**Geometry**

**Class Syllabus: 2018-2019**

1. **Instructor Information**

Teacher: Mr. Brian Martin

Contact Information: Please feel free to call or e-mail me about any questions. If you call or text before 10:00 pm I will try to respond that evening.

1. Phone: 484-645-6193

2. E-mail: [bjmar92@gmail.com](mailto:bjmar92@gmail.com)

1. **Course Description**

Geometry, as the name suggests literally means earth – measure. This branch of mathematics deals with the measurements, properties, and relationships of points, lines, angles, surfaces, and solids. Geometry also deals with logic, using inductive and deductive reasoning as an integral part of geometric thinking. Geometry is closely connected to other branches of mathematics such as Algebra, Logic, Probability, and Trigonometry. Real life applications as well as a brief glimpse into the history of geometry will be evident throughout the course, we will also devote some study to formal proofs and recreational mathematics.

1. **Rationale**

This course focuses on practical applications of geometrical ideas. We also spend some time on logical thinking skills and appreciating some abstractions cultivated from the study of geometry. We want to praise our Creator while studying His laws that govern the universe.

1. **Goals and Aims**
2. **Enjoy** thinking rationally and analytically.
3. Appreciate law, order, and absolutes.
4. Promote interest in mathematics.
5. Be well prepared for higher math courses.
6. Develop general problem solving abilities.
7. **Objectives, the student will be able to …**
   1. Express sets, subsets, and elements of sets symbolically
   2. Perform set operations
   3. Distinguish between postulates, axioms and theorems
   4. Define subsets of lines, planes, and space
   5. Classify curves, surfaces, solids, and polygons
   6. Apply properties of real numbers
   7. Construct and bisect Angles
   8. Calculate perimeter, circumference, area and volume
   9. Construct lines segments
   10. Solve inequalities
   11. Plan formal proofs
   12. Construct congruent angles, lines, and polygons
   13. Calculate area of various polygons
   14. Calculate surface area of various polygons
   15. Calculate volume of various solids
   16. Use the Sine, Cosine, and Tangent functions
   17. Transform various geometric shapes
   18. Compare and contrast Euclidean Geometry with spherical Geometry
8. **Textbook and Instructional Material**

*Geometry –* 3rd edition BJU Press

Kuta software

*Mathisfun.com*

1. **Equipment and Materials**
   1. Scientific Calculator
   2. Ruler
   3. Compass
   4. Protractor
2. **Course** **Requirements**

The prerequisite to this course is a 70% or higher in Algebra I, or math placement exam.

* 1. **Logistics**

1. Keep a notebook of homework, classwork, and class notes for each chapter.
2. Attend class three days a week. (secretary or principal must be notified ahead of time if student is going to be missing)
3. There will be approximately 15 exams throughout the year.

**Test fix-up procedures:** After an exam is handed back you have up to one week to ask for and complete a redo. The make-up test is situationally dependent and can be done for full credit.

4. Quizzes will occur about semi-weekly.

5. Absent students are responsible for all catch-up work.

1. **Procedures**

**Classroom**

* 1. Students should be seated by the time the bell rings.
  2. Tests and quizzes should be overturned and placed on the corner of one’s desk when finished.
  3. Student should record daily homework assignments.

**Homework**

* 1. All homework will be due the following class period unless otherwise instructed.
  2. Late assignments will be penalized according to PVMS policy.
  3. Questions while grading should be marked with question marks and saved until the end.
  4. Headings must include student’s name and lesson/assignment number. All homework **must be done in pencil.**

1. **Methods**

A. Teaching Methods

1. Lectures 2. Demonstrations 3. Cooperative learning

4. Board drills 5. Projects 6. Multimedia

B. Assessment

1. Exams 2. Quizzes 3. Review 4. Homework

5. Classwork

1. **Grading Policies**

A. Tests 75% B. Quizzes 10% C. Homework 7.5% D. Projects 7.5%

**Intermediate work, if needed, must always be shown to get full credit, even if you use a calculator.  I generally give partial credit for correct work even if the final answer is incorrect.**

