CoSM Class Syllabus / Policy

Spring 2018
MTH 351 section 1: College Geometry

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Class meeting time and place: MWF 9—9:50 am, Math 212

Course Description: Survey of topics form classical Euclidean geometry, modern Euclidean Geometry, projective geometry, transformational geometry, and non-Euclidean geometries.


Program Learning Outcomes: Students graduating from SFASU with a B.S. degree and a major in mathematics will satisfy sever program learning outcomes; the outcomes addressed by this course include:

- Demonstrate comprehension of core mathematical concepts.
- Execute mathematical procedures accurately, appropriately, and efficiently.
- Demonstrate competence in using various mathematical tools, including technology, to formulate, represent, and solve problems.
- Demonstrate proficiency in communicating mathematics in a format appropriate to expected audiences.

Student Learning Outcomes (SLO): At the end of the semester, successful students will be able to:
1. Use axioms, definitions and given theorems to prove properties of a geometry.
2. Show how a model for a geometry can serve to prove independence of a set of axioms.
3. Prove two triangles are congruent under varying sets of hypotheses (the traditional SAS, SSS, ASA, AAS proofs).
4. Use the Inequality Theorems for triangles to establish relationships between measures of sides and angles of triangles.
5. Use the properties and proven theorems concerning circles to establish congruence of triangles.
6. Understand that the difference between absolute, Euclidean, hyperbolic, and other classical geometries is the parallel postulate (or absence of one), and that this difference is what establishes the independence of the Euclidean Parallel Postulate.
7. Use parallel projection and similar triangles to prove congruence of angles or constance of ratios of sides.
9. Use and write mappings which describe translations, rotations, and other geometric transformations, and discuss the importance of these mappings in the high school classroom.
10. Prove theorems in a geometry besides Euclidean geometry (usually hyperbolic geometry) to understand their dependence on the accepted axiom set, and understand the implication of the axiom set in the high school classroom.
Course Requirements:
Students will be expected to come to class prepared for class participation and discussion. Daily grades will consist of homework, quizzes, and similar assessments, including, possibly, dynamic geometry software assignments. Homework assignments will consist of problems from the text as well as problems discussed in class; students are encouraged to discuss rough drafts of homework problems with the instructor. In addition to homework, there will be several regular assessments (exams/projects) and a comprehensive final exam. Additional exams, quizzes, or other assessments may be added and included in one of the categories in the grading section (below) at the instructor’s discretion.

Course Calendar:
Topics for this course and approximate time spent are as follows:
- History, Axiomatic Systems, and Logic Review (about 20%)
- Axioms and Neutral Geometry (about 30%)
- Euclidean and Non-Euclidean Geometries (about 30%)
- Transformational Geometry and other topics (about 20%)

Grading Policy:
The daily grades will be worth 20% of the final grade, the regular assessments 50%, and the final exam 30%; in addition, the final exam may be used to replace the lowest exam grade. Grades will be assigned based on the final average: 90—100 A, 80—89 B, 70—79 C, 60—69 D, 0—59 F. There will be no extra credit.

Attendance Policy:
Attendance and participation are expected; please contact me ahead of time if you will be absent.

Academic Integrity (A-9.1)
Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

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) the falsification or invention of any information, including citations, on an assigned exercise; 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 are (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 an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper 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.

Please be respectful of your fellow students and your instructor. Cell phone use and texting are not allowed in class. Remember to turn your cell phone off or place it in quiet mode before entering the classroom.