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| **Lawrence Humanities Leadership and Development**  70 -71 North Parish Rd., Lawrence, Mass. 01840  Phone: 978-946-0724 | |
| **Course:** **Geometry Academic Year : 2014 - 2015**  **Teacher Name: Mr. Tanaka Room Number: 406**  **Grade Level(s): 10 Number of Credits: 5 credits**  **Pre-requisite Courses**: **Algebra 1** | |
| **Course Description**  Throughout this course, students will learn geometry defined by Standards of Mathematical Content in Common Core. The content is devoted primarily to plane Euclidean geometry, studied both synthetically (without coordinates) and analytically (with coordinates). Euclidean geometry is characterized most importantly by the Parallel Postulate, that through a point not on a given line there is exactly one parallel line. (Spherical geometry, in contrast, has no parallel lines.)  While students learn and acquire procedural fluency, students also develop mathematical habits of mind based on The Standards for Mathematical Practice. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education. The first of these are the NCTM process standards of problem solving, reasoning and proof, communication, representation, and connections. The second are the strands of mathematical proficiency specified in the National Research Council’s report *Adding It Up*: adaptive reasoning, strategic competence, conceptual understanding (comprehension of mathematical concepts, operations and relations), procedural fluency (skill in carrying out procedures flexibly, accurately, efficiently and appropriately), and productive disposition (habitual inclination to see mathematics as sensible, useful, and worthwhile, coupled with a belief in diligence and one’s own efficacy).  *\*This passage is a modification of the passage from the Common Core and the NCTM curriculum standards* | |
| **Textbook(s) and/or required materials/supplies**  CME Project Geometry Common Core 2013 | |
| **Grading**   1. Summative Assessments 30% 2. Class Performance 25% 3. Mathematical Practice 25% 4. Homework Assignments 20% | |
| **Teacher Availability / Other course specific information**  I am available before and after school in room 406.  Morning: 7:30 – 8:15 am  After school: Upon Request  E-mail: [stanaka@lawrence.k12.ma.us](mailto:stanaka@lawrence.k12.ma.us)  Website: bit.ly/mrtanakaswebsite | **Classroom Conduct Expectations**  Students are expected to attend daily and actively participate during the class as well as in the assigned group and finish all assignments on time. Students are expected to develop mathematical thinking and reasoning through discussion with peers and teacher, and communicate with others. All of ideas, strategies or attempts, which use to figure out the solution of the problem should be written in the student’s notebook. All of corrected assignments and journals are used to review before the test or quiz. Students must take all tests and quizzes. |
| **Content:**  This course emphasizes abstraction and critical thinking in mathematics. Students will master the essential concepts of geometry as it is used to generalize problem-solving situations and gain an appreciation and understanding of its historical roots. Students analyze properties and determine attributes of two- and three-dimensional objects. Students explore relationships (including congruence and similarity) among classes of two- and three-dimensional geometric objects, make and test conjectures about them, and solve problems involving them. Students establish the validity of geometric conjectures using deduction, prove theorems, and critique arguments made by others. Students use trigonometric relationships to determine lengths and angle measures.  *\*This passage is a modification of the passage from the Common Core and the NCTM curriculum standards* | |