

Course title and number Basic Concepts of Geometry (MATH 367-500)
 Term Spring 2015
 Meeting times and location TR 9:35 – 10:50 AM, Blocker 121

Course Description and Prerequisites

Basic Concepts of Geometry. (3-0). Credit 3. I, II, S Formal development of geometry: finite [Euclidean and non-Euclidean]. Designed primarily for elementary mathematics teacher certification. Others must have consent of instructor. Prerequisite: MATH 366 or equivalent with a grade of C or better.

Course Objectives and Learning Outcomes

The overall goal of this course is to provide pre-service middle school teachers with the mathematical knowledge necessary to provide effective classroom instruction related to geometry and mathematical arguments.

In other words, this is a mathematics content course for students working towards a mathematics teaching certificate for Grades 4 through 8. It is not a methods course in which the main focus is on how to teach mathematics. It is a course in which you will be asked to do and learn mathematics by engaging in logical mathematical thinking about geometric concepts to develop a strong content-knowledge base. You will draw upon this base to make appropriate instructional decisions and generate appropriate mathematical questions as a mathematics teacher in Grades 4-8.

Students who participate in this course should improve their ability to:

- Apply principles of logic and reasoning to build and support mathematical arguments, i.e. proofs;
- Develop and explain their own mathematical thinking (verbally, pictorially, and in writing); and
- Analyze and evaluate the mathematical reasoning of others.

The development of these broad outcomes will be supported by the accomplishment of more specific outcomes that will be articulated during the course.

During the semester, I will make homework assignments in order to promote class discussion. There will be several in-class activities that lead to discussions of concepts and language that you will see again on the exams. It is impossible to replicate these experiences outside of the classroom environment; therefore class attendance and participation are extremely important. **Attendance is required and will be taken each class period.**

Instructor Information

Name Tamara A. Carter, Instructional Assistant Professor
 Email address tcarter@math.tamu.edu (please include your full name and class)
 Office hours TR 11-12 and 1-2; and by appointment
 Office location 245A Blocker
 Webpage www.math.tamu.edu/~tcarter
 Class material will be posted in eCampus

Materials

Textbook
 Foundations of Geometry, 2nd Ed., by Venema
 Pearson. ISBN: 9780136020585

Texas A&M Student ID

Bring your student ID to all exams. If you have a question about your grade, please come see me in person and bring your ID.

Tentative Schedule: All changes will be announced in class, via email, and/or posted in eCampus. My expectation is that you have read the book sections before coming to class.

Week 1	Jan. 20, 22	Chapter 1, Section 2.1, 2.2
Week 2	Jan. 27, 29	Sections 2.3, 2.4
Week 3	Feb. 3, 5	Section 2.5
Week 4	Feb. 10, 12	Section 2.6, Review
Week 5	Feb. 17, 19	Exam 1 Section 3.1
Week 6	Feb. 24, 26	Section 3.2
Week 7	Mar. 3, 5	Sections 3.3, 3.4
Week 8	Mar. 10, 12	Sections 3.5, 3.6
	Mar. 16-20	Spring Break – No Class
Week 9	Mar. 24, 26	Section 3.7, Review
Week 10	Mar. 31 – Apr. 2	Exam 2 Section 4.1
Week 11	Apr. 7, 9	Sections 4.2, 4.3
Week 12	Apr. 14, 16	Sections 4.4, 4.6
Week 13	Apr. 21, 23	Euclidean Geometry (Chapter 5 highlights)
Week 14	Apr. 28, 30	Hyperbolic Geometry (Chapter 6 highlights) and Review
Exam 3 (during the final exam period)	May 7, Thursday	Exam 12:30 – 2:30 pm in our regular classroom

Grading Policy

Learning Journal	6%
Activities and Daily Grades	10%
Three Major Exams (28%) each	84%
Total	100%

Required Averages

A = [90,100%] B = [80,90%) C = [70,80%) D = [60,70%) F = [0,60%)

I reserve the right to lower these cutoffs if I deem that it is appropriate, but you should not expect them to be lowered.

Attendance & Make-up Policy

The University views class attendance as the responsibility of an individual student. Attendance is essential to complete this course successfully. University rules related to excused and unexcused absences and make-ups are located on-line at <http://student-rules.tamu.edu/rule07>. Please notify me via email prior to the date of an absence, if possible. Consistent with Texas A&M Student Rules, in cases where advance notification is not feasible (e.g. accident, or emergency), you must provide notification by the end of the second working day after the absence. This notification should include an explanation of why notice could not be sent prior to the class. For injury or illness too severe or contagious to attend class, you must provide confirmation of a visit to a health care professional affirming date and time of visit. The Texas A&M University Explanatory Statement for Absence from Class form will not be accepted. It is YOUR responsibility to schedule a make-up. Any assignments given on the day(s) missed will still be due according to the regular schedule.

Learning Journal

Each week you must write an entry in your online learning journal (in eCampus). Journal entries are

due by midnight on Sunday for the prior week. The entry must be based on the writing prompts that will be posted within eCampus.

Daily Grades and Activities

In-class activities will generally involve group work and occur during most class periods. Activities may also be assigned as homework. I may collect activities for a grade, participation points, or as a means of taking attendance. Your participation in class also counts toward your daily grade even if papers are not collected. Please attend and participate in all classes.

Exams

The three in-class exams will each be 75 minutes long. Everything discussed in class, experienced within an activity, or found in the suggested homework is fair game for content on an exam. You will be expected to show all of your work and many items will require expository writing (as in explanations). The third exam will be during the official final exam time. The complete final exam schedule can be viewed at <http://registrar.tamu.edu/General/FinalSchedule.aspx>

Extra Help & Preparing for Exams

Your Professor

Communication is essential. Please communicate with me before class, after class, during office hours, via email, and through your journal.

Your Classmates

It is also important to communicate with your classmates. You will learn more and be able to build on each other's ideas if you discuss the material with other people. Please consider setting a regular time to meet. This is a useful idea to carry into your teaching career as well.

Thoughtful Practice

Please read and re-read the book. Please also rework problems that we have worked in class. It would also be good to work additional problems that are suggested (even when they do not directly count for a grade).

Americans with Disabilities Act (ADA)

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 believe you have a disability requiring an accommodation, please contact Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information, visit <http://disability.tamu.edu>. If you require accommodation, please see me as soon as possible so that we can make sure you have the necessary paperwork in order.

Academic Integrity

For additional information please visit: <http://aggiehonor.tamu.edu/>

"An Aggie does not lie, cheat, or steal, or tolerate those who do."

Academic integrity is vital to an academic community and essential for all teachers. As an Aggie, you have agreed to know and uphold the honor code. Please review the website carefully. I will be happy to answer any questions you might have. You will be asked to sign the honor code on your work as a reminder of that commitment. If you ever have a question about whether or not an action would be acceptable under the honor code, please ask your professor BEFORE you take the action. If you don't have time to ask, then consider whether or not you would take the action if your professor was beside

you.

For this class, I encourage you to study with your classmates (unless I specifically state otherwise). However, all graded work (exams, quizzes, project, etc.) must clearly be your own individual work, and you should not discuss graded work with anyone who has not completed that work yet. If you use a source when completing work, cite the source.

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