RARITAN VALLEY COMMUNITY COLLEGE

ACADEMIC COURSE OUTLINE

MATH 070 Number Systems Workshop

I. Basic Course Information

A. Course Number and Title: MATH 070 Number Systems Workshop

B. New or Modified Course: Modified

C. Date of Proposal: Semester: Fall Year: 2023

D. Effective Term: Fall 2024

E. Sponsoring Department: Math and Computer Science

F. Semester Credit Hours**: 1 (no credit)**

G. Weekly Contact Hours**: 1** Lecture**:** 1 Lab**: 0** Out of class student work per week: 2

H. ☐ Prerequisite (s): Appropriate score on placement test
☒ Corequisite (s): each section of this course is linked to a specific single section of MATH 101 Number Systems
☐ Prerequisite (s) and Corequisite (s):

I. Additional Fees**:** None

J. Name and E-Mail Address of Department Chair and Divisional Dean at time of approval**: Lori Austin lori.austin@raritanval.edu; Sarah Imbriglio sarah.imbriglio@raritanval.edu**

II. Catalog Description

MATH 070 Number Systems Workshop is linked to MATH 101 Number Systems and is designed to enhance the course for students who need support in arithmetic and basic algebra. Topics are selected to complement topics taught in Number Systems. These topics include but are not limited to basic operations on rational numbers, order of operations, simplifying algebraic equations, solving algebraic equations, and modeling using algebra.

III. Statement of Course Need

A. Students in non math-intensive majors who currently do not place out of MATH 020 Elementary Algebra formerly were required to complete Elementary Algebra before enrolling in a college level course or take MATH 101R Number Systems with Review which combined Number Systems and Algebra in one course. This course allows students to enroll simultaneously into a Number Systems course while getting the needed enhanced instruction in MATH 070. This course links with a MATH 101 Number Systems course to provide students with appropriate and timely review of arithmetic and basic algebra, allowing them to complete their math requirement in one semester.

B. This course does not have a lab component.

C. This course is not designed for transfer.

IV. Place of Course in College Curriculum

A. This course is not a free elective.
B. This is not a General Education Course.
C. This course does not meet any program requirements.
D. This course does not transfer.

V. Outline of Course Content

A. Arithmetic Skills
    1. Properties of Rational Numbers
    2. Operations on Rational Numbers
    3. Order of Operations
    3. Ratios and Proportions

B. Algebra Skills
    1. Simplifying variable expressions
    2. First-degree equations with one unknown
    3. Inequalities
    4. Formulas
    5. Exponents
    6. Radical Expressions

VI. A. Course Learning Outcomes:

At the completion of the course, students will be able to:

1. Perform arithmetic operations on rational numbers using correct order of operations. (GE-2)
2. Solve problems using proportional reasoning, decimals, percents, measurements, and radicals. (GE- 2)
3. Simplify basic algebraic expressions. (GE-2)
4. Solve first degree algebraic equations and inequalities. (GE-2)
5. Model a situation using algebra. (GE-2)

B. Assessment Instruments

The assessment instruments used in the linked MATH 101 are used for this course, and this instrument(below) is also used:

1. Homework

VII. Grade Determinants

Students will be assigned a Pass/Fail grade for this course that corresponds to the grade in MATH 101 Number Systems. A grade of A through D in Number Systems will correspond to a P and a grade of F in Number systems will correspond to a grade of F.

This course may include the following modes of teaching:

A. lecture/discussion
B. small-group work
C. computer-assisted instruction
D. student collaboration

VIII. Texts and Materials

The text and materials for this course will correspond to those used in MATH 101 Number Systems.

A. Suggested textbook**:** *A Survey of Mathematics with Applications,* current edition, by Angel, Abbott, and Runde.
B. Scientific calculator
C. Pearson MyMathLab

(Please Note: The course outline is intended only as a guide to course content and resources. Do not purchase textbooks based on this outline. The RVCC Bookstore is the sole resource for the most up-to-date information about textbooks.)

IX. Resources

No other resources will be needed.

X. Check One: ☐Honors Course ☐Honors Options ☒ N/A

Definition: According to the Honors Council, an Honors course is one that enriches and challenges students beyond a course's regular scope and curriculum. An Honors course will offer a sophisticated use of research, introduce intellectually stimulating readings and critical perspectives, promote a higher level of critical discussion and written work, and encourage independent study projects, at the option of the instructor.

State how the Honors or Honors Option of this course conforms to this definition. For example: the difference may include additional content, text, materials, assessment instruments, and grade determinants: