

MATH for K-8 Teachers I COURSE SYLLABUS

Course Information

- a. Number: Math 132
- b. Title: Math for K-8 Teachers
- c. Prerequisite: Appropriate math placement, DVSP 099, or instructor consent
- d. Credits: 5
- e. This course is offered fall quarter MTRF from 2:30 – 3:50
- f. Created: Winter 2014

Personal Information

- a. Instructor: Terry Souhrada
- b. Office: Beaverhead (Piel Qlawqn) Rm 115
- c. Office Hours: 9:30 am – 11:30 am or by appointment
- d. Telephone: 406-275-4764

Required Materials

- a. Text: None
- b. Manipulative Kit
- c. Notebook, pencil, and basic calculator if desired

Description

This course is the first of a three-course math content sequence for future teachers in grades K-8. This course will focus on the mathematical meaning and background of arithmetic, number theory, number systems, and problem solving. Students will experience various pedagogical approaches while investigating the hows and whys of our number system and the associated arithmetic operations with whole number, integers, rational numbers, ratio, and proportional reasoning.

Objectives

1. *General Course Objectives*

Upon completion of this course students will:

- a. be familiar with basic properties of our number system.
- b. understand several approaches to solving problems
- c. accurately carry out rational number operations.
- d. use appropriate tools strategically.

2. *Critical Thinking*

Upon completion of this course students will:

- e. reason quantitatively and abstractly.
- f. successfully identify and apply appropriate problem solving strategies.
- g. analyze and construct mathematical arguments.
- h. reason quantitatively and abstractly.

3. *Cultural*

Upon completion of this course students will:

- i. accept and appreciate a variety of mathematics backgrounds and abilities.
- j. increase understanding of their own strengths and methods through interaction with a diverse group of learners.
- k. quantify and solve problems specifically related to issues on the reservation.

Attendance - Do not miss class!

In order to give yourself the best possible chance to succeed in this class, you need to attend every day. Everything we do builds on previous material, some of which is not presented in the book. If

you must miss a class, let me know ahead of time and then come see me later to discuss the missed material and assignments.

ATTENDANCE POLICY

- IF YOU MISS MORE THAN FIVE CLASSES, YOU WILL BE ADVISED TO DROP.
- IF YOU COME LATE TO CLASS TWICE, IT WILL COUNT AS ONE ABSENCE.

Grading

Your final grade will be determined according to a standard percentage scale (90-100=A, 80-89=B, 70-79=C, 60-69=D, 0-59=F) with points distributed as follows:

a. exercises, problem sets, and group tasks	40%	(1 – 2 per week)
b. journal responses	20%	(1 – 2 per week)
c. short exams	40%	(approx. 4 per quarter)
Total Points	100%	

Course Outline

Week 1 – Number System and Whole Number Addition and Subtraction

Week 2 – Integers and Integer Addition and Subtraction

Week 3 – Whole Number and Integer Multiplication and Division

Week 4 – Other Number Systems

Week 5 – Primes, Composites, GCD, and LCM

Week 6 – Rational Number Operations

Week 7 – Rational Number Problem Solving

Week 8 – Ratios

Week 9 – Ratios and Percentage

Week 10 – Proportional Reasoning

Credit Hours

Following the SKC Credit Hour policy, to meet the identified objectives of this course, this 5-credit course, delivered over a 10-week term will approximate:

5 hours/week classroom instruction

In addition, out-of-class student work will approximate a minimum of 10 hours per week.

Available Help

- (1) If you are struggling or need help with this course, you should first contact the instructor to get support and advice about how you can improve your learning.
- (2) The SEM tutoring lab in room 109 is open every day and staffed with tutors to help you succeed in this course. Please take advantage of this service.
- (3) Reasonable accommodations are provided for eligible students with identified disabilities. The College complies with the Rehabilitation Act of 1973 and the Americans with Disabilities Act. Students may contact the College's Disability Officer, Stanley Fleming (stanley_fleming@skc.edu, 406.275.4968) or consult the SKC web page for Students with Disabilities for more information.

* The faculty reserves the right to change the course syllabus or course content. Students will be provided advanced written notice of any changes.