



2021-2022 COURSE SYLLABUS FOR MATH III PLUS

DEPARTMENT OF MATHEMATICS

1.	COURSE NUMBER, TITLE, UNITS AND PRINCIPAL/DEPARTMENT APPROVED DESCRIPTION	
	Integrated Mathematics III+ (Two semesters; 5 units each semester; 10 units total)	
2.	GENERAL INFORMATION	
	Term and year:	Fall 2021 - Spring 2022
	Instructor:	Ms. Hu
	Class Room:	T6
	Phone number:	395 - 5090 x506806
	E-mail address:	Wei-hu@scusd.edu
3.	TEXTBOOKS AND/OR RECOMMENDED OR REQUIRED READINGS	
	<i>CCSS Mathematics III Integrated Pathway</i> , by Walch, J. Weston (Walch, ME; 2015) <i>CCSS Mathematics III Integrated Pathway, Honors Supplement</i> , by Walch, J. Weston (Walch, ME; 2015) Algebra And Trigonometry with Analytic Geometry	
4.	GENERAL OVERVIEW	
	<p>Integrated Mathematics III+ is an advanced and accelerated course stemming from the new Common Core course, Integrated Mathematics III, which expands on the topics of Integrated Mathematics I and II providing further mathematics development stressing the concept and application of a function. This college preparation course is the foundation for high school advanced and basic college level mathematics courses. It is the bridge from the concrete to the abstract study of mathematics. Starting with statistical inferences and conclusions, students will gain analytical and problem-solving skills. Then students will explore more advanced algebraic expressions and concepts. Topics include simplifying expressions, evaluating and solving equations and inequalities, and graphing linear and quadratic functions and relations. Real world applications are presented within the course content and a function's approach is emphasized. Math III topics include (but are not limited to): (1) statistical inferences and conclusions; (2) relations, functions, equations and inequalities; (3) conic sections; (4) polynomials; (5) trigonometry; (6) mathematical modeling; (7) algebraic fractions; (8) logarithmic and exponential functions; (9) sequences and series; and (10) counting principles and probability. The Honors component of this course will also look at (a) matrices; (b) rational functions; and (c) a more in-depth look into functions through interpretation and construction.</p>	
5.	COURSE OBJECTIVES	



The following sequence by textbook unit identifies the major units making up the Integrated Mathematics III+ curriculum. [**Honors/Plus** topics in **bold**]

Unit 1 Inferences and Conclusions from Data

Unit 2A Polynomial Relationships and [**Matrices and Systems of Equations**]

Unit 2B Rational and Radical Relationships and [**Rational Functions**]

Unit 3 Trigonometry of General Triangles, Trigonometric Functions and [**Interpreting Functions**]

Unit 4A Modeling of Inverse, Logarithmic, and Trigonometric Functions and [**Building Functions**]

Unit 4B Mathematical Modeling and Choosing a Model

Students will acquire and demonstrate knowledge of the concepts, definitions and properties required to meet the Integrated Mathematics III+ standards. Students will develop critical thinking and decision-making skills by connecting concepts to practical applications needed to be productive members of society. All students are expected to demonstrate the following objectives:

- Students should be able to work with functions represented in a variety of ways: graphical, numerical, analytical, or verbal. Students should understand the connections among these representations.
- Students should be able to communicate mathematics both orally and in well-written sentences and should be able to explain solutions to problems.
- Students should be able to model a written description of a physical situation with a function.
- Students should be able to handle a faster and more rigorous curriculum with an expectation of higher-level thinking.
- Students should be able to use technology (graphing calculators and graphing software) to help solve problems, experiment, interpret results, and verify conclusions.
- Students should be able to determine the validity of solutions, including sign, size, relative accuracy, and units of measurement.

6. COURSE REQUIREMENTS, ATTENDANCE AND SPECIFIC GRADING POLICY

Grades are based on demonstrated mastery of concepts and development of skills, not effort or potential. *A major component of your grade is determined by your results on exams and quizzes.* Progress reports are available on the District Web site in Infinite Campus. Student overall performance is determined by exams (including final exam) and quizzes as well as assignments, which comprises homework (based on work collected), in class assignments (based on work collected such as worksheets, activities), and projects. Assignments are a guide as to what is most important and what will be tested. Assignments are given daily. *Students not actively engaged in assignments and study will most likely fail the class.* Planning your study should include a minimum hour of quality time daily. The math dept. complies with district protocol, viewable at www.scusd.edu. Make-up work/tests are student's responsibility and may not be allowed without a valid re-admit, or excused absence.



