



Sam Houston
State University

MATH 1332

Fall 2017

College Mathematics

Instructor: Assistant Professor Timothy Trujillo

I am a logician studying combinatorics and the foundations of mathematics. My research focuses on Ramsey theory and its application to combinatorial set theory and the theory of forcing.

- **Contact Information:**

Office: LDB 417A Phone: TBA Email: trujillo@shsu.edu

- **Office Hours:** Open door policy

Monday & Wednesday 11:05 am - 1:00 pm
Tuesday & Thursday 8:30 am - 9:20 am

- **Class Day/Time:** Tuesday & Thursday 11:00 am - 12:20 pm **Class Location:** LDB 212

- **Textbook:** None

Course Description:

This course is designed to meet the objectives of **component area 2 of the core curriculum** for non-business and non-science related majors. Topics may include sets, counting principles, probability, logic, linear algebra, linear programming, mathematics of finance, geometry, and calculus. Applications are emphasized.

Texas Core Curriculum Statement of Purpose: Through the Texas Core Curriculum, students will gain a foundation of knowledge of human cultures and the physical and natural world, develop principles of personal and social responsibility for living in a diverse world, and advance intellectual and practical skills that are essential for all learning.

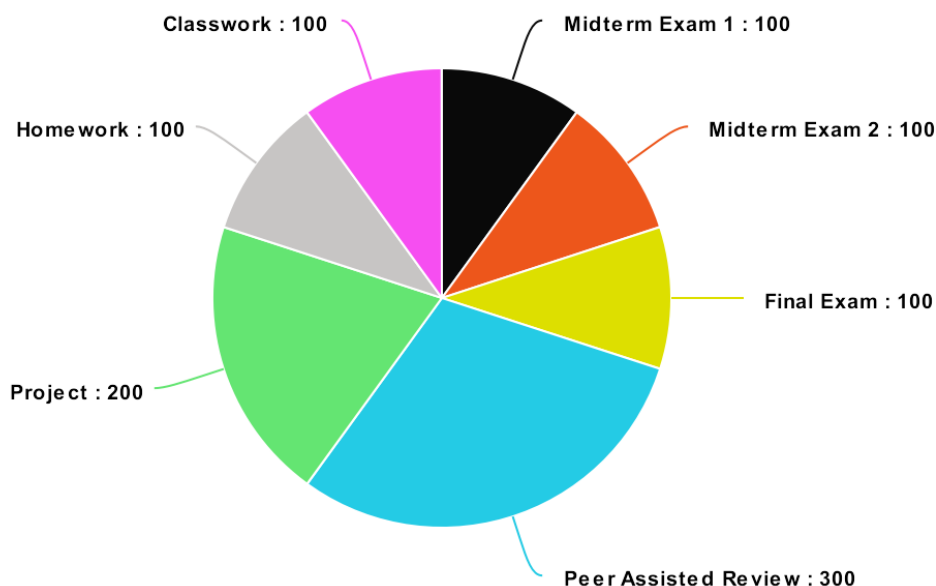
Student Learning Objectives:

1. **Critical Thinking Skills (CT)** - creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
2. **Communication Skills (COM)** - effective development, interpretation and expression of ideas through written, oral and visual communication
3. **Empirical and Quantitative Skills (EQS)** - manipulation and analysis of numerical data or observable facts resulting in informed conclusions
4. **Teamwork (TW)** - ability to consider different points of view and to work effectively with others to support a shared purpose or goal
5. **Social Responsibility (SR)** - intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities
6. **Personal Responsibility (PR)** - ability to connect choices, actions and consequences to ethical decision-making

Grading Procedures:

Midterm Exam 1 (CT & EQS)	100 points		
Midterm Exam 2 (CT & EQS)	100 points		
Final Exam (CT & EQS)	100 points		
Peer Assisted Review (COM & TW)	300 points		
Project (CT, EQS, COM & SR)	200 points		
Homework (EQS & PR)	100 points		
Classwork (CT, TW & EQS)	100 points		
<i>Extra Credit</i>	<i>200 points</i>		
Total	1000 points		

Points Earned	Final Grade
900 - 1000	A
800 - 899	B
700 - 799	C
600 - 699	D
0 - 599	F



Coursework Return Policy:

Barring any unforeseen circumstances, coursework (including homework and exams) will be graded and returned to students within two weeks. Feedback will be provided on all coursework or solutions will be posted. In general, final exams are not returned to the student nor are solutions posted, but students may schedule an appointment to review their final exam.

Absence Policy:

Attendance and serious interaction with the course material are critical to success in this class. Students should treat this class as they would other professional obligations.

This class meets two days a week for fifteen weeks. Students who have five unexcused absences will have to meet with me to discuss their absences. If they miss class again after this they may have their semester grade lowered by one letter grade (100 points). **Students with eight unexcused absences will receive a failing grade and their remaining work will not be graded.**

When a student misses class for legitimate reasons/emergency situations students may contact the Dean of Students' Office by completing the "**Absence Notification Request Form**" (available in person or online at www.shsu.edu/dept/dean-of-students/).

