

Syllabus MA 433 S12 11 am in CB 343 Instructor: John Lewis

The Course: The book we shall use for this course is entitled *Complex Variables and Applications* by Brown and Churchill, *eighth edition*. During the semester we will cover parts of

- Chapter 1: Complex Numbers
- Chapter 2: Analytic Functions
- Chapter 3: Elementary Functions
- Chapter 4: Integrals
- Chapter 5: Series
- Chapter 6: Residues and Poles
- Chapter 7: Applications of Residues
- Chapter 8: Mapping by Elementary Functions

Tests: There will be two tests during the semester and a final test at the end of the semester. Tests will be in class, given at the following times:

First Test: Monday February 13, in class.

Second Test: Wednesday March 21, in class.

Final Test: Friday May 4 in class at 1:00 pm.

Homework and Quizzes: Suggested homework problems will be assigned in class from the homework problems, listed at the beginning of each testing period. Homework will not be collected during the first part of the semester but instead a quiz (worth 20 points) based on the homework will be given each Friday (except on a test week) beginning January 20. During the last part of the semester a take home test will be given in several parts, collected, and graded. Your quizzes and take home test together will be counted as two tests. Makeup for late quizzes will not be given for any reason. Also very late homework will not be accepted.

Important Dates: Monday January 16 is an academic holiday because of Martin Luther King's birthday. The last day to withdraw in this course without a grade is April 6. Spring break begins on March 12. There is no class on Friday March 30 as I will be on my way to a mathematics conference. The last day of classes is April 27.

Grades: Points will be given as follows:

Hour Tests	=	200
Final Test	=	125-150
Quiz Scores	=	100
Homework Scores	=	100

At the end of the semester each student's points will be added and his/her percentage of the total points will be calculated. You are guaranteed that if your percentage is the university standard, then you will get at least that grade:

- 90-100 percent = A
- 80 - 89 percent = B
- 70 - 79 percent = C
- 60 - 69 percent = D
- 0 - 59 percent = E.

However there may also be a slight curve given after the percentages are figured.

Office Hours: My office and office hours are

765 Patterson Office Tower
MWF 9-10 am, 12:30-2:30 pm

Course Webpage: A copy of this syllabus along with future test review and answer sheets can be found at <http://www.ms.uky.edu/~john/>

The following homework problems are recommended for you to work on. Quiz problems will be similar to but not necessarily chosen from the homework.

Suggested Problems MA 433 (not to hand in)

Section 1.2 (page 5) 1 (a), 2, 4.

Sections 1.3 (page 8) 1.

Section 1.4 (page 12) 1 (a),(d), 5 (b),(c), 6.

Section 1.5 (page 14) 1 (a), (c), (d), 9, 11.

Section 1.8 (page 22) 1 (a),(b), 5 (a), 6, 9, 10, 11.

Section 1.10 (page 29) 1 (a), 2 (b), 3 (a), 6, 7.

Section 1.11 (page 33) 1 (a),(c), 2, 3, 4 (d), 5, 7 (a),(b).

Section 2.12 (page 37) 1 (d), 2, 3, 4.

Section 2.14 (page 44) 2, 3 (b),(c), 5.

Section 2.18 (page 55) 3 (a),(b), 5, 10.

Section 2.20 (page 62) 1, 2, 8 (a), 9.

Section 2.23 (page 71) 1 (a),(c), 2 (b),(c), 3 (b), 4 (b),(c), 6, 9.

Section 2.25 (page 77) 1 (b),(c), 2 (a), 4 (b),(c), 5, 6.

Section 2.26 (page 81) 1 (b),(c), 2, 6, 7.

Section 3.29 (page 92) 1 (b), 4, 8 (a),(c), 13.

Section 3.31 (page 97) 1 (b), 2 (a),(c), 3 (b), 6, 8, 9 (a), 10.

Section 3.32 (page 100) 2, 6.

Section 3.33 (page 104) 1 (a), 2 (a),(c), 3, 4.

Section 3.34 (page 108) 2, 8, 9(a), 11, 16.

Section 3.35 (page 111) 2, 5, 8, 14, 15 (a).

Section 3.36 (page 114) 1 (a), 2 (b), 7.