Welcome to Math 300-01 – *Introduction to Proof.*

My name is Prof. Rohm; I will be your instructor for this course.

I have posted a copy of my current schedule and contact information on D2L. You can also find more information about me at

- http://www.uwsp.edu/mathsci/Pages/faculty/dRohm.aspx
- http://www4.uwsp.edu/math/drohm

Here is the most recent catalog description for the course:

> **MATH 300. Introduction to Proof. 4 cr.** Transition to upper division mathematics. Topics include logic, proof techniques, set theory, relations, functions and cardinality; elementary properties of integers, rational numbers, and real numbers; open and closed subsets of the real numbers; limits; also reading and writing formal mathematical proofs. **Prereq: 121.**

Math 300 partially satisfies the Communication in the Major requirements for students seeking mathematics majors. Communication in the Major courses provide students with systematic opportunities to develop oral and written communication skills in the context of their chosen fields, beginning the process of learning to communicate in discipline-specific formats and styles.

Learning outcomes: Upon completing this requirement, students will be able to

- Apply discipline-specific standards of oral and written communication to compose an articulate, grammatically correct, and organized presentation/piece of writing with properly documented and supported ideas, evidence, and information suitable to the topic, purpose, and audience.
- Critique their own and others' writing/oral presentations to provide effective and useful feedback to improve their communication.

A complete copy of the syllabus for this course has been posted on D2L. This includes description of assessment, with a schedule for examinations, and the grading criteria for the course.

As a new or continuing UWSP student, you should be fully aware of your rights and responsibilities as a UWSP student, both on and off campus. You can find these linked through the Dean of Students webpage.

- https://www.uwsp.edu/dos/Pages/stu-academic.aspx
- https://www.uwsp.edu/dos/Pages/stu-conduct.aspx
- https://www.uwsp.edu/dos/Pages/stu-personal.aspx
- https://www.uwsp.edu/dos/Pages/offcampus.aspx

UWSP is committed to providing reasonable and appropriate accommodations to students with disabilities and temporary impairments. If you have a disability or acquire a condition during the semester where you need assistance, please contact the Disability and Assistive Technology Center on the 6th floor of Albertson Hall (the library) as soon as possible.

https://www.uwsp.edu/disability/Pages/default.aspx

The DATC can also be contacted at 715-346-3365 or DATC@uwsp.edu.

Thank you for reading this. I look forward to collaborating with you this semester as a member of the Pointer Community.

Spring 2019 **Math 300-01** **8:00 MTWR**
Sci D223

Instructor: Dale M. Rohm **Office Hours:** 12:00-2:00 WTR
Office: Sci D356 or by appointment.
Phone: (715)346-3798 url: http://www.uwsp.edu/mathsci/Pages/faculty/dRohm.aspx
e-mail: drohm@uwsp.edu

Text: Galovich, *Doing Mathematics: An Introduction to Proofs and Problem Solving*, 2e.
ISBN 978-0-495-10816-0

Course Description

MATH 300. Introduction to Proof. 4 cr. Transition to upper division mathematics. Topics include logic, proof techniques, set theory, relations, functions and cardinality; elementary properties of integers, rational numbers, and real numbers; open and closed subsets of the real numbers; limits; also reading and writing formal mathematical proofs. **Prereq: 121.**

Math 300 is a one-semester study of mathematical foundations which partially fulfills the Written Communication in the Major requirement of the Mathematics Major. The majority of the mathematical content for the course is quite elementary, requiring little beyond ordinary calculus. However, the required detail of understanding will provide you with an exposure to formal mathematical proof and writing of mathematics not included in prerequisite courses.

Technology Policy

Calculators are of little or no use in this course, and will generally not be allowed while completing any in-class assignment. **Turn your phones off or place them in airplane mode before the start of any examination.** During lectures, there are times when taking an image of the board or screen will be valuable, you are encouraged to do so. **However, texting or browsing during lecture is rude and distracting, don't do it.** Refrain from audible alerts during class by using vibrate modes.

As we progress through the course, it may become more convenient for people to begin using typesetting software when submitting written assignments. In particular, you may wish to explore the mathematical editing features of *Word* or *LaTeX*. Many options are available, including the complete free MikTeX package available through the UWSP Microsoft Software Center. **When completing written assignments, be aware that the cutting and pasting from Internet sources is plagiarism, and will not be tolerated.**

Course Schedule

The course begins with an overview on understanding mathematical problems and how to devise a plan for solving them. The majority of the subject content involves terminology for statements and methods of proof as found in most upper-level mathematics courses. This material is found in selected sections of Chapters 1, 2, and 3.

Examination I: Thursday, February 21, 2019

The second portion of the course completes our discussion on techniques for proof before discussing topics from set theory. Special emphasis will be given to functions and relations. This material is found in selected sections of Chapters 4 and 5.

Examination II: Thursday, April 4, 2019

The final third of the course applies ideas from the first two parts to cover selected topics related to various number systems and their properties. This includes some elementary ideas of number theory and combinatorics from selected sections of Chapter 4,5, and 6.

Final Examination: 2:45-4:55 on Thursday, May 16, 2019

Evaluation and Grading: Most weeks I will give a list of exercises, most of which will be on content and not required to be turned in. However, these problems will provide topics for formal writing assignments which will be graded on composition as well as content. You will be given a chance for revision and rewriting when completing these assignments.

Attendance and participation is expected at every class meeting and will be included as part of your grade. There is no easier way to earn an unsatisfactory grade in an upper-level mathematics course than to skip class or fail to turn in required assignments. **I will not give "make-up", "retake", or "extra-credit" examinations, unless arranged prior according to university procedures.** Alternate or make-up examinations for religious or university-related accommodation require prior approval. The only other accommodations will be for legitimate medical or personal emergencies.

Your course grade will be determined by your performance on three content examinations, the formal written assignments, and attendance/participation. The examinations will be on content only, usually consisting of True/False, fill-in-the- blank, and short answer questions. Your scores will be scaled according to the percentages shown below and totaled to give a numerical score. Final letter grades will be awarded according to the following curve.

Grade Item	Weight	Percentages	Minimum Grade
Attendance/Participation	15%	85-100	A–
Examination I	20%	75-84	B–
Examination II	20%	60-74	C–
Final Examination	20%	50-59	D
Written Assignments	25%	0-49	F

At the end of the course, I reserve the right to raise a student's grade if it is my determination that their numerical scores are not reflective of actual comprehension. I will never give a grade lower than that determined by this stated criteria.

The last day to add/drop a 16-week class is Thursday, January 31.
The last day to drop a 16-week class with a "W" grade is Friday, April 5.