Instructor and Class Information

Instructor: Dr. Brian Beavers, Department of Mathematics and Statistics, Stephen F. Austin State University

Office: Math Building 310, STEM Building 310

ZOOM Office: https://sfasu.zoom.us/my/drbeaverssfa

Email: beaversbd@sfasu.edu

Telephone: 936.468.1433 (Math 310) or 936.205.1839 (Google Voice)

Office Hours: 11am-12pm MTWRF in ZOOM Office, or in one of my physical offices by appointment

Class Meeting Information

Class Meetings and Location: This is primarily an online class, but there will be a one-hour weekly class meeting, 3:30pm-4:30pm in Math Building 209. Students may participate in the weekly class meeting in one of three ways (1) live in the classroom on SFA campus, (2) live in the ZOOM tool, or (3) by watching the recording.

Course Expectations:

The following is an excerpt from SFA Policy 5.4:

The federal definition of a credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates:

1. Not less than one hour of classroom or direct faculty instruction and a minimum of two hours out-of-class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or 10 to 12 weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time, or;
2. At least an equivalent amount of work as outlined in item 1 above for other academic activities as established by the institution including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours.

To this end, all students in online courses offered by the Department of Mathematics and Statistics that wish to be successful should plan to spend a minimum of three hours of work for every credit hour associated with this course.

Expected activities to be completed in the time include reviewing course content, reading assigned course resources, completing all assigned exercises and projects, and performing periodic assessment preparation. Students should check daily for course announcements. In order to effectively participate in course discussions, students should log in and participate in the course at least four days each week, not just during weekends, and preferably daily.

Required Materials

No required textbook

Functional computer and internet connectivity, preferably high-speed

Microsoft Office (available from SFA via mySFA and Office 365)

ZOOM Video Conferencing (available from sfasu.zoom.us)
Geogebra software (available from geogebra.org)
A handheld scientific calculator is recommended. Handheld graphing calculators are permitted on exams.

Course Description
Survey of geometric topics with an emphasis on trigonometry and Euclidean geometry. Includes historical and grades 4-8 classroom connections. Prerequisites: C or higher in MTH 300.

Learning Objectives
See the departmental syllabus online.

Course Requirements
The three foundational areas of elementary mathematics are arithmetic, algebra, and geometry; in this class we will focus on that third foundational area. Geometry, and in particular the deductive method pioneered by the Greeks, have been an important part of human knowledge for our entire intellectual history. Humans have always needed to measure and construct various shapes, not just for practical purposes, but also for art and for enjoyment. We even see the beginning of trigonometry in ancient Egypt, where the ratios of sides of triangles played an important role in the building of the Pyramids. For thousands of years, Geometric concepts have been one of the primary ways to help students get used to abstract reasoning. In this class, we will take full advantage of the richest of geometric reasoning to help prepare you to then take these riches to your future classroom.

In this class, we have a variety of activities: readings, assignments, discussions and projects, both as an individual and in groups, to help you understand the concepts and develop necessary skills. Your course letter grade will be calculated as a weighted average of four tests, a series of assignments, and participation in weekly class meetings. Tests are intended to be instruments by which you can show what you have learned as the semester progresses; as a result, I require that there be a proctor present when you take each test in order to help guarantee that no academic dishonesty occurs. You may take your tests in person on SFA Campus (see details below) or you may take your tests at a testing center at a local library or community college (or individual proctors approved by me in exceptional circumstances). Please start considering your testing plans now, and note that some proctoring centers require a fee.

This course is dependent on technology and making machines do what we need them to do when we need them to do it. If you find a glitch in anything, it is your responsibility to inform me immediately! If it is something that I can fix, I will do so ASAP. Otherwise, I will direct you to other means of help. Only with such notifications will I consider extending deadlines as a result of technical difficulties.

