MATH 300-002: Introduction to Advanced Mathematics
Syllabus, Fall 2022

Course objectives. The primary goal of this course is to learn how to read and write correctly mathematical proofs, with an ability to articulate a scholarly question, to engage in the key elements of the scholarly process, and to situate the concepts, practices, or results of scholarship within a broader context. MATH 300 is a **Writing-Intensive Course** (see https://wac.gmu.edu/teaching-with-writing/).

Prerequisites. ((MATH 114^C, 114^{XS}, 114T or 116^C) and (MATH 125^C, 125^{XS}, 125T or 175^C)).

Textbook required. *A transition to advanced mathematics*, 8th edition, D. Smith, M. Eggen, R. Andre, Brooks/Cole, 2015.

Material to be covered. Chapters 1-5, and 7 (with some sections omitted).

Lectures. TR, 9:00 am–10:15 am, Innovation Hall, Room 330.

Instructor. Dr. Valeriu Soltan, Office: Exploratory Hall, Room 4202. Email: vsoltan@gmu.edu

Office hours. Exploratory Hall 4202, TR, 11 am-1 pm, or by an appointment.

Homework. Problems for the homework are assigned regularly (see page 3 below). Although these will not be collected, success in quizzes, midterm, and final exam strongly depends on their completing and understanding.

Graded writing assignment. With a purpose to instruct students in the main types of writing practiced in math, the proof-based homework can be used for writing assignments, intended to master students' skills in comprehensive expositions (due date is November 10th).

Writing center: Johnson Center, Room 227E, Tel. (703) 993-1200. http://writingcenter.gmu.edu

Exams. There will be multiple quizzes, two tests, and final exam. All quizzes, tests, and final exam are closed-book and closed-notes.

Attendance and make-ups. Each student is expected to come to class regularly. No make-ups for quizzes, tests, and exams are allowed unless you provide a serious written excuse. Excused quizzes and tests should be taken within a timely fashion before the next test.

Grading. Your grade for the course is the sum of grades for quizzes (25%), tests (40%), writing assignment (10%), and final exam (25%). There will be no curving, extra crediting, etc. Equivalence between scores and letter grades, recommended by GMU, is given in the table below.

A+	A	A-	B+	B	B-	C+	C	C-	D	F
100-98	97-93	92-90	89-87	86-83	82-80	79-77	76-73	72-70	69-60	59-0

GMU policies on final exams. The final exam may not be given during the last week of classes. If you need to change the date of your final exam for unusual circumstances, you have to obtain professor's approval at least a week prior to the last day of classes. Retaking tests and final exam are not permitted. Absence from the final exam will not be excused except for sickness on the day of the exam confirmed by physician's note or for other causes approved by the student's academic dean or

director. If a student missed the final exam due to illness or a family emergency, an <u>incomplete grade</u> (IN) may be assigned provided the student took all four tests. If absence from the final exam is unexcused, the grade for the course is F.

Academic integrity and university policies. Mason is an Honor Code university. See for other policies at http://universitypolicy.gmu.edu/. Students are responsible for knowing and following established policies.

ODS. If you are a student with a disability and you need academic accommodations, please see me and contact the Office of Disability Services. All academic accommodations must be arranged through this office.

Religious holydays. If you observe upcoming religious holidays (see https://ulife.gmu.edu/religious-holiday-calendar/), please inform me one week in advance about a possible overlap with a day of quiz, test, or final exam.

Course Outline

Date	Sections	HW Problems
08/23	1.1	1-4, 6-10.
08/25	1.2	1, 3, 5-7, 9.
08/30	1.3, Quiz for 1.1	1, 6, 8, 10.
09/01	1.4	5-7, 9.
09/06	1.5, Quiz for 1.3	3-7, 9-11.
09/08	1.6	1, 2, 4, 6, 8.
09/13	2.1, Quiz for 1.4	1, 4, 6, 7, 11, 15.
09/15	Practice	
09/20	**Test 1**	Covers Sections 1.1-1.5.
09/22	2.2	1-3, 6, 9-11.
09/27	2.4	1, 2, 4-6.
09/29	3.1, Quiz for 2.2	2-7.
10/04	3.2	1, 6.
10/06	4.1, Quiz for 3.1	1-4, 6, 8.
10/11	*Fall Break*	
10/13	4.2	1, 2, 8, 17.
10/18	4.3, Quiz for 3.2	1, 2, 10.
10/20	4.4	1-3, 7.
10/25	Practice	
10/27	**Test 2**	Covers Sections 2.2, 2.4, 3.1, 4.2.

11/01	4.5, Quiz for 4.3	1-4, 7, 12.
11/03	4.6	3-5, 6-8.
11/08	5.1, Quiz for 4.5	2, 3, 7, 12, 16.
11/10	5.2	2-5, 7.
11/15	5.3, Quiz for 4.6	2, 5, 9, 10, 13.
11/17	7.1	1-6.
11/22	7.2, Quiz for 5.1	1, 4-7, 9-11.
11/24	*Thanksgiving*	
12/01	Practice	
12/08	**Final exam**	**7:30 am-10:15 am**