



Course Syllabus
MATH0801 – CBUA Geometry
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I. COURSE DESCRIPTION

This course is a requirement for senior high general education diploma and a prerequisite for dual enrollment College Algebra course. Geometry will involve the student to the use of theorems, constructs, logic, proofs, and critical thinking that are common and necessary for mathematical (geometric) and real-world success. Geometry contains the natural schema to teach and understand God the Creator through His Creation. Biblical applications and connections are fundamental. The Euclidean or Plane geometry contents will integrate triangle, quadrilateral, and circle dynamics teaching structural and conceptual properties. These properties including area, volume, similarity, and congruence. This course will connect the student to geometry in nature, architecture, and real-world connections exploring fractals, geometric symmetry, and transformations. The course prepares students for successful math progress while developing critical thinking skills and logic.

II. COURSE OUTLINE

1. **MODULE 1 - Unit 1 Part 1: Foundations / Unit 1 Part 2: Reasoning and Proof**
2. **MODULE 2 - Unit 2: Parallel and Perpendicular Lines**
3. **MODULE 3 - Unit 3: Congruent Triangles**
4. **MODULE 4 - Unit 4: Relationships in Triangles**
5. **MODULE 5 - Unit 5: Quadrilaterals**
6. **MODULE 6 - Unit 6: Area**
7. **MODULE 7 - Unit 7: Circles**
8. **MODULE 8 - Unit 8: Surface Area and Volume**
9. **MODULE 9 - Unit 9: Transformations and Symmetry**
10. **MODULE 10 - Unit 10 – Part 1: Similarity / Unit 10 – Part 2: Introduction to Trigonometry**

III. READING & MATERIALS

1. Required Texts/Resources:

- (1) All CBU/CBUA courses use the Bible as a primary textbook. Translations used for coursework include any of the following: NASB, ESV, KJV, and NKJV. Other translations/versions may be used for complementary study and research.
- (2) Delta Math: [DeltaMath \(www.deltamath.com\)](http://www.deltamath.com) Login credentials through course
- (3) Supplemental Textbook: BJU Press: Geometry (Bob Jones University Press)
- (4) Geometry Tools: Construction Set; Scientific Calculator

IV. LEARNING OUTCOMES

1. Course Learning Outcomes (CLO's)

- (1) To provide foundational geometric reasoning and logic that is a basis for critical thinking skills needed to move into higher math courses (Algebra 2 / College Algebra / Calculus)
- (2) To provide strategies to assess real life situations with reason and logic generated through understanding the processes and procedures of geometric proofs and theorems.
- (3) To prepare learners to perform logic processing using proofs and theorems while applying critical thinking strategies to both real-world problems and geometric relationships.



2. Program Learning Outcomes (PLOs)

- (1) To prepare Learners for roles in transformative education teaching and service.
- (2) To provide Learners a foundation for effective individual and organizational leadership in diverse environments.
- (3) To ensure Learners demonstrate worldview foundation for empowering people and building communities.
- (4) To help Learners formulate a Biblical approach to transformative learning and leadership and how mathematical, algebraic, and geometric constructs support the Biblical Worldview.

3. CBU Learning Outcomes (CBULOs)

- (1) *Critical Thinking, Problem Solving, and Research* – Learners will demonstrate ability to think critically, solve problems, and conduct interdisciplinary research at a level appropriate to their program applying Geometric proofs and logic to solving problems.
- (2) *Personal Growth* – Learners will understand how learning is related to personal growth, and will be challenged to grow in their thinking, communication, conduct, and engagement with others.
- (3) *Skills Development* – Learners will advance in skills related to their area of learning, demonstrating a level of competency appropriate to their program.
- (4) *Social Responsibility* – Learners will appreciate the diversity in and value of others as designed by our Creator, and will grow in willingness and capability to serve others.
- (5) *Worldview Applications* – Learners will become capable at thinking from a worldview perspective and will understand the relationship of description and prescription, using geometric proofs and constructs so that they can ground their actions in sound principles.

V. ASSIGNMENTS AND GRADING

- A. Grading will be based on accumulated points in each of the following categories:
- (1) Assessments (**40%** of grade): Includes module assessments to show student has mastered the material by the end of the module. Includes Final Assessment = 15%
 - (2) Assignments (**40%** of grade): Assignments include, but are not limited to: Checks for understanding, Delta math assignments, teams' assignments, and handouts.
 - (3) Application & Analogy (**20%**) These assignments/projects include written analysis of Geometric problems, applying Geometry to real-world careers, and using analytic skills to find geometric co-relationships in mathematics.

VI. GRADING SCALE

91-100%	A
81-90%	B
71-80%	C
61-70%	D
0-60%	F

VII. CARNEGIE UNIT CREDIT HOUR EQUIVALENT

<i>Total Hours of Module Content:</i>	40 hours
<i>Total Hours of Reading Content:</i>	20 hours
<i>Total Hours of Minor Assessments:</i>	20 hours
<i>Total Hours of Major Assessment:</i>	30 hours
<i>Total Hours of Competency Assessment:</i>	25 hours
	135 Hours