Marquette University High School
Mathematics Course Syllabus 2019-20

Course: Honors Geometry/Algebra 2 - 2 Semesters (5th, 6th, 7th periods)
Teacher: Mr. Dan Cleary
E-mail: cleary@muhs.edu **Web:** www.MrCleary.com
Classroom: Room 332 **Office:** Math Department - Directly across from room 314.
Available for student help in Math Office or room 332 - 2nd period, homeroom, 4th and 8th (Maybe) periods.

Class Materials: It is **your responsibility** to be prepared for class. This includes having the appropriate materials to complete class activities, a system for note taking, completing and saving assignments, and general preparation to be an active participant in class. Such materials will include: Folder and/or 3 ring binder, notebook, notebook/loose leaf paper, graph paper, ruler, mechanical pencils, eraser (no pens!), and a calculator (graphing calculators are not necessary) and your school approved electronic device. Consequences for not having appropriate materials for class may include, but are not limited to monetary fines, demerits, and jugs. **Note**: Apple watches and cell phones are not appropriate or welcome as class materials. Please do not bring these items to class.

Text: Geometry for Enjoyment and Challenge by Rhoad, Milauskas and Whipple
McDougal, Littell & Company. 1995.
4th Quarter: Math XL For School: Math XL must be purchased and includes online questions and support that will be periodically assigned. http://www.mathxlforschool.com/home_school.htm . Class code will be provided.
Optional 4th Quarter Text - Algebra and Trigonometry for College Readiness by Lial and Hornsby. Addison-Wesley, Copyright 2011, Pearson Eucation Inc. www.pearsonschool.com. ISBN 0-13-136626-2. You will be able to access the instructional portions of the text via Math XL.

Homework: Your primary homework responsibility will be to watch, ***listen***, and take notes from a video covering a section of the text/topic. Links to the videos will be available through http://www.mrcleary.com/AccelGeometry.html and on www.youtube.com . Notes and completed sample problems will be due in the class day after it is assigned. Notes will be checked frequently in class and will be graded on completion (2 points) and neatness (1 point). **Late homework (video notes) can earn up to 1 point.** Illness/absence from class does not excuse you from homework. Homework must be turned in upon your return to class. Video note templates are available on my moodle page. I ***strongly*** encourage you to use those templates when watching ***and listening*** to the instructional videos.

Classwork: Classwork will focus on reinforcing and teaching the skills and concepts from the previous night's video homework, and may include, but is not limited to, exercises from the text, worksheets, and online practice. The goal is to complete all assigned classwork during class time. Unfinished classwork will be required to be completed as homework in addition to any video homework. Classwork may be completed using pencil in a notebook or on a school approved electronic devices. Make sure you have organized and efficient access to your completed classwork, including labels with date, section and topic. I reserve the right to collect and/or spot check classwork. Classwork evaluations will be based on mathematical process (did you **attempt** the correct algebraic or geometric process?) (2 points), completion (did you complete/make a sincere and honest attempt to complete the assigned work?) (2 points), and neatness (can I read it?) (1 point). Late classwork may earn up to 3 points. After an absence it is your responsibility to turn in your classwork and homework to earn full credit.

Notebooks: It is essential to keep good lecture notes in this course. Notes may be taken in a single notebook that is used exclusively for mathematics or on a school approved electronic device. You will use a separate notebook for notes and classwork. Be sure to label your notes with the date, section number and topic. Notes may be taken in either pen or pencil**.** Your notes should include definitions, sample problems, and hints from the video. Taking notes is more than just re-writing what is on the screen. Be sure to **LISTEN** for hints and valuable tips that should be included in your written notes.

Mathematics is not a spectator sport. You will learn more by being involved in the subject through both class participation and homework. As a result, you can expect to earn a higher grade by keeping up with videos and being an active participant in classwork. Completing your classwork will confirm what you do and do not understand. It is the best test preparation you have.

Exams: Exams are scheduled at the culmination of each section of the text. The concepts in Geometry build upon one another synthesizing material learned in prior sections. The exams will reflect that. Each exam will be one class period. The semester exam (75 minutes) will be cumulative. You will be notified well in advance of exam dates. If you know you will be absent (games, trips, etc.), see me to make alternate arrangements. If you are absent the day of an exam, you must take the exam during the next day in the testing center. If you miss the day before the test you will take the test with the class. For longer absences, see me to schedule a make-up during one of your free periods.

