

# Introduction to Mathematical Reasoning

## Math 300 C Summer 2021

**Instructor:** Josh Southerland

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(specify **Math 300** in all correspondence)

**Course Website:** [sub.mersion.cc/m300/m300\\_2021C.html](http://sub.mersion.cc/m300/m300_2021C.html)

**Office Hours:** Wednesday, 4:30 - 6:30 pm (PDT), tentatively

**Course Summary:** This is a first course in mathematical reasoning, largely focusing on reading and writing rigorous mathematical proofs. As such, this is an introduction to the techniques commonly assumed in upper-level, proof-based math courses. Topics include logic, proof techniques, set theory, functions, and cardinality.

**Textbook:** There are two recommended textbooks for the course: *Mathematical Reasoning: Writing and Proof, Version 2.1* by Ted Sundstrom and *An Introduction to Mathematical Reasoning, second edition* by Matthew Conroy and Jennifer Taggart. Both textbooks are free. You can find links to them on the course website. These are supplementary - the primary materials will be lecture notes provided by the instructor.

**Grading:** Your grade will be made up of

Homework	50 %
Canvas Quizzes	20 %
Written Quizzes	20 %
Oral Quiz	10 %

To achieve a 2.0, you will need an overall course grade of at least a 65%.

**Technology:** Since the class will be entirely online, in order to take this course you will need the following:

1. Internet!
2. A laptop or phone that will allow you to participate in Zoom video conferences
3. Browser that can access Gradescope and Canvas
4. Gradescope Account (this will be tied to Canvas)
5. The ability to upload PDFs and/or images of written work (for example: consider phone apps that convert images to PDFs, or scanning apps such as Scannable)

**Zoom Policies for lectures and office hours:** During **lectures**, keep your microphones muted. Use the chat function in Zoom to ask questions, or if you like, you may unmute and ask a question live. Please keep in mind all of the lectures and office hours are being recorded. Occasionally, if I don't understand a question, I may ask you to unmute and clarify (or clarify in the chat). If you would like to use video, please do - this always helps the instructor. However, there is no policy requiring that you keep videos on. During **office hours**, you can unumute your microphone and ask questions. If there ends up being too many people, I may ask every to mute their microphones and utilize the chat feature. Also, please be courteous. If you ask a question, please ask follow-up questions if you need. However, if you find the answer is satisfactory, please give others an opportunity to ask a question before you ask another.

**Academic Honesty:** To receive a grade in the course, you will be required to sign an academic honesty pledge. A record of the pledge will be kept on Gradescope.

**Homework:** Each week, beginning the second week of the class, you will turn in a written homework assignment via Gradescope. This portion of your homework will generally be due at 11:59pm on Wednesday, although specific dates may fluctuate. **No extensions will be given to anyone for any reason.** However, you may miss up to 20% of the total of homework points available for the quarter without penalty to your grade.

**Canvas Quizzes:** You will have weekly Canvas quizzes beginning Monday, June 28. Canvas quizzes will be short multiple choice, True / False, or short answer type questions intended only to test whether or not you understand the basic logic, definitions, theorems, and techniques taught in the lectures. Each quiz will cover material from the prior week's lectures. There will be no make-up quizzes, however, you may miss up to 10% of the total Canvas quiz points without penalty to your grade.

**Written Quizzes:** There will be three timed, in-class, written quizzes given throughout the quarter. These quizzes will be held during class time. If you cannot attend these three classes (see dates below), please look for another Math 300 course that better suits your schedule. For each of these written quizzes, you will need to upload your solutions to Gradescope before the deadline. Late uploads will be penalized via point deductions. Some quizzes may end up being open-book. If this is the case, a policy for the quiz will be provided before the quiz. There will be no make-up quizzes, however, the lowest of your first two quizzes will be dropped. Each of the remaining two will comprise 10 % of your course grade.

**Oral Quizzes:** You will be required to take one oral quiz during the last week of the course. You will need to pick an available time listed on the course website and email the Instructor to reserve that time slot. The oral quizzes will be held over Zoom, and will include only you and the instructor. You will be asked to describe in words how you would prove a given statement or two. A week before oral quizzes start, you will be provided a rubric. There will be no make-up oral quizzes.

#### Quiz Dates:

Canvas Quizzes:	Weekly (M or W)	via Canvas
Written Quiz 1:	Wednesday, July 14th	via Zoom, first 20 min. of class
Written Quiz 2:	Wednesday, August 4th	via Zoom, first 20 min. of class
Written Quiz 3:	Friday, August 20th	via Zoom, first 20 min. of class
Oral Quiz:	Details forthcoming	via Zoom

**Make-Ups:** No extensions will be granted for homework to anyone for any reason. No exceptions. Make-up exams and make-up quizzes will not be given. If you miss an exam due to unavoidable, compelling, and well-documented circumstances (e.g., illness, transportation emergency), **contact Josh immediately.**

#### Resources for Students with Disabilities:

The University of Washington is committed to providing access, equal opportunity and reasonable accommodation in its services, programs, activities, education and employment for individuals with disabilities. To request disability accommodation contact the Disability Services Office at least ten days in advance at: 206-543-6450/V, 206-543-6452/TTY, or dso@uw.edu.

#### Religious Accommodations

Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW's policy, including more information about how to request an accommodation, is available at Religious Accommodations Policy:

<https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/>  
Accommodations must be requested within the first two weeks of this course using the Religious Accommodations Request form:

<https://registrar.washington.edu/students/religious-accommodations-request/>