



MATH 103A: Complex Analysis

Summer 2018

(This document's location
is: http://tamanoi.math.ucsc.edu/tamanoi/Math103A_Summer_2018.htm)

DRC accommodation: If you qualify for classroom accommodations because of a disability, please submit your Accommodation Authorization Letter from the Disability Resource Center (DRC) to me as soon as possible, preferably within the first week of the Summer Session. Contact DRC by phone at [831-459-2089](tel:831-459-2089) or by email at drc@ucsc.edu 125 Hahn, for more information.



Instructor

Professor Hirotaka Tamanoi

Office: McHenry 4180
Hours: Monday 1:30PM-3:30PM
Wednesday 1:30PM-3:30PM
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Lecture

Room: Nat Sci Annex 103
MW: 9:00AM -- 12:30PM

Discussion Sections and TA

TA: Nathan Marianovsky nathanmarianovsky@gmail.com

Sections: Tuesday, Thursday 2PM-3:30PM, Thimann Lab 101

Office Hours: Thursday, Friday 3:30PM-5PM, McHenry 4112

Textbook

Complex Variables and Applications, 9th edition

By James Brown and Ruel Churchill

McGraw-Hill

Course Description

Complex analysis is a jewel of classical mathematics. We will cover at least up to chapter 7 of the textbook, culminating in the application of residues to computation of integrals.

Homework, Quiz, Exams, and Course Grade

Homework: Homework assignments are given after every class and posted on this course web page. See below. They will be due on Fridays 5PM, starting on the first week. There will be a homework folder in the filing cabinet on the first floor of McHenry library across the room 1247.

You can discuss homework problems with your fellow students, but you have to write your own answers. **However:** *when we decide that homework assignments from two students are suspiciously similar, both students will receive no credits. And other disciplinary actions may follow. So please write your homework assignments in your own words.*

Quiz: In each discussion section, there will be a short quiz consisting of one or two relatively basic problems from the materials from the previous day's lecture. These quizzes are meant to continue motivating you to work on homework problems. Quizzes

Short Exams: There will be half an hour exams on Monday classes during 2nd, 3rd, 4th week. These short exams replace the midterm.

Course grade will be determined by the following (tentative) scale:

Homework 15%, Quiz 10%, Short Exams ~30%, Final ~45%

This grade distribution is tentative. It will be adjusted at the end of the summer session II using averages of each category. All scores are available at the Canvas course site.

Exam Schedule

Final Exam: Wednesday August 29, in class, cumulative.

Lecture Schedule

Week 1 (July 30, August 1): Chapter 1 and Chapter 2

Week 2 (August 6, 8): Chapter 3, Chapter 4, Quiz 1 on 8/6 in class.

Week 3 (August 13, 15): Chapter 4, Chapter 5, Quiz 2 on 8/13 in class

Week 4 (August 20, 22): Chapter 6, Chapter 7, [Quiz 3](#) on 8/20 in class

Week 5 (August 27, 29): Chapter 7. **Final Exam: Wednesday August 29** in class, cumulative.

Assignments

Chapter 1: (Due 8/3) **Section 2:** 1,2. **Section 3:** 1. **Section 5:** 1ab, 4, 5, 8, 9. **Section 6:** 1, 2, 10, 13, 15. **Section 9:** 1, 2, 4, 5, 9, 10, 11. **Section 11:** 1, 2, 4, 5, 7. **Section 12:** 1, 4.

Chapter 2: (Due 8/3) **Section 14:** 1, 2, 3, 9. **Section 18:** 1, 3, 5, 7. **Section 20:** 2, 3, 4, 6, 7, 8. **Section 24:** 1, 2, 3, 8. **Section 26:** 1, 2.

Chapter 3:(Due 8/10) **Section 30:**1,2,3,8,10. **Section 33:** 2,5,6,7,8. **Section 36:** 1,2. **Section 38:** 1,2,3,4,7. **Section 39:** 1,2,3,4. **Section 40:** 2,3,4.

Chapter 4: (Due 8/10) **Section 42:** 1, 2, 3, 4. **Section 43:** 1, 5. **Section 46:** 1, 2, 3, 4, 10, 13. **Section 47:** 1, 2, 4, 6. **Section 49:** 1, 2, 3.

Chapterr 4: (Due 8/17) **Section 53:** 1, 2, 4, 5. **Section 57:** 1, 2, 3, 4, 5, 6. **Section 59:** 1, 2, 4, 5, 7.

Chapter 5: (Due 8/17) Section 61: 4. Section 65: 1, 2, 3, 5, 7, 8, 9, 10, 11. Section 68: 1, 2, 3, 4, 5. Section 72: 1, 2, 3, 4, 6. Section 73: 1, 2, 5, 6, 9.

Chapter 6: (Due 8/24) Section 77: 1, 2, 4, 7. Section 79: 1, 2. Section 81: 1, 3, 4, 5, 6. Section 83: 1, 5, 6.

Chapter 7: (Due) Section 86: 2, 3, 5, 8, 9. Section 88: 2, 5, 7, 12. Section 91: 1, 2, 3, 5. Section 92: 1, 2, 3, 6.