Getting Started
The first requirement is to complete the Getting Started module which basically gives you all the information that you will need to be prepared for this online course. In this module is a tentative timeline of assignments as well as their due dates. Not everything is on this timeline now; I will be updating it as the semester proceeds. My main method of announcement to the whole class is the News tool. I will give updates at least once a week on what you should be working on.
Again, this Getting Started module includes all the basic course information such as this syllabus, the departmental course description, an introduction assignment, etc. Note that successful completion of the module includes a quiz designed to reinforce the important points in this document and the other materials in the module. **You must receive a perfect score (100%) on the quiz before any other modules will be available to you. You may retake the quiz until you receive the required score.**

### About the Content Modules

There are eight modules in this course besides the introduction module. The first gets us warmed up and ready to go. The second helps get you acclimated to the Geogebra software. Modules three through five explore the central results of geometry, concerning circles, quadrilaterals, and circles respectively. The last three modules give an overview of trigonometry. Each module includes practice problems and Stop & Think exercises; solutions to these are provided. At the end of some modules, you may be required to complete a module quiz over the content in the module. In some modules, you will also have assignments that must be submitted via the dropbox tool or discussion assignments that will be posted to the discussion board. Graded assignments will be included in the class participation part of your course grade.

### The Discussion Board

The discussion board is the location where you and your classmates will see any discussion assignments and post discussion responses that are to be shared with the whole class. Discussion assignments count toward the class assignments portion of your grade. If you click the discussion tool, you will see that there are four items available to you on day one: Student Introductions, Classroom Discussion, Errata Discussion, and Free Discussion. If you have already completed your student introduction, you should see that post as well as postings from your classmates. (Be sure to revisit this link so that you can find out who else is in the course with you!) The Free Discussion category is a place where we can talk in general about anything regarding the course. This is a place where you can post a question that you have about the course, whose answer might also serve other students.

You should see a discussion topic entitled "Errata Discussion". Although I have tried to make sure that all information is correct, it is always possible to find errors. For example, if you find a link that is not working, please post that information to the Errata Discussion board including where the link is located in the module. All error captures to this board are greatly appreciated by the designer of the course!

### Class Meetings

A new addition to this course compared to previous years is a weekly class meeting. One considerable weakness of a purely text-based online course is the lack of feeling of connection with classmates and your teacher. Based on a time determined by a discussion during the first week, we will schedule a one-hour class period where we will meet each week. You may participate in one of three ways: (1) live in person on SFA campus, (2) live in the ZOOM tool, or (3) by watching the recording and responding afterward. The Participation component of your grade will be based on how you participate in this meeting. If you are in the meeting in-person or in ZOOM, you will earn full credit for participating; if you watch the recording afterward, you will earn full credit by posting a response to the Classroom Discussion area under the topic for that week's meeting. Further instructions will be discussed once we schedule our meeting time.

### Course Outline

<table>
<thead>
<tr>
<th>Modules</th>
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<tbody>
<tr>
<td>Getting Started</td>
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## Grading Policy

### Computation of Course Grade

Your course grade will be determined by your performance on graded work in the following categories: (1) assignments (both individual and group), (2) three tests, (3) a comprehensive final exam, and (4) participation in weekly class meetings. Your final course grade will be the weighted mean as follows:

- **"Participation" - 5%**. For each of the 13 weekly class meetings, you will either be counted as having participated or not. If you attend the class live, either in person or by ZOOM, and actively participate you will get full credit for that meeting. For those who do not attend live, but rather watch the recording, you will need to respond by the given deadline in the discussion area to prompts I give you once the recording is posted.
- **"Assignments" - 10%**. This is the mean of your scores, equally weighted, on the various assignments that I will collect during the course. Many assignment will be written homework to be turned in to D2L’s Dropbox feature. Some will be discussions or quizzes in D2L. All assignments will be detailed in the module and timeline in D2L.
- **"Test 1," "Test 2," and "Test 3" - 20% each, and "Final Exam" - 25%**. You will be required to complete three tests and a final during this course. For each test, you will be allowed 1.5 hours, and 2.25 hours for the final exam. These must be completed on the SFA campus at designated times or at an approved testing center.

### Off Campus Test Dates
(Off campus testing arrangements are your responsibility so please begin making arrangements for the first test now. Please ensure that the testing center that you choose will return your exam to me by midnight of the test day.)

