Math 10A Mathematics for Elementary School Teachers I

Spring 2021

Course Syllabus

General Information

Instructor

Veronica Andrade

Office

FEM 4A (Currently Only Online due to COVID-19)

Office Hours

Tuesdays and Thursdays 10:00 – 11:50, Wednesdays and Fridays 10:00 – 10:50,

I will connect automatically, click on this link during those times if you would like

to connect: https://cccconfer.zoom.us/j/98747301529

Class Times

We will have one mandatory meeting (an orientation meeting) on 1/11/2021 at 11:00 am. If you complete Unit 0 prior to 1/11/2021 you do NOT have to attend this meeting and you will NOT be penalized.

You have video lessons to guide you through the course (they will be available on CANVAS) you need to watch and take notes when it is convenient for you but before the due dates. You must also complete the assignments in MyMathLab by the due dates. We will not meet regularly but I will be available for you, all you have to do is email me and we can set up a time to meet. Please don't hesitate to email me. I may also contact you from time to time especially if you fall behind2

Email

maria.andrade-romeo@reedleycollege.edu

Tutoring

The math center is available. If you do not have the RC_Math Center on your CANVAS Dashboard (It has a tiger on the cover) please let me know and I will send a request to add you. This is the virtual Math Center and you go there to access tutors Monday-Friday 8:00 AM to 5:00 PM NO APPOINTMENT REQUIRED. Just go to the CANVAS course and you will see a drop-in tutoring schedule, you live tutors only a click away.

Prerequisites

none

Course Description

Math 10A is designed for prospective elementary school teachers. It will study problem solving strategies and skills, number sequences, set theory, ancient numeration systems, number theory, rational and irrational numbers, computation algorithms, and application of mathematics. Emphasis is on comprehension and analysis of mathematical concepts and applications of logical reasoning.

Text and Required Material

1. Beckmann, "Mathematics for Elementary Teachers with Activities" 5th Edition MyMathLab Access Card. The best and cheapest way to purchase the access card is with a credit card through CANVAS.

   You have two options. Option one purchase the MyMathLab Access Card only or Option Two Purchase BOTH the textbook AND the MyMathLab Access Card. In other words, the MyMathLab access card is required and the actual textbook is completely optional (older editions of the textbook are ok because the textbook is not required.

Reasons for which you may be dropped

I may drop students at any time starting on Monday January 11th through Sunday March 14th. Here are the reasons for which you may be dropped:

1. You may be dropped if you have not signed up for MyMathLab by Tuesday January 12th at NOON. You may use the 14-day free trial to sign up. Make sure that you sing up through the CANVAS website. From CANVAS you will go to the Pearson website, but DO NOT go directly to the Pearson website. This means that I will NOT give you a course ID. When you sign up through CANVAS MyMathLab will automatically know what course you need to enroll in.
2. You may be dropped IF YOU HAVE NOT PURCHASED the access code by Wednesday January 27th at NOON.
3. You may be dropped if you have TWO or more consecutive missing assignments at any point within the dropping period.

   NOTE: If you want to drop the class, make sure that you do so on Webadvisor, do not depend on me to drop you.

Important Dates

1/22/2021: Last day to drop for a full refund.
1/29/2021: Census-Last day to add a class or drop a class to avoid a "W"
3/12/2021: Final drop deadline, a letter grade will be assigned after this date
5/12/2021 – Final Exam Due

Grading

Grade	Range
A	90 – 100%
B	80 – 89%
C	70 – 79%
D	60 – 69%
F	0 – 59%

Grade Category	Weight
Tests	70%
Quizzes, Activities	10%
Homework	20%

YOUR GRADE IS THE GRADE ON THE CANVAS GRADEBOOK (NOT THE GRADE IN MYMATHLAB)

Tests and Quizzes

You may not give or receive help for a test or a quiz.

Instruction

I will post the readings and video lessons in CANVAS, please go to the CANVAS homepage and click on the sections to do the readings, watch the videos and take notes. Some of your assignments will also be completed in CANVAS and the majority of the assignments will be completed in MyMathLab. All of the instructions are on CANVAS.

Academic Dishonesty

Cheating is the act or attempted act of taking an examination or performing an assigned, evaluated task in a fraudulent or deceptive manner, such as having improper access to answers, in an attempt to gain an unearned academic advantage. Cheating may include, but is not limited to, copying from another's work, supplying one's work to another, giving or receiving copies of examinations without an instructor's permission, using or displaying notes or devices inappropriate to the conditions of the examination, allowing someone other than the officially enrolled student to represent the student, or failing to disclose research results completely.

Plagiarism is a specific form of cheating: the use of another's words or ideas without identifying them as such or giving credit to the source. Plagiarism may include, but is not limited to, failing to provide complete citations and references for all work that draws on the ideas, words, or work of others, failing to identify the contributors to work done in collaboration, submitting duplicate work to be evaluated in different courses without the knowledge and consent of the instructors involved, or failing to observe computer security systems and software copyrights.
Incidents of cheating and plagiarism may result in any of a variety of sanctions and penalties, which may range from a failing grade on the particular examination, paper, project, or assignment in question to a failing grade in the course, at the discretion of the instructor and depending on the severity and frequency of the incidents.

Students with Disabilities

If you have any special needs addressed by the American Disability Act and need course materials in alternate modes, or alternate testing circumstances, it is your responsibility to notify me as soon as possible. Upon notification, immediate reasonable efforts will be made to accommodate your special needs.

Student Learning Outcomes

Upon completion of this course, students will be able to:

1. Solve multi–step problems using a variety of strategies, including making a table, creating a math

drawing, making a model, using patterns, working backward, guessing and checking, and comparing with previous experience.
2. Perform conversions and arithmetic operations to solve problems using number bases other than base-10.
3. Use greatest common factors and least common multiples in computations with rational numbers, including comparing, graphing, and performing arithmetic operations.

Course Objectives

In the process of completing the course, the student will:

1. Perform calculations with place value systems
2. Evaluate the equivalence of numeric algorithms and explain the advantages and disadvantages of equivalent algorithms in different circumstances
3. Apply algorithms from number theory to determine divisibility in a variety of settings
4. Analyze least common multiples and greatest common divisors and their role in standard algorithms
5. Explain the concept of rational numbers, using both ratio and decimal representations
6. Analyze the arithmetic algorithms for these two representations and justify their equivalence
7. Analyze the structure and properties of whole, rational, and real number systems
8. Define the concept of rational and irrational numbers, including their decimal representation and illustrate the use of a number line representation
9. Develop and reinforce conceptual understanding of mathematical topics through the use of patterns, problem solving, communication, connections, modeling, reasoning, and representation
10. Develop activities implementing curriculum standards

Course Outline

1. Numeration systems: history, Hindu-Arabic numeration system, and place value systems
2. Integers: structure and basic properties, computational algorithms
3. Basic number theory: divisibility, prime and composite numbers, prime factorization, fundamental theorem of arithmetic
4. Least common multiple and greatest common divisor
5. Rational numbers: structure and properties, ratio and proportion
6. Real numbers: structure and basic properties, arithmetic operations, rational and irrational numbers, decimal representation, number line representation
7. Patterns, problem solving, communication, connections, modeling, reasoning, and representation
8. National and state curriculum standards for elementary school math including Common Core State Standards.

Disclaimer

Ms. Andrade-Romeo reserves the right to make changes to the syllabus with whole class notification.