Math 411 Syllabus	Fall 2017	Laurel Langford
Geometry	11-12:15 TR	laurel.langford@uwrf.edu
Section 1; Credits: 3	NH 16	http://langfordmath.com/

Office hours (getting help): I will be available in my office to answer questions (206E NH; office phone 715-425-4360) MWF 11:00-12:30, TR 12:20-1:00. I am around a lot during the day when I am not in class, and I am (almost) always happy to see you (it is a good idea to make an appointment if you are able to plan ahead).

Text: you should have the textbook Geometry From Euclid to Knots by Stahl (1st ed.)

Announcements and the most recent theorems list are posted on my web site: http://langfordmath.com/. I will be posting your scores on D2L. Sometimes there are problems (both human and machine errors). Please save your graded work until after you have checked your grades in D2L to make sure I have scores recorded correctly.

Goals for this class:

- Understand how results (theorems) are built from assumed properties (axioms) in mathematics.
- Be able to prove theorems in Euclidean geometry
- Understand the foundational theorems in Euclidean geometry
- Understand some of the results of making different assumptions about basic properties in a geometric system (in particular in the historically significant cases of spherical and hyperbolic geometry).

Assignments:

As we go through the course, you will be (re-) proving many of the theorems of elementary geometry. We as a class will be building geometry from the ground up, where our "ground" is a set of axioms. Your main tasks will be:

- figuring out how to prove geometry theorems
- writing up your proofs (you will be turning in a something almost each day)
- sharing your proofs with the class (see presentations)

We will also be revisiting some high-school-geometry-type-problems, and there will be a set of geometry puzzles assigned approximately every 2 weeks.

Presentations: I will provide frequent opportunities for you to volunteer to present your proof from the currently assigned theorems. I expect everyone to share their work on a regular basis. Grading is based on how often you present, and also the quality of your explanations: is the proof correct? Is it clear and easy to follow?

Tests: There will regular quizzes (every 2-3 weeks) and a comprehensive final exam. These will comprise the majority of your grade.

Grading: Your grade will be based primarily on your scores on homework, presentations, quizzes and the final exam. Homework will count as 20% of your grade, presentations 5%, and the quizzes and final exam will count as 75% of your grade. Your grade will be based primarily on the weighted average of your scores. Letter grades will be at least as high* as those determined by your weighted average and these percents:

A: 94-100%	A-: 90-93%	B+: 87-89%	B: 84-86%	B-: 80-83%
C+: 77-79%	C: 74-76%	C-: 70-73%	D: 60-69%	

*I will occasionally raise a grade for someone who shows a greater understanding of the content (eg. in class discussions and presentations) than is reflected in the test scores, but I never lower a grade below what is indicated by the weighted average).

Late work: Late work will be accepted at my convenience. Late work may earn partial or full credit, depending on when it is turned in (see longer syllabus in D2L for details).

The UWRF promotes safe, inclusive and effective learning environments that protect the rights and support the interests of both students and faculty. For additional information regarding our inclusivity expectations, academic accommodations, academic conduct expectations and processes, and other syllabi information, please consult http://go.uwrf.edu/Syllabi

Teacher Content Standards: Information about teacher content standards covered by this course can be found at: https://www.uwrf.edu/MATH/WisconsinContentTeacherStandardsMathematicsCourses.cfm.

An expanded version of this syllabus is available in the Content section of the D2L web site