



MTE 553.001 Geometry for Teachers

COURSE SYLLABUS: Fall 2024

Instructor: Rebecca Dibbs, PhD

Office Location: 318 Binnion

Office Hours: MW 10-12, R 6-7 (ZOOM ONLY); by appointment

Office Phone: 468-8660

University Email Address: Rebecca.Dibbs@tamuc.edu

COURSE INFORMATION

Materials

Textbook(s) Required: The Mathematics That Every Secondary School Teacher Needs to Know. Alan Sultan & Alice Artzt

Course Description: Hours: 3

Geometric Structures for Teachers - Three semester hours This course is specifically designed for teachers K-8. The National Council of Teachers of Mathematics (NCTM) explains in its Principles and Standards (2000) that "geometry and spatial sense are fundamental components of mathematics learning." This course is designed to prepare the teachers to create learning environments conducive to meeting the national and state standards regarding geometry. Topics include characteristics of 2 and 3 dimensional shapes, mathematical proofs, spatial relationships, transformations and symmetry.

COURSE REQUIREMENTS

Course Activities

Homework: Homework: Homework will be assigned each week. Assignments can be found online at the course website and in Dropbox. Students are not allowed to discuss problems with other members of the class, tutors, or anyone except for the instructor. Students are not to use outside references. This means that students are not allowed to access internet resources or use other textbooks for help. If you have questions about problems, you should see your instructor. Many problems will be assigned and all problems will be discussed in class. Problems will be due Sunday at 11:30 pm, and will be graded in the following way:

- **10 pts - Correct work**
- **1 - 9 pts - Almost correct work**

Exams: There will be three exams during the semester. They are tentatively scheduled to occur on Week 6, Week 12, and Week 15. Any changes to this schedule will be announced in class and posted on the web-page. If a student misses an exam, the student will be allowed to replace that exam score with their score on the final exam if the student contacts the instructor prior to the exam and the student takes and passes the next exam at the regularly scheduled time. The final exam will be comprehensive.

The key to success in this course is regularly working with other students in the class and asking questions when you have them!!! We will discuss lab problems in class, but there will often not be enough time to discuss all of them. Please come to office hours if you have additional questions about the problem set.

Workload and Assistance: You should expect to spend a **minimum of TWO HOURS every day**, outside of class, on the course material. This includes watching the videos, labs, and studying for quizzes and exams. Some weeks (those in which an exam is scheduled, for instance) may require more of your time, other weeks may require less, but *on average*, budget 8 to 12 hours each week. **I can't stress enough that in order to be successful in this class you should spend much of this time working with other students in the class!** Please ask questions and seek assistance as needed. You may email me at any time, and I encourage you to make use of my office hours

GRADING

This class will be graded on a weighted percentage system:

Assignment	Weight
Homework	20%
Exam 1	20%
Exam 2	20%
Exam 3	20%
Final Exam	20%
Total	100%

All point totals will be rounded to the nearest percent before grades are assigned:

A: 90-100

B: 80-89

C: 70-79

D: 60-69

F: Below 60

TECHNOLOGY REQUIREMENTS

Use of a graphing calculator having at least the capabilities of the TI-83 will be helpful throughout the course. TI-89 is highly recommended. A computer algebra system will be used for some problem exploration, enhanced conceptual understanding, and to engage students as active participants in the learning process.

COMMUNICATION AND SUPPORT

Interaction with Instructor Statement

My primary form of communication with the class will be through Email and Announcements. Any changes to the syllabus or other important information critical to the class will be disseminated to students in this way via your official University Email address available to me through MyLeo and in Announcements. It will be your responsibility to check your University Email and Announcements regularly.

Students who Email me outside of regular office hours can expect a reply within 24 hours M-F. Students who Email me during holidays or over the weekend should expect a reply by the end of the next regularly scheduled business day.

myLeo Support

Your myLeo email address is required to send and receive all student correspondence. Please email helpdesk@tamuc.edu or call us at 903-468-6000 with any questions about setting up your myLeo email account. You may also access information at <https://leo.tamuc.edu>.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures

Academic Honesty

Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including (but not limited to) receiving a failing grade on the assignment, the possibility of failure in the course and dismissal from the University. Since dishonesty harms the individual, all students, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced. In **ALL** instances, incidents of academic dishonesty will be reported to the Department Head. Please be aware that academic dishonesty includes (but is not limited to) cheating, plagiarism, and collusion.

