

Course Syllabus
MATH 1332-001-Contemporary Mathematics
Spring 2016

Instructor: Dr. Angela Brown

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Office Hours: M 3-5, T 3:30-5, W 9-11, 4-5, R 3:30-5, others by appointment.

Time and Place of Class Meetings: TTh 11:00-12:15 ACR 205

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).

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

Other Equipment Needed: paper and pencils.

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.

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.

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: 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 and homework 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. No late work will be accepted.

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 people can have the same project idea. 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.

The final exam is on Thursday May 12 at 12:15 pm.

General Policies: Class will start at the designated time and run for 1hour and 15 minutes with no breaks. You are expected to be on time, attend every class meeting, stay for the duration of class time and come to learn. Do not schedule any appointments that will conflict with class time; if you have done so then I need documentation of the appointments.

You are expected to bring all necessary materials and take notes and participate. You are expected to turn-off and not to access any electronic, non-task oriented device such as cell/smart phones/pads and i-pods. Again, a cell-phone cannot be used as a calculator. Devices for recording the lecture are permitted; either audio or video.

If you come to class without your materials then you will be released from class to go get the appropriate materials. If you try to sleep during class or put your head on your desk you will have to leave class and go home and sleep. Working on another class is not allowed. If you sit with your arms crossed, you will be asked to take notes and participate. If you are causing others around you to miss lecture material then you will be asked to leave.

Any personal business must be conducted during office hours or by appointment. I will only discuss grades and attendance issues in my office. Classroom time is for the entire class.

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. You are expected to check your Sul Ross e-mail account. Absences due to school functions should be discussed with me ahead of time.

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.

Americans With Disabilities Act: As an instructor, I am required by law to provide “reasonable accommodations” to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing the instructor for MATH 1332 of their need for accommodation and in providing authorized documentation through designated administrative channels. If you need to request such accommodations, please contact the ADA Coordinator in Counseling and Accessibility Services, Ferguson Hall 112, 432-837-8203.

Important Dates:

January 19 First Day of Classes
 January 22 Last Day for Late Registration and Schedule Changes
 February 3 12th class day
 March 14-18 Spring Break
 March 25 Good Friday
 April 8 Last Day to Withdrawal from University or Drop Classes with a Grade of “W” (by 4 pm)
 May 4 Last Day of Classes
 May 9-12 Final Exams
 May 13 Commencement

Tentative Schedule-Subject to Change

Tuesday		Thursday	
Jan 19, 2016	Intro/Silly Stories	Jan 21, 2016	Change of Base
Jan 26, 2016	Historical Number Systems	Jan 28, 2016	Historical Number Systems
Feb 2, 2016	Modular Arithmetic	Feb 4, 2016	Modular Arithmetic
Feb 9, 2016	Cryptography	Feb 11, 2016	Fibonacci Numbers
Feb 16, 2016	Golden Ratio	Feb 18, 2016	Exam 1
Feb 23, 2016	Euclidean Geometry	Feb 25, 2016	Pythagorean Theorem
Mar 1, 2016	Golden Rectangle	Mar 3, 2016	Symmetry and Tiling
Mar 8, 2016	Platonic Solids	Mar 10, 2016	Non Euclidean Geometry
Mar 15, 2016	Spring Break	Mar 17, 2016	Spring Break
Mar 22, 2016	Flatland	Mar 24, 2016	Flatland 2
Mar 29, 2016	Mobius Bands	Mar 31, 2016	Exam 2
Apr 5, 2016	Knot Theory	Apr 7, 2016	Knot Theory
Apr 12, 2016	Graph Theory	Apr 14, 2016	Graph Theory
Apr 19, 2016	Four Color Theorem	Apr 21, 2016	Four Color Theorem
Apr 26, 2016	Presentations	Apr 28, 2016	Presentations
May 3, 2016	Presentations	May 5, 2016	Dead Day