

Berean Christian High School
GEOMETRY – Course Outline 2018-2019
Mr. Gemmill

“But in your hearts set apart Christ as Lord. Always be prepared to give an answer to everyone who asks you to give the reason for the hope that you have. But do this with gentleness and respect...” I Peter 3:15

GEOMETRY COURSE DESCRIPTION: The geometry skills and concepts developed in this college-preparatory course are beneficial to all students. In the context of exploring relationships involving plane and solid figures, students will develop their abilities to reason and construct formal, logical arguments and proofs in geometric settings. Students will also practice SAT/ACT placement problems.

“Mathematics is the gate and key to the sciences.”
-Roger Bacon

GEOMETRY COURSE PHILOSOPHY: Geometry is uniquely suited to the development of critical thinking and reasoning skills, which are essential for effectively impacting our world for Christ. The order and beauty found in geometric figures are also amazing reflections of our Creator’s design.

“[The universe] cannot be read until we have learnt the language and become familiar with the characters in which it is written. It is written in mathematical language, and the letters are triangles, circles and other geometrical figures, without which means it is humanly impossible to comprehend a single word.”
-Galileo, *Opere Il Saggiatore* p. 171.

GEOMETRY SCOPE & SEQUENCE

Quarter 1

- Introduction and Constructions
- Chapter 1: Foundation for Geometry
- Chapter 2: Geometric Reasoning
- Chapter 3: Parallel and Perpendicular Lines

Quarter 2

- Chapter 9: Extending Transformational Geometry
- Chapter 4: Triangle Congruence
- Chapter 5: Properties and Attributes of Triangles

Quarter 3

- Chapter 6: Polygons and Quadrilaterals
- Chapter 7: Proportions and Similarity
- Chapter 8: Right Triangles and Trigonometry

Quarter 4

- Chapter 10: Extending Perimeter, Circumference and Area
- Chapter 11: Spatial Reasoning
- Chapter 12: Circles
- Chapter 13: Probability

GEOMETRY COURSE MATERIALS:

Curriculum: HMH Fuse Geometry iPad Course

Supplementary resources:

- Geogebra and Geometer's Sketchpad Explorer Dynamic Geometry Apps
- Geometry Pad App
- Flatland by Edwin A. Abbott

Required Resources: *Things to bring to class every day (unless otherwise instructed)*

- Charged iPad: You will download your HMH Fuse text onto your iPad.
- Composition Journal for Vocabulary/Organization Charts
- 3-Ring Binder with graph paper and four divided sections:
 - **Reference** (*Course Outline, Definitions, Postulates and Theorem ("DPT") Packets*)
 - **Notes & Classwork**
 - **Homework**
 - **Quizzes & Tests**
- "Bullseye" compass/ ruler/protractor (provided by Berean).
- Sharpened pencil(s) and eraser.
- Red pen for self-grading (required). Additional colors are recommended for notes and homework.
- Scientific calculator (TI-30 series or similar) with trigonometric functions (sin, cos, tan). A graphing calculator is not required for geometry, but is allowed if preferred (TI-84 series recommended).

IMPORTANT NOTE:

*****IPAD CALCULATORS MAY NOT BE USED DURING TESTS OR QUIZZES.
Students must bring calculators for use on all tests and quizzes.*****

Optional Resources

- Optional: Good quality compass with a center adjustment wheel. Staedtler makes several good compasses for less than \$15. This is not a necessary purchase.
- Optional Textbook: This year, we will be using an interactive iPad driven text, provided by Berean and downloaded on the Monday after All School Retreat. There will be a few textbooks available for classroom use only (in the event of an iPad failure), but students will not receive an actual textbook. The iPad text is identical to the 2012 Student Edition of Holt McDougal Geometry (ISBN-10: 0547647093), though the iPad is enhanced with many additional resources. I do not

expect any students to need a physical textbook, but you are certainly welcome to purchase one for your own reference if you desire.

Classroom Rules and Procedures

The following rules will be observed at all times:

1. Respect for the teacher and others will be expected at all times.
2. Backpacks will be kept at the back of the classroom at all times.
3. Cell phones will be turned off or silenced and placed in the Cell Phone Pocket Holder upon entrance into the class. Cell phones will never be used or seen with a student. Cell phones will be confiscated for the day if it goes off in class or if a student is caught using it. It will be given to the dean and can be picked up at the end of the day. Demerits will be assigned as well. This rule applies until the bell signals the end of the period.
4. iPads may only be used for classwork. When in use they must be flat on the desk. When not in use they must be placed under the desk. If iPads are used improperly or used not according to the student handbook, they will be confiscated as well.

The following procedures will be observed at all times:

1. Upon entrance into the classroom, the student will check themselves in on the smartboard and the student needs to be in their assigned seat, prepared with needed supplies at their desk when the bell rings or they will be tardy.
2. Students will be expected to have their needed materials out and ready for use before the bell rings and the student will immediately start on the bell work for the day.
3. During class lecture, students must raise their hand before asking a question. Also there will be no talking or getting out of a seat unless permitted by the teacher.
4. When taking exams and quizzes, only a pencil and a calculator (if permitted by the teacher) may be on the desk.
5. When turning in homework, there will be one student from each row assigned to collect the homework from their given row. The homework will then be turned in to the designated area in the back of the room.
6. Before receiving a hall pass the student's cell phone must be placed on the teacher's desk. The cell phone will be returned when the hall pass is returned.