Quizzes: There will be periodic quizzes throughout the semester. Most will be announced, however, I do reserve the right to give unannounced quizzes. These will be a great way to boost your score and show you are keeping up with the work. In general, I will try to give a quiz (30-50 points) each week. Quizzes missed due to absence will not be made up -- no effect on your grade -- You will receive a copy of the quiz for study. If you know you will be absent, advance arrangements should be made to take the quiz. Abuse of this policy will be reviewed on a case by case basis.

Projects: A longer term individual or group project may be assigned. The project will synthesize your current studies in geometry, math history and current applications of geometry and mathematics. The point value of each project will be comparable to one exam.

Grading Scale: Your grade will be based on the percentage of the total possible points you have earned. The grading scale will never be tougher than that listed in your handbook and shown below.

A+ 100-98 B+ 89-87 C+ 79-77 D+ 69-67 F below 60

A 97-93 B 86-83 C 76-73 D 66-63

A- 92-90 B- 82-80 C- 72-70 D- 62-60

The total points will accumulate throughout the semester and will re-set again with zero points at the start of the spring semester. I encourage you to maintain a record of your grades and to periodically check your grades online. The purpose is two-fold, first, for you to see where you stand and, second, to compare your records to mine to ensure I have correctly recorded your scores.

Online Grade updates: Grades will be updated at the school required deadlines as outlined in the Student/Parent Handbook. More frequent updates will occur at my convenience.

Class Participation: You will be expected to participate in class. This includes and is not limited to answering and asking pertinent questions, participating in cooperative groups, and completing assigned classwork.

Notebooks: It is essential to keep good lecture notes in Geometry. Unlike Algebra, there should be substantial written material in your notebook that you will need to study and learn. You are required to take notes daily. Be sure to include in your notes postulates, theorems, definitions, properties, sample problems, and hints.

My Expectations: I expect you to be in class. I expect you to be on time for class. I expect you to watch **and listen** to the instructional videos and take the corresponding notes in a timely manner. I expect you to participate in class. Absenteeism, tardiness, and misconduct will be dealt with in an appropriate manner, including, but not limited to monetary fines, demerits, and jugs. Students are expected to treat the teacher and each other with respect and expect the same in return. I expect academic honesty. Academic dishonesty will not be tolerated. Refer to your student handbook for additional information. Finally, I expect you to do well in this class and for us to have a great year.

Geometry Topics

Basic Vocabulary, Definitions, Deductive Structure, Basic Logic, very basic probability	Chapter 1
Perpendicularity, Complements and Supplements, Theory of Addition, Subtraction, Multiplication and Division, Transitive and Substitution	Chapter 2
Proving Triangles Congruent, Altitudes and Medians	Chapter 3
Equidistance, parallel and perpendicular, slope	Chapter 4
Indirect Proof, parallel lines and associated angle relationships, Types of polygons, Properties of quadrilaterals and proving quadrilaterals	Chapter 5
Lines and Planes in Space (3 dimensions)	Chapter 6
Formulas for polygons, Properties of Regular Polygons	Chapter 7
Ratio, Proportion, Similarity, Proving similar triangles	Chapter 8
Pythagorean Theorem, Pythagorean Triples, Application of Pythagorean Theorem, Intro to right triangle trigonometry (SOH-CAH-TOA)	Chapter 9
Circles: Chords, Arcs, Secants, Tangants, Angle-Arc relationships, Circumference and Area	Chapter 10
Area of Polygons and Circles	Chapter 11
Surface Area and Volume of 3 dimensional figures	Chapter 12

Algebra 2/Trigonometry Topics

Review of Real Number System, Linear Equations/ Inequalities & Graphs of Linear Equations and Functions	Chapters 1 -3
Systems 2 and 3 variable and Matrices – Basic Intro	Chapter 4
Exponents, Polynomials & Polynomial Functions synthetic division	Chapter 5
Factoring, Rational Expressions and Functions	Chapters 6 & 7
Roots, Radicals, Root Functions, Complex Numbers	Chapter 8
Various topics in Trigonometry – Review SOH-CAH-TOA, solving right triangles, introduce the Unit Circle and Radians	Selected sections from Chapters 14, 15, and 16

STUDENT NAME: _____

STUDENT SIGNATURE: _____

PARENT/GUARDIAN SIGNATURE: _____