Syllabus
Math 500
Basic Real Analysis

Professor: Farhod Abdullayev
Office: Salisbury Laboratories 405B
Office Hours: M 12:00 pm-1:00pm and 3:00 pm-4:00 pm, TR 1:00 pm-2:00 pm, or by appointment
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Lecture: MW 4:00 pm-5:15 pm - Stratton Hall 203

Course page: Course information, homework assignments, announcements will be posted on my.wpi.edu. However, information given in class takes precedence over information given on Blackboard.

Text: Introduction to Analysis by Maxwell Rosenlicht

Course Description: 1. Notions from set theory (Chapter 1)
2. The real number system (Chapter 2)
3. Metric spaces (Chapter 3)
4. Continuous functions (Chapter 4)
5. Differentiation (Chapter 5)
6. Riemann Integration (Chapter 6)
7. Interchange of limit operations (Chapter 7)
8. The method of successive approximations (Chapter 8)

Course Objectives: The main goal of this course is to provide a solid understanding of classical analysis. Most of the theorems will be proven and exercises with theoretical character will be assigned as homework. Students are expected to acquire basic techniques for rigorously proving theoretical results in classical analysis.

Attendance: Attendance is expected and participation during lecture is encouraged. Students will be responsible for what is covered in class and the announcements made during lecture. No cell phones or laptops are allowed during lecture!

Office Hours: Come to office hours for help. This gives us the opportunity to focus on specific problems you may be having and to explain things in a more personal manner. If the scheduled times are bad for you, make an appointment, I am more than happy to help.

Homework: Problems will be assigned once per week and will be posted on my.wpi.edu as suggested problems and homework. It is highly recommended that you regularly do your homework otherwise you will be in a serious disadvantage on exams. It is essential to do your homework in a timely fashion! If you have trouble with the assigned problems, please see me as soon as possible. Working problems is the best way to understand the material taught during lecture. Late homework will be accepted only in exceptional circumstances. You should have your homework turned in before class time in order for it to be graded. Your work should be very legible and done neatly. If the work is not presentable, and is illegible, you will not receive credit for it. Please staple the sheets of your assignment together. Do not use paper torn out of spiral bound notebooks. Each homework will consist of 3-4 problems. You need to show both your answer and the work leading to it. Symbiotic student interactions are encouraged: copying another student’s work is prohibited.
**Exams:** There will be three mid term exams (two in class and one take-home) distributed equally.

**Exam 1 (in class) - September 30**

**Exam 2 (take-home) - due on November 11**

**Exam 3 (in class) - December 14**

Please make arrangements so that there are no conflicts with the time and date for the exams (during the lecture period). Make-up tests will only be given in exceptional circumstances and require prior approval of the instructor. If absences at exams are not adequately documented, the student will receive 0 points.

**Grades:** Your final score for the course will be computed as follows

- Exams 1-3: 60%
- Homework: 40%

If $P$ denotes the overall percentage obtained in this class, the following minimum grades are anticipated to be:

- A: $P \geq 90\%$
- B: $80\% \leq P < 90\%$
- C: $70\% \leq P < 80\%$
- NR: $P < 70\%$.

**Academic Dishonesty:** Each student should be familiar with WPI’s Academic Policy (http://www.wpi.edu/offices/policies/honesty). All acts of fabrication, plagiarism, cheating and facilitation will be prosecuted according to the university’s policy. If you are ever unsure as to whether your intended actions are considered academically honest or not, please see me.

**Special Needs:** Any students with disabilities or other special needs, who need special accommodations in this course are invited to share these concerns or requests with the instructor and contact the Office of Disability Services (ODS) as soon as possible. The ODS is located in the Daniels Hall and the phone number is 508-831-4908 (disabilityservices@wpi.edu). If you are eligible for course adaptations or accommodations because of a disability (whether or not you choose to use these accommodation), or if you have medical information that I should know about please make an appointment with me immediately.