Introduction to Complex Variables

Syllabus

Dr. R.L. Herman

Spring 2007

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Course Content:

Required Texts: *Applied Complex Variables*, John W. Dettman, Dover 1984. *Complex Variables*, Murray R. Spiegel, Shaum's, McGraw Hill, 1999.

Optional Texts: *Complex Variables and Applications*, James W. Brown and Ruel V. Churchill, McGraw Hill, 2004. *Complex Variables*, Francis Flannigan, Dover, 1983

This course is an introduction to the study of functions of a complex variable. Topics are to include: Algebra of complex numbers, elementary functions with their mapping properties; analytic functions; power series; intgration, Cauchy's Theorem, Laurent series and residue calculus; elementary conformal mappings and boundary value problems. We will generally follow the chapters (1-6) in Dettman's book and Spiegel's book will be useful for providing additional examples. There are several copies of Brown and Churchill in the library.

Course Requirements:

Homework: Homework assignments will be collected on a regular basis and you will be told when the work is due. As doing homework is very important for learning the material in this course, it will count as 30% of your grade.

Attendance: YOU ARE EXPECTED TO ATTEND ALL OF THE CLASSES! After three excused absences there will be a penalty of 1% for each absence from your total grade.

Paper: There are many interesting topics in complex analysis. You will be given the opportunity to explore one topic in depth through the writing of a research paper on some aspect of the field. More detail will be provided later in the semester. This paper will count 10% of your grade.

Exams and Grades: There will be a midterm and a final for this course. The exams will cover the material up to the date of the exam. The tentative dates for the exams are below.

THIS SYLLABUS IS SUBJECT TO CHANGE!							
	Exam		Date				
	Midterm		Mar 1				
	Final		May 8, 7:00 PM				
Your final grade will be based on the following							
	Home	work			30%		
	Paper			10%			
	Midte	rm		30%			
	Final		30%			0%	
		90-10	0	А			
		80-89	.5	В			
		70-79	.5	С			
		60-69	.5	D			

Borderline grades may be modified by a plus, or a minus, if the instructor determines that such grades are earned.

Advice for Success:

In order to learn the material in this course and earn a good grade, you need to put in some effort. Do not put off assignments or reading. If you do not understand something, ask the instructor. Come to office hours, use the email, ask knowledgeble students, or go to the library/internet and find supplementary material. The instructor can only cover the basics in class. You are not expected to know the material by only listening to the lectures. You need to work problems and think about what you are doing.

Academic Honor Code: "The University of North Carolina at Wilmington is committed to the proposition that the pursuit of truth requires the presence of honesty among all involved. It is therefore the institution's stated policy that no form of dishonesty among its faculty or students will be tolerated. Although all members of the university community are encouraged to report occurrences of dishonesty, each individual is principally responsible for his or her own honesty." Student Handbook. (*This includes plagiarism, bribery and cheating.*)

Student Disabilities: UNCW Disability Services supplies information about disability law, documentation procedures and accommodations that can be found at http://www.uncw.edu/stuaff/disability/. To obtain accommodations the student should first contact Disability Services and present their documentation to the coordinator for review and verification. (If you feel that you should qualify for disability testing or accommodations during this course, contact the Office if Disability Services in Westside Hall or call ext. 3746.)