- **Test 1**: September 16-18
- **Test 2**: October 14-16
- **Test 3**: November 11-13
- **Final Exam**: December 9-11

### On Campus Test Dates
(4 - 8 PM)

- **Test 1**: September 18 - Math Building 203
- **Test 2**: October 16 - Math Building 101
- **Test 3**: November 13 - Math Building 203
- **Final Exam**: December 11 - Math Building 101
Score Descriptors

Tests, the Final Exam, certain assignments, and your final course letter grade will be graded on the "standard 10-point" scale based on the percentage (rounded to the nearest percent) of total points earned by the student on the exam or on assignments:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage Range</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>[90%,100%]</td>
</tr>
<tr>
<td>B</td>
<td>[80%,90%)</td>
</tr>
<tr>
<td>C</td>
<td>[70%,80%)</td>
</tr>
<tr>
<td>D</td>
<td>[60%,70%)</td>
</tr>
<tr>
<td>F</td>
<td>[0%,60%)</td>
</tr>
</tbody>
</table>

Most assignments will be graded holistically on a 0-10 scale based on completion and performance; the overall Assignment course component will be the mean of these scores converted to a percentage. The various scores are described below. To summarize, a “passing” score is a 7 or higher and a “failing” score is a 6 or lower. Each score will take execution, communication, and correctness into account. I am using this system so that I can better communicate to you whether you understand the material well enough or not. Your primary goal is to earn a 7 or better on each assignment. In addition, for any group assignments, participation by each group member will be considered.

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 or 9</td>
<td>Outstanding (“A”)</td>
</tr>
<tr>
<td>8</td>
<td>Good (“B”)</td>
</tr>
<tr>
<td>7</td>
<td>Average (“C”)</td>
</tr>
<tr>
<td>6</td>
<td>Deficient (“D”)</td>
</tr>
<tr>
<td>5 or less</td>
<td>Failing (“F”)</td>
</tr>
</tbody>
</table>

These score means that your mathematics and communication are flawless or nearly flawless.

This score means that, overall, you understand the material well, but made minor mistakes in the mathematics or communication.

This score means that, overall, you understand the material well enough to pass, but you made several substantial mistakes in mathematics or you communicated poorly.

This score means that you show some understanding but the flaws in mathematics or communication are not sufficient to be considered passing.

This score means that either you did not complete the assignment, you did not sufficiently participate in the discussion, or your mathematics or communication shows serious and fundamental errors. You need to review prerequisite material and the basics of what was being assessed. You must complete every assigned problem in order to score higher than a 5.

Note that certain mistakes by themselves will automatically drop you to a 6 or lower because they are common but fundamental errors that wreck havoc on the truth of your work or fundamentally change the difficulty level of the task at hand. Also, be sure to think about what your writing communicates to a reader. I grade what you have said, not what you meant to say.

Make-Up, Communication, Academic Dishonesty, and Other Class Policies

- It is your responsibility to be aware of due dates and to have access to a computer and other equipment that can handle the necessary work and to schedule enough time to complete the assignments.
- Any bonus assignments will be announced ahead of time and will be open to the entire class. For fairness and equity reasons, I do not offer bonus assignments to individual students at the end of the semester.
- Generally, missed assignments cannot be made up except in the case of an extended, but excused, absence (such as a week-long illness).
- Deadlines may be extended at the discretion of the instructor in case of exceptional technical difficulties, but you should make every effort to avoid doing things at the last minute.
Tips For A Successful Math Class