1. **Course** **Outline**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Week Number | Chapters | Dates | Suggested Pacing |  |
| Week 1 | Chapter 1 Incidence Geometry | Aug. 26-29 | Introduction to course  Lesson 1.1-1.3, AG1 |  |
| Week 2 | Sept. 2-5 off Monday | Lessons 1.4-1.6, GTH |  |
| Week 3 | Sept. 8-12 | Lessons 1.7 Review,  Test, 2.1-2.2 |  |
| Week 4 | Chapters 2  Subsets of Lines, Planes, and Space  Chapter 3  Segments Measurement | Sept. 15-19 | Lessons 2.3-2.4, AG2, 2.5-2.6 |  |
| Week 5 | Sept. 22-26 | Lesson 2.7, Review, Test, 3.1-3.2 |  |
| Week 6 | Sept.29-Oct.3 | AG3, Lessons 3.3-3.4, GTH, 3.5 |  |
| Week 7 | Chapters 3 Segments Measurement  Chapter 4  Angles and Measurements | Oct. 6-10 | Lessons 3.6, Review, Test, 4.1-4.2 |  |
| Week 8 | Oct. 13-17 Extra Day 2x | AG4, Lessons 4.3-4.4 |  |
| Week 9 | Oct. 20-24 | Lessons 4.5-4.6, Review, Test, 5.1 |  |
| Week 10 | Chapter 5  Preparing Proofs  Chapter 6  Congruence | Oct.27- 31  End of 1st Quarter | Lessons 5.2-5.3, GTH,  5.4-5.5 |  |
| Week 11 | Nov.3-6 | Lessons 5.6, AG5, 5.7, Review, Test |  |
| Week 12 | Nov. 10-12 | Lessons 6.1-6.4, AG6 |  |
| Week 13 | Chapter 6  Congruence  Chapter 7  Triangles and Quadrilaterals | Nov. 17-21  Extra Day | Lessons 6.5-6.8 |  |
| Week 14 | Nov. 24-26 Off 27-28 | Review, Test, 7.1 |  |
| Week 15 | Dec. 2-5 Off Dec 1 | Lessons 7.2-7.5 |  |
| Week 16 | Chapter 7  Triangles and Quadrilaterals Chapter 8  Area | Dec. 8-12 | Lessons 7.6, AG7, 7.7, Review, Test |  |
| Week 17 | Dec. 15-19 | Lessons 8.1-8.3, GTH, AG8 |  |
| Week 18 | Dec.22-24 | Lessons 8.4-8.6 |  |
| Week 19 | Chapter 8  Area  Chapter 9  Circles | Jan. 5-9 | Lessons 8.7-8.8, Review, Test, 9.1 |  |
| Week 20 | Jan. 12-16  End of 2nd Quarter | Lessons AG9, 9.2-9.5 |  |
| Week 21 | Jan. 19-23 | Lesson 9.6-9.7, Review, Test, 10.1 |  |
| Week 22 | Chapter 10  Space  Chapter 11  Volume | Jan. 26-30 | Lessons 10.2-10.4, AG10, 10.5 |  |
| Week 23 | Feb. 2-6  Extra Day | Lessons 10.6, GTH, 10.7-10.8 |  |
| Week 24 | Feb. 9-13 | Review, Test, Lessons 11.1-11.3 |  |
| Week 25 | Chapter 11  Volume  Chapter 12  Transformations  and Symmetry | Feb. 16-20  Extra Day | Lesson 11.4, AG 11, 11.5-11.6 |  |
| Week 26 | Feb. 23-26 Off 27 | Review, Test, 12.1-12.2 |  |
| Week 27 | March 2-6 | AG12, 12.3-12.4, GTH, 12.5 |  |
| Week 28 | Chapters 13  Similarity  Chapter 14  Trigonometry | March 9-13 | Lessons 12.6, 13.1-13.3, AG13 |  |
| Week 29 | March 16-20  End of 3rd Quarter | Lessons 13.4-13.7 |  |
| Week 30 | March 23-27 | Review, Test, Lessons 14.1-14.3 |  |
| Week 31 | Chapter 14  Trigonometry | March 30-Apr. 3  Extra Days | Lessons AG14, Lesson 14.4 |  |
| Week 32 | March 31-Apr. 3 | Lessons 14.5-14.6 |  |
| Week 33 | Apr. 6-9  Off 10 | Review x3 |  |
| Week 34 |  | Apr. 13-17 Off 18 | Tests |  |
| Week 35 | Apr. 20-24 |  |  |
| Week 36 | Apr. 27-May 1 | Senior Trip? |  |
| Week 37 |  | May 4-8 |  |  |
| Week 38 | May 11-15  Off 14 |  |  |
| Week 39 | May 18-22 |  |  |