Math 434: Complex Variables

MWF 11:45 AM – 12:50 PM; CH 133   Spring 2015

Contact Information:

Instructor: Professor C. Crawford	**Office Hours:**
Office: DA 209C	Monday 9:30 – 10:30 AM
Phone: 617-3479	Tuesday 1:00 – 2:00 PM
Email: crawford@elmhurst.edu	Thursday 1:00 – 2:30 PM
Webpage: http://www.elmhurst.edu/~crawford	By appointment

Course Description:

This course is an introduction to the theory and applications of functions of a complex variable. Topics include the complex number system, analytic functions, Taylor and Laurent expansions, contour integration, mappings, and applications. *Prerequisite*: MTH 251 and MTH 301.

Instructional Materials:

Required Text: *Complex Variables and Applications, 8th or 9th Edition* by Brown and Churchill

Grading

Quizzes/Homework/Seminar/Projects	**100 pts**	Wednesdays; In-Class *tentatively*: 2/18, 4/8, 5/13
2 Exams (100 pts each)	**200 pts**	*Tentative Dates*: **3/11 & 4/22**
Final Exam	**150 pts**	Friday 5/22 at 10:30 AM – 12:30 PM
	450 pts	

Your final letter grade for the course will be based on the percentage of total points earned. Excessive and consistent disruptions (e.g. tardiness, leaving class for drinks or the restroom, cell phones, etc.) may result in lowering your grade up to one full letter grade. ___All cell phones must be turned completely off and put away___. *Having a cell phone out during an exam or quiz will result in an automatic 0 grade for the exam or quiz.*

EXAMS: Two exams are ___tentatively___ scheduled for **Wednesdays, March 11** and **April 22.** You must take all exams in class on the announced dates (subject to change at my discretion). **No make-up exams will be allowed**. See below for the replacement policy.

FINAL EXAM: The cumulative final exam will be on **Friday, May 22 from 10:30 AM -12:30 PM.**

EXAM REPLACEMENT POLICY: If you take all of the course exams as scheduled then the lowest score will be replaced by your final exam percentage, if this is to your benefit. *You will not be allowed to take an exam early or late for any reason*. If you miss any exam(s), your final percentage will serve as the score for the missed exam(s). Only the missed exam score(s) will be replaced.

QUIZZES: Three **In-Class Quizzes** are ___tentatively___ scheduled for **Wednesdays 2/18, 4/8, and 5/13**. They will typically be given during the first 15-20 minutes of class. Additional quizzes may also be given, with advance notice. Your lowest in-class quiz score will be dropped.

HOMEWORK: Typically, homework will be assigned each class and (a portion of it) will be ___due Wednesday of the next week___ unless there is a quiz or exam that week or otherwise noted. Additional homework may be collected, with advance notice. You have a **one-day** grace period on assignments without penalty (unless this option is abused or otherwise noted). You will be docked 10% for each *day* late thereafter. **Late homework will not be accepted after the assignment has been graded.** Homework scores are typically based on solutions to a few of the problems and overall completeness. For every 3 homework assignments graded, I will drop 1.

SEMINAR: As part of your grade, you are **required to attend one of the math seminars** held <u>Wednesdays 4:00-5:00 PM in CS 213</u> and hand in a 1-2 page Summary/Evaluation Paper. Seminar Summary/Evaluation Papers receive a holistic (overall) grade based on the guidelines below. The seminar paper will count as a quiz grade and you cannot drop it.

Seminar Summary/Evaluation Paper Guidelines:	
Attendance : • **Attendance and written paper**	**~60%**
Content: • **Clear summary of the main point(s) and some details of the talk** *[Note: You will often not understand everything in the talk, nor are you expected to. But you should be able to explain the main point(s)/some details clearly (e.g. Imagine trying to explain what you did understand of the talk to another math/science major who was not in attendance.).]* • **Evaluation of the topic** *[Note: The evaluation is not a critique of how well the speaker presented the material, but more about the ideas presented and their potential impact on you and to the broader science or education community. You should also consider any limitations or questions you have about the talk along with possible extensions for further work.]*	**~20%**
Mechanics & Format: • **1-2 pages, double-spaced, 1-inch margins** • **Clear and skillful organization and writing** • **Error-free** • **Neat and professional presentation**	**~20%**

PROJECTS: Projects may be assigned periodically throughout the semester and may count as one or more quiz scores each. You will **not** be allowed to drop any of these project scores.

QUIZZES/HOMEWORK/SEMINAR/PROJECTS: The remaining quiz and homework grades along with the seminar grade and any projects will be totaled and scaled to 100 points.

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

<u>Policies and Academic Integrity:</u>
You are expected to adhere to the College Academic Integrity Policy as stated in the *E-Book* as it applies to this class.
• Test and quizzes, whether take-home or in-class are to be your own work unless otherwise stated. You may ask questions of me any time during an exam or quiz.
• 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.
• **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 reflect your own work. However, feel free to obtain input, feedback, etc, from me and other students. Group projects should reflect quality contributions by all group members.
• Please feel free to ask questions of me for all work, especially if something is unclear.

<u>Accommodations:</u>
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 *<u>and then contact me</u>.*