Geometry A Course Outline (1st Trimester, 2016-17)

Geometry Course Information, SEHS 2016-17 Teacher: Peter Wiebe Room 720A Instructional Access: 8:00 – 8:30 Tu & Th, 3:05 – 3:35 Wed	Interactive Help & Resources: *Synergy* Student & Parent Portals *Class Website/Assignment Calendar:* • http://tinyurl.com/sehs-geo-a *~ or scan this qr code* →
Textbook: *CPM Core Connections Geometry, vol 1* eBook: http://tinyurl.com/SEHS-Geo-2016-17 *~ or scan this qr code* →	

Introduction: This is the first trimester of a two-trimester Geometry course designed to provide you with a hands-on approach to learning geometric concepts. Using the *College Preparatory Mathematics* (CPM) curriculum, you will hone critical reasoning, develop collaborative skills & apply geometric methods to solve a variety of real-world & mathematical problems. Success in this course earns .5 MA credit per trimester and prepares you for Algebra 2.

Assessment & Grading Practices: A: 90-100%, B: 80-89%, C: 70-79%, I: 60-69%, F: Below 60%

Based on overall, weighted average of individual categories: Classwork, homework, INB (30%); quizzes, tests, and final exam (70%). Students will have multiple opportunities to show understanding & fluency. Insufficient evidence of proficiency may result in reduced credit. You are responsible for all material covered, assigned & assessed. Modifications & accommodations will be made for documented plans.

Attendance & Expectations: Plan ahead. Arrive prepared to stay & work all period. Regular attendance is essential for success, and possibly, full credit. After an absence, it is your responsibility to find out what you missed & make it up; some activities cannot be made up & may impact learning. You are expected to actively participate with your assigned teams. Respect people, ideas, property & everyone's right to learn. Smartphones, tablets, & personal computers may be used for class-specific purposes only. *Parents & guardians can reach you during class by calling the main office at (541) 790-8000.*

Materials: Arrive to class on time & ready to work with the following items every day.

- College-ruled composition book (for INB), provided at beginning of trimester
- Sharpened pencils with erasers, (colored pencils are optional, but useful)
- Loose-leaf paper, folder & a section of a 3-ring binder dedicated to this course
- Scientific calculator (with trig functions); Graphing calculator is optional (Desmos app or TI 84 preferred)
- All recent & current work & related materials, as well as the textbook checked out for this course
- A geometric tools set for *homework* (protractor, straight edge with inches & cm, compass)

You are responsible for your textbook. The school requires you to pay for lost or stolen books (this one is $75) before you get a replacement. *If you are unable to obtain learning tools & materials, please let me know promptly & privately.*

Getting Help – Student Resources: You will collaborate extensively in cooperative study teams & receive support from your instructor in class. Options outside of class should supplement in-class learning.

- You can review the resources in your interactive notebook, binder, assignments & assessments.

- You can use support at cpm.org, khanacademy.org, or other sites. Use *Academics Unlimited* and/or *Homework Club* and/or contact a tutor (free or paid) through the *Math Resource Center*. An e-book of the text is online and a parent guide with extra practice is available for free at cpm.org.

- I am available during *Instructional Access* at the times listed above, or by appointment. These times may also be used to demonstrate proficiency.

Coursework: *Common Core State Standards* include skills, knowledge, & the mathematical practices used to learn them. Oregon requires all students to pass 3 years of math (Algebra & higher) and to pass a comprehensive test (called *Smarter Balanced*) or produce a work sample. To prepare to meet these graduation requirements, you will create an interactive notebook, take various types of assessments, and engage in team & individual activities. This curriculum repeatedly "spirals" through topics, so expect to develop proficiency over time, rather than to master concepts upon the first exposure. Your strong efforts in and outside of class are essential to success.

Grading Rubric

	1 **Beginning Proficiency**	2 **Developing Proficiency**	3 **Close to Proficient**	4 **Proficient**	5 **Highly Proficient**
Conceptual Assessments	• Evidence shows no work or understanding	• Minimal understanding but demonstrates some effort towards understanding • Student does not know how to do it but can formulate a question.	• Within the process, minor conceptual errors were made • Work is incorrect due to misconception of relevant concepts	• Shows conceptual understanding of learning target even if there are computational errors • Conceptual understanding is shown/present but there is not much justification or explanation of "why" or "how"	• Problem solved one way and checked another. • Work is correct and includes explanations of steps taken • All relevant parameters defined
Procedural	• Work specifically implements "wrong" method	• Many mistakes and/or major conceptual errors	• Mistakes made show procedural / "quick fix" errors	• Mistake because of minor non-conceptual error • Some incorrect work from other learning targets affects result	• All correct with no errors • Trivial arithmetic mistake ok if not a situation where a check/review of work would have highlighted mistake
Next Steps:	• Intense intervention with teacher. • Student needs guided practice (Instructional Access (IA))	• Moderate intervention with teacher. • Student needs guided practice (IA)	• Minimal intervention with teacher or another student who is highly proficient • Student can independently practice (IA, home)	• Opportunities to demonstrate, model and teach other students. • Student can independently practice (home)	• Opportunities to demonstrate, model and teach other students. • Student can independently practice (home)

