (plagiarism), and helping another student cheat or plagiarize. Academic dishonesty will result in a grade of zero on that particular assignment; serious infractions of the Academic Honesty policy will result in failure of the course. For complete information about the University's policy on Academic Honesty, consult the Student Handbook 2000-2001.

ADA Syllabus Statement: If a student has a disability that qualifies under the American with Disabilities Act (ADA) and requires accommodations, he/she should contact the Office for Disability Accommodations (ODA) for information on appropriate policies and procedures. Disabilities covered by ADA may include learning, psychiatric, physical disabilities, or chronic health disorders. Students can contact ODA if they are not certain whether a medical condition/disability qualifies.