

THE UNIVERSITY OF TEXAS AT EL PASO
COLLEGE OF SCIENCE
DEPARTMENT OF MATHEMATICAL SCIENCES

Course #: MATHEMATICS 3325

CRN 23950

Course Title: Principles of Mathematics

Credit Hours: 3

Term:

Fall 2023

Course Meetings & Location: TR 12:00-1:20, LART 210

Prerequisite: MATH 1312

Instructor: Joe Guthrie

Contact Info: Office Location: Bell Hall 300

Telephone: 747-6755

email: jguthrie@utep.edu

Fax: 747-6502

Emergency Contact: 747-5761

Office Hours: TR 3:00-4:00 and by appointment.

Textbook: Smith, Eggen, and St. Andre, *A Transition to Advanced Mathematics*, 8th Ed.
(Required)

Course Objectives: Students are expected to make considerable progress in the following areas:

| # | Objective |
|---|---|
| 1 | Students will be able to understand the basics of logic and to write propositions and sentences by emphasizing the correct use of mathematical symbols. |
| 2 | Students will be able to construct proofs, thoroughly understanding several important proof techniques including direct proof, proof by contraposition, proof by contradiction, proof using cases, and mathematical induction |
| 3 | Students will build a solid understanding of some concepts most useful for advanced courses: Sets, Relations, Functions and Cardinality |
| 4 | Students will be able to read and understand mathematical proofs working with definitions and theorems based on the deductive reasoning. |
| 5 | Students will be able to write clear and concise mathematical proofs using correct logical steps from hypothesis to conclusion |

Course Activities and Assessment:

Homework: Homework will be assigned each class day and discussed at the next class meeting. Students will be expected to give solutions at the board and will be assigned a grade for participation. Selected assignments also will be collected and graded.

Exams: There will be three mid-term in class exams as well as a final exam. The final exam will cover the entire course and will be held 1:00-3:45 Tuesday December 12.

Course Grade: At the end of the semester, you will have percentage scores for your homework and for your mid-term and final exams. The homework and class participation

will count 15%, each mid-term exam will count 20%, and the final exam will count 25% toward your course average. Grades will then be assigned according to:

A: 90-100% B: 80-89% C: 70-79% D:60-769% F: 0-59%.

If you have problems with the course material, need to be absent for an exam, or have any other circumstances that may affect your performance in the course, contact me by phone or email as soon as possible.

Students taking the course for graduate credit will be required to submit an additional report in addition to the other requirements.

Drop policy: The deadline to drop with an automatic W is Friday November 3.

Make-up Policy: Makeup exams will be given only in extraordinary and unavoidable circumstances and with advance notice to me by phone or email.

Attendance Policy: Prompt attendance at all class meetings is expected.

Academic Integrity Policy: You are expected to conform to the UTEP policy on integrity. See <http://academics.utep.edu/Default.aspx?tabid=23785>.

Disability Statement: If you have or suspect you have a disability and need an accommodation, you should contact the Disabled Student Services Office (DSSO) at 747-5148 or at dss@utep.edu or go to Room 106 Union East Building. You are responsible for presenting to me any DSS accommodation letters and instructions.

Military Statement: If you are a military student with the potential of being called to military service or training during the semester, please let me know during the first week of classes and contact me as soon as possible if you do receive such an assignment.

Math 3325 Homework Fall 2023

§1.1 # 3 even, 4 even, 10 even, 11 b-f even

§1.2 # 5 even, 6 even, 10 even, 12 even

§1.3 # 1 even, 2 even, 8 even

§1.4 # 1 all, 5 even, 7 odd, 9 odd, 11 b,e

§1.5 # 2 all, 3 odd, 4 odd, 6 odd, 9

§1.6 # 1 odd, 2 odd, 4 all

§2.1 # 3, 4 even, 5 even, 16 even, 17 even

§2.2 # 2 odd, 6 even, 9 even, 11 even, 12

§2.3 # 1 even, 3, 7 b, 9 a,d

§2.4 # 4 odd, 5 odd, 6 odd, 10

§2.5 # 3, 5, 67

§3.1 # 7, 9, 10

§3.2 # 1 odd, 6 odd, 8, 12, 15

§3.4 # 1 even, 2 even, 7 even

§3.5 # 1 even, 2, 4, 10

§4.1 # 3 even, 4, 13, 17

§4.2 # 1 even, 2, 4

§4.3 # 1 even, 2 even, 4, 5, 6, 9, 14

§4.4 # 1 even, 2, 3

§5.1 # 1, 4, 13, 16, 17, 21

§5.2 # 1, 3 even, 4 even, 5, 8

§5.3 # 5, 6, 7, 12

§5.4 # 3, 5

§5.5 # 1