# MATH C002N: MATHEMATICS FOR THE WORKFORCE 2

| Item | Value |
|---|---|
| Curriculum Committee Approval Date | 02/23/2024 |
| Top Code | 170200 - Mathematics Skills |
| Units | 0 Total Units |
| Hours | 36 Total Hours (Lecture Hours 36) |
| Total Outside of Class Hours | 0 |
| Course Credit Status | Noncredit (N) |
| Material Fee | No |
| Basic Skills | Basic Skills (B) |
| Repeatable | Yes; Repeat Limit 99 |
| Open Entry/Open Exit | Yes |
| Grading Policy | P/NP/SP Non-Credit (D) |

## Course Description

MATH C002N is for students who seek to improve or refresh their mathematics reasoning and developmental computational skills. Topics cover mathematical skills from pre-algebra including ratios and proportions; measurements with U.S. measurement system, and the metric system; understanding variables, and solving equations with one variable. Noncredit. NOT DEGREE APPLICABLE. Not Transferable.

## Course Level Student Learning Outcome(s)

1. Demonstrate numerical literacy and quantitative reasoning skills in pre-algebra.

## Course Objectives

- 1. Build mathematics basic skills for greater success in their next math course.
- 2. Demonstrate improved numerical literacy and quantitative reasoning skills necessary for future progression in math courses.
- 3. Perform problem solving in prealgebra and its application problems.

## Lecture Content

Module 1: Ratios and Proportions Ratios Rates Proportions Problems Solving with Proportions Module 2: Percent and Applications The Basic of Percent The Percent Proportion The Percent Equation Problem Solving with Percent Consumer Applications: Sale Tax, Tips, Discounts, and Simple Interest Module 3: Measurement Problem-Solving with U.S. Measurement Units The Metric System -- Length The Metric System -- Capacity and Weight Module 4: Understanding Variables and Solving Equations Introduction to Variables Simplifying Expressions Solving Equations Using Addition and Division Solving Equations with Several Steps Module 5: Affective Domains, Study Skills, and Tips for Taking Math Tests

## Method(s) of Instruction

- Enhanced NC Lect (NC1)
- Online Enhanced NC Lect (NC5)
- Live Online Enhanced NC Lect (NC9)
- DE Delayed Enhanced NC Lect (NCD)

## Instructional Techniques

All the methods of instruction use computers, math software, calculator, videos, and PowerPoint Presentations.

## Reading Assignments

Reading a textbook and supplementary OER materials

## Writing Assignments

Observe real-world problems and translate into mathematical notations and symbols. Practice with homework exercises and quizzes.

## Out-of-class Assignments

Reading texts, practicing with homework exercises, and taking online quizzes Written assignments

## Demonstration of Critical Thinking

Apply mathematics concepts, choose specific formulas to solve real world application problems, and explain the reasoning to present the results on the quizzes and final exam. Written assignments include a variety of problems to reinforce the understanding and achievement of all SLOs. Quizzes will be multiple-choice or free-response; content will be from a recent lecture, reading assignment, or homework assignment. Final examination will be free-response, open-ended, show your work for partial credit. Objective Examination may be separate assessment or part of an exam, will cover any of the SLOs. Apply mathematics concepts to solve real world application problems, explain the reasoning, and present the results.

## Required Writing, Problem Solving, Skills Demonstration

Included as homework assignments, classroom discussions, quizzes, and final examination. Students are required to explain solutions and justify reasoning verbally on their writing, that can be included in classroom discussions. Students must select the correct math formulas, follow the order of operations to solve the problems and write out the final solutions through homework assignments, quizzes, or final examination, where students demonstrate their mastery of the learning objectives and their ability to devise, organize and present complete solutions to problems.

## Eligible Disciplines

Mathematics: Master's degree in mathematics or applied mathematics OR bachelor's degree in either of the above AND master's degree in statistics, physics, or mathematics education OR the equivalent. Master's degree required.

## Textbooks Resources

1. Required Marecek, L.; Anthony-Smith, M.; Mathis, A.H. Prealgebra, 2nd ed. Houston: OpenStax Rice University, 2020

## Other Resources

1. OER textbooks, supplementary materials 2. Coastline Library