

MA873O/ Algebra 2-2 Syllabus

Course Title----- Algebra 2-2
Course Number----- MA873O
Grades:----- 09-12
High School Credit Value:----- 0.5
Prerequisites:----- Successful completion of Algebra 2-1

Course Length:----- Regular courses: 17 weeks
CR: 9-17 weeks.

Course Time:----- Regular courses: 17 week schedule: 75 - 90
minutes per school day (6-7.5 hours per
week)
Credit Retrieval: 75 - 90 minutes per
school day (6-7.5 hours per week) until
course completion.

{ Course Description }

The second semester of Algebra 2 covers the following mathematical topics: radical functions, exponential and logarithmic functions, probability and statistics, systems of equations and inequalities, matrices, conic sections, and sequences and series.

Students enrolled in this course will complete an online curriculum called Compass Learning Odyssey (CLO). High School Math focuses on foundational skills to support learners, emphasizes repetition and practice of key skills, reinforces study habits, including note-taking, to sharpen students' comprehension, and covers National Mathematics Advisory Panel's concepts for success in algebra.

Course Materials:

The student should plan on 60 to 90 minutes of working in this math class per week day.

This math class requires the use of Compass Learning Odyssey. The student will run a system checkup in order to be able to fully take advantage of the course. Please see the link to check for system requirements, run a system checkup, and download necessary programs. This course may be taken on the PC or Mac platform.

The student has the opportunity to participate with the instructor online, thus the student is encouraged to have headphones with a microphone in order to meet with the teacher online.

State Alignments

Washington State Standards guided the design of the course. Learning expectations are found within

the course itself.

Standard 1 - Solve problems that can be represented by systems of equations and inequalities including systems of equation in three variables.

Standard 2 - Solve problems involving probability and solve problems involving combinations and permutations.

Standard 3 - Use the laws of exponents to simplify and evaluate numeric and algebraic expressions that contain rational exponents.

Standard 4 - Add, subtract, multiply, divide, and simplify rational and more general algebraic expressions.

Standard 5 - Translate between the standard form of a quadratic function, the vertex form, and the factored form; graph and interpret the meaning of each form.

Standard 6 - Solve quadratic equations and inequalities, including equations with complex roots and solve problems that can be represented by quadratic functions, equations, and inequalities.

Standard 7 - Solve exponential and logarithmic equations.

Standard 8 - Construct new functions using the transformations $f(x - h)$, $f(x) + k$, $cf(x)$, and by adding and subtracting functions, and describe the effect on the original graph(s).

Standard 9 - Plot points, sketch, and describe the graphs of functions of the form $f(x)=a[\sqrt{x-c}]+d$, $f(x)=a/x+b$, $f(x)=a/x^2+b$, $f(x)=a/(bx+c)$, and solve related equations.

Standard 10 - Given a finite sample space consisting of equally likely outcomes and containing events A and B, determine whether A and B are independent or dependent, and find the conditional probability of A given B.

Standard 11 - Calculate and interpret measures of variability and standard deviation and use these measures and the characteristics of the normal distribution to describe and compare data sets.

Standard 12 - Find the terms and partial sums of arithmetic and geometric series and the infinite sum for geometric series.

Standard 13 - Understand the concept of complex numbers and perform computations with complex numbers.

Standard 14 - Develop fluency in operations with real numbers, vectors, and matrices, using mental computation or paper-and-pencil calculations for simple cases and technology for more-complicated cases.

Course Outline

Unit	Lessons	17 Week Learning Plan Contract
Radical Functions	Radical Expressions, Equations & Inequalities	3 Weeks
Exponential & Logarithmic Functions	Exponential & Logarithmic Functions, Equations & Inequalities	3 Weeks
Probability & Statistics	Describing Data Sets, Fitting Graphs to Data, Computing Probabilities	3 Weeks
Systems of Equations & Inequalities	Solving Systems of Equations. Solving Systems of Inequalities	2 Weeks
Matrices	Operations with Matrices, Solving Systems of Equations using Matrices	3 Weeks
Sequences & Series	Describing & Analyzing Arithmetic, Geometric, and Other Sequences & Series	3 Weeks

Course Work

The student will work in the Compass Learning textbook to receive instruction in the required learning standards. The student will participate in activity quizzes where the student's goal is to achieve a 70% or better before moving forward in the textbook. The student will have three attempts to reach the 70% or better mark.

Upon completion of the lessons within the unit, the student will take a cumulative chapter test within Compass Learning. Students will report the score they earned on their Reflection Assignment for that unit located under the Units tab on your iA campus page. In the Reflection Assignment, students are asked to self-assess, reflect on their learning for that unit, and report their chapter test score from Odyssey. (Please see the revision policy for ways students can improve their unit test scores.)

Students are also required to complete weekly checkpoints (summative assessments for lessons with CLO). These checkpoints require the student to demonstrate their complete understanding of required skills presented to them each week. Approximately 50% of the points possible in checkpoints are earned by showing work and explaining processes and support. The other 50% of the points are earned from correct answers. Students are able to redo checkpoints after reviewing teacher feedback.

Homework and course pacing for this course are outlined on the student's Learning Plan Contract which is found under the Unit tab on their iA course home page. The Learning Plan Contract of 17 is based upon the student's contracted start and end date. The Learning Plan Contracts indicates when lessons and assignments should be completed in order to complete the course by the contracted end date.

Grading**Grades will be generated from the following:**

Weekly Checkpoints - These checkpoint summative assessments are worth 10 points each. Checkpoints require the student to demonstrate to the instructor their complete understanding of taught skills. Students are given points for accurate answers and for showing their work.

Chapter Reflection Assignments - Students will complete a 10 point reflection question asking the student to reflect on their learning and progress within their Odyssey textbook. It will also ask them to report their chapter test score from Odyssey. Chapter Test reflections are worth about 30 points.

Revision Policy - While working within the Odyssey textbook, the student is able to attempt the quizzes up to three times to surpass the 70% mark until they are able to move ahead. The student is not able to "redo" or "revise" the Chapter Test activity. Currently, teachers are unable to "reset" this test. So, students want to make sure that they do their best on their first attempt. Individual arrangements may be made with the instructor if a student needs to revise this test to improve their learning and improve their score.

Checkpoints are able to be revised one more time based upon teacher feedback given the first attempt.

Grades - Grades are posted within the iA math course. Students can click on the Student Grades tab in their class to view their gradebook. Grades or scores in the Odyssey textbook are there for the student and parent to see their practice and progress in the different skills. Only the Chapter Test score will be placed within the iA math gradebook. As stated above, the gradebook will be consisted of checkpoint scores and chapter test scores.

Occupational Credit:

This course may qualify for *occupational credit. Please consult your school counselor for further clarification.

*Please note that FLA901 (Sign Language) does not qualify for occupational credit.

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