

# Math 199-01/02: Mathematical Software Tools

Th 2:30 – 4:00 PM; DA 309

Fall 2017

## Contact Information:

**Instructor:** Professor C. Crawford

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## **Office Hours:**

Monday 11:00 AM – 12:00 PM

Tuesday 1:30 PM – 3:00 PM

Thursday 11:00 AM – 12:00 PM

By appointment

## Course Description:

This course is designed for preservice teachers of mathematics. Students will be introduced to a variety of hardware and software tools, which can aid in learning mathematics. You will have the opportunity to work through several projects appropriate for the high school curriculum. We will be using graphing calculators, computer algebra systems such as Maple, Excel spreadsheets, and statistical and geometry software. Most of all, you should have fun learning these skills!

## Instructional Materials and Resources:

**Software:** *Fathom*<sup>®</sup> *Dynamic Data*<sup>™</sup> software available for purchase at <http://fathom.concord.org/>. [Further directions for purchasing this software will be sent later. The price is expected to be \$5-10.]

**Calculator:** A graphing calculator such as one of the TI-8x or -9x series is recommended.

**Computer Labs/Citrix:** Open access computer labs are found in DA 108 & 110. Any of the software not required above should be available to you in these labs or through Citrix.

**Flash Drive, Dropbox, Google Drive, Cloud, etc:** Be able to save all work from class for later use.

## Grading

Your final letter grade for the course will be based on the percentage total points earned throughout the semester. There will be **no exams or quizzes** and grading breakdown is as follows:

<b>Activity/Lab Exercises</b>	<b>80-120 pts (10 pts each)</b>	
<b>Webpage Project</b>	<b>30 pts</b>	[Due: <b>Thursday 12/17</b> or <b>Thursday 12/14</b> ]
<b>Activity Project w/ Presentation</b>	<b>30 pts</b>	[Presentations: <b>Thursday 12/7</b> or <b>Thursday 12/14</b> ]
<b>Technology Paper</b>	<b>30 pts</b>	[Due: <b>Friday 12/15</b> via email]
	<b>170-210 pts</b>	

*All students must attend both presentation days. An absence on a presentation day will result in docking your corresponding project grade by 50%.*

## **ACTIVITY/LAB EXERCISES**

Activities or labs involving the various software tools will be given at each class session. You will be expected to work through these activities, answer all relevant questions, and turn in the associated work and assigned exercises. You are encouraged and possibly required to work with others. However, unless otherwise specified you should turn in an individual assignment/lab report. Each Activity/Lab is worth 10 points.

## **FINAL PROJECTS**

There are 3 types of projects required for this class. **Project 1 is a Technology Lab and Presentation** similar to those done in class. **Project 2 is a Webpage** for a fictional math class. **Project 3 is a Technology Paper**. Details for each type of project are given in a separate handout.

**Project Presentations/Webpage Due:** One project is due **Thursday, December 7** [Last Day of Class] and the other one is due **Thursday, December 14** [Final Exam Time 1:00-3:00].

*All students must be present for both presentation days.*

The **Technology Paper Project** is due **Friday, December 15** via email.

Note to Future Teachers:

A link to the **Illinois Secondary Education Mathematics Content-Area Standards** for this course can be found at <http://www.elmhurst.edu/~mth>.

Policies and Academic Integrity: You are expected to adhere to the College Academic Integrity Policy as stated in the *E-Book* as it applies to this class. For example, *obtaining or attempting to use unauthorized materials or information or unauthorized help from another person or source is considered **cheating**.*

- Test and quizzes, whether take-home or in-class, are to be your own work unless otherwise stated.
- Calculators and notes are not allowed on quizzes and tests unless otherwise stated. If calculators are allowed, you may not store any notes or unauthorized programs on the calculator.
- Having a cell phone out during an exam or quiz will result in an automatic 0 grade for the exam or quiz.
- **You may work with others on your homework and are *encouraged* to do so.** But you must turn in your own homework unless specifically stated as group work requiring one submission.
- Individual projects should be your own work. All group members should make quality contributions to group projects.

Accommodations:

The College will make reasonable accommodations for persons with documented disabilities. A student with a disability that may have some impact on work in this course should contact Dr. Corinne Smith, Disabilities Service Coordinator, at 630-617-6448 and ***then contact me***.