Math 3000: Bridge to Higher Mathematics – CTW
Math 7000: Thinking Math: Introduction to Proof
(Summer 2023, Section 003, CRN 50173/51700)

10:00–11:40am Mondays, Wednesdays, and Fridays @ 107 Aderhold Learning Center (ALC)

Instructor: Yongwei Yao

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Lecture: 10:00–11:40am Mondays, Wednesdays, and Fridays @ 107 Aderhold Learning Center (ALC).

Office Hours: 12:45pm–2:15pm, Tuesdays and Thursdays, online via Webex.

Textbook: *A Transition to Advanced Mathematics* (6th edition or newer) by D. Smith, M. Eggen, R. St. Andre, Brooks/Cole. The lectures will be based on this textbook, covering materials in Chapters 1–6.

Prerequisites: Math 2641 and Math 2420 each with a grade of C or higher for Math 3000; or admission to a graduate program for the preparation of Secondary Mathematics teachers (this requires at a minimum the complete calculus sequence) for Math 7000. During the first two weeks of the semester the Department of Mathematics and Statistics checks the computer records to determine whether or not each student has met the prerequisites for this course. If you do not meet the prerequisites please inform your instructor and change to another course. In case the system finds that you don't have the prerequisites, you will be dropped from this course.

Course content/outcome: The course offers a solid introduction to rigorous and higher mathematics via a formal approach to the presentation and development of mathematical concepts and proofs. Contents of the course include logic and proofs, set theory, relations, functions, cardinality, and concepts of analysis. Students passing the course will be able to present rigorous proofs in solving routine mathematical exercises.

CTW: Math 3000 is one of the CTW courses, where CTW stands for **C**ritical-**T**hinking-through-**W**riting. Students shall get their training in CTW via doing weekly homework assignments. The instructor will grade the homework assignments accordingly to meet the CTW requirements.

Homework: There will be weekly homework assignments that will be graded. You can discuss the problems your classmates, but the write-up of the solutions has to be done individually according to your own understanding. Identical solutions will not be graded. *Your performance/grade in homework depends not only on the correctness of the answers,* ***but also on how your write/present your solutions/proofs****.*

Show your work/steps carefully in your homework. No late homework is accepted.

Homework weighs 25% of your overall performance.

Exams: There are two midterm exams and a final exam, with midterms held at 107 Aderhold Learning Center (ALC), and with the **final exam held at 203 Aderhold Learning Center (ALC)**.

Exam	Date	Time	Location	Weight
First Exam	June 28 (Wednesday), 2023	10:25–11:40am	107 ALC	25%
Second Exam	July 12 (Wednesday), 2023	10:25–11:40am	107 ALC	25%
Final Exam	July 26 (Wednesday), 2023	10:45am–1:15pm	203 ALC	25%

All the exams are required and the final exam is cumulative. Make-up exams will be permitted only in the case of extreme emergencies that must be documented, such as medical emergencies. It is the instructor's role to determine if a particular emergency is a valid one.

(more on the next page)

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Grading Scheme: First the total scores are computed by using the weights as follows:

Component	Homework	Midterm Exam I	Midterm Exam II	Final Exam
Weight	25%	25%	25%	25%

Then the letter grades will be assigned as follows:

Score (%)	97—	93–96	90–92	87–89	83–86	80–82	77–79	70–76	60–69	0–59
Grade	A+	A	A−	B+	B	B−	C+	C	D	F

Attendance: You are expected to attend regularly for the entire period of the class. That is, you are expected to arrive on time and stay for the duration of the class. Attendance will be taken periodically. If you miss all the classes during the first two weeks, you could get withdrawn administratively. After five or more absences a student could get withdrawn from this class. In case of an absence, the student is responsible for knowing/studying all the materials covered. For university policies, see `http://codeofconduct.gsu.edu/`

Important withdrawal dates: Remember that a student who misses all the lectures during the first two weeks can be withdrawn by the instructor.

Last day to add/drop classes: Friday, June 09, 2023, 5:00pm. See GoSolar or PAWS.
Last day to withdraw and possibly receive a **W**: Friday, June 30, 2023.
For details, see `http://advisement.gsu.edu/self-service/policies/withdrawal-policy/`

Disruptive behavior: Any disruptive behavior will be handled according to the University's policy on disruptive behavior found at the following site `http://codeofconduct.gsu.edu/`.
This includes the possibility of withdrawing the student from the class.

Academic (dis)honesty: Academic honesty is expected. Cheating will not be tolerated and will be handled according to the University's policy on academic honesty found at `http://codeofconduct.gsu.edu/`, which includes academic as well as disciplinary penalties.

Teaching evaluations: Your constructive assessment of this course plays an indispensable role in shaping education at Georgia State. Upon completing the course, you are welcome to fill out the online course evaluation.

Disability: Students who wish to request accommodation for a disability may do so by registering with the Office of Disability Services. Students may only be accommodated upon issuance by the Office of Disability Services of a signed Accommodation Plan and are responsible for providing a copy of that plan to instructors of all classes in which accommodations are sought.

Other Important dates:

Juneteenth	June 19 (Monday), 2023; No class on this day
Independence Day	July 4 (Tuesday), 2023; No class on this day
Independence Day makeup	July 24 (Monday), 2023
Last Day of Classes (Juneteenth makeup)	July 25 (Tuesday), 2023; We have class on this day

Changes: This course syllabus provides a general plan for the course; deviations may be necessary.

Course URL: `https://math.gsu.edu/yyao/2023Su/math3(7)000.html`
Relevant information (homework assignments, etc.) will be posted there as the course progresses.

Welcome aboard!