Math 299
History of Mathematics
Spring 2009

Instructor: Fred Schultheis
Office: PPHAC 218
Phone: 610-625-7887
Office Hours: M 1:30-3:00 pm, W 12:45-2:00, and by appointment.
Required Texts: Journey Through Genius by William Dunham
A Concise History of Mathematics by Dirk J. Struik
Email: mefbs01@moravian.edu
This course examines the historical development of mathematics and the problems that helped motivate this development from its early beginnings up to the dawn of the twentieth century. We will also examine the context in which the mathematical results were discovered and the people who discovered them.

Course Description
The course meets on Monday, Wednesday, and Friday from 8:50-10:00 in PPHAC 330. Homework assignments will be given at each class meeting. Students are expected to complete these assignments by the next class meeting, where they will be discussed. No one can learn mathematics without doing it themselves and so, to the student, homework is the most important part of the course. In addition to the daily homework assignments (ungraded) there will be regular problem sets (graded). Since class participation is important, students are expected to attend every class.

Coarse Goals
Upon completing the course, successful students will have a deeper understanding of :

- how the various branches of mathematics developed
- the various motivating forces or mathematical problems that led to these developments
- the significant mathematical problems.

Grading
Your final grade will be based on; cultural awareness (50 points), class participation (50 points), two hourly exams (100 points each), an oral presentation (50 points), a research paper (100 points), graded problem sets (100 points total), and a comprehensive final exam (at most one third of your total grade). You have the option of writing a major paper instead of the final exam. The following grading scale is used for assigning your final grade.

		$86-89$	$B+$	$76-79$	$C+$	$66-69$	$D+$	≤ 59 F
$93-100$	A	$83-85$	B	$73-75$	C	$63-65$	D	
$90-92$	$A-$	$80-82$	$B-$	$70-72$	$C-$	$60-62$	$D-$	

Attendance
Class attendance is required. You will lose 20% from your class participation grade for each unexcused absence. If you are sleeping in class, you are not there. If you feel the need to leave class before it is over, even if you come back, you are not there. In other words, in any of these cases you will be considered absent and will lose 20% of your class participation grade.

You are responsible for all work covered in class and all assignments, even if absent from class. If you must miss more than one class due to illness or emergency, you should notify the instructor. **In-class exams must be taken at the announced time; make-up exams will be given only in case of extreme emergency or serious illness.**

Cultural Awareness

One goal for this course is to develop an appreciation of the beauty and utility of mathematics. To help foster this appreciation you are encouraged to spend some time outside of class thinking and discussing mathematics.

There are no specific assignments for this portion of the course but many opportunities for you to satisfy the requirements. Some examples of activities that foster cultural awareness include: attending talks, giving a talk, reading a paper, or solving a problem.

Some typical cultural events include, but are not limited to

- attending an epsilon talk (5 points)
- attending a Mathematics Colloquium at Moravian (7 points)
- attending a math talk at another LVAIC school (9 points)
- attending the EPADEL conference in April (10 points)
- review an article on differential equations and present it to the class (7 points)
- solving a problem outside the scope of the class (5-infinite points) with 5 additional points available for presenting the solution to the class

If you attend an event relevant to your mathematical growth you need to write a short paper that explains what the event was and how it deepened your appreciation of differential equations or mathematics. At most 3 epsilon talks and 3 Mathematics Colloquiums may count towards your cultural awareness grade. However, once you have reached the 50 points for your cultural awareness grade, you may do additional cultural events for extra credit. **For any talks you attend a write up is due within one week of when the talk was given. No culture points will be accepted after the second last Friday of the term.**

ACADEMIC HONESTY POLICY GUIDELINES MATHEMATICS COURSES

The Mathematics and Computer Science Department supports and is governed by the Academic Honesty Policy of Moravian College as stated in the Moravian College Student Handbook (pp. 27-32). The following statements will help clarify the policies of members of the Mathematics faculty.

In all homework assignments which are to be graded, you may use your class notes and any books or library sources. When you use the ideas or thoughts of others, however, you must acknowledge the source. For graded homework assignments, you may not use a solution manual or the help, orally or in written form, of an individual other than your instructor. If you receive help from anyone other than your instructor or if you fail to reference your sources you will be violating the Academic Honesty Policy of Moravian College. For homework which is not to be graded, if you choose, you may work with your fellow students. You are responsible for understanding and being able to explain the solution of all assigned problems, both graded and ungraded.

All in-class or take-home tests and quizzes are to be completed by you alone without the aid of books, study sheets, or formula sheets unless specifically allowed by your instructor for a particular test.