| ***Course Description:*** | Mathematical Modeling is a problem-based course that emphasizes using mathematics to represent, analyze, and solve real-world problems. Students will learn how to create and interpret models involving algebra, geometry, probability, statistics, and functions. The course highlights connections between mathematics and everyday applications such as finance, science, engineering, technology, and social sciences. Through projects, group work, and technology-based activities, students will develop critical thinking, collaboration, and communication skills. By the end of the course, students will be able to apply multiple strategies to approach complex, open-ended problems and justify their solutions with mathematical reasoning. |  |
| --- | --- | --- |
|  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| ***Course Objectives:*** | To meet all objectives for mathematics as set forth by the Alabama Course of Study and Madison City Schools. |  |
| ***Classroom Expectations:***  ***Cell Phone Expectations***  ***Tardy Policy*** | You are expected to conduct yourself in a respectful and productive manner. In addition to all the rules and expectations listed in the student handbook, I expect you to have a positive attitude, treat others with respect, practice self-discipline, and demonstrate responsibility. If these conditions are not met, you can expect one-on-one meetings with me, parent/instructor conferencing, and administrative action, if necessary.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  ALL electronic devices are prohibited to be used during the instructional day. This is from 8:12-3:28. This includes: cell phones, smart watches, earbuds/headphones/airpods, tablets, and personal computers (school issues laptops will be allowed). Discipline will be given to ANY student who uses an electronic device. If you bring your device to school, it MUST be placed in your bookbag. It cannot be on your person.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Students late to ANY class, without a pass, will report to a tardy scanning station.  You will input your identification number on the pin pad. A tardy slip will be printed for you to report to class. Parent email will be sent for every tardy. Discipline will be as follows: 3 total tardies will result in 1 day of ISS; 6 total tardies will result in 2 days of ISS;  Progressive discipline to follow. |  |
| ***Grading Policy:*** | Grades are based on a 100 point scale. We have two types of grades: daily grades (30% of final grade) and tests (70% of final grade). The percentage based grading scale is as follows: A (90-100), B (80-89), C (70-79), D (65-69), and F (below 65). Grades will be a reflection of mastery of the standards. Make sure all absences are excused as class work can be made up and graded for excused absences only.  Cheating/plagiarizing will be handled by the teacher at teacher discretion. |  |
| ***Exam Exemption Policy***  ***Make-up Work Policy:*** | Any student in grades 9-12 are eligible to earn an exam exemption for the 2025-2026 Exams for each class IF they have earned an 85% or higher as the final grade for that course. Any of the following will EXCLUDE a student from exempting for that class:   * More than five EXCUSED absences * Any UNEXCUSED absence * In School Suspension (ISS) for 3 days or more * Out of School Suspension (OSS) * One or more days of Alternative School placement * Not participating in the state standardized assessment for their grade level (10th PreACT, 11th ACT with Writing, 12th WorkKeys, and AP exams)   Attendance and full participation in reviews and assignments for the class leading up to the day of the final exam are required.  Make-up tests will only be given to a student who has an excused absence. The student must make arrangements with the teacher to take a make-up test. Tests may be taken during Patriot Prep with prior arrangement from each teacher. A student only has one week. All make-up tests will be administered in the designated classroom on the Patriot Path session roster.  Homework/Classwork: Students who are absent for excused reasons will be permitted to make up missed work. It is the student’s responsibility to get their work assignments the day upon return to school and complete the assignments according to a time frame determined by the teacher within two weeks of the date of the last absence. Grades of zero will be assigned for assignments missed because of unexcused absences. |  |
|  |  |  |
| ***Materials and***  ***Supplies Needed:***  ***Laptops*** | Organization of your choice Optional to contribute to classroom: Printer Paper  Pencils Lined Paper (preferred college ruled)  Calculator Tissues  Concerning laptop utilization: 1.Student laptops should not be hard-wired to the network or have print capabilities. 2. Use of discs, flash drives, jump drives, or other USB devices will not be allowed on Madison City computers. 3. Neither the teacher, nor the school is responsible for broken, stolen, or lost laptops. 4. Laptops and other electronic devices will be used at the individual discretion of the teacher. |  |
|  |  |  |
|  |  |  |

| **18 – WEEK PLAN\*** | |
| --- | --- |
| **Week 1** | Introduction/Measurement Foundations |
| **Week 2** | Measurement Foundations |
| **Week 3** | Measurement Foundations |
| **Week 4** | Applied Geometry & Estimation |
| **Week 5** | Applied Geometry & Estimation |
| **Week 6** | Applied Geometry & Estimation |
| **Week 7** | Functions & Exponential Change |
| **Week 8** | Functions & Exponential Change |
| **Week 9** | Functions & Exponential Change |
| **Week 10** | Rates of Change & Real-World Graphing |
| **Week 11** | Rates of Change & Real-World Graphing |
| **Week 12** | Rates of Change & Real-World Graphing |
| **Week 13** | Algebra Applications in Trades |
| **Week 14** | Algebra Applications in Trades |
| **Week 15** | Algebra Applications in Trades |
| **Week 16** | Data Analysis & Probability |
| **Week 17** | Data Analysis & Probability |
| **Week 18** | Final Review & Final Exam |

**\*This is a tentative plan and may change at the discretion of the teacher.**

I look forward to having a great year! I feel fortunate to have your child in my class this semester and hope that you will contact me should you have any concerns about the progress of your child or any aspect of the instruction. With your child, please read the attached policies, then sign and date this signature page and have your child submit this in school by the end of the week. Please provide a current email address and phone number at which I can contact you should the need arise. Please contact me at school via my email with any concerns.

Game On!

**Please sign/complete below to acknowledge that you have received, read, and understood the syllabus.**

| Parent Phone Number: | Parent Email: |
| --- | --- |
| Student Name: | Parent Name: |
| Student Signature: | Student Signature: |