

MATH 656. THEORY OF FUNCTIONS OF A COMPLEX VARIABLE II, SPRING 2020

SYLLABUS

Instructor: Dr. Erwin Miña-Díaz Office: Hume Hall 317
Office hours: M. W. 1:00-2:00 PM Email: minadiaz@olemiss.edu
Telephone: (662) 915-1204

Course Information

Text: Joseph Bak and Donald J. Newman, *Complex analysis*, Springer-Verlag 1997, 2nd or 3rd Edition.

Time/Place: Tuesday-Thursday, 11:00 AM - 12:15 PM, Hume Hall 331

Course description

This course is the second part of a two-semester course in complex function theory. The first part followed the same book, covering the material up to Chapter 7. This time we will cover many topics from Chapter 8 onward, such as the general Cauchy theorem and formula, branches of logarithms and roots of functions, isolated singularities of analytic functions, the residue theorem, basic theory of conformal maps, infinite products and analytic continuation. Our presentation will sometimes deviate from that in the book.

Course learning objectives

The aim of the course is to prepare the student well for an independent study of more advanced topics as well as for initiating research in any field with a complex analysis background. This is a theoretically oriented course, with a strong emphasis in proving results. The material will be covered thoroughly and rigorously. By the end of the course, the successful student should have improved his/her mathematical skills and maturity to start reading original papers and advanced books on the subject. The course stresses individual learning through homework assignments, each containing problems that require the student to have a true comprehension of the material. Some of these problems will be challenging, so that an independent search in the literature is encouraged.

Homework

Doing the homework is vital for a true comprehension of the material and doing well in this course. However, the homework will not contribute to your grade. I strongly encourage you to attend office hours to discuss your homework solutions.

Tests, final exam and grades

There will be two tests, each worth 100 points. The final exam is worth 200 points. Thus, your maximum possible score is 400 points, and your grade will be determined according to the following scale:

A	93%	A-	90%	B+	87%	B	83%	B-	80%	C+	77 %
C	70%	D	60%	F	below 60%						

Test 1: Thursday, February 20.

Test 2: Thursday, April 2.

Final: Tuesday, May 5 at Noon.

Deadlines

Monday, March 2 is the deadline for course withdrawals. After the course withdrawal deadline, courses dropped will be recorded on University records and the W grade will be recorded if the student is not failing the course at the time of withdrawal; otherwise the grade recorded will be F. After the course withdrawal deadline, a student may drop a course only in cases of extreme and unavoidable emergency as determined by the academic dean.

Attendance, cheating, and academic needs

Attendance is mandatory. Cheating on any exam, theft or attempted theft of exam questions, possession of exam questions prior to the time for examination, shall all be offenses subject to appropriate penalties. It is the responsibility of any student with a disability who requests an accommodation to contact the Office of Student Disability Services (915-7128).