

Math 322
Real Analysis
Spring 2011, Section 1
CRN: 21253
Kennedy 207
11:00-12:15 TTh

Instructor: Dr. Christopher Mouron

Office: 322 Ohlendorf Hall

Office Hours: MWF 10:00-11:00 AM, or by appointment

Phone: x3720

Email: mouronc@rhodes.edu

Text: *Understanding Analysis*, by Stephen Abbott. Springer.

Course Description: Real Analysis is the bridge from computational calculus to higher mathematics. The material presented is crucial for anyone who wants to study graduate level mathematics or beyond. In particular, the epsilon-delta techniques that will be studied in this course are the foundation of all mathematical analysis arguments. Also, this course is designed to further develop the student's ability to communicate mathematics effectively.

Course Content: The goal is to cover the following topics: Sequences and series of functions, The Riemann Integral, The Baire-Category Theorem, The construction of the real numbers from the rational numbers. Measure theory and dynamics may also be covered if time permits.

Course Prerequisites: Math 321 or equivalent.

Attendance Policy: I will follow the College's attendance policy, which can be found on page 71 of the Catalogue. In particular, a student will be given a warning after 7 absences and a written recommendation to the Dean may be made that the student be dropped from the course if class attendance does not improve. In the case of a missed test, the student will be allowed to make-up the test only if both of the following conditions are satisfied:

- 1) I am contacted before the test is given (at least 1 week in the case of absence due to the attendance of an official school function.)
- 2) I am given proper documentation.

Finally, the student is responsible for all material and notes due to an absence. Get the notes from another student. Come to my office for any materials handed out in class.

Boardwork (15%): Mathematics is not a spectator sport. In order to learn the techniques and concepts, the student must work problems outside of class. Each class student will present homework problems.

Formal Homework (25%): There will be weekly homework problems that will be collected and graded on correctness of the mathematics and written exposition.

Late homework will not be accepted.

Tests (35%): There will be 2 tests that will consist of an in-class part and a take home part. The tentative test dates are:

- 1) Week of February 14
- 2) Week of March 29

Final Exam (25%): The final exam will be cumulative and consist of an in-class part and a take home part. The final exam is Tuesday May 3 at 5:30 pm.

Grades: Grades will be earned for the following percentages:

<i>A</i>	Score \geq 93%	<i>C</i>	73% \leq Score $<$ 77%
<i>A-</i>	90% \leq Score $<$ 93%	<i>C-</i>	70% \leq Score $<$ 73%
<i>B+</i>	87% \leq Score $<$ 90%	<i>D+</i>	67% \leq Score $<$ 70%
<i>B</i>	83% \leq Score $<$ 87%	<i>D</i>	63% \leq Score $<$ 67%
<i>B-</i>	80% \leq Score $<$ 83%	<i>D-</i>	60% \leq Score $<$ 63%
<i>C+</i>	77% \leq Score $<$ 80%	<i>F</i>	Score $<$ 60%

Honor Code: The student is expected to conduct him or herself within the guidelines of the College's Honor Code. If you have any questions about what is or not allowed, please ask.

If you have a documented disability and wish to receive academic accommodations, please contact myself and the Office of Student Disability Services as soon as possible.