Math 425: History of Mathematics
Class Time: MWF 9:00am-9:50am
Location: NATRS 115

Instructor:	Janet Oien
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Phone:	970-491-6602
Office:	Weber 103
Help Hours:	TBD with your input

Credits: 3 credits
Prerequisites:
Any two of the following courses: MATH 317, MATH 366, Math 369.

Course Description:
This course includes the historical development of geometry, arithmetic, algebra, and calculus from ancient times to present days. By a course on *Mathematics* we signify that we will be learning mathematics in this course as well as history. We are interested in all branches of mathematics and learning from the historical development of mathematics how these branches intertwine. The study of how mathematics was developed can help us teach mathematics, and understanding how history can inform pedagogy will be part of the course.

My goals are for you to:
- examine mathematics through a historical lens, by solving familiar mathematical tasks using historical methods
- explore how a historical lens of mathematics can inform your teaching, by reflecting and planning on how you will use this lens in your future classrooms,
- reflect on how mathematics is embedded in social and political contexts, by reading, reflecting and writing about your new discoveries.

Required Texts:
Great Moments in Mathematics Before 1650 Howard Eves
https://bookstore.ams.org/view?ProductCode=DOL/5

Great Moments in Mathematics After 1650 Howard Eves
https://bookstore.ams.org/view?ProductCode=DOL/7

Additional Resources/Texts:
- *Transforming Instruction in Undergraduate Mathematics via Primary Historical Sources (TRIUMPHS)*, a website http://webpages.ursinus.edu/nscoville/TRIUMPHS.html with materials on primary historical sources to be used in undergraduate mathematics courses.
- MOMATH History of Math Project: https://history-of-mathematics.org/
- Lectures by N. Wildberger that go along with the Stillwell text are available on YouTube; search for "History of Mathematics - N J Wildberger". https://www.youtube.com/playlist?list=PL34B589BE3014EAEB

- *[The History of Mathematics, An Introduction](...)*, 7th ed. David M. Burton
- *[A History of Mathematics, An Introduction](...)*, 3rd ed. Victor J. Katz
- *Mathematics and its History*, 3rd ed. John Stillwell, 2010 (.pdf through CSU library).
- *Worlds Out of Nothing*, Jeremy Gray, 2007 (.pdf through CSU library).
- *The Heritage of Thales*, Anglin and Lambek, 1995 (.pdf through CSU library).

Class Structure:
Class time will be a combination of discussion, interactively working on problems, and lecture. You will be expected to prepare for class by doing some reading, working problems, and posting to Canvas Discussion Posts. Much of the time I will facilitate as you present your work and engage in discussions.

Attendance Policy and Participation:
- I expect all of you to attend class regularly; only then can you participate in group activities and discussions.
- Our class periods should be opportunities for reflective dialogue. Every person's input is valuable for a meaningful learning experience. Please let me know ahead of time of your absences.
- It is expected that you come to class prepared to apply the concepts learned from the class readings and assignments in our classroom activities or discussions.

Method of Evaluation
- Homework and Class Participation (150 points) Homework is to be taken seriously both in the content of your responses and the presentation. This will include written homework, group work, presentations in class, reflections on readings or discussion posts on Canvas. Homework may occasionally be in the form of making a video or preparing a presentation for class. I anticipate assessing something at least once a week for credit.
- Mini Project (100 points) The mini project will consist of a rough draft written report, a written report, a poster, a short presentation to the class, and peer reviews of other projects. The project will be due approximately in the middle of October.
- Final Project (150 points) The final project will consist of a rough draft written report, a final written report prepared in LaTex, presentations to the class, as well as a poster to be presented at the Mathematics Department's 400-level course poster session, tentatively scheduled for the morning of Thursday 12/7/23 from 8am-11am.

Late assignments and projects are not accepted without prior permission. If you are missing class for a university-sponsored event, please send me an email and provide written documentation at least one week prior to the event in order to make arrangements regarding the work you will be missing.

Course Grade: The following scale will be used in determining course grades:

90% - 100% → A	80% - 89% → B	70% - 79% → C
60% - 69% → D	Below 60% → F	

Important Dates:
- September 4th - Labor Day - No Classes
- November 10th - Last Day to withdraw from course
- November 18th - Fall & Thanksgiving Break Begins
- December 7th - Math Poster Session from 8am-11am
- December 8th - Last Day of Classes
- December 11th - **Final Exam from 7:30am - 9:30am**

The Principles of Community

The *Principles of Community* help us express what our community stands for and guide our expectations as we build the next generation of Rams.

Inclusion - We create and nurture inclusive environments and welcome, value and affirm all members of our community, including their various identities, skills, ideas, talents and contributions.

Integrity - We are accountable for our actions and will act ethically and honestly in all our interactions.

Respect - We honor the inherent dignity of all people within an environment where we are committed to freedom of expression, critical discourse, and the advancement of knowledge.

Service - We are responsible, individually and collectively, to give of our time, talents, and resources to promote the well-being of each other and the development of our local, regional, and global communities.

Social Justice - We have the right to be treated and the responsibility to treat others with fairness and equity, the duty to challenge prejudice, and to uphold the laws, policies and procedures that promote justice in all respects.

OTHER IMPORTANT CONSIDERATIONS

Statement of Full Participation: Any students in this course who have a disability that may prevent them from fully demonstrating their abilities should contact instructor(s) as soon as possible to discuss accommodations necessary to ensure full participation and to facilitate your educational opportunities. Also, please realize that every voice is important in this class. If at any time you feel harassed on the basis of ethnic or cultural background, gender, or sexual orientation, please notify us so we can address the situation immediately and/or make the proper referrals to the appropriate campus personnel.

Accommodations for Successful Learning: If you have a documented disability that warrants accommodations in the course, please make an appointment to see instructor(s) at your earliest convenience. We are committed to facilitating your success. We are willing to make appropriate accommodations that will increase your learning opportunities in this class. If you have not already contacted the office of Resources for Disabled Students, please do so. They are located at: 100 General Services Building; Telephone Number: (970) 491-6385.

Academic Integrity Policy - This course will adhere to the CSU Academic Integrity Policy as found on the Student' Responsibilities page of the CSU General Catalog and in the Student Conduct Code. At a minimum, violations will result in a grading penalty in this course and a report to the Office of Student Resolution Center.