Cheating is defined as:

- Copying another's test or assignment
- Communication with another during an exam or assignment (i.e. written, oral or otherwise)
- Giving or seeking aid from another when not permitted by the instructor
- Possessing or using unauthorized materials during the test
- Buying, using, stealing, transporting, or soliciting a test, draft of a test, or answer key

Plagiarism is defined as:

- Using someone else's work in your assignment without appropriate acknowledgement
- Making slight variations in the language and then failing to give credit to the source

Collusion is defined as:

- Collaborating with another, without authorization, when preparing an assignment

If you have any questions regarding academic dishonesty, ask. Otherwise, I will assume that you have full knowledge of the academic dishonesty policy and agree to the conditions as set forth in this syllabus.

Late Policy: Late work/Make-ups will not be accepted without a documentable and valid excuse, because the lowest grade(s) in each category is dropped. Examples of documentable and valid excuses include:

- *car accident w/ police report
- *illness w/ doctor's note (you or your child)
- *athletic or other mandatory extra-curricular travel
- *field trip for another class
- *being detained upon entering the country by Homeland Security

University Specific Procedures

ADA Statement

Students with Disabilities

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

Texas A&M University-Commerce

Gee Library- Room 132

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

StudentDisabilityServices@tamuc.edu

University Specific Policies

- The final exam time can be found at <http://www.tamuc.edu/admissions/registrar/academicCalendars/final-exam-schedule.aspx>
- Campus Concealed Carry (new): Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M

University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to (<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>) and/or consult your event organizer). Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

- The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact: Office of Student Disability Resources and Services, Texas A&M University-Commerce, Gee Library, Room 132, Phone (903) 886-5150 or (903) 886-5835, Fax (903) 468-8148, email: StudentDisabilityServices@tamuc.edu
- Basic Tenets of Common Decency: “All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment.” (Student’s Guide Handbook, Policies and Procedures, Conduct.) This means that rude and/or disruptive behavior will not be tolerated.
- A&M-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Texas A&M University-Commerce acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements

and follow their instructors' guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

COURSE OUTLINE / CALENDAR

Week	Sections	Homework
8/25	1.2, 1.3, 1.4	1.2: 7, 9 1.3: 7, 22, 26 1.4: 4bde, 13
9/2	4.2, 4.3, 4.4	4.2: 2, 8, 13 4.3: 3, 8 4.4: 1
9/9	4.5, 4.6, 5.2	4.5: 1, 3 4.6: 4 5.2: 1, 6
9/16	5.3, 5.4, 5.5	5.3: 1, 2 5.4: 1, 4 5.5: 2, 5
9/23	5.6, 5.7, 5.8	5.6: 7, 12 5.7: 1, 3 5.8: 3
9/30	5.9, 5.10, TEST 1	5.9: 1, 2, 6 5.10: 1, 2 TEST 1
10/7	6.2, 6.3, 6.4	6.2: 3 6.3: 6 6.4: 1, 3
10/14	6.5, 7.2, 7.3	6.5: 1, 6, 9 7.2: 5, 6 7.3: 3, 8
10/21	11.2, 11.3, 11.4	11.2: 1, 2 11.3: 1, 7, 12 11.4: 1, 3, 4
10/28	11.5, 11.6, 11.7	11.5: 1, 2 11.6: 1, 4 11.7: 2

11/4	11.8, 11.9, TEST 2	11.8: 2 11.9: 3 TEST 2
11/11	12.2, 12.3, 12.4	12.2: 2, 4 12.3: 2, 4, 8, 9 12.4: 1,3a, 4a
11/18	12.5, 12.6, 12.7	12.5: 1, 2, 3 12.6: 1 12.7: 1,2, 3, 4abce
11/25	12.8, 12.9, 12.10	12.8: 1, 2abcd 12.9: 1, 2ab 12.10: 2, 6, 17, 18
12/2	9.8, 10.10, TEST 3	9.8: 1, 2 10.10: 2, 3 TEST 3
12/9	FINAL EXAM	FINAL EXAM