MA 1117 History of Math Fall 2011

MW 3:00-4:20pm, Krebs 215

Instructor: John Thompson
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Office: 133B Krebs Hall (269- 2043)

* Monday, October 10th's class will meet on Tuesday, October 11th.

Office Hours: MWF 12:30-1:50pm, drop-in, ***or*** by appointment (I might add an on-line hour later)
Also, feel free to e-mail questions to me.

Website: http://www.pitt.edu/~jwt01

Online Resource: (MacTutor) http://www-history.mcs.st-andrews.ac.uk/
(Euclid's Elements) http://aleph0.clarku.edu/~djoyce/java/elements/toc.html
(Non-Euclidean Geometry) http://cs.unm.edu/~joel/NonEuclid/NonEuclid.html

Reference Texts: Journey Through Genius: The Great Theorems in Mathematics by William Dunham
A Concise History of Mathematics by Dirk Struik

Goal:
1. To foster a greater appreciation of our mathematical heritage.
2. To experience a series of influential theorems from our mathematical history.
3. To gain an appreciation for the people in and the process of mathematics.
4. To improve ones mathematical communication skills.

Grading: Your grade will be determined via the following breakdown.

Midterm/Final Exams	40%
Quizzes	20%
Reading Notes	10%
Homework/Sketchpad	5%
Class Work	10%
Papers/Presentations	15%

Quizzes: A short 5-10 minute quiz based on the readings and discussion from the previous classes will be given the class following the discussion of the readings.

Homework: All assignments are to be written in a logical and easily understood manner. **Neatness** and **presentation** are important (if you have poor penmanship consider using MSWord with Equation Editor or LaTeX for the non-diagram parts of your solution). Problems will range from course-related topics to Praxis-style questions and worksheet utilizing Geometer's Sketchpad (located on the computer lab computers). Note: You should expect to rewrite your solutions, possibly several times, prior to submission. Do NOT hand in scratch work as your final write-up.

Class Work: A large portion of this course involves in-class participation. From the occasional class lecture to group work, you are expected to joyously participate and contribute to the value of the class. A subjective grade based on your participation in group and class discussions as well as your professionalism and attitude will be given. Occasionally throughout the semester you will receive feedback regarding your oral communication skills.

Presentation: You will be required to present at least one proposition from the first book of Euclid's *Elements*. You will collaborate with me on how you should present your proposition.

Exams: The first exam will be given following the discussion of the readings for the "Late Greeks." The second exam will be given following discussion of the "Astronomy" readings and the Euclid's *Elements* presentations. The exams will consist of multiple choice, matching, or fill in the blank type questions (≈40%) based mainly on the history discussed while the remainder will address mathematical problems similar to those discussed in class or assigned for homework.

Final Exam: The final exam will consist of multiple choice questions (≈40%), and some mathematical problems relating to topics discussed in class or assigned for homework. Topics will focus on Euclid's propositions and post-Euclid material. The final will be Monday, December 11 from 12:30-2:30pm in Krebs 215.

Paper: (10 pts) There will be one paper required (approx. 2-4 pages). The paper is to be on a mathematician not listed on the reading assignment sheet. You must obtain instructor approval for your mathematician. You are to persuasively argue why your mathematician merits to be studied. Biographical material should be include in the context of making your persuasive argument.

Disability Act: If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Office of Health & Wellness (OHW), G-10 Student Union Building, (814) 269-7119 to schedule an appointment as early as possible in the term. OHW will verify your disability and determine reasonable accommodations for this course.

Honesty: Students are responsible for becoming familiar with the UPJ Academic Integrity Guidelines. In order to protect honest students, any act of academic dishonesty (cheating on exams, plagiarism of graded assignments etc.) will likely result in failure of the course and/or expulsion from the university. Homework is intended to be independent work.

Personal Responsibility: As independent adults in the college community you must realize that not only do you receive freedom to make certain choices, but you also become accountable for your personal behavior. I strongly encourage you to define yourself as a person of sincere honesty and integrity.