Exams (30% of total grade):

We will have two midterm exams and one final exam through out the semester. Each exam will be graded on a 100 point scale.

Duration	Date	Topics
Exam 1 (40 minutes)	September 28th	Covers HW 1 - 3
Exam 2 (40 minutes)	October 26th	Covers HW 1 - 6
Final Exam (80 minutes)	December 7th	Covers HW 1 - 10

Project (20% of total grade):

The project will consist of a three to five page typed report about a mathematical topic. The report will be graded on a 200 point scale.

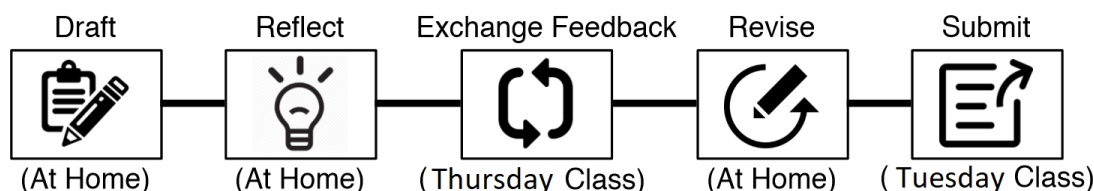
Project Deadline 1	Thursday of Week 10	Topic submitted and approved (60 points)
Project Deadline 2	Thursday of Week 12	Three resources submitted and approved (40 points)
Project Deadline 3	Thursday of Week 13	A outline of the project (40 points)
Project Due Date	Thursday of Week 15	A final draft of the project (60 points)

Homework (10% of total grade):

Homework is a one to two page worksheet that will be assigned weekly on Tuesdays. Homework assignments are due at the start of class on the following Tuesday.

Classwork (10% of total grade):

Group work will be assigned during each class. Students will turn the assignment at the end of class and a score of 0, 1 or 2 will be given on the assignment. A running percentage grade will be computed throughout the semester. Points will be awarded at the end of the semester based on the percentage at the end of the semester. For example, if you obtain a 89.76% at the end of the semester you will be awarded 89.76 points out of 100 points.

Peer Assisted Review - PAR (30% of total grade):

Throughout the semester we will have 10 PARs each graded on a **30 point scale**:

- **(10 points)** Completing a rough draft to be reviewed by your peers.
 - **0-3 points** (Student submitted a rough draft but does not meet the minimum requirements.)
 - **4-7 points** (Student submitted a rough draft meeting the minimum requirements.)
 - **8-10 points** (Student has submitted a rough draft that is thoughtful and meets the minimum requirements)
- **(10 points)** Two reviews of your rough draft.
 - **0-3 points** (One review has been submitted with final draft.)
 - **4-7 points** (Two reviews have been submitted with final draft but names of reviewers are missing.)
 - **8-10 points** (Two completed reviews have been submitted with the final draft.)
- **(10 points)** Completing a final draft and responding to feedback.
 - **0-3 points** (Student has updated the draft but the prompt has not been fully addressed.)
 - **4-7 points** (Student has updated the draft and the prompt has been fully addressed.)
 - **8-10 points** (Student has updated the draft, the prompt has been fully addressed, and student has responded to meaningful peer feedback.)

Accommodations for ADA: (<http://www.shsu.edu/dept/disability/index.html>)

Students seeking academic accommodations under the Americans with Disabilities Act (ADA) should register with Students with Disabilities (SSD) Office located in the Lee Drain North Annex building (next to Farrington). In order for students with disabilities to be eligible for academic accommodations and adjustments, they need to provide documentation that shows evidence of a “substantially limiting” disability as defined by the federal legislation noted above. This documentation must be from a qualified professional who is licensed or certified to diagnose the disability in question.

The Sam Houston Academic Success Center:

1. Monday-Thursday: 8:00am - 7:00pm
2. Friday: 8:00am - 7:00pm
3. Saturday: Closed
4. Sunday: 2:00pm - 7:00pm
5. Both the Writing Center and the Math Center are open during normal hours of operation.

The Writing Center at the Sam Houston Academic Success Center is located in Farrington 111. If you wish to attend a session at the Writing Center, please call 936-294-3680.

