

MATH 3101: FOUNDATIONS FOR HIGHER MATHEMATICS

Summer 2017

Instructor:	Aleesha Moran	Time:	TR 5:30PM – 8:15PM
Email:	avmoran@wustl.edu	Place:	215 Eads

Course Page: <https://bb.wustl.edu/>

Office Hours: By appointment. The location will also be case-by-case.

Main References:

1. **(Required).** S. G. Krantz, *The Elements of Advanced Mathematics*.
2. **(Recommended).** Connie M. Campbell, *Advanced Mathematics: A Guide to Understanding Proofs*.

Supplies and Other Materials: Calculators *should not* be needed for this course. If you would like to keep a calculator just in case, then the following calculators are acceptable for this course: Casio FX-250, Casio FX-260, FX-270, Casio FX-300, Sharp EL-501, Sharp EL-506, Sharp EL-520, Sharp EL-531, Sharp EL-546, TI-30, TI-34, TI-36. Calculators will not be provided.

Objectives: The purpose of this course is to serve as a transition between calculation-oriented courses and more theoretical and proof-based courses. Math 310 covers logic, set theory, proofs, and other aspects of mathematical rigor.

Prerequisites:

Tentative Course Outline:

- Ch. 1: Basic Logic
- Ch. 2: Methods of Proof
- Ch. 3: Set Theory
- Ch. 4: Relations and Functions
- Ch. 6: Number Systems
- Ch. 7: More on the Real Number System

Grading Policy: Homework (30%), Midterms 1 and 2 (20% each), Final (30%).

Grading Scale: Letter grades will be given based on your overall score. This scale is subject to change; however, the cutoffs will be no higher than below.

Grading Scale	
90+	A
75-89	B
60-74	C
50-69	D
0-49	F

Important Dates: (Subject to change)

Midterm 1	June 27, 2017
Midterm 2	July 18, 2017
Final Exam	August 3, 2017

Course Policy:

- Late homework will never be accepted. Homework not submitted before the deadline will be considered late. When turning in homework, you must have “clean” edges and write legibly. If I cannot read your work, it will affect your grade.
- Contrary to popular belief, mathematics is a highly collaborative field. I expect you to discuss homework problems with other students. However, you must write up or complete your homework independently. Plagiarism will be taken very seriously.
- Your lowest homework score will be dropped when calculating your final homework grade.
- All exams (midterms and final) are closed book, and you are only permitted to use the calculators listed above. In some cases, I may allow one (or more) pages of notes to use and be turned in with the exam.
- When calculating your grade for the semester, the percentage on the final may replace your lowest midterm grade percentage (assuming the final percentage is higher than the lowest midterm percentage).

Class Policy:

- Regular attendance is essential and expected.
- Be courteous when using mobile devices. Make sure your cell phone is off or on silent. No texting, reading emails, playing games, etc. during class. Exceptions can be made if you are expecting an important call.
- Missing one class could easily lead to a disastrous domino effect. If you have to miss a lecture, then I strongly recommend you study the material you missed before you return to class. I require that you know all material covered in class. You are responsible for making up anything that was covered in lectures you missed. If you miss a lecture, I recommend doing the following:
 - Photocopy, and read notes from someone who was in class,
 - Read the relevant sections from the lecture notes and texts,
 - Do practice problems.

After you have done this, you may contact me or come to office hours if you need clarification on any materials.

Academic Honesty: To review the Academic Integrity Policy, please visit the WUSTL website. Note that should you fail to follow this policy, serious consequences could follow. Please take the time to read this and ask me questions regarding how the policy relates to our class.