Instructor: Prof. Bruce Reznick, 327 Altgeld Hall, 333–4284, reznickmath.uiuc.edu. My phone has voice mail and I frequently check and reply to my email, including weekends. Office hours are by appointment. I take them seriously, and they can usually be arranged within 24 hours. You are also encouraged to ask me questions immediately before, during and after class. I enjoy answering questions by email, so that I can post the (anonymized) question and my answer on the webpage (see below) for all to see. I’m terrible with names; don’t take it personally. This course has a webpage:


There will be a “class diary” summarizing the class day by day, providing links to handouts, and containing my responses to all questions sent to me by email. I also expect to have an ongoing page of useful mathematical links, to which you are invited to contribute.

Text and Syllabus: The text is Complex Variables by Stephen Fisher. The syllabus for the course suggests that we shall cover most of the first three chapters of the text. Be aware that (reading, understanding, constructing) proofs are an integral part of this course. Although Math 448 is an undergraduate course, it attracts some graduate students, and this can stress both sides. Given a choice, I’d rather bore the grad students rather than baffle the undergrads.

Homework Policy: Written homework will be assigned to be due weekly. Please staple or paper-clip your homework sheets (no folding over corners), and consider writing more than one draft. You are expected to spell correctly and write complete, grammatical sentences when possible in this and all your University assignments. Homework solutions will be distributed when the assignment is due. No late homework is accepted, but the lowest two homework scores (possibly zero) will be omitted in computing your homework average. In rare instances, you may be excused from an assignment, but the dropped scores are intended to cover ordinary illnesses, weddings, etc. Collaboration in studying and working the homework is strongly encouraged! Collaboration without comprehension is a waste of time. A phone and e-mail list will be distributed once the class stabilizes. It is my policy not to give specific homework help on pending problems. But if you ask a question in class or in email, I can further explain to everybody the underlying mathematics.

Homework Content: Most homeworks will be a combination of various types of problems. (1) There will be computational exercises which are not graded and which you can do with the assistance of WolframAlpha. The purpose of these is for you to gain familiarity with some of the techniques of the course. Easier versions of these questions may appear on exams, when you’ll have to do them by hand. (2) There will be problems from the text. (3) There will be old exam questions, marked by the rubric (E). (4) There will be a few other questions that I just make up. (5) Those taking the course for 4 hours credit are expected to do more work! Accordingly, there will be a few more challenging “bonus” problems on each
assignment. Students can work any problems they wish, but those seeking more credit will be expected to do these, and this will be reflected in the denominator of the homework score. In any event, no assignment score will exceed 100%.

**Exam Policy:** There will be two Hour Exams, at the usual intervals. Painful recent experiences cause me to remind you that the dates of exams are not subject to individual negotiations. You will need serious documentation in order to qualify for a makeup exam! All exams will be closed-book and closed-note, and will resemble the homeworks. The Final Exam is comprehensive, and somewhat harder than the Hour Exams. The Final must be held at the scheduled time: Monday, December 13, from 7:00 – 10:00 pm.

**Grading Policy:** Keep in mind that I am grading your work, not you as a person. Each Hour Exam counts 25%, the Final Exam counts 50% and the Homework counts 20%. The lowest 20% is dropped. (Again, painful recent experiences cause me to state that a missed exam cannot be dropped from the computation of the grade.) All grades are numerical. The highest possible grade cutoffs are: A/B – 90%, B/C – 80%, C/D – 70%, D/E – 60%, by which I mean “A-/B+”, etc. I will try to keep you posted on any curving as the semester progresses. (I reserve the right to curve differently for people enrolled in the three-hour version and the four-hour version, though the maximum cutoffs apply to all.) There are two exceptions to the numerical grading for people who take both Hour Exams: anyone who scores 96% on the Final gets an A and anyone who scores 75% on the Final will pass. Experience shows that these exceptions rarely make a difference.

**Philosophy:** The study of functions of a complex variable is one of the most beautiful areas of mathematics, with many applications, both pure and applied. It will be a privilege and a pleasure for me to spend the semester talking to you about this subject. Education is not a zero-sum game when done correctly. I do not consider you my adversaries, and hope the feeling will be mutual. Become an active participant in this course. Let it get under your skin and visit your dreams. These are serious steps towards becoming a mathematician.