GEOMETRY COURSE GRADING POLICY:

Quarter grades will be distributed by these approximate percentages:

- Homework : 20%
- Quizzes: 30%
- Tests: 40%
- Class work and notebook: 10%

Homework:

- Homework will be assigned almost every day and posted on RenWeb and the whiteboard at the beginning of every week. Any changes will be announced during class time and updated on the board/RenWeb. Homework will be collected at random.
- Odd-numbered problems will be corrected at home as part of the homework assignment. This encourages self-directed learning. Even-numbered problems will be corrected in class (using a red pen or pencil).
- Homework is graded on a 0 to 5 point scale:
 - (1 pt) Homework must be labeled with your name, date assigned, class name and period, and the complete assignment (Assignment #, pages, and problems assigned). Incomplete labeling will result in your homework being returned to you and considered tardy.
 - (1 pt) Make all corrections in red pen(at home and during class). Questions that the student answered incorrectly must be circled with a red pen and the student must legibly write the correct answer. All problems must be corrected.
 - (3 pts) Show your work! (No work, no credit)
 - Do your work in ***pencil***;
 - Draw sketches for proofs at a minimum. Sketch neatly, using your straight edge and compass as needed.
 - Graph paper is recommended for all notes, class work and homework and is *required* for any problems requiring graphing or use of a coordinate plane.
 - Be neat; (I must be able to read your work. If I can't read it, the assignment's grade will be a 0).
 - Be sure to abide by the **Homework Rules** as listed in class and at the end of this course outline.
- Unless otherwise specified, working cooperatively together on homework or getting assistance from others, including other students, is encouraged. *Copying homework, however, is considered **cheating** and will be dealt with according to the BCHS handbook.*
- **Late Work:** Unexcused late homework will be reduced by 10% for each class day it is late. After that, the maximum value of the homework will be 50%. Late homework will not be accepted after the relevant chapter test has been given. If homework is turned in late due to an *excused* absence, the dates of the excused absence must be written on the homework assignment.

Tests and Quizzes:

- One or two quizzes will normally be given during the course of each chapter.
- Chapter tests will be given at the end of each chapter.
- **Absences:** A missed test or quiz for an unexcused absence receives a grade of zero. For excused absences, the grade for the relevant chapter test will be substituted for a missed quiz grade and the mid-term or semester final grade will be substituted for missed chapter tests. Make-up tests are not given, unless arranged prior to the absence.
- *Berean's academic honesty policy will be strictly enforced.*
- Berean's handbook policy on tests and quizzes will be strictly followed.

Class Work and Notebooks

- You must keep an organized and complete binder. Your binder may be checked at random.
- Full participation is expected during class time activities. Your class work will be graded.

- A Vocabulary/Organization Journal will be kept by the students and graded under the Class Work category. The Vocabulary/Organization Journal is meant to help the students keep track of different Tier II and Tier III vocabulary words that we may come across throughout the year and help the students stay organized through the use of charts and graphic organizers. These journals will be collected at random and graded accordingly.

EXTRA GEOMETRY HELP: It is my goal to encourage you and help you to realize your unique God-given academic potential, while you discover glimpses of the Lord's amazing mind and character through mathematics. ***PLEASE ask me if you have questions or need help!***

- I will be available before school, during lunch, after school for the students to get extra help. To make sure that I am available, the student needs to talk to me ahead of time to set up a time to meet that works for both of us. It is important that the student consistently does their homework and sees me when necessary. **The best way to reach me is through email.**
- I may also offer special study sessions if needed or requested. Typically these study sessions will occur on Tuesdays afternoon.
- The best way to reach me outside of school hours is via e-mail: gemmillwalker.bchs@gmail.com. Be sure to include your name and a detailed explanation of your question.

Homework Rules

-Make sure problems are not to close together!

-Use graph paper when drawing graphs!

-Do NOT put multiple problems on the same graph!

-Use different colored pens when you make changes in graphs!

-When correcting homework, do corrections in red pen!

-Show your work! If no work is shown I will not grade it.

-Write legibly! If I can't read it I will not grade it.

-Staple homework together!

-Label homework in the upper right corner as follow:

Last name , First Name

Date

Class name and period

HW Set and Problem numbers

P-M-I Chart

<u>P</u> lus	<u>M</u> inus	<u>I</u> nteresting

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I have read and understand the BCHS Geometry Course Outline for 2017-2018.

Student Name (printed):

Date:

Student Signature:

Class Period:

*Parent or Guardian Name (printed):

Date:

Parent or Guardian Signature:

*Parent or Guardian Name (printed):

Date:

Parent or Guardian Signature:

- At least one parent or guardian signature.