MAT 593
Fall 2017
History of Math

Instructor: Rebecca R.G.   **Email:** rirebhuh@syr.edu

Call me: Rebecca or Dr. R.G.   **Office:** Carnegie Hall 313C

Office Hours: TBD, or email me to find another time to meet

Course Description: In this course, we will explore the history of mathematics by learning about the places and times where discoveries were made, the people who made them, and the methods they used. Sessions will include discussion of the historical context as well as practice in the techniques used by mathematicians in various historical periods. You will be asked to consider the circumstances that lead to mathematical discovery, the factors that play into our knowledge of the history of math, and the processes that different cultures have used to solve similar types of problems.

Mathematics Prerequisites: MAT 397 and 2 500-level courses in mathematics, or graduate standing in the mathematical sciences. If you do not meet these prerequisites but still want to take the course, contact me by the end of the first week of classes so we can discuss your particular situation.

Textbook: A History of Mathematics: An Introduction, 3rd Edition by Victor J. Katz, Addison-Wesley 2009. ISBN-13: 978-0-321-38700-4.

Final Examination: Thursday, December 14, 5:15pm–7:15pm. This exam will cover material from the whole semester. No makeup exams will be given without a documented excuse such as illness or emergency. In particular, travel plans are not a valid reason to miss the final exam.

Grading: The final score will be computed on a scale of 0% to 100% divided as follows:

> Final Exam 20%
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> Midterm 20%
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> Final Project 20%
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> Homework 10%
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> Presentations 10%
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> Quizzes 10%
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> Class Participation 10%

Blackboard: All assignments, course information, and homework, quiz, and exam grades will be posted on Blackboard. Please check Blackboard regularly to ensure your grades have been recorded correctly.

Midterm Examination: Wednesday, October 18th during class. No makeup exams will be given without a documented excuse such as illness or emergency.

Final Project: Each student must turn in a final project on a topic from the history of mathematics. This will take the form either of a 6-page paper or a lesson plan for an 80-minute class. You must get your topic approved by me no later than Monday, November 6th in class, and the final project is due in class on Wednesday, December 6th. More details will be given in October.

In Class: The first 5-10 minutes of class will consist of presentations on topics from the history of mathematics given by students. See information on presentations below.

The rest of class time will consist of group work on problems that introduce and develop concepts, and presentations of class and homework problems. You will be expected to work on problems together during class, and to present your work to your classmates. Presentations of problems will be graded primarily for participation, not for accuracy. Participation in group discussions and presentations of problems will make up 10% of your final grade.

So that you can participate during class, come to class on time, and do not leave early. If you need to miss a class, get the notes and announcements from a classmate. If you have more than 2 unexcused absences, your final grade will be affected.

Homework: There will be weekly homework assignments that continue the ideas we explore during class. Your write-ups of homework problems should be in full sentences, and should be written so that a classmate can follow your argument without prior knowledge of the problem. If a problem requests a proof, your write-up should be a formal proof with a clear chain of logic. Sample proofs and written problems are available upon request, so that you can see what your work should look like, and solutions will be posted regularly.

A few problems from each assignment will be graded in detail, and the rest will be graded for completion. If you would like to get feedback on a particular problem or problems, indicate this on the front of the assignment and I will read them as time allows.

Presentations: At the beginning of the class, there will be a 5-minute presentation on a historical topic given by 1-2 students (depending on class size). You will sign up for the dates/topics you wish to present, and you will be responsible for at least 2 presentations during the course of the semester. More details will be given in a separate document.

If you are nervous about presenting, speak to me as soon as possible. You can practice your presentation in front of me before you present in class.

Quizzes: There will be a quiz roughly once every 2 weeks on the mathematics covered in this course. The quizzes will be based on class discussions and homework problems, and will enable you to get feedback on your work before the midterm. No makeup quizzes will be given, but your lowest quiz score will be dropped.

Electronic Devices: All electronic devices (phones, laptops, tablets, calculators, etc.) should be turned off and put away during class unless explicitly allowed by the instructor.

Tips for Success: The key to success in this course is to work on mastering the problems in and out of class, be prepared to present when it's your turn, and ask for help when you get stuck. Use office hours to ask questions about the material and to make sure your presentations meet the requirements.

You are strongly encouraged to discuss the homework problems with your classmates and to work together. However, your write-up must be your own work, and should reflect your own understanding of the problems. Copying a homework solution, in part or in full, is a violation of academic integrity. If you have any questions about the difference between working together and copying, please come talk to me.

Office Hours: You are strongly encouraged to come to office hours on a regular basis. If you cannot make my office hours, e-mail me to schedule an appointment at a different time. It is completely fine to do this.

Students with Disabilities: If you need accommodations for a disability, please contact the Office of Disability Services (ODS), http://disabilityservices.syr.edu, located in Room 309 of 804 University

Avenue, or call (315) 443-4498 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible for coordinating disability-related accommodations and will issue students with documented disabilities Accommodation Authorization Letters, as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible.

Academic Integrity: Syracuse University?s Academic Integrity Policy reflects the high value that we, as a university community, place on honesty in academic work. The policy defines our expectations for academic honesty and holds students accountable for the integrity of all work they submit. Students should understand that it is their responsibility to learn about course-specific expectations, as well as about university-wide academic integrity expectations. The policy governs appropriate citation and use of sources, the integrity of work submitted in exams and assignments, and the veracity of signatures on attendance sheets and other verification of participation in class activities. The policy also prohibits students from submitting the same work in more than one class without receiving written authorization in advance from both instructors. Under the policy, students found in violation are subject to grade sanctions determined by the course instructor and non-grade sanctions determined by the School or College where the course is offered as described in the Violation and Sanction Classification Rubric. SU students are required to read an online summary of the University's academic integrity expectations and provide an electronic signature agreeing to abide by them twice a year during pre-term check-in on MySlice.

The Violation and Sanction Classification Rubric establishes recommended guidelines for the determination of grade penalties by faculty and instructors, while also giving them discretion to select the grade penalty they believe most suitable, including course failure, regardless of violation level. Any established violation in this course may result in course failure regardless of violation level. For more information and the complete policy, see http://class.syr.edu/academic- integrity/

Religious Observances Policy: Syracuse University's religious observances policy, found at `http://supolicies.syr.edu/emp_ben/religious_observance.htm`, recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holy days according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that maybe missed due to a religious observance provided they notify their instructors before the end of the second week of classes. For fall and spring semesters, an online notification process is available through MySlice/Student Services/Enrollment/My Religious Observances from the first day of class until the end of the second week of class.

Tentative Class Calendar: This can be found in a separate file on Blackboard, under Course Information.