Each student will work as a member of a team of 3 students on this project - I will solicit your choices for team members, but will make the decisions regarding who works with whom. This project will involve the selection of an important topic/person in the development of modern mathematics, researching the nature, history, and implications of the idea, and then writing a substantial paper on the topic. In addition, each team will make a 15 minute presentation to the class about their topic and their research of the topic. These presentations will be done during the last week of class. The entire project will be 25% of your course grade.

The semester project will be to write a chapter of a book - envision a book like *Journey through Genius* or *Euler, the Master of Us All*, but instead on another mathematician (or mathematicians) or great theorem. Your paper will include a prologue (a history of the subject up until your mathematician(s) enters or the theorem was proven), then at least one major contribution of that (those) mathematician(s) or of the significance of the theorem, discussed in full detail. The paper will conclude with an epilogue, an examination of how the mathematics in this area has developed since your mathematician(s) or the theorem was proven.

This project first involves picking an appropriate historical and mathematical subject, and if appropriate, at least one mathematician of significance in the area. The topic should be interesting (both to you and a wider audience), and needs to include a substantial proof (or a significant mathematical idea) that you will explain to an audience that is not as mathematically sophisticated as you are - envision writing to a group of students who know some calculus and have completed math 210. Your research paper will be 12 to 15 pages long, complete with references.

The point breakdown for the project is included in the discussion of dates below.

1. **By Tuesday January 18**: Submit the names of three potential classmates with whom you wish to work (it is preferable that you speak with each person first), the topic(s) you are interested in pursuing, and at least four one to two hour time blocks in which you are free (every week) to meet to discuss the project.

   From this information, I will attempt to pair project teams of people with suitably agreeable schedules and interests. Only one group can work on a given topic. Teams will be announced by Tuesday January 25.

2. **By Thursday February 17**: Turn in a typeset summary of the historical context of your problem, topic, or mathematician, including all relevant names and dates. This is essentially the first portion of the paper - the Prologue. This introduction should be 3-4 pages long. Include all references used, and cite them appropriately in your writing. (10 points)

3. **By Thursday March 17**: Turn in a typeset outline of your entire paper including plans for the epilogue. Included will be a short peer evaluation of your co-worker on the project. (10 points)

4. **By Thursday March 31**: Turn in a rough draft of your full paper. This will be typeset and double-spaced. Your report should be 12 to 15 pages long and must adhere to the standard writing guidelines from Writing 150 and MTH 210. (10 points)

   At least a week prior to this date you will get a copy of the grading guidelines I will use on the paper. This draft will be returned to you with my comments by Thursday April 7.

5. **By Tuesday April 19**: Turn in the final draft of your paper to me. Papers will be graded and returned by our final examination. Classroom presentations will be made on April 19 and April 21.

The final paper will be marked on a scale of 80 points, and the presentation will be graded on a scale of 40 points.

6. **On Thursday April 21**: After class, turn in your peer evaluations of the other members of your team, along with the self-evaluation of your own work. The self, peer, and instructor evaluations of your contributions to the project will be used to determine any necessary adjustments to the grade each individual will receive.