1. **COURSE TITLE\*:** Quantitative Reasoning Corequisite
2. **CATALOG – PREFIX/COURSE NUMBER/COURSE SECTION\*:** Math 1025
3. **PREREQUISITE(S)\*:**

A student must meet *one* of the following criteria to register for this course:

* Math 1106 with a grade of B or higher
* Three High school STEM or Core Math courses with grades of C or higher
* Accuplacer QAS score of 243 or higher

**COREQUISITE(S)\*:**

A student must concurrently be enrolled in the following course:

* Math 1125
1. **COURSE TIME/LOCATION/MODALITY: (*Course Syllabus – Individual Instructor Specific*)**
2. **CREDIT HOURS\*:** 1 **LECTURE HOURS\*:** 1

 **LABORATORY HOURS\*:** 0 **OBSERVATION HOURS\*:** 0

1. **FACULTY CONTACT INFORMATION: *(Course Syllabus – Individual Instructor Specific)***
2. **COURSE DESCRIPTION\*:**

This course is designed to be taken alongside Math 1125 Quantitative Reasoning by reinforcing prerequisite concepts just before they are needed. Topics include measurement systems, proportions, percentages, exponents, probability, linear functions, and exponential functions.

1. **LEARNING OUTCOMES\*:**
2. Convert between different units using fraction multiplication.
3. Interpret, set up, and solve proportional relationships from word problems.
4. Apply the laws of exponents to simplify expressions with integer exponents.
5. Convert between standard notation and scientific notation.
6. Solve problems involving percentages, including increase and decrease.
7. Plot points on the Cartesian plane using ordered pairs.
8. Construct a table of values to plot a linear equation.
9. Calculate measures of central tendency (mean, median, mode).
10. Determine probabilities of simple and compound events.
11. Identify and calculate x- and y-intercepts of a linear equation.
12. Calculate the slope of a line given two points.
13. Interpret the slope in terms of rate of change.
14. Write equations of lines in slope-intercept form.
15. Graph lines using slope-intercept form.
16. Determine the equation of a line given a point and the slope.
17. Evaluate exponential functions for given inputs.
18. Graph exponential functions.
19. Interpret key features of exponential graphs.
20. **ADOPTED TEXT(S)\*:**

Prealgebra 2e

OpenStax

Download for free at

https://openstax.org/details/books/prealgebra-2e

Lynn Marecek, MaryAnne Anthony-Smith, Andrea Honeycutt Mathis

Elementary Algebra 2e

OpenStax

Download for free at

https://openstax.org/details/books/elementary-algebra-2e

Lynn Marecek, MaryAnne Anthony-Smith, Andrea Honeycutt Mathis

Intermediate Algebra 2e

OpenStax

Download for free at

https://openstax.org/details/books/intermediate-algebra-2e

Lynn Marecek, Andrea Honeycutt Mathis

**9a: SUPPLEMENTAL TEXTS APPROVED BY FULL TIME DEPARTMENTAL FACULTY (INSTRUCTOR MUST NOTIFY THE BOOKSTORE BEFORE THE TEXTBOOK ORDERING DEADLINE DATE PRIOR TO ADOPTION) \*\*\*.**

1. **OTHER REQUIRED MATERIALS: (SEE APPENDIX C FOR TECHNOLOGY REQUEST FORM.)\*\***
2. **GRADING SCALE\*\*\*:**

Grading will follow the policy in the catalog. The scale is as follows:

A: 90 – 100

 B: 80 – 89

 C: 70 – 79

 D: 60 – 69

 F: 0 – 59

1. **GRADING PROCEDURES OR ASSESSMENTS: (*Course Syllabus – Individual Instructor Specific)***

|  |  |  |
| --- | --- | --- |
| *Category* | ***EXAMPLE ONLY****Total Points* | *% of Grade* |
| Participation | 50 | 50% |
| Written Homework | 25 | 25% |
| Online Homework | 25 | 25% |
| Total | 100 | 100% |

1. **COURSE METHODOLOGY: *(Course Syllabus – Individual Instructor Specific)***

The course design provides instruction and materials to support the course objectives. Classes may consist of a variety of means to accomplish this including but not limiting to: lectures, class discussions, group projects, supplemental materials, and outside assignments. Practice is an important part of the learning process. For every one hour of class time, two additional hours of study time should be expected.

