

## **MATH 301: Intro to Real Analysis**

### **Summer 2015 Course Syllabus**

**Instructor:** Weining Kang, wkang@umbc.edu, 410-455-2433.

- **Lecture:** M/W/Th 9am - 11:50am, Janet & Walter Sondheim 204.
- **Office/Hours:** MP 403, M/W/Th 12:30pm - 1pm, 3:30pm – 4pm.

**Prerequisite:** You must have completed MATH 142 or MATH 152 in addition to MATH 221 with a grade of "C" or better.

**Textbook:** *Introduction to Real Analysis* by Bartle and Sherbert, Fourth Edition, John Wiley & Sons, Inc.

**Course Description:** This course is a systematic study of basic analysis with an emphasis on formal proofs, examples and counter examples. Topics include properties of the real line, sequences, series, limits, continuity and differentiation of functions. We will cover most of Chapters 1–6 of the textbook depending on the class progress. This course has two major goals:

- learn the mathematical foundations of real numbers and basic analytic properties of functions of a real variable;
- learn how to read, construct, and write rigorous mathematical proofs.

**Attendance:** Attending lectures is a fundamental part of the course; you are responsible for material presented in the lecture *whether or not it is discussed in the textbook*. You should expect questions on the exams that will test your understanding of concepts discussed in the lecture. It is absolutely vital that you read the assigned material in advance so that you may be sufficiently prepared to understand the concepts when they presented in the lecture.

**Homework:** Homework assignments will be posted with the due dates in the lecture and on the class blackboard via *myUMBC*. Homework will be collected at the **beginning** of the class on the due dates. Late homework will **NOT** be accepted. One (1) lowest homework grade will be dropped from your final grade. These homework assignments will comprise a substantial

portion of your grade and you will be expected to take them seriously and to **write them up neatly**. You are encouraged to discuss homework assignments with other students, but you should write up your own solutions. **Copying from other students or from a solution manual is prohibited. Any violation will result in a ZERO grade and will be reported to the University Academic Integrity Committee.**

**Exams:** There will be one (1) midterm exam, three (3) quizzes as well as one (1) final exam. All exams are closed-book and calculators and other computing devices are not allowed for any exam. Makeup exams will be given only for **appropriately documented** reasons of illness, family emergency, religious obligation, etc.

**Grading:** Your cumulative average will be calculated as follows:

- 25% Homework, 30% Midterm, 5% for each quiz, 30% Final Exam.

**A: 90-100 %, B: 80-89%, C: 70-79%, D: 60-69%, F: below 60%.**

**Academic Dishonesty:** Academic dishonesty is considered a serious offense at UMBC. Cheating, fabrication, plagiarism, and helping others to commit these acts are all forms of academic dishonesty and will result in disciplinary action, which may include failure of the course or even expulsion from the university. For details, please consult the UMBC Student Handbook, the Faculty Handbook, the UMBC integrity webpage ([www.umbc.edu/integrity](http://www.umbc.edu/integrity))