CO 480 Course Outline – Spring 2019

Overview

This course will examine a few of the people, places and problems that are historically significant in mathematics. The course is taught through a series of vignettes complemented with readings. Each of the vignettes looks at a particular person working on a particular mathematical problem in a particular historical and geographical place. There will, of course, be many connections to other people, other problems and other places.

Hopefully, this story telling approach will illuminate the interactions between mathematics and society in the past, in the present, and in your experience.

Section and Instructor Information

Section 001, 16:00 - 17:20 TTh, STC 0010
Steven Furino, MC 4234, scfurino@uwaterloo.ca
Office Hours: After class and by appointment.

Course Website

We will be using LEARN this term for our course website. All course related information will be posted there.

Textbook

You will be required to purchase or have access to Chapters 8 – 11 of *The History of Mathematics*, 7th edition by David Burton and published by McGraw-Hill. Physical and electronic copies of these four chapters and the entire textbook are available at the Waterloo bookstore. Ebooks require an access code from `http://www.bookstore.uwaterloo.ca/accesscodes.html`. If you have any questions, they can be directed to Shawn Gilbertson at shawn.gilbertson@uwaterloo.ca.

Course Work

The course work to be submitted is in three parts: assignments, two end of term tests, and a project based on a mathematician born after 1700. There is no midterm test and no final exam.

Assignment 0 This assignment is simply for you to discover a little about your mathematical ancestry and introduce yourself to me.

Assignments 1 – 4 Assignments have two parts. The first part consists of brief historical essays. Marks will be awarded for quality and detail of historical information, and for quality of exposition. The second part is a collection of mathematical problems. There are four assignments each worth 5%.

Tests There will be one in-class test covering the history portion of the course and a second in-class test covering the mathematics. Both will be very straightforward. Each test is worth 10%. You must pass both of the tests to pass the course.

Project The project will be modelled on the vignettes presented in class. Each vignette will have three components. The first component is a description of the *place*, the geographical and historical setting. The second component is a description of the *person*, a biography of your chosen mathematician. The final component is a mathematical exposition of a *problem* related to the person and place. The project can be done in groups of size one to four. The vignette will be submitted in four parts all of which are more completely described in the projects section of the course website. There will be two in-class mandatory writing workshops to assist with the projects.

1. The *Project Outline* identifies the group members, the person, the place and the problem. You will be asked to provide a detailed outline and identify source material at the level of specific scholarly articles or chapters in books. (5%)
2. The *First Edition* is a complete version of your project. No lectures, reading or assignments are due during the week prior to the deadline. A second, revised edition will be required later. Use the quality of the course mini-documentaries and the textbook prose as standards. (35%)
3. The First Edition will be randomly and anonymously distributed to other groups in the class for an *Editorial Review*. You will be expected to edit the writing, verify the mathematics and fact-check the history. (10%)
4. The *Final Edition* should take into account editorial suggestions, additional research and your own revisions. (10%)

Work	Due Date	Weight
First Day of Class	Tuesday, May 7	
Assignment 0	Thursday, May 9	
The Principles of Writing a Proposal	Thursday, May 16	
Assignment 1	Thursday, May 16	5%
Project Proposal	Thursday, May 23	5%
Assignment 2	Thursday, May 30	5%
Assignment 3	Thursday, June 13	5%
Project consultation	No classes on Tue, June 18	
Making it Shine: Revision Strategies for Clarity and Flow	Thursday, June 20	
First Edition	Thursday, June 27	35%
No class. See note 1.	Tuesday, July 2	
Editorial Review	Thursday, July 11	10%
Assignment 4	Thursday, July 18	5%
In class test (scope: history)	Thursday, July 25	10%
In class test (scope: mathematics)	Tuesday, July 30	10%
Final Edition	Tuesday, July 30	10%
Last Day Of Class	Tuesday, July 30	

Notes

1. Tuesday, July 2 follows a Monday schedule to make up for Canada Day on July 1. `http://ugradcalendar.uwaterloo.ca/page/uWaterloo-Calendar-Events-and-Academic-Deadlines`

TurnItIn

Plagiarism detection software (Turnitin) will be used to screen assignments in this course. This is being done to verify that use of all materials and sources in assignments is documented.

Cheating Policy

The reputation of the University and the integrity of your degree rests on the assumption that all work submitted is your own. Discussion related to the assignments is acceptable and encouraged, but you are expected to write up the assignments on your own. Copying or paraphrasing a solution from a fellow student or old solutions qualifies as cheating.

All students suspected of cheating will automatically be referred to the Undergraduate Associate Dean. Students who are unsure whether an action constitutes an offence, or who need help in learning how to avoid offences should seek guidance from the instructor. For information on categories of offences and types of penalties, students should refer to Policy 71, Student Academic Discipline, http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm. Students who believe that they have been wrongfully or unjustly penalized have the right to grieve; refer to Policy 70 Student Grievance, http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm.