MATH 01.130.8 Calculus I

Instructor:	Guangming Yao	**Course Web:**	http://users.rowan.edu/ yao/
Office:	Robinson Hall 229B	**Office Hours:**	MW 14:00-15:00, TR 10:00-11:30
Email:	yao@rowan.edu	**Class Schedules:**	MT 15:15–16:30, EDUC 3091A R 15:15–16:05, BUN 107

Text: Jon Rogawski, Calculus: Early Transcendentals with CalcPortal, 2nd Edition, Freeman 1-429-28256-8, Packaged and Mathematica Manual, 2011, 1-464-10187-6, Optional.

References: The following is a partial list of supplemental reading which is beneficial:

1. Abdul Hassen, Gary Itzkowitz, Hieu D. Nguyen, Jay Schiffman, Mathematica for Rogawski's Calculus, 2nd Edition, W. H. Freeman and Company New York.

2. http://users.rowan.edu/ hassen/Math_Rogawski_Calc.htm

Course Description: Prerequisites: Math #01.122(Precalculus) or 60 on the CLM exam This course begins with a discussion of functions, the limit concept and continuity. The concept of a derivative is introduced and the student learns to differentiate algebraic functions, exponential, functions, logarithmic and trigonometric functions. Differentiation is applied to analysis of functions, extreme problems and to problems in related rates. The integral as the limit of a sum is linked to the antiderivative by the Fundamental Theorem of Calculus and used to find areas.

Course Objectives: Students will demonstrate the ability to: (i) compute limits; (ii) differentiate and integrate polynomial, rational, algebraic, exponential, logarithmic and trigonometric functions; (iii) use differentiation to solve extreme and related rate problems, and (iv) use integration to find areas and volumes.

Technology Sources: The Mathematics department policy recommends the TI-89 for this course. The instructor will use the TI-89 in class. Mathematica software will also be used in this class.

Course Contents:

1. Limits and Continuity
2. Differentiation
3. Applications of the Derivative
4. Integration
5. Applications of the Integral

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 & Quizzes	100 points
Mathematica Projects	100 points
Three Tests	100 points each for a total of three tests
Final Test	100 points

Grades are awarded according to the following tableaux:

Score	Grade
600 – 525	*A*
525 – 450	*B*
450 – 375	*C*
375 – 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.

Late Assignments: 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.

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, then you must also produce documentation supporting your absence.

Homework: You are expected to do the homework. 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. The final exam is based entirely on the homework. It is in closed book and notes, thus students who cannot master the basic homework problems will be unlikely to do well on the final exam.

Quizzes: 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, the professor).

Projects: There will be two Mathematica projects, the due dates will be given in class.

Tests: There will be three 75-minute tests, the dates will be given at least a week before the tests. The materials covered in the three tests will be as follows:

> **Test 1:** all sections of Chapter 1 and Chapter 2
>
> **Test 2:** all sections of Chapter 3
>
> **Test 3:** all sections of Chapter 4

Tests are not multiple-choice. Every test will consist of two parts: (1) a review of the homework assignments, and (2) a bonus problem that you have not seen in class or in the homework.

Final Exam: The final exam will be held during finals week (December 14 through December 20). Specific date, time and location will be announced when it becomes available. Final test will cover all sections of Chapter 5 and chapter 6.

Note: The deadline to drop a full-semester course without academic penalty is Monday, September 12th.

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.