**COURSE NAME Algebra I**

**COURSE NUMBER MA101/102**

**GRADE LEVEL 8-12**

**GRADING SCALE Gayville-Volin HS Standard Scale**

**WEIGHT 1.0**

**CURRENT TEACHER Jennifer Rice and/or Jason Selchert**

**COURSE DESCRIPTION:**

Algebra I is an introductory mathematics course that covers the following topics: real numbers, linear equations, inequalities, systems, exponents and functions, quadratic equations, polynomials, factoring, rational equations, radicals, and geometry.

The fundamental purpose of this course is to extend the mathematics that students learned in the middle grades. The instructional focuses deepen and extend understanding of linear and exponential relationships by contrasting them with each other and by applying linear models to data, and students engage in methods for analyzing, solving, and using quadratic functions.

**PRE-REQUISITES:** The student must have successfully completed all middle school required math courses or successfully scored at the Advanced level on the Smarter Balanced test (SBAC) (or a comparable assessment). Teacher may use discretion to grant permission for students who do not meet these pre-requisites.

**LEARNER EXPECTATIONS:** This course is set up from the standpoint of the learner. Learners will meet with the learning facilitator in large, small and individualized grouping scenarios. All other interactions will be at the request of the learner. Learners will need to be able to work independently as well as collaboratively for the learning experiences, responsibly submit learning tasks, and communicate with the learning facilitator regarding questions or concerns in a timely and respectful fashion. Course materials will be made available through Schoology and/or Blackboard Learn.

**MATERIALS AND EQUIPMENT NEEDED:** Computer and Internet access will be needed for electronic submission of learning activities and for communication with instructor. Each learner will also need a folder, notebook and writing utensil. A graphing or multi-function calculator is helpful, but not required. Students may use online calculators and built in apps from within the computer operating system.

**FEES:** None

**COURSE NAME Algebra II**

**COURSE NUMBER MA201/202**

**GRADE LEVEL 9-12**

**GRADING SCALE Gayville-Volin HS Standard Scale**

**WEIGHT 1.00**

**CURRENT TEACHER Jennifer Rice and/or Jason Selchert**

**COURSE DESCRIPTION:**

Building on their Algebra I work with linear, quadratic, and exponential functions, students extend their collective knowledge of functions to include polynomial, rational, and radical functions. Students work closely with the expressions that define the functions, and continue to expand their abilities to model situations and to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms.

**PRE-REQUISITES:**

Successful completion Algebra I

**LEARNER EXPECTATIONS:** This course is set up from the standpoint of the learner. Learners will meet with the learning facilitator in large, small and individualized grouping scenarios. All other interactions will be at the request of the learner. Learners will need to be able to work independently as well as collaboratively for the learning experiences, responsibly submit learning tasks, and communicate with the learning facilitator regarding questions or concerns in a timely and respectful fashion. Course materials will be made available through Schoology and/or Blackboard Learn.

**MATERIALS AND EQUIPMENT NEEDED:** Computer and Internet access will be needed for electronic submission of learning activities and for communication with instructor. Each learner will also need a folder, notebook and writing utensil. A graphing or multi-function calculator is helpful, but not required. Students may use online calculators and built in apps from within the computer operating system.

**FEES:**

None

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| --- | --- |
| **COURSE NAME** | Geometry  |
| **COURSE NUMBER** | MA301 / MA302 |
| **GRADE LEVEL** | 9-12 |
| **GRADING SCALE** | Gayville-Volin High School Default Scale |
| **WEIGHT** | 1 |
| **CREDIT/TERM** | 1.0/Year  |
| **LEARNING FACILITATOR** | Jason Selchert and/or Jennifer Rice |

**COURSE DESCRIPTION:** Course Description:  This course is designed to emphasize the study of the properties and applications of common geometric figures in two and three dimensions.  It includes the study of transformations and right triangle trigonometry.  Inductive and deductive thinking skills are used in problem solving situations, and applications to the real world are stressed.  It also emphasizes writing proofs to solve (prove) properties of geometric figures.  Students who have completed Algebra I and Algebra II are candidates for Geometry.