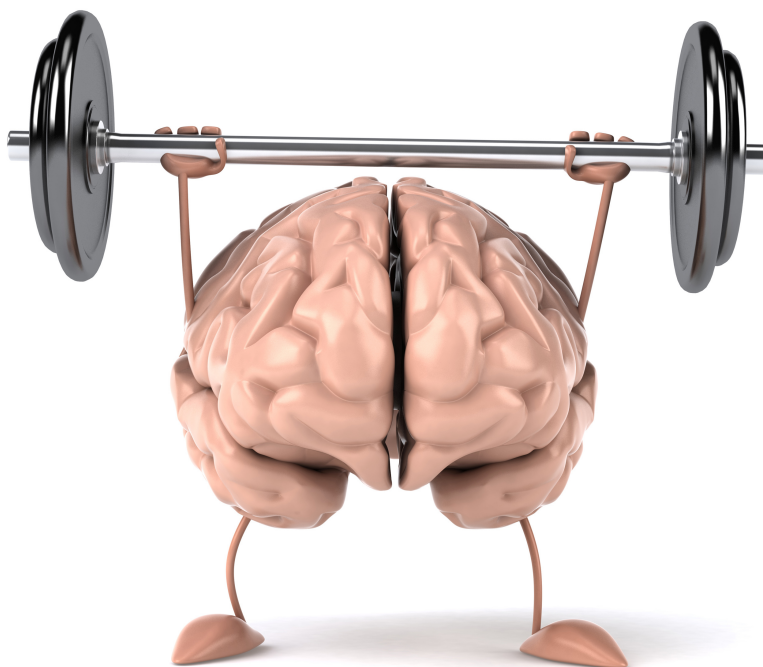
Appointments are required for the Writing Center.

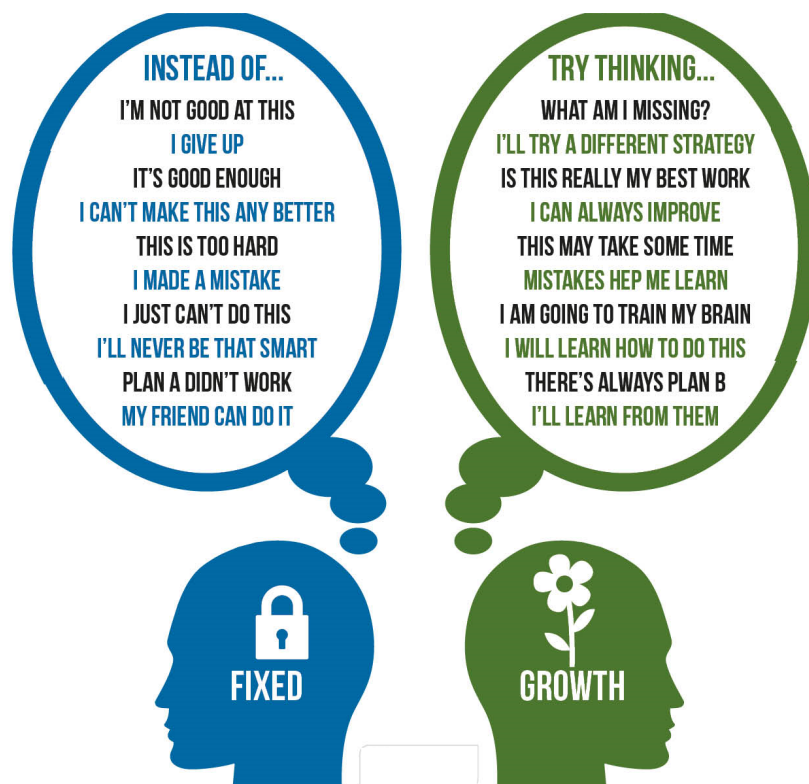
The Math Center at the Sam Houston Academic Success center is located in Farrington 104. If you wish to visit the Math Center for assistance, you may walk in during any of our normal hours of operation.

Appointments are not required for the Math Center.

Growth Mindset:

There is scientific evidence that **neural connections grow and become stronger** the more you struggle with learning and correct your mistakes. Based on research by Stanford Professor Carol Dweck and her colleagues, we know that students with a **growth mindset - the belief that intelligence is not just something that you are born with** - have higher levels of success than those with a fixed mindset.





Tentative Course Schedule and Topics:

Week	Topics	Homework
Week 1	Growth Mindset and Syllabus	
Weeks 2-3	College Algebra	
Week 2	Expression, equations and order of operations (PAR 1)	
Week 3	Functions and solving equations	(HW 1-Due)
Weeks 4-6	Analytic Geometry	
Week 4	Exponentiation, logarithms and graphing (PAR 2)	
Week 5	The vertical line test, relations, lines, circles and ellipses (PAR 3)	(HW 2-Due)
Week 6	3D graphing and contour maps (Exam 1 - 40 minutes)	(HW 3-Due)
Week 7-9	Numbers & Numerals	
Week 7	The decimal system, binary system, and other bases (PAR 4)	
Week 8	Inca, Egyptian, Mayan, Babylonia numerals (PAR 5)	(HW 4-Due)
Week 9	Infinity and limits (PAR 6)	(HW 5-Due)
Week 10-12	Visual Calculus	
Week 10	The derivative and tangent lines (Exam 2 - 40 minutes)	(HW 6-Due)
Week 11	Vector fields and differential equations (PAR 7)	
Week 12	The integral and applications (PAR 8)	(HW 7-Due)
Week 13-14	Art & Math	
Week 13	Tessellations and fractals (PAR 9)	(HW 8-Due)
Week 14	Mathematical games (PAR 10)	
Week 15	Project Week	
Week 15	Work on project in class / Extra credit	(HW 9-Due)
Finals Week	(Project - Due) (Final Exam - 80 minutes)	(HW 10-Due)