

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

Course #: MATHEMATICS 3325

CRN 12982

Course Title: Principles of Mathematics

Credit Hours: 3

Term: Fall 2022

Course Meetings & Location: online

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 12:00- 1:20 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 assignments are included in this syllabus. Students will post solutions to exercises on the class Blackboard Discussion Board and will be assigned a grade for participation.

Exams: There will be three mid-term exams as well as a final exam. The exams will be online. The mid-terms will be 12 :00- 1:20 on a Tuesday or Thursday. The final exam will be December 6, and will cover the entire course.

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 will count 10%, each mid-term exam will count 20%, and the final exam will count 30% 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 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: Students may be dropped by the instructor for lack of participation. The deadline to drop with an automatic W is Friday October 28.

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

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 a disability and need accommodations, please contact The Center for Accommodations and Support Services (CASS) at 747-5148, or by email to cass@utep.edu, or visit their office located in UTEP Union East, Room 106. For additional information, please visit the CASS website at www.sa.utep.edu/cass. You are responsible for presenting to me any CASS 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 2022

§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, 8 all

§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

§5.4 # 3, 5

§5.3 # 5, 6, 7, 12

§5.5 # 1