1. **COURSE TITLE\*:** Math for the Business and Social Sciences
2. **CATALOG – PREFIX/COURSE NUMBER/COURSE SECTION\*:** MATH 1115
3. **PREREQUISITE(S)\*:**

Student must meet one of the following criteria to register for this course:

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

**COREQUISITE(S)\*:** None

1. **COURSE TIME/LOCATION/MODALITY: (*Course Syllabus – Individual Instructor Specific*)**
2. **CREDIT HOURS\*:** 3 **LECTURE HOURS\*:** 3

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

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

This course is designed for students in technologies related to the social sciences or business. Students will experience mathematical language, notation, and problem solving. Competencies will include Numeracy (critical thinking, problem solving, rates, ratios, dimensional analysis, proportions and percentages), Mathematical Modeling (personal finance, loans, investments, linear functions), and Probability/Statistics (measures of central tendency and spread, interpretation of data presented in graphical form, use of probability in decision making).

1. **LEARNING OUTCOMES\*:**

At the completion of this course the student will:

1. **Be able to use the concepts of numeracy to investigate and explain quantitative relationships and solve problems in a variety of real-world contexts.**

*Supporting objectives:*

1.1 Solve real-world problems requiring the use and interpretation of ratios in a variety of contexts including parts to whole comparisons, converting between decimals and percentages, calculating and interpreting probabilities and rates of change.

1.2 Solve real world problems related to rates of change, distinguishing between absolute and relative change.

1.3 Apply proportional reasoning appropriately to real-world situations such as scaling, dimensional analysis and modeling.

1.4 Assess reasonableness of quantities that they calculate or estimate.

1.5 Make use of correct units when using numbers based on context.

1.6 Demonstrate measurement sense including units, precision, accuracy.

1. **Be able to make decisions by analyzing mathematical models, including situations in which the student must recognize and/or make assumptions.**

*Supporting objectives:*

2.1 Use tables, graphs, and equations to model real world situations.

2.2 Model financial applications such as credit card debt, personal finance, savings, and loans.

2.3 Calculate and interpret future value and present value and apply these concepts to real-world situations.

1. **Use the language and structure of statistics and probability to investigate, represent, make decisions, and draw conclusions from real-world contexts.**

*Supporting objectives:*

3.1 Summarize and interpret datasets with regard to shape, center, and spread. Use both graphical and numerical data.

3.2 Calculate and interpret measures of center including mean, median, expected value, and weighted average.

3.3 Make inferences and decisions based on visual displays of quantitative information including line graphs, bar graphs, and histograms.

1. **ADOPTED TEXT(S)\*:**

*Pearson Custom Mathematics: Math* *for Business and Social Sciences*

2014

Material from texts by Cheryl Cleaves

Pearson Learning Solutions

ISBN: 9781269680264

**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.)\*\***

A calculator is required. Computer and other supplemental materials are available in the Learning Resources Center.

1. **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)***

|  |
| --- |
| *Example 1 - By Percent* |
| Homework 10%  Quizzes/Tests 90%  Total 100% |

|  |  |  |
| --- | --- | --- |
| *Example 2* | | |
| *Category* | *By Total Points* | *% of Grade* |
| Homework (20x10) | 200 | 10% |
| Quizzes/Tests  (5x360) | 1800 | 90% |
| Total | 2000 | 100% |

|  |  |  |
| --- | --- | --- |
| *Example 3* | | |
| *Category* | *By Total Points* | *% of Grade* |
| Online Quizzes | 400 | 100% |
| Online Tests  (6x100) | 600 | 15% |
| Notebook  (2x500) | 1000 | 25% |
| Midterm | 1000 | 25% |
| Final | 1000 | 25% |
| Total | 4000 | 100% |

1. **COURSE METHODOLOGY: *(Course Syllabus – Individual Instructor Specific)***
2. Classes may consist of a variety of means to accomplish the objectives of this course, including but not limiting to: lectures, class discussions, small 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.
3. Assignments will be evaluated according to instructor directives. It is assumed that students are familiar with fractions, decimals, percents, and simple equations. Students who are unable to master this material after a brief review should consider dropping the course and enrolling in Pre-Algebra Math 1106.

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

Chapter 1: Basic Concepts of Numbers (review as needed) **–** LO1

* Estimating, rounding, formulas
* Exponents, roots
* Order of operation and problem solving

Chapter 2: Equations **–** LO1

* Linear equations
* Word problems
* Formulas

Chapter 3: Measurement **–** LO1

* Customary system (mixed measures are optional)
* Metric system
* Time, temperature
* Dimensional Analysis
* Accuracy, precision

Chapter 4: Percent **–** LO1

* Percent equivalents
* Solving percent problems
* Increases and decreases

Chapter 5: Payroll (optional)

Chapter 6: Simple interest **–** LO2

* Simple interest
* Ordinary and Exact interest
* Promissory notes (optional)

Chapter 7: Consumer Credit **–** LO2

* Installment loans
* Rule of 78 (optional)
* Open end credit

Chapter 8: Compound Interest **–** LO2

* Compound interest and future value
* Present value

Chapter 9: Probability and Statistics **–** LO3

* Reading circle, bar, line graphs
* Measures of Central Tendency
* Measures of dispersion
* Counting techniques and simple probability (optional)

Assignments will be evaluated according to instructor directives. It is assumed that students are familiar with fractions, decimals, percent, and simple equations. A student who is unable to master this material after a brief review should consider dropping the course and enrolling in Pre-algebra 1106.

**Suggested Pace:**

Week 1: Chapter 1 Review as needed

Week 2: Chapter 2 Equations

Week 3: Chapter 2 Equations

Week 4: Chapter 3 Measurement

Week 5: Chapter 3 Measurement

Week 6: Chapter 4 Percent

Week 7: Chapter 4 Percent

Week 8: Chapter 6 Simple Interest and Discounts

Week 9: Chapter 6 Simple Interest and Discounts

Week 10: Chapter 7 Consumer Credit

Week 11: Chapter 7 Consumer Credit

Week 12: Chapter 8 Compound Interest, Future Value, Present Value

Week 13: Chapter 8 Compound Interest, Future Value, Present Value

Week 14: Chapter 9 Statistics

Week 15: Chapter 9 Statistics

Week 16: Finals

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

**16. FERPA: \***

Students need to understand that their work may be seen by others. Others may see your 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 your 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](mailto: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 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](mailto: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.