Geometry Learning Targets

Geo01   I can describe & perform rigid transformations, both graphically & algebraically, & describe symmetry in a figure.   [G-CO.1-5]

Geo02   I can use & prove relationships among angles formed by intersecting lines; among angles within triangles; & among parts of triangles within parallelograms.   [G-CO.9-10]

Geo03   I can perform constructions to produce objects with known angle- & length-relationships. [G-CO.12]

Geo04   I can use & explain the connections between congruence & rigid motions, especially as applied to triangle congruence.   [G-CO.6-8]

Geo05   I can use dilations, scale factor & the definition of similarity, to determine & establish similarity between 2 objects, especially triangles.   [G-SRT.1-3]

Geo06   I can use congruence & similarity criteria to solve problems & prove geometric relationships.   [G-SRT.5]

Geo07   I can identify & explain corresponding trigonometric ratios for acute angles in similar right triangles; & for acute angles & their complements; & use trigonometric ratios & the Pythagorean Theorem to solve right triangles.   [G-SRT.6-8]

Geo08   I can identify indications for, & use, the Law of Sines & the Law of Cosines.   [G-SRT.10-11]

Geo09   I can use geometric shapes, their measures, & their properties, to describe objects & model situations, including those involving density.   [G-MG.1-2]

Geo10   I can identify, find & use parts of, dimensions of, & formulas for volume of, circles, cylinders, pyramids & cones.   [G-GMD.1-2]

Geo11   I can identify relationships between 2-D shapes & 3-D objects intersected by planes; & between 3-D objects & 2-D objects rotated about lines. [G-GMD.4]

Geo12   I can use algebraic tools to identify & find information about polygons on the coordinate plane.   [G-GPE.4-6]

Geo13   I can use proportional reasoning to relate arc length & sector area to a circle's circumference & area.   [G-C.5]

Geo14   I can identify & use relationships among angles formed by tangents, radii & chords of circles.   [G-C.2]

Geo15   I can determine independence & find conditional probability for probalistic events, including by modeling data with 2-way tables.   [S-CP.1-5]

Geo16   I can use tree diagrams & area models to represent independent events.   [S-CP.6-9]

Geo17   I can calculate an analyze expected values, & use probabilities to determine fairness.   [S-MD.5-7]

Mth01   I can consistently & thoroughly complete & check assigned Review & Preview exercises.

Mth02   I can consistently & thoroughly make & maintain a neat, organized Interactive Notebook.

MP.1   I can make sense of problems and persevere in solving them.

MP.2   I can reason abstractly and quantitatively.

MP.3   I can construct viable arguments and critique the reasoning of others.

MP.4   I can model with mathematics.

MP.5   I can use appropriate tools strategically.

MP.6   I can attend to precision.

MP.7   I can look for and make use of structure.

MP.8   I can look for and express regularity in repeated reasoning.

Successful Learning Behaviors

Team Norms

Success for the individual is inseparable from success for the team. Teaching & learning are mutually supportive activities; we all learn best when we teach one another.
- Keep all conversation within your team; keep any phone use for math only.
- Explain and justify your ideas; give statements and reasons.
- Helping your teammate does not mean giving answers. Help by giving hints and asking good questions.
- No one alone is as smart as all of us together. Do not leave anyone behind or let anyone work ahead. Your team is not done until everyone is done.

Whole-Class Discussion Norms

Success for the individual is interdependent with success for all. Teaching & learning are mutually supportive activities; we all learn best when we listen to one another.
- Raise your hand to pose questions & comments.
- Refer to your work & your other resources when composing questions & comments.
- When another person is addressing the class, refrain from side-talk, even if on-topic.
- Offer to share your written work to support your verbal contributions.

Formal Assessment Norms

For an exam (daily quiz, comprehensive unit quiz, final), use the opportunity to demonstrate proficiency & fluency, & afford all others the same opportunity.
- Adhere to school policy on academic integrity.
- No sharing; use your own calculator, your own *INB*, pencil, eraser & straight edge; ***keep phones turned off & put away***.
- No talking, no communicating with others, no note-passing, etc.
- After turning in a quiz, review previous work, or preview upcoming lesson; keep all personal electronics off until instructor announces the quiz is over.