

# MATH 655. THEORY OF FUNCTIONS OF A COMPLEX VARIABLE I, FALL 2009

## SYLLABUS

Instructor: Dr. Erwin Miña-Díaz  
Office: Hume Hall 317  
Office hours: Mon 2:00-3:00 PM, Tue-Thu 2:00-4:00 PM, or by appointment  
Email: minadiaz@olemiss.edu Telephone: (662) 915-1204

### **Course information**

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Text: Joseph Bak and Donald J. Newman: *Complex Analysis*, Springer-Verlag 1997, 2nd Edition.

Meeting time/place: Tuesday-Thursday, 11:00 AM - 12:15 PM, Hume Hall 331

Course description: This course, together with its second part MA 656, is an introduction to the beautiful subject of complex analysis. We will deal with concepts familiar to you from your study of calculus like continuity, derivatives, integrals, sequences and power series. Though at first sight it might seem that we are simply extending the real variables calculus to the setting of complex numbers, it will soon be clear that there are profound differences between real calculus and complex analysis. In particular, complex analysis stands out for its elegance and powerful results, including applications to real variable calculus, combinatorics and number theory, but also to physics and engineering. We shall cover chapters 1 to 11 of the book, leaving the rest of the material for the second semester.

This is a theoretically oriented course, with a mathematical emphasis in proving results. The aim of the course is to prepare the student for an independent study of more advanced topics as well as for initiating research in any field with a complex analysis background.

### **Attendance policy**

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Attendance is mandatory. Only two absences in the entire semester with a proper excuse will be accepted. Per each additional absence you will lose 10% of your grade automatically.

### **Homework**

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Doing the homework is vital for a true comprehension of the material and doing well in this course. Homework will be assigned on Tuesday of each week, to be collected on the following Tuesday at class time. I will grade the homework assignments to help both you and me keep track of your progress. However, the homework will not contribute to your grade. I strongly encourage you to attend office hours to discuss your homework solutions' progress.

### **Tests, final exam and grades**

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There will be two tests and a final exam on the following dates:

Test 1 on Tuesday September 22

Test 2 on Tuesday October 27

Final Exam on Tuesday December 8 at Noon.

The final is comprehensive, each test and the final is worth 100 pts. Thus, your maximum possible score is 300 pts, and your grade will be determined according to the following scale: A is 90%, B is 80%, C is 70%, D is 60%, F is less than 60%.

### **Academic needs**

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It is the responsibility of any student with a disability who requests a reasonable accommodation to contact the Office of Student Disability Services (915-7128). Contact will then be made by that office through the student to the instructor of this class. The instructor will then work with the student so that a reasonable accommodation of any disability can be made.