

# MA 38500 Introduction to Mathematical Logic

## Spring Semester 2020

updated April 13<sup>th</sup> 2020 (additions to the original in **bold red**, deletions ~~struck out~~)

As a Boilermaker pursuing academic excellence, I pledge to be honest and true in all that I do.  
Accountable together - we are Purdue.

### Basic Information

Course Code	MA 38500
Course Title	Introduction to Mathematical Logic
CRN	13875
Course Credit	3 credit hours
Prerequisites	MA 30100 is strongly recommended
Dates	January 13 <sup>th</sup> 2020 - May 1 <sup>st</sup> 2020
Meeting Times	Mondays, Wednesdays, Fridays at 10:30am
Meeting Location	<del>REC 121</del> <b>Starting March 23<sup>rd</sup> 2020, lectures will be streamed live via Zoom (login details available on <a href="#">Blackboard</a>); recordings of and notes made during lectures will also be posted to <a href="#">Blackboard</a> after the lectures take place.</b>

### Webpages

Official Course Page:

<https://www.math.purdue.edu/academic/courses/coursepage?subject=MA&course=38500>

In addition, course information, materials and announcements will be posted as appropriate either on [Blackboard](#) or on the instructor's course website as follows (check both of these regularly):

<https://www.math.purdue.edu/~thoma922/teaching/ma38500/ma38500ss20.html>

### Instructor

Name	Prof. Margaret E. M. Thomas
Email Address	memthomas at purdue.edu ( <i>emails <b>must</b> include MA38500 in the subject line</i> )
Office Location	MATH 638
Office Hours	<del>Tuesdays 2-3pm, Wednesdays 2:30-3:30pm, Thursdays 4-5pm, or by appointment.</del> <b>Starting the week of March 23<sup>rd</sup> 2020, office hours will be streamed live via Zoom (login details available on <a href="#">Blackboard</a>); times will be announced on the instructor's course website and are expected to match the previous times as much as possible (Tuesdays 2-3pm, Wednesdays 2:30-3:30pm, Thursdays 4-5pm).</b>

### Course Description

Propositional calculus and predicate calculus with applications to mathematical proofs, valid arguments, switching theory, and formal languages.

## Textbook

J. Rubin, Mathematical Logic: Applications and Theory

Access to the textbook is required (see **Assessment Methods** below). The course will cover most of Chapters 1 - 10, and a few topics from Chapters 11 - 16.

A reprinted version of the book is available at a reduced cost from the [University Bookstore](#). The original version of the book is out of print but new and second-hand copies are still available from some online retailers.

A copy of the book is also available on reserve in the Department of Mathematics Library (**which is no longer accessible after March 20<sup>th</sup> 2020 at 5pm**).

## Assessment Methods

- Assignments Twelve written assignments consisting of problems from the textbook. These will be posted on the instructor's course website and will be due almost every Friday (see schedule below) **at the start of class: at 10:30am EDT via Gradescope (accessed through [Blackboard](#))**.
- Midterm Tests ~~Two~~ **One** written closed-book tests in class of 45 minutes duration ~~each~~ **(Midterm Test 1). One written open-book test posted to [Blackboard](#) and due via Gradescope (accessed through [Blackboard](#)) (Midterm Test 2)**.
- Final Exam One cumulative written ~~closed-book~~ **open-book** final examination of ~~2 hours~~ **duration posted to [Blackboard](#) and due via Gradescope (accessed through [Blackboard](#)) on a date and at a time TBC, as close as possible to the original final examination date in the schedule below.**

Planned schedule for assignment due dates, midterm tests and final examination:

Assignment 1	January 17 2020
Assignment 2	January 24 2020
Assignment 3	January 31 2020
Assignment 4	February 7 2020
Assignment 5	February 14 2020

Midterm Test 1 February 21 2020

Assignment 6 February 28 2020

Assignment 7 March 6 2020

Assignment 8 March 13 2020

SPRING BREAK

~~Midterm Test 2 March 27 2020~~

Assignment 9 ~~April 3 2020~~ **March 27 2020**

Assignment 10 ~~April 10 2020~~ **April 3 2020**

**Midterm Test 2 Released April 9 2020 6pm EDT, deadline April 10 2020 9pm EDT**

Assignment 11 April 17 2020

Assignment 12 April 24 2020

Final Examination May 8 2020 **TBC**

## Course Evaluation

Final grades will be calculated according to the following weighting of the above assessments:

Assignments	25%
Midterm Tests	40% (20% for each midterm)
Final Exam	35%

The instructor reserves the right to adjust this grading scheme at the end of the course; this adjustment will be applied uniformly and in a manner which only increases individual grades.