- Sleep and relax! Well...outside of class, that is. It is hard to do math well with a tired or anxious mind!
- Learn mathematical terminology! It's hard to think and talk about concepts when you don't know what the words mean that we're using. For any math word, be able to give a formal definition, an informal definition, an example that illustrates the concept, and "non-examples" (examples of situations that are close to being right, but not quite).
- Do. The Homework. All of it. Several times if necessary. Create new problems if you run out of problems to practice.
- Strategize! Take the time to think about how the different types of problems are solved and create a road map in your mind how to get to the solution.
- The quality of the time is as important as the quantity of the time you spend studying. You have to understand the concepts and basic examples before you can master the harder problems. Regularly look back at the big picture when you get stuck on an immediate detail.
- Get help! If you're alert, know the words, and understand the examples but are still stuck, then get help from me or a tutor.
- Learning math is a lot like learning anything else – sports, music, etc. Some have natural talent, some don't. At the beginning, you have to drill those basic moves until you can do them almost without thinking in order to overcome your anxiety. Only then can you concentrate on improving your skills and learning more sophisticated moves. I am your coach; I can't make the

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moves for you. I can show you the mechanics of the move and explain why the move does what it does, but only you can do it for yourself. You must both practice and reflect on your performance in order to win!

- Find your motivation and hold onto it! It's hard to do well in something you don't want to do, and it's easy to get lost in the drudgery and lose focus. But, math can be very beautiful and enjoyable with a little motivation!

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**The SFA Way**

"...striving for personal excellence in everything that we do."

At Stephen F. Austin State University, our faculty, staff, alumni and students believe in doing things "The SFA Way." We expect the best from ourselves and from each other, and we hold each other accountable when we fail to maintain these standards.

Root Principles

Grounded in the five "Root Principles" below, members of the SFASU community seeks to strive for personal excellence in everything that we do.

**The Principle of Respect:**

Lumberjacks command respect and treat others with respect • They are considerate of others and tolerant of differences • They demonstrate respect for those around them by avoiding the use of offensive or profane language • They do not threaten or harm anyone and deal peacefully and civilly with conflict.

**The Principle of Caring:**

Lumberjacks think of the needs of others and seek to improve the quality of life of those around them • They are compassionate, empathic and kind • They respond with humility to those they have helped and express gratitude freely to those who help them • Lumberjacks prepare themselves to become leaders in their communities and workplaces • They dedicate themselves to excellence in their chosen field of study and to using what they learn in the service of others.

**The Principle of Responsibility:**

Lumberjacks do what is right • They persevere in times of adversity • Through self-control and self-discipline, they strive to do their best • Lumberjacks challenge each other to exceed expectations • They are active learners both inside and outside of the classroom • They are reliable; they do what they say they will do • Lumberjacks hold themselves accountable for their decisions •

**The Principle of Unity:**

Lumberjacks are loyal to their friends, family, university, state and country • Lumberjacks stand together against any adversary • They recognize that though we are very different from one another, we are united by the Lumberjack Spirit. Lumberjacks seek to understand the people and world around them • When one lumberjack fails, all fail • When one lumberjack succeeds, all succeed.

**The Principle of Integrity:**

Lumberjacks have the courage to do what is right, even when it is hard or unpopular • They respond to each situation with steadfast values that are not subject to change based on the actions of others • They seek opportunities to practice effective and ethical leadership • Lumberjacks are honest; they do not deceive, cheat or steal • Lumberjacks stand up for those who cannot stand up for themselves • As lifelong learners, lumberjacks are committed to continuously improving themselves.

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**Academic Integrity A-9.1**

Abiding by university policy on academic integrity is a responsibility of all university faculty and students. Faculty members must promote the components of academic integrity in their instruction, and course syllabi are required to provide information about penalties for cheating and plagiarism as well as the appeal process.

**Definition of Academic Dishonesty**

Academic dishonesty includes both cheating and plagiarism. Cheating includes, but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) falsification or invention of any information, including citations, on an assignment; and/or, (3) helping or attempting to help another in an act of cheating or plagiarism.
Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism include, but are not limited to: (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from the Internet or another source; and, (3) incorporating the words or ideas of an author into one's paper or presentation without giving the author due credit. Please read the complete policy at http://www.sfasu.edu/policies/academic_integrity.asp.

Withheld Grades (Semester Grades Policy A-54)

Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

The circumstances precipitating the request must have occurred after the last day in which a student could withdraw from a course. Students requesting a WH must be passing the course with a minimum projected grade of C.

Students with Disabilities

To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

Acceptable Student Behavior

Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy D-34.1). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.