**PRE-REQUISITES:** Algebra I with Algebra II as a recommendation.

**LEARNER EXPECTATIONS:** This course is set up from the standpoint of the learner. Learners will meet with the learning facilitator in large, small and individualized grouping scenarios. All other interactions will be at the request of the learner. Learners will need to be able to work independently as well as collaboratively for the learning experiences, responsibly submit learning tasks, and communicate with the learning facilitator regarding questions or concerns in a timely and respectful fashion. Course materials will be made available through *Schoology* and/or *Blackboard Learn*.

**MATERIALS AND EQUIPMENT NEEDED:** Computer and Internet access will be needed for electronic submission of learning activities and for communication with instructor. Each learner will also need a folder, notebook and writing utensil. A graphing or multi-function calculator is helpful, but not required. Students may use online calculators and built in apps from within the computer operating system.

**FEE:** None

**COURSE NAME College Prep Math**

**COURSE NUMBER MA401/402**

**GRADE LEVEL 11-12**

**GRADING SCALE Gayville-Volin Standard Grading Scale**

**WEIGHT 1**

**CURRENT TEACHER Jennifer Rice and/or Jason Selchert**

**COURSE DESCRIPTION:**

This course will provide diagnostic and remedial activities designed to correct mathematics difficulties and habits that interfere with students’ progress in developing mathematics skills and understandings, and address mathematical skill gaps. Activities are chosen to increase or improve students’ mathematics skills to help prepare them for entry level post-secondary mathematics courses.

**PRE-REQUISITES:**

Algebra I, Algebra II, Geometry

**LEARNER EXPECTATIONS:** This course is set up from the standpoint of the learner. Learners will meet with the learning facilitator in large, small and individualized grouping scenarios. All other interactions will be at the request of the learner. Learners will need to be able to work independently as well as collaboratively for the learning experiences, responsibly submit learning tasks, and communicate with the learning facilitator regarding questions or concerns in a timely and respectful fashion. Course materials will be made available through Schoology and/or Blackboard Learn.

**MATERIALS AND EQUIPMENT NEEDED:** Computer and Internet access will be needed for electronic submission of learning activities and for communication with instructor. Each learner will also need a folder, notebook and writing utensil. A graphing or multi-function calculator is helpful, but not required. Students may use online calculators and built in apps from within the computer operating system.

**FEES:**

None

**COURSE NAME Trigonometry**

**COURSE NUMBER MA501 / MA502**

**GRADE LEVEL 11-12**

**GRADING SCALE Gayville-Volin Standard Grading Scale**

**WEIGHT 1.25**

**CURRENT TEACHER Leslie Tvedt (SILDL – Castlewood High School)**

**COURSE DESCRIPTION:**

This course presents trigonometric functions, formulas, solutions of right triangles and applications, variations of functions with changes in angles, trigonometric equations, identities, solutions of oblique triangles and applications, logarithmic functions, inverse functions and complex numbers. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving.

**Learning Outcomes:** Upon successful completion of this course, students will:

1. Compute the values of trigonometric functions for common angles in all quadrants of the unit circles measured in both degrees and radians.

2. Graph trigonometric functions and their transformations.

3. Prove trigonometric identities.

4. Solve trigonometric equations.

5. Solve right and oblique triangles.

6. Use the concepts of trigonometry to solve applications.

**PRE-REQUISITES:** Algebra I, Algebra II, Geometry

**TEACHER EXPECTATIONS:** Students should demonstrate a willingness to find solutions to problems on their own.

**MATERIALS AND EQUIPMENT NEEDED:**

MathXL for school student 1-year Access Digital Delivery (ISBN: 0321820118), TI-83 or TI-84 Calculator

Technology: This is an online course, so you will need a computer with internet access. Also needed is a State of South Dakota K12 email account. Required software includes Word, OneNote, and Lync through the state k12 system.