## Attendance

In the event of an absence for medical or other reasons, students should review and follow the Student Regulations concerning Classes, informing the instructor as far in advance as possible.

[https://www.purdue.edu/studentregulations/regulations\\_procedures/classes.html](https://www.purdue.edu/studentregulations/regulations_procedures/classes.html)

## Academic Integrity

Academic integrity is one of the highest values that Purdue University holds. Individuals are encouraged to alert university officials to potential breaches of this value by either emailing [integrity@purdue.edu](mailto:integrity@purdue.edu), or by calling 765-494-8778, or by contacting the Office of the Dean of Students (<https://www.purdue.edu/odos/>). While information may be submitted anonymously, the more information that is submitted provides the greatest opportunity for the university to investigate the concern.

Purdue prohibits "dishonesty in connection with any University activity. Cheating, plagiarism, or knowingly furnishing false information to the University are examples of dishonesty" (Section B.2.a of the Student Regulations

[https://www.purdue.edu/studentregulations/student\\_conduct/regulations.html](https://www.purdue.edu/studentregulations/student_conduct/regulations.html)).

Furthermore, the University Senate has stipulated that "the commitment of acts of cheating, lying, and deceit in any of their diverse forms (such as the use of ghostwritten papers, the use of substitutes for taking examinations, the use of illegal cribs, plagiarism, and copying during examinations) is dishonest and must not be tolerated. Moreover, knowingly to aid and abet, directly or indirectly, other parties in committing dishonest acts is in itself dishonest."

Incidents of academic misconduct in this course will be addressed by the course instructor and referred to the Office of Student Rights and Responsibilities (OSRR) for review at the university level. Any violation of course policies as it relates to academic integrity will result minimally in a failing or zero grade for that particular assignment or test, and at the instructor's discretion may result in a failing grade for the course. In addition, all incidents of academic misconduct will be forwarded to OSRR, where university penalties, including removal from the university, may be considered.

## Nondiscrimination

Purdue University is committed to maintaining a community which recognizes and values the inherent worth and dignity of every person; fosters tolerance, sensitivity, understanding, and mutual respect among its members; and encourages each individual to strive to reach his or her own potential. In pursuit of its goal of academic excellence, the University seeks to develop and nurture diversity. The University believes that diversity among its many members strengthens the institution, stimulates creativity, promotes the exchange of ideas, and enriches campus life. Purdue's nondiscrimination policy can be found at

[https://www.purdue.edu/purdue/ea\\_eou\\_statement.php](https://www.purdue.edu/purdue/ea_eou_statement.php).

## **Academic Accommodation of Students with Disabilities**

Purdue University strives to make learning experiences as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, you are encouraged to contact the Disability Resource Center at: [drc@purdue.edu](mailto:drc@purdue.edu) or by phone: 765-494-1247.

## **Mental Health**

If you find yourself beginning to feel some stress, anxiety, and/or feeling slightly overwhelmed, try WellTrack, <https://purdue.welltrack.com/> Sign in and find information and tools at your fingertips, available to you at any time.

If you need support and information about options and resources, please see the Office of the Dean of Students, <http://www.purdue.edu/odos>, for drop-in hours (M-F, 8 am-5 pm). If you're struggling and need mental health services: Purdue University is committed to advancing the mental health and well-being of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of mental health support, services are available. For help and to speak with a clinician, contact Counseling and Psychological Services (CAPS) at 765-494-6995 or by going to CAPS' office on the second floor of the Purdue University Student Health Center (PUSH). For urgent situations after hours, on weekends and holidays, call 765-494-6995 to speak with a clinician. Please see <http://www.purdue.edu/caps/> for further information.

## **Commercial Note Taking in Classes**

Notes taken in class are generally considered to be “derivative works” of the instructor’s presentations and materials, and they are thus subject to the instructor’s copyright in such presentations and materials. *No individual is permitted to sell or otherwise barter notes, either to other students or to any commercial concern, for a course without the express written permission of the course instructor.*

See the Regulations on Student Conduct: Miscellaneous Conduct Regulations:

<http://catalog.purdue.edu/content.php?catoid=8&navoid=8208#miscellaneous-conduct-regulations>

## **Major Campus Emergency**

In the event of a major campus emergency, course requirements, deadlines, and grading are subject to change that may be necessitated by a revised calendar or other circumstances beyond the instructor’s control. Relevant changes to this course will be posted on course websites.