

# MA 320

## Quick Links

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## Course Information

- Semester: 2019 Fall
- Title: Foundations of Math
- Section:
  - MA 320-101
- Class Time:
  - TR 2:00-3:15pm
  - HUMB 212
- Office Hours
  - TR 10:45am-1:45pm
  - MSPB 314

## Course Content

A transition to higher mathematics with an emphasis on proof techniques. Topics include symbolic logic, elementary set theory, induction, relations, functions, and the structure of the number system.

We will spend most of our class time working through freely available course notes written by B.J. Baker. A textbook is available in the bookstore or online, *Bridge to Higher Mathematics*, by Sam Vandervelde, but it is not required.

## Grading

The default grade for each student is determined based upon of three requirements, detailed further below:

- **Content Mastery**
- +1 Letter Grade
- **Writing Portfolio**
- +1 Letter Grade
- **Final Exam**
- +2 Letter Grades
- By default, 90% on the final exam is required to earn both letter grades, but this may be lowered by **Participating** in class as described below.

At the end of the course, grades are assigned as follows:

- **A:** +4 Letter Grades earned
- **B:** +3 Letter Grades earned
- **C:** +2 Letter Grades earned
- **D:** +1 Letter Grades earned
- **F:** 0 Letter Grades earned

## Participation

Throughout the course, students are expected to engage with the CampusWire discussion platform. Based on the analytics data provided to the instructor, and other relevant participation data such as attendance, the requirements to gain letter grades from the Final Exam will be lowered as follows:

- +2 Letter Grades: from 90% to as low as 70%
- +1 Letter Grade: from 80% to as low as 50%

Put another way, a student who avoids participating all semester will need to make 80% on the final to improve their course grade by one letter and 90% for two letters, but the student who participates the most will only need to earn 50% on the final to improve their course grade by one letter and 70% for two letters.

## Absences

Absences may be excused with appropriate documentation. If the absence is anticipated, it must be documented and verified by the instructor ahead of the absence to be excused. For medical excuses, do not send any medical information, but send the note from the medical professional asking the instructor to excuse the absence. Absences must be documented via email. Only unexcused absences count against participation credit for the semester.

## Content Mastery

As material is covered, certain topics (called Standards) will be assessed on periodic Mastery Quizzes, which are made as follows.

- **Mastery Mark** : The solution demonstrates complete mastery of the given standard.
- **Revision Mark** : The solution might demonstrate mastery of the given standard, but needs to be revised for clarity/accuracy.
- **Issues Mark** : The solution demonstrates partial understanding of the given standard, but has one or more issues that suggest that further study is required to develop complete mastery.
- : The solution demonstrates negligible understanding of the given standard.

Marks other than may be reattempted on future quizzes. Once a has been earned for a Standard, that Standard is considered Mastered (regardless of how many reattempts were required).

Students that Master at least 90% of the Standards by the end of the semester will earn +1 Letter Grade. These Standards will also be on the Final Exam and can be Mastered at that time as well (see below).

## Writing Portfolio

This course is designated as a Writing-Intensive Course by the university. As such, students are required to compile a Writing Portfolio over the course of the semester. This portfolio will include one example of each of the types of proofs we will cover in this course, in addition to one short paper on a topic agreed upon by each student and the instructor.

An important part of this process is instructor and peer review, followed by revisions. Students will be required to post drafts to CampusWire as well as provide feedback to peers on early drafts. Students will have a limited number of instructor reviews they may use to have the instructor provide feedback on a writing assignment, and approve the assignment as satisfactory if possible.

The complete portfolio will be printed and submitted to the instructor at the final exam. Students that submit a satisfactory portfolio according to the [rubric][portfolio-rubric] will earn +1 Letter Grade.

## Final Exam

The Final Exam will be graded out of 100%. Half of this score will be based upon Content Mastery exercises (which may also be used to meet the Content

Mastery requirements for the course). The rest of this score will be based on writing proofs (which do not affect the Writing Portfolio).

Any student who earns 90% or better will earn +2 Letter Grades, and any student who earns 80% or better will earn at least +1 Letter Grade. However, these requirements may be lowered as far as 70% and 50% respectively by Participating in the course (see above).

## **Academic Honesty**

Academic Honesty is defined in USA's Student Academic Conduct Policy. Any student who is caught cheating will permanently forfeit all credit earned for the relevant area of the course (Participation, Content Mastery, Writing Portfolio, or the Final Exam) as well as be deducted one letter grade. In addition, the incident will be reported to the university.

A second instance of academic dishonesty will immediately result in an F for the course.

## **USAOnline and USA Course Policies**

The official syllabus for this course is available on USAOnline. Grade data will be provided to students via periodic printed progress reports.

USA's Course Policies apply to this course.