**14. COURSE OUTLINE: *(Course Syllabus – Individual Instructor Specific)***

***(Insert sample course outline with learning outcomes tied to assignments / topics.)***

***Prealgebra Algebra 2e***

**Chapter 5: Decimals**

5.5 Averages and Probability

**Chapter 6: Percents**

6.5 Solve Proportions and their Applications

***Elementary Algebra 2e***

**Chapter 1: Foundations**

1.10 Systems of Measurement

**Chapter 3: Math Models**

3.2 Solve Percent Applications

**Chapter 4: Graphs**

4.1 Use the Rectangular Coordinate System

4.2 Graph Linear Equations in Two Variables

4.3 Graph with Intercepts

4.4 Understand Slope of a Line

4.5 Use the Slope-Intercept Form of an Equation of a Line

4.6 Find the Equation of a Line

**Chapter 6: Polynomials**

6.7 Integer Exponents and Scientific Notation

***Intermediate Algebra 2e***

10.2 Evaluate and Graph Exponential Functions

|  |  |  |
| --- | --- | --- |
| **Week** | **Topic** | **Learning Outcomes** |
| **Week 1** | **1.10 Systems of Measurement** | **1** |
| **Week 2** | **6.5 Solve Proportions and their Applications** | **2** |
| **Week 3** | **6.7 Integer Exponents and Scientific Notation** | **3, 4** |
| **Week 4** | **3.2 Solve Percent Applications** | **5** |
| **Week 5** | **4.1 Use the Rectangular Coordinate System****4.2 Graph Linear Equations in Two Variables** | **6, 7** |
| **Week 6** | **5.5 Averages and Probability** | **8, 9** |
| **Week 7** | **4.3 Graph with Intercepts** | **10** |
| **Week 8** | **4.4 Understand Slope of a Line** | **11, 12** |
| **Week 9** | **4.5 Use the Slope-Intercept Form of an Equation of a Line** | **13, 14** |
| **Week 10** | **4.6 Find the Equation of a Line** | **15** |
| **Week 11** | **10.2 Evaluate and Graph Exponential Functions** | **16, 17, 18** |
| **Week 12** | **10.2 Evaluate and Graph Exponential Functions** | **16, 17, 18** |
| **Week 13** | **Extra Practice** |  |
| **Week 14** | **Final Test Review** |  |
| **Week 15** | **Final Test Review** |  |

**15. SPECIFIC MANAGEMENT REQUIREMENTS\*\*\*:**

**16. FERPA: \***

Students need to understand that their work may be seen by others. Others may see students’ work when being distributed, during group project work, or if it is chosen for demonstration purposes. Students also need to know that there is a strong possibility that their work may be submitted to other entities for the purpose of plagiarism checks.

**17. ACCOMMODATIONS: \***

Students requesting accommodations may contact Ryan Hall, Accessibility Coordinator at rhall21@sscc.edu or 937-393-3431, X 2604.

Students seeking a religious accommodation for absences permitted under Ohio’s Testing Your Faith Act must provide the instructor and the Academic Affairs office with written notice of the specific dates for which the student requires an accommodation and must do so no later than fourteen (14) days after the first day of instruction or fourteen (14) days before the dates of absence, whichever comes first. For more information about Religious Accommodations, contact Ryan Hall, Accessibility Coordinator at rhall21@sscc.edu or 937-393-3431 X 2604.

**18. OTHER INFORMATION\*\*\*:**

**SYLLABUS TEMPLATE KEY**

**\*** Item cannot be altered from that which is included in the master syllabus approved by the Curriculum Committee.

**\*\*** Any alteration or addition must be approved by the Curriculum Committee

**\*\*\*** Item should begin with language as approved in the master syllabus but may be added to at the discretion of the faculty member.