

Real Variables I - Math 320

Section 102, Fall 2018

- **Instructor:** Malabika Pramanik
- **Instructor's office:** Mathematics Building, Room 214
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- **Email (preferred):** malabika@math.ubc.ca
- **Office hours:** To be announced on the course website.
- **Course-common web page :** The course website is
<http://www.math.ubc.ca/~malabika/teaching/ubc/fall18/math320/index.html>
Homework assignments and all relevant course information (such as practice problems, final exam venue) will be posted here.
- **Section web page :** The course has two sections. Our section number is 102. Individual section links are provided in the common webpage mentioned above. Section-specific information will appear here. The url for our section's website is
<http://www.math.ubc.ca/~malabika/teaching/ubc/fall18/math320/section102/index.html>
- **Text :** *Principles of Mathematical Analysis (third edition)* by W. Rudin.
- **Lectures :** Monday, Wednesday, Friday 9-10 am in Room 212 Geography Building.
- **Prerequisites :** Either (a) a score of 68% or higher in Math 226 or (b) one of Math 200, Math 217, Math 226, Math 253, Math 263 and a score of 80% or higher in Math 220.
- **UBC course description :**
 1. The real number system
 2. Real Euclidean n -space
 3. Open, closed, compact and connected sets
 4. Bolzano-Weierstrass theorem
 5. Sequences and series
 6. Continuity and uniform continuity
 7. Differentiability and mean-value theorems
- **Course Policies :**
 1. Homework problems will be posted weekly on the course-common website, and collected at the *beginning of class every Wednesday*. Writing proofs is an integral component of this course, and as such homework solutions should be carefully prepared with special attention to detail and mathematical rigour. Answers should be clear, legible and in

complete English sentences. *You will be graded on the precision of your answers as well as the quality of your exposition.*

2. You are encouraged to discuss homework problems with each other. However, the solutions that you write up should be entirely your own.
3. Occasionally, a set of practice problems may be provided to supplement the material being taught in class. You do not need to hand in the solutions to these problems, but it is strongly recommended that you work through them. Exam questions will be largely modelled on these problems.
4. The class discussion platform is an online resource called Piazza. This is a forum for the students to discuss mathematics with each other, with some input and oversight from the instructor or the TA. The access code for subscribing to Piazza will soon be mailed to you.
5. In addition to homework, there will be *two midterms and a final exam*. The midterm will be 50 minutes long and held during class time on **Fridays October 12 and November 9**. Your total score will be a weighted average of your homework, midterm and final scores, with the breakdown as follows.

Homework	20%
Midterm	$15\% + 15\% = 30\%$
Final exam	50%

6. The midterm and final exam will be strictly closed book; no formula sheets or calculators will be allowed.
7. Please refer to the course-common webpage for policies on missed work.
8. *Do not make travel plans until the final exam schedule has been announced.*