MATH 4233: College Geometry, Spring 2019

Instructor: Dr. Amin Boumenir
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Office Hours: Monday and Wednesday 12:00pm-2:00pm, also by appointment.
Prerequisites: Math 3003 or consent of department
Credit: 3 hours
Class Time and Place: Monday and Wednesday 3:30pm-4:45pm, Boyd 302
Textbook: College Geometry: A discovery approach by David C. Kay

Courses Description: An introduction to Euclidean and non-Euclidean geometries developed with the study of constructions, transformations, applications and the rigorous proving of theorems.

Topics include:
2.1 An Introduction to Axiomatic and Proof
2.2 The Role of Examples and Models
2.3 Incidence Axioms for Geometry
2.4 Distance, Ruler Postulate, Segments, Rays, and Angles
2.5 Angle Measure and the Protractor Postulate
3.1 Triangles, Congruence Relations, SAS Hypothesis
3.2 Taxicab Geometry: Geometry without SAS Congruence
3.3 SAS, ASA, SSS Congruence, and Perpendicular Bisectors
3.4 Exterior Angle Inequality
3.5 The Inequality Theorems
3.6 Additional Congruence Criteria
3.7 Quadrilaterals
3.8 Circles
4.1 Euclidean Parallelism, Existence of Rectangles
4.2 Parallelograms and Trapezoids: Parallel Projection
4.3 Similar Triangles, Pythagorean Theorem, Trigonometry
4.4 Regular Polygons and Tiling
4.5 The Circle Theorems
5.1 Euclid’s Superposition Proof and Plane Transformations
5.2 Reflections: Building Blocks for Isometries
5.3 Translations, Rotations, and Other Isometries
5.4 Other Linear Transformations
5.5 Coordinate Characterizations

Homework: homework is assigned but not collected, to be expected on tests. Will be discussed in class if you have any questions about them.

Tests: There will be three tests. Each will be worth 25%.
Test 1: Monday February 18, 2019
Test 2: Monday March 25, 2019
Test 3: Monday April 22, 2019
Final exam: Wed, May 1, 2019, 2pm-4pm. The final exam is worth 25%.
Grading Scale:
A = 90-100%, B = 80-89%; C = 70-79%; D = 60-69%; F = 0-59%
Attendance Policy: If you miss a class, you are responsible for obtaining any information that you missed. If you miss four classes or more without a university-approved excuse, you may get an F in this course.

Rescheduling tests/Final: If you have a university-approved excuse for missing a test or final, you may be allowed to reschedule, but you must make arrangements with me in advance.

Grading: Your final grade will be determined as follows:
Test one: 25%, Test two: 25%, Test three: 25%, final exam 25%.

Learning Outcomes: The student will have an understanding of:
1. Axiomatic and Proof
2. Incidence Axioms for Geometry
3. Triangles, Congruent Relations and Side-Angle-Side Hypothesis
4. Quadrilaterals and Circles
6. Euclidean Geometry, Euclidean Parallelism, Existence of Rectangles
7. Transformation in Geometry, Euclid’s Superposition Proof and Plane Transformation
8. Reflection, Translation, Rotation, and Other Isometries

ACADEMIC DISHONESTY
Academic dishonesty is NOT tolerated. It will result in failure on assignment(s) as well as possible disciplinary sanction(s) as stipulated by university rules. The University of West Georgia Student Conduct Code defines academic dishonesty as cheating, fabrication, plagiarism, and facilitating or allowing academic dishonesty in any academic exercise.
Cheating: Using or attempting to use unauthorized materials, information or study aids;
Fabrication: Falsification or unauthorized invention of any information or citation;
Plagiarism: Representing the words or ideas of another as one's own. Direct quotations must be indicated and ideas of another must be appropriately acknowledged.

Academic dishonesty in any form compromises your grade and lowers the quality of your diploma. A fellow student who cheats may actually lower your grade, sometimes causing unfair and inflated grading scales. I hope each of you values your college education enough to protect yourself from dishonest classmates.
Students, please carefully review the following information at this link http://www.westga.edu/assetsDept/vpaa/Common_Language_for_Course_Syllabi.pdf.
It contains important material pertaining to your rights and responsibilities in this class. Because these statements are updated as federal, state, university, and accreditation standards change, you should review the information each semester.