

Syllabus

CLASS MEETS	MWF 3:10-4:00 in Ritter 217.										
INSTRUCTOR	Dr. Bryan Clair										
EMAIL	bryan@slu.edu										
OFFICE	Ritter Hall 110. 977-3043.										
OFFICE HOURS	M1-2, Th10-12, or by appointment. If you're not coming to office hours, you're missing out on a valuable resource.										
WEB PAGE	http://math.slu.edu/~clair/complex										
TEXTBOOK	E.B. Saff, A.D. Snider, <u>Fundamentals of Complex Analysis</u> (3ed).										
HOMEWORK	<p>There will be regular homework assignments, usually due on Fridays. Your work should be neat and legible. Use plenty of paper, and staple your work!</p> <p>I encourage you to work together on homework, but everyone should write up results separately. You should also feel free to check your solutions in the back of the book and then correct them.</p> <p>Your homework assignment must have a self-assessment on the front page. The self evaluation should tell me which problems you found easy, which were difficult, and how well you feel you have mastered the material on the assignment. This is also the place to request feedback on problems that caused you trouble.</p> <p>Homework is graded as follows:</p> <ul style="list-style-type: none"> + On time, complete (or mostly complete). √ On time, missing self-evaluation or otherwise incomplete. Late 50% credit, you will receive no comments 0 Not turned in. 										
QUIZZES	There will be a handful of short in-class quizzes (dates to be announced).										
EXAMS	<p>I give makeup exams only for severe and documented reasons.</p> <p>Exam 1 Friday, September 25</p> <p>Exam 2 Friday, October 30</p> <p>Final Exam Wednesday, Dec 9, 2-3:50pm</p>										
GRADING	<p>Grading is on a straight scale (uncurved), with 90%,80%,70%,60% guaranteeing A,B,C,D respectively. Grading is weighted as follows:</p> <table border="0" style="margin-left: 40px;"> <tr> <td>Homework</td> <td>15%</td> </tr> <tr> <td>Quizzes</td> <td>10%</td> </tr> <tr> <td>Exam 1</td> <td>20%</td> </tr> <tr> <td>Exam 2</td> <td>20%</td> </tr> <tr> <td>Final Exam</td> <td>35%</td> </tr> </table>	Homework	15%	Quizzes	10%	Exam 1	20%	Exam 2	20%	Final Exam	35%
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HONESTY

Students are expected to be honest in their academic work, as per the Honesty Policy of the College of Arts & Sciences. Plagiarism, cheating and dishonesty will be reported to the dean and may result in probation, expulsion, or worse.

TOPICS

Week	Chapters	Topics
1-2	Ch 1.	Algebra and geometry of complex numbers. Complex exponentials, powers, and roots. Euler's formula.
3-5	Ch 2.	Complex functions and mappings. Limits, continuity, analyticity. The Cauchy-Riemann equations and harmonic functions.
6-7	Ch 3.	Polynomials, rational functions. Partial fraction decompositions. Exponential and trig functions. Multi-valued functions and the logarithm.
8-10	Ch 4.	Contour integrals. Cauchy's integral formula. Liouville's theorem. The fundamental theorem of algebra. Maximum modulus principle. Dirichlet problems.
11-13	Ch 5.	Power series. Laurent series. Zeros and singularities.
14-15	Ch 6.	The Residue Theorem and integration techniques.