COURSE DESCRIPTION
COMPLEX ANALYTIC DYNAMICS
MA 792
SUMMER 2023

DEPARTMENT OF MATHEMATICS
UNIVERSITY OF ALABAMA AT BIRMINGHAM

Course Instructor: Professor Nikita Selinger
Office: UH 4016
Phone#: (205) 934-2154
E-mail: selinger@uab.edu
Office Hours: Before/after class, drop-in, or email for appointment.

Meeting times: Thursdays 1 PM – 3 PM
Meeting location: UH 4002
Textbook: Milnor, John. Dynamics in One Complex Variable. Third Edition. United Kingdom: Princeton University Press, 2011.

Important Dates

First day of our class: June 5, 2023
Last day to drop without paying full tuition: June 12, 2023
Juneteenth Holiday: June 19, 2023
Independence Day Holiday: July 4, 2023
Last day of our class: August 3, 2023
Final Exam Date: Thursday, August 10 8:00 AM - 10:30 AM

Syllabus
Review of complex analysis.
Local fixed point theory.
Global theory of complex dynamical systems.
Structure of the Fatou and Julia sets for polynomials and rational functions.
Structure of the Mandelbrot set.

Course policies:

- Please make sure that you are able to receive e-mail through your Blazer-ID account. Official course announcements may be sent to that address.

- If your are contacted by the Early Alert Program, you should consider taking advantage of the services it offers. Various services to assist you are also listed in the *Student Resources* section of the *Blazernet* web site.
- If you wish to request a disability accommodation please contact DSS at 934-4205 or at *dss@uab.edu*.
- If a test is missed due to a serious verifiable circumstance or official university business, the test grade will be replaced with the properly rescaled final exam score. If you miss the final exam you will receive a zero score for this exam. In all cases you **must** contact your instructor of such circumstances **before** the exam takes place.

Methods of teaching and learning:

- Class meetings of 120 minutes consisting of discussions of the class material as well as examples and homework problems.
- Students are expected to undertake at least 10 hours of private study and homework per week.

Assessment procedures:

- Student achievement will be assessed by the following measures:
  - **Class presentations.** Presenting homework problems in class will count as 30% towards the final grade.
  - **Midterm** Midterm test contributes 30% to the course average.
  - **A 150-minute comprehensive final examination**. The final contributes 40% to the course average.
- Your course performance is your course average (including the final exam score). This is a number between 0 and 100.
- Your final grade is determined according to the following table:

Course performance:	88-100	75-87	62-74	50-61	below 50
Final Grade:	A	B	C	D	F

- In addition your grade maybe raised by a strong performance on the final exam (normally at most one letter grade).
