

# Course Information Sheet: Math 30800, Section R, Fall 2018

**Course Title:** Bridge to Advanced Mathematics

**Pre-requisites:** A grade of C or higher in MATH 20300 or placement by the Mathematics Department

**Catalog Description:** This course explores the logical and foundational structures of mathematics, with an emphasis on understanding and writing proofs. Topics include set theory, logic, mathematical induction, relations and orders, functions, Cantors theory of countability, and development of the real number system.

**Meeting time and place:** Tuesdays and Thursdays 3:30-4:45pm in NAC 6/111.

## Instructor Information:

- **Name:** Prof. Patrick Hooper
- **Office hours:** Will be listed on the course website. Appointments are also accepted.
- **Office:** NAC 6/282
- **Email:** whooper@ccny.cuny.edu
- **Office Phone:** (212) 650-5149

## Course Textbooks:

- *Introduction to Mathematical Structures and Proofs*, 1st edition, by Larry J. Gerstein. The book is available for free while you are on campus from

<https://link.springer.com/book/10.1007%2F978-1-4614-4265-3>

- *Elementary Analysis: The Theory of Calculus*, 2nd edition, by Kenneth A. Ross. The book is available for free while you are on campus from

<http://link.springer.com/book/10.1007%2F978-1-4614-6271-2>

**Grades:** Grades will be computed from the following:

- Attendance
- Homework, Problem Sets, and/or Quizzes (15%)
- Three midterms (15% each)
- Final Exam (40%): Tuesday, December 18th from 3:30 to 5:45pm in our usual classroom.

Your final score will be tabulated out of 100% as indicated by the percentages above, with attendance taken into account. (See the attendance section below.) A letter grade will be assigned to you according to the table below.

A+	97-100	B+	87-89	C+	77-79				
A	95-96	B	84-86	C	74-76	D	60-69	F	0-59
A-	90-94	B-	80-83	C-	70-73				

**Course information:** Course information can be found on the course website,

<http://wphooper.com/teaching/2018-fall-308/>.

This includes lists of homework assignments and a collection of course documents.

**Blackboard:** I use blackboard to keep track of your grades, and you can view your grades there. To access blackboard visit <http://bbhosted.cuny.edu/>.

**General expectations:** For each hour spent in the classroom, I expect you to spend at least three hours reading and understanding the book, understanding lecture notes, and doing homework. Practice (doing problems and writing proofs) is an important part of understanding mathematics. Only adequate practice will guarantee that you can complete midterm and exam problems in a timely manner.

**Expectations of written work:** Mathematical computations and proofs will be graded partially on presentation. In order to receive full credit, a student who reads your answer should be able to easily understand your proof. Written work is expected to be legible and arguments are expected to be well articulated.

**Email:** It is important that you are accessible via email. I will collect the email address you would like to use through a survey at the beginning of the semester.

**Final exam:** The final exam will be held on Tuesday, December 18th from 3:30 to 5:45pm according to the university's final exam schedule. Ensure that you have no time conflicts. A makeup for the final exam is offered only under extremely compelling circumstances. Notify me as soon as you know you will have to miss the final.

**Midterms:** We will have three midterms each taking roughly the full class period to complete. Your midterm grade constitutes 45% of your total grade in the class, with each of the three midterms counting for 15%. A grade of zero will be assigned for midterms missed without a good reason. If you miss a midterm under compelling circumstances, that midterm will be dropped and no makeup will be given. In this case, your midterm grade will be computed by averaging your remaining midterms. Notify me ahead of a midterm you expect to miss to be sure your circumstances are sufficiently compelling. Makeup midterms will only be given for the second midterm missed, and only under compelling circumstances.

**Homework, Problem Sets, and/or Quizzes:** I intend to primarily determine this grade from Homework and Problem Sets. I will switch to quizzes if problems arise (such as "past homework problems" below).

**Homework assignments:** Homework will be assigned weekly and will have a due date. I expect to collect and grade some problems from each homework assignment. Late homework will not be accepted. If you can not attend class, you may scan and email your homework to me before the start of class on the day it is due.

**Homework goals:** I assign homework to encourage you to work on your problem solving skills, improve your proof writing, and to give me feedback on how you are doing with the material. Hopefully experience in solving homework problems will prepare you to solve test problems.

**Past homework problems:** In the past, students in this class have copied homework answers from the back of the book, from answers found online, or from friends. This is plagiarism and subverts

the goals listed above! If I find this happening in this class, I will cease collecting homework and start giving daily quizzes to test you on the homework assignments. Because of time considerations, I will likely also have to cease giving group work in class.

**Acknowledgements in homework:** It is okay to work with other students, and to use the book and external sources to help with your homework problems, but you must write your answers in your own words (otherwise it is plagiarism). **On each problem, you must list other students you worked with and any sources you used.**

**Grade for Homework, Problem Sets, and/or Quizzes:** When grades are computed, each of your homework and quiz grades will be rescaled to be out of 100 points. Your lowest two scores will be removed from this list. Your total Quiz and Homework grade will be the average of the remaining scores.

**Attendance Policy:** As students, class time is extremely important for learning. You will be introduced to the material, and the relative importance of topics in the course will be revealed. For this reason, attendance is mandatory. **Missing an excess of eight 50 minute periods (or 4 classes) may result in you being dropped from the course, and will certainly result in the reduction of your final grade by 5% (or half a letter grade).** Occasionally, exceptions to this policy will be made, but only for good reason and only with notification prior to the absence. Good reasons include illness with a doctor's note and many religious observations.

**Lateness:** Lateness to class is unacceptable because it disrupts the learning process of the whole class. For this reason, any student who arrives more than 5 minutes after class begins will be considered late. Three late attendances are considered the equivalent of one absence. Thus, sufficiently many late attendances will result in actions as described in the Attendance Policy. In addition, any student who arrives 15 minutes after a class begins will be considered absent from that class period.

**Academic integrity:** You are expected to adhere to the CUNY Policy on Academic Integrity. This policy is posted at <http://www.ccny.cuny.edu/about/integrity.cfm>. As a particular note, you are required to acknowledge sources used when turning in work including homework. This includes disclosing collaborators on homework problems.

**Accommodations for Students with Disabilities:** Qualified students with disabilities will be provided reasonable academic accommodations if determined eligible by the AccessAbility Center (AAC). Prior to granting disability accommodations in this course, the instructor must receive written verification of a student's eligibility from the AAC, which is located in NAC 1/218. It is the student's responsibility to initiate contact with the AAC and to follow the established procedures for having the accommodation notice sent to the instructor.