RATIONAL NUMBERS/DATA FOR TEACHERS
MATH 308 – 001/002 (3 HOURS)
CRN – 38828/39933

Fall 2013 Syllabus

Instructor: Dr. Vivian R. Moody
Office Hours: Tuesday/Thursday, 1:00 – 3:00 PM
Office: COHH 3111
Phone: (270)745-6209 (OFFICE); (270)799-9121 (CELL; you may send a text message to the instructor for a quick response, in most cases.)

E-mail: vivian.moody@wku.edu (Best form of contact)

Course Hours: Section 001, TR, 9:35 – 10:55 AM; Section 002, TR, 11:10 – 12:30 PM

Course Location: COHH 3125

Materials:

Textbook: Billstein, Libeskind, & Lott. (2013). A Problem Solving Approach to Mathematics for Elementary School Teachers, A, 11/E. Note: The textbook will be used as one of the many resources we will have for the class. Therefore, we utilize it partially, but not necessarily completely.

Activities Manual: Dolan, Williamson, & Muri (2013). Mathematics Activities for Elementary School Teachers, A, 11/E. The activities manual accompanies the textbook and will be used during each class period. You are not required to bring your textbook to class, but you ARE REQUIRED to bring your copy of the activities manual each class period.

MyMathLab: Pearson Education Valuepack Access Card. MyMathLab may be used during the course to assess homework and projects.
This course will utilize Blackboard. Course documents, such as the syllabus, handouts, or supplemental materials to the textbook will be posted on Blackboard. The instructor will post announcements, grades, comments, and etc. via Blackboard. You will also submit most of your assignments and assessments via Blackboard. Please contact the Information Technology Helpdesk at 270-745-7000 for more information and questions regarding Blackboard.

This course will utilize the TI-83 and/or TI-84 graphing calculators throughout the semester. The instructor will use the TI-83 and TI-84 graphing calculators during lesson presentations and demonstrations.

You may not share calculators on any exam. Cell phones may not be used as calculators during any type of assessment.

Course Description:
This course focuses on the conceptual development of the rational number system, including operations with and relationships among fractions, decimals, and percent; elementary probability and statistics are also covered. This course is for students in the early grades (K-5), middle grades (5-9) or SPED teacher certification programs only.

Prerequisites:
Completion of the general education math courses, Math 205 and Math 206 with grades of “C” or better are required.

Important Dates:

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<tr>
<th>Event</th>
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<tr>
<td>Classes Begin</td>
<td>Tuesday, August 27, 2013</td>
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<tr>
<td>Fall Break (no classes)</td>
<td>Thursday, October 3, 2013</td>
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<td>Thanksgiving Holiday</td>
<td>Thursday, November 28, 2013</td>
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**Final Exam Schedule**

<table>
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<tr>
<th>Section</th>
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<tr>
<td>Section 001 (9:35 AM)</td>
<td>Thursday, December 12, 2013, 1:00 – 3:00 PM</td>
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<tr>
<td>Section 002 (11:10 AM)</td>
<td>Monday, December 7, 2013, 8:00 – 10:00 AM</td>
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Please Note: In compliance with university policy, students with disabilities who require accommodations (academic adjustments and/or auxiliary aids or services) for this course must contact the Office for Student Disability Services in Downing University Center A-200. The OFSDS telephone number is (270)745-5004; TTY is (270)745-3030. Per university policy, please DO NOT request accommodations directly from the professor or instructor without a letter of accommodation from the Office for Student Disability Services.

Academic dishonesty will not be tolerated. This includes any form of cheating or plagiarism. The policy is found on the web at [http://www.wku.edu/coursecatalog/](http://www.wku.edu/coursecatalog/).

Student Assistance/Tutoring:
Should you require academic assistance with this course, or any other General Education Course, there are several places that can provide help. The Learning Center, located in the Academic Advising and Retention Center, DUC A-330, has tutors in most major undergraduate subjects and course levels throughout the week—they can also direct you to one of many tutoring and assistance Centers across campus. To make an appointment, or request a tutor for a specific class, call (270)745-6254 or stop by DUC A-330. Log on to TLC’s web site at http://www.wku.edu/tlc for tutoring for students at a distance. TLC hours: Monday-Thursday, 8:00am-9:00pm, Friday 8:00am-4:00pm, and Sunday 4:00pm-9:00pm.

Course Design:
This course will be divided into three modules as follows:

Module 1: Fractions (Chapter 6)
This module will focus on the meaning of fractions, computing with fractions, and operations involving fractions.

Module 2: Decimals (Chapters 6 & 7)
This module will focus on the meaning of decimals, the relationship and interconnectedness between decimals and fractions, computing with decimals, and operations involving decimals.

Module 3: Percent and Probability & Data Analysis (Chapters 6, 7, 9, & 10)
This module will focus on the meaning of percent, the meaning of ratios, the relationships and interconnectedness among fractions, decimals, percent, and ratios, computing with percent, and operations involving percent and ratios.

In addition, this module will include determining probabilities, statistical analysis, and representing and interpreting data.

Learning Outcomes:
After the completion of this course, students will be able to:

1) Demonstrate a conceptual understanding of the relationships and interconnectedness among fractions, decimals, percent, and ratios.
2) Recognize and develop multiple representations of equivalent terms, simplest form, rational number properties, denseness property, and ordering of fractions and decimals.
3) Complete computations with fractions and decimals using models and manipulatives.
4) Solve rational number problems in multiple ways.
5) Analyze data for measures of central tendency.
6) Complete calculations for probabilities including simple probability, multi-stage events, with and without replacement, and conditional probability.
7) Graph statistical data in different formats such as categorical and numerical graphs and box-and-whisker plots.
8) Analyze real-world statistical problems and recognize misconceptions in statistics involving graphs and data.
Attendance:

Absenteeism and tardiness