

## Administrative Master Syllabus

### Course Information

<b>Course Title</b>	Basic Mathematics for College
<b>Course Prefix, Num. and Title</b>	MATH 0306
<b>Division</b>	Mathematics and Physical Sciences
<b>Department</b>	Mathematics
<b>Course Type</b>	Academic General Education Course (from ACGM, but not WCJC Core)
<b>Course Catalog Description</b>	<p>Topics include fundamental operations on whole numbers, fractions, decimals, and integers; identifying factors of a number; converting between decimals, fractions, and percents; simplifying numerical and algebraic expressions; and an introduction to solving multi-step equations.</p> <p>A minimum grade of “C” is required to pass this course.</p>
<b>Pre-Requisites</b>	TSI Placement
<b>Co-Requisites</b>	none

### Semester Credit Hours

<b>Total Semester Credit Hours (SCH): Lecture Hours:</b>	3:3:0
<b>Lab/Other Hours</b>	
<b>Equated Pay Hours</b>	3
<b>Lab/Other Hours Breakdown: Lab Hours</b>	0
<b>Lab/Other Hours Breakdown: Clinical Hours</b>	0
<b>Lab/Other Hours Breakdown: Practicum Hours</b>	0
<b>Other Hours Breakdown</b>	0

### Approval Signatures

Title	Signature	Date
<b>Department Head:</b>		
<b>Division Chair:</b>		
<b>VPI:</b>		

## **Additional Course Information**

**Topical Outline:** Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, and clinical or other non-lecture instruction).

### Chapter 1 – Whole Numbers

- 1.1 Introduction to Whole Numbers
- 1.2 Addition of Whole Numbers and Perimeter
- 1.3 Subtraction of Whole Numbers
- 1.4 Rounding and Estimating
- 1.5 Multiplication of Whole Numbers and Area
- 1.6 Division of Whole Numbers
- 1.7 Exponents, Square Roots, and the Order of Operations
- 1.8 Problem-Solving Strategies

### Chapter 2 – Fractions and Mixed Numbers: Multiplication and Division

- 2.1 Introduction to Fractions and Mixed Numbers
- 2.2 Prime Numbers and Factorization
- 2.3 Simplifying Fractions to Lowest Terms
- 2.4 Multiplication of Fractions and Applications
- 2.5 Division of Fractions and Applications
- 2.6 Multiplication and Division of Mixed Numbers

### Chapter 3 – Fractions and Mixed Numbers: Addition and Subtraction

- 3.1 Addition and Subtraction of Like Fractions
- 3.2 Least Common Multiple
- 3.3 Addition and Subtraction of Unlike Fractions
- 3.5 Order of Operations and Application of Fractions and Mixed Numbers

### Chapter 4 – Decimals

- 4.1 Decimal Notation and Rounding
- 4.2 Addition and Subtraction of Decimals
- 4.3 Multiplication of Decimals
- 4.4 Division of Decimals
- 4.5 Fractions as Decimals

### Chapter 6 – Percents

- 6.1 Percents and Their Fraction and Decimal Forms
- 6.2 Fractions and Decimals and Their Percent Forms
- 6.5 Applications Involving Sales Tax, Commission Discount, and Markup

### Chapter 10 – Real Numbers

- 10.1 Real Numbers and the Real Number Line
- 10.2 Addition of Real Numbers
- 10.3 Subtraction of Real Numbers
- 10.4 Multiplication and Division of Real Numbers
- 10.5 Order of Operations

Chapter 11 – Solving Equations

11.1 Properties of Real Numbers

11.2 Simplifying Expressions

**Course Learning Outcomes:**

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

1. Add, subtract, multiply, and divide whole numbers.
2. Add, subtract, multiply, and divide fractions.
3. Add, subtract, multiply, and divide decimals.
4. Convert between fractions, decimals, and percents.
5. Add, subtract, multiply, and divide integers.
6. Simplify numerical expressions using the order of operations.
7. Simplify algebraic expressions.
8. Solve multi-step equations.
9. Identify prime numbers, find prime factorization of a number, and identify all factors of a number.

**Methods of Assessment:**

Midterm Exam (Required)

Final Exam (Required)

Other Methods of Assessment:

- Hour Exams
- Homework
- Quizzes
- Short Answer
- Discussion Board
- Participation
- Projects

**Required text(s), optional text(s) and/or materials to be supplied by the student:**

Basic College Mathematics, 3<sup>rd</sup> edition, by Miller, O'Neill, and Hyde. (McGraw Hill Publisher)

Students must have computer access to the WCJC website, their WCJC student email and online accounts. WCJC has open computer labs, with internet access, on all campuses for students to use.

**Suggested Course Maximum:**

20

**List any specific or physical requirements beyond a typical classroom required to teach the course.**

None

**Course Requirements/Grading System:** Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course.

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|---|--------|
| A. Midterm Exam   | 10-20% |
| B. Department Final Exam*   | 10-20% |
| C. Other Course Requirements, such as Homework, Quizzes, Unit Tests | 60-80% |

\*Department Policy – Students must score 60% or above on the Departmental Final Exam in order to pass MATH 0306 Basic Mathematics for College.

- A = 90-100  
B = 80-89  
C = 70-79  
D = 60-69  
F = 59 or below

### Curriculum Checklist:

☒ **Administrative General Education Course** (from ACGM, but not in WCJC Core) – No additional documents needed.

☐ **Administrative WCJC Core Course** – Attach the Core Curriculum Review Forms

- ☐ Critical Thinking
- ☐ Communication
- ☐ Empirical & Quantitative Skills
- ☐ Teamwork
- ☐ Social Responsibility
- ☐ Personal Responsibility

☐ **WECM Course** – If needed, revise the Program SCANS Matrix and Competencies Checklist