7.	<p>DESCRIPTION OF MAJOR ACTIVITIES/EXERCISES/PROJECTS</p>
	<p>Instructional Strategies and Activities Include:</p> <ul style="list-style-type: none"> · Lecture on concepts and techniques · Presentation/modeling of examples and strategies · Large and small group discussions and explorations · Reading and writing assignments · Practice and learning through classwork and homework assignments · Applications to demonstrate relevance and extend learning · Active student engagement in group work and discussions · Quizzes, and tests to encourage and monitor learning
8.	<p>GENERAL STATEMENTS</p>
	<p>Students are expected to be familiar with and adhere to policies in the JFKHS Student Handbook. The student handbook identifies student rights, responsibilities, discipline rules and consequences, behavior, and other information for academic and social success. Student ignorance does not provide justification for failure to follow the information contained in the student handbook. All material submitted can be retained by the instructor. If you desire copies of any submitted materials, then duplicate copies for yourself before submission. The Principal reserves the right to modify and/or change the course syllabus as needed during the course.</p> <p>CLASSROOM BEHAVIOR EXPECTATIONS: The following summarize important expectations for classroom behavior. Students are expected to:</p> <ul style="list-style-type: none"> • attend class every day. • complete all assignments on time. • be seated and prepared for learning when the bell rings. • treat their classmates with respect; no put downs of any kind. • actively and positively participate in class. • demonstrate personal responsibility, honesty, and integrity in all of their actions. <p>CLASSROOM RULES: The following few rules guide classroom behavior and activity.</p> <ul style="list-style-type: none"> • Follow teacher directions and requests immediately. • Keep your hands, feet, and other objects to yourself. • Remain seated unless you have permission to move about the classroom. • Eating (food, candy, etc.) and gum chewing are not permitted in the classroom. <p>ELECTRONIC DEVICES: Electronics (music devices, cell phones, etc.) are to be turned completely off and put away.</p> <p>The following percentage scale will be used in determining grades:</p> <p style="text-align: center;">90% - 100% A</p>



80% - 89%	B
70% - 79%	C
60% - 69%	D
50% - 59%	F

85%	Tests, group tests, quizzes, other assessments, common unit exams
15%	Participation in all class activities, and completion of assignments, warm-ups, practice, etc.

HOMEWORK AND STUDY: Homework and student study is an essential part of your education. Any student expecting to do well in this course should carefully read the text and do all the assigned work.

TESTS/EXAMS: A comprehensive test to measure students' mastery of skills and concepts will be given, as a minimum, at the end of each chapter/unit; mid-chapter tests and quizzes will also be given based on chapter content. Students will be informed of the comprehensive test date at least a week in advance. Unexcused absences before the test date do not excuse a student from taking the test as scheduled. Lastly, a comprehensive final must be taken at the end of each semester.

CHARACTERISTICS OF QUALITY WORK: Using the following guidelines will help you master the Integrated Mathematics III+ objectives. Quality work has the following characteristics.

- Is complete with full solution. That is, all problems are completed or at least attempted.
- The supporting work for each problem is shown completely using proper algebraic conventions and notations.
- The work is done neatly.
- The work is done accurately.

CHARACTERISTICS OF A SUCCESSFUL STUDENT: Students that are successful in school generally exhibit the following traits:

- Is consistently present for class in body and spirit.
- Desires to learn the material presented.
- Uses time wisely.
- Does practice work, study, and test preparation faithfully.
- Asks thoughtful questions during class.
- Actively participates in class and gets extra help when needed.

ACADEMIC DISHONESTY: Academic dishonesty is considered a serious offense in my class. Students cheating will face serious consequences. I encourage collaboration on all assignments but I expect the work you hand in (assignments, exam/quiz, etc.) to be your own.

CALCULATOR USE AND EXPECTATION: A graphing calculator is strongly recommended for this class (preferably a TI-83/84 Plus as the text correlates with TI). The calculator is a tool to aid in



learning concepts, not just a means of computation. Graphing calculator use will be allowed on some tests and quizzes during the year. However, when not allowed, student should have a scientific calculator available (ie. TI-30). Absolutely no cell phones will be allowed for calculator use.

Supplemental Resources: <http://www.khanacademy.org/>