

Sul Ross State University
Course Syllabus
MATH 1332-001: Contemporary Mathematics
Spring 2018

Instructor: Dr. Angela M. Brown

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Office Hours: MW 2:30-4:00, W 10:00-12:00 TR 3:30-5:00, others by appointment.

Time and Place of Class Meetings: TR 9:30 am-10:45 am ACR 205

Course Prerequisites: Undergraduate level Math 0300 Minimum Grade of D or high enough score on one of the math placement exams (ASSET 38, ACCUPLACER 63, MAPS 613, THEA 230, TASP 230, COMPASS 39).

Mathematics Program Learning Objectives: The graduating student should be able to

- Apply knowledge of basic mathematics principles.
- Identify and provide valid proofs or solutions for theorems or problems.
- Recognize and dispute invalid mathematical statements by using counter-examples.

Course Objectives:

- The student will be able to use problem solving strategies to gain a deeper knowledge of a problem.
- The student will be able to solve change of base problems including from a historical perspective.
- The student will be able to find and understand numbers beyond the integers.
- The student will be able to distinguish between different graphs and knots.
- The student will expand on their knowledge of Euclidean geometry into other branches of geometry.

Required Textbooks: *The Heart of Mathematics* 3rd ed, Burger and Starbird, ISBN 978-0-470-49951-1.

Other Equipment Needed: paper and pencils, possibly markers and or colored pencils. Other materials may be needed as the course progresses.

Grading Scale: 90-100 A, 80-89 B, 70-79 C, 60-69 D, 59-Below F

Grading Policy: The grade weighting will be as follows:

Homework 20%

Quizzes/In Class Assignments: 20%

Participation: 10%

Project: 20%

Exams: 30%

Quizzes and In Class Assignments: Quizzes will be given periodically. You will have advanced warning of most quizzes. Additional in class assignments will be given and counted the same as quiz grades.

Homework: Homework will be assigned daily and homework will be taken up at the beginning of class on Thursday. Homework will be graded on completion and accuracy. Copying answers out of the back of the book is plagiarism and will be prosecuted.

Project: From the material presented in class or material in the book not presented, students will need to come up with a creative (i.e. not a term paper) project. These will be presented at the end of the course. Each student must come up with their own original creation and no two groups can have the same project idea. You may work in pairs. More information will be given on this later in the semester.

Exams: No make-up exams will be given. Exams will be closed notes, closed book, and no calculator will be allowed unless otherwise stated by your instructor. Any restroom breaks need to be taken before an exam starts. You cannot leave the classroom in the middle of an exam under any circumstances.

Final Exam Date: Monday, May 7 8:00-10:00 am

Attendance Policy: Students are expected to attend every class. If class must be missed, the student is expected to get the notes from a classmate, and to check with me or on Blackboard for announcements and updated assignments.

Students are expected to arrive to class on time. If a student is perpetually late, they will be asked to not attend class unless they arrive on time. If tardiness becomes a problem for the class as a whole, people who arrive late will not be permitted to enter the class. If this stricter policy becomes necessary, there will be an announcement made in class.

It is policy of the university to drop a student with a grade of "F" if 9 hours or more of class are missed. For this course that would be 6 or more class sessions missed.

Cell Phone Policy: Cell phones are not allowed in class. They can not be used as calculators on any assignment. Any phone ringing during class will be taken up until the end of class. If a phone rings during a test or quiz, the student will forfeit their right to finish said test or quiz.

SRSU Disability Services:ADA (Americans with Disabilities Act) Sul Ross State University is committed to equal access in compliance with the Americans with Disabilities Act of 1973. It is the student's responsibility to initiate a request for accessibility services. Students seeking accessibility services must contact Mary Schwartze-Grisham, M. Ed., LPC., in Counseling and Accessibility Services, Ferguson Hall, Room 112. The mailing address is P.O. Box C-122, Sul Ross State University, Alpine, Texas. Telephone: 432-837-8691. E-mail: mschwartz@sulross.edu .

Important Dates:

Aug 26	First Day of Classes
Aug 29	Last Day for Late Registration and Schedule Changes
Sept 2	Labor Day Holiday
Sept 11	12th Class Day-Last Day to Drop a Course Without Creating an Academic Record
Nov 15	Last Day to Withdrawal from University or Drop Classes with a Grade of “W” (by 4 pm)
Nov 27-29	Thanksgiving Holiday
Dec 6,9-11	Final Exams

Tentative Schedule-Subject to Change

	Tuesday		Thursday
Aug 27	Introduction and Activity	Aug 29	Problem Solving
Sept 3	Set Theory	Sept 6	Set Theory
Sept 10	Logic	Sept 12	Logic
Sept 17	Geometry	Sept 19	Exam 1
Sept 24	Geometry	Sept 26	Geometry
Oct. 1	Applications of Geometry	Oct. 3	Knot Theory
Oct. 8	Knot Theory	Oct. 10	Graph Theory
Oct. 15	Graph Theory	Oct. 17	Exam 2
Oct. 22	Number Theory	Oct. 24	Number Theory
Oct. 29	Number Theory	Oct. 31	Historical Number Systems
Nov. 5	Historical Number Systems	Nov. 7	Modular Arithmetics
Nov12	Modular Arithmetics	Nov. 14	Cryptography
Nov. 19	Cryptography	Nov. 21	Voting Theory
Nov26	Voting Theory	Nov. 28	Thanksgiving Holiday
Dec 3	Exam 3		

Final Exam Monday December 9, 2019 8-10 am Presentation will be during this time!

Tentative Schedule-Subject to Change

	Tuesday		Thursday
Jan 16	Introductions Silly Stories	Jan 18	Change of Base
Jan 23	Historical Number Systems	Jan 25	Historical Number Systems
Jan 30	Modular Arithmetic	Feb 1	Modular Arithmetic
Feb 6	Cryptography	Feb 8	Fibonacci Numbers
Feb 13	Golden Ratio	Feb 15	Exam 1
Feb 20	Euclidean Geometry	Feb 22	Pythagorean Theorem
Feb 27	Golden Rectangle	Mar 1	Symmetry and Tiling
Mar 6	The Platonic Solids	Mar 8	Non Euclidean Geometry
Mar 20	Flatland	Mar 22	Flatland 2
Mar 27	Mobius Bands	Mar 29	Exam 2
Apr 3	Knot Theory	Apr 5	Knot Theory
Apr 10	Knot Theory	Apr 12	Graph Theory
Apr 17	Graph Theory	Apr 19	Four Color Theorem
Apr 24	Four Color Theorem	Apr 26	Exam 3
May 1	Presentations		
May 7 (Monday)	Presentations During Final Exam Time		