GEOMETRIC COMPLEX ANALYSIS - SUMMER 2020

JOHN C. MAYER

SYLLABUS

Course:	MA 692-00	SpTp: Geometric Complex Analysis
Meetings:	TuTh 10:20 AM – 12:20 PM	Zoom (link on Canvas)
Instructor:	John Mayer	Email: jcmayer@uab.edu
Office Hours:	by appointment	Zoom office: 939-460-2319

Format of Course. This course will be conducted as a seminar course, with student presentations, but also with exercises and two examinations. Active participation will be essential. Students will need to master LaTeX in order to produce Beamer slides for class presentations. Look into the online LaTeX platform *Overleaf* (basic version free). The instructor will provide on Canvas in Files both the PDF and LaTeX files of my introductory Beamer slides for an example, and will meet individually with you in the process of preparing your slides.

Material. Textbook: *Complex Analysis; the Geometric Viewpoint*, Steven G. Krantz, Second Edition, ISBN 0-88385-035-4.

Please obtain the textbook before the first class meeting (June 9). Read the Prefaces and Chapter 0 through Section 2 before the first meeting. The instructor will lecture on Chapter 0 for the first two or three meetings. The slides will be posted to Canvas and we will go through them together via Zoom class meetings. Check Canvas often for Announcements and Assignments.

The following Khan Academy course may be useful if you need a review of introductory complex analysis, or have not taken a course (even undergraduate) in complex analysis from a traditional viewpoint: Complex Variables and Functions - Faculty of Khan - 17 lectures The instructor recommends completing the Khan Academy course before the Summer Term begins.

Exercises: There will be a list of Exercises for the chapters, Chapter 0 and beyond, as we cover the material. These will be posted to Canvas as Assignments, and your solutions uploaded to Canvas before class.

Class Meetings. Since class meetings are two hours long, meetings will be divided into two sessions of about 60 minutes each, with a 5 minute break between sessions. Three sessions per week will be student presentations, and one session per week will be exercises.

(1) There will be three scheduled 1 hour student presentations per week on material from the textbook, as assigned by the instructor. Each presentation counts 6-10 Participation points for the presenter, depending upon quality of presentation. Beamer slides should be used for presentations, and should be posted to Canvas

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prior to the class meeting (usually 2 hours before class). Credit for slides is 0-5 points. The instructor wil meet individually with you to provide help on preparing your slides.

(2) Mere presence counts 1 Participation point per class meeting.
(3) You are encouraged to ask questions. You may receive additional Participation points (1-2) for commenting on another's presentation, provided that it moves discussion forward.
(4) Each Exercise presented at the board and defended correctly counts 2–4 additional Participation points, depending upon quality of explanation/proof/defense. Which Exercises you are prepared to present should be written out and uploaded to Canvas before class, according to the Assignment deadline (usually 2 hours before class).
(5) Priority order for presenting Exercises previously uploaded is determined by:
    (a) Persons with lowest Participation point total.
    (b) Persons who have not yet presented that day.
    (c) Random experiments to break ties.
(6) There are two examinations: midterm and final (see "Grading" below).

Grading. Items will be weighted the flexible amounts indicated below, by your choice, presumably so as to produce the best individual grade. You can (and may) rely entirely on Participation for your grade.

Participation	50–100%	rank-ordered subject to a minimum
Examination	0–50%	mid-term and final exams count equally

Possible grades are A:85%, B:70%, C:50%, F:below 50% '. Per University guidance, you may elect to have the course graded Pass/Fail. Pass is equivalent to "C" but does count toward degree credit (the previous Spring Term and current Summer Term only. Normally, "A" or "B" is required for degree credit.) See: www.uab.edu/students/academics/faqs-for-students for information about the Pass/Fail and withdrawal options.

You *are not required* to present Exercises unless you want to do so. It can only help your grade. (Submitted written exercises will not be graded; only those that are presented in class.) You *are required* to prepare Beamer slides with LaTeX and to present your scheduled presentations on the textbook material. You *are required* to take the mid-term exam, though it cannot hurt you much if your Participation total is excellent. You *are not required* to take the final exam, but then Participation must count at least 75%.

Attendance. Attendance in class is required, as you are there not only to present your own results, but to critique the work of others. Participation is expected. Unexcused absence is a 5 point penalty per day on your Participation total. Lateness of above 20 minutes is a 1 point penalty. After a warning from the instructor, *your* grace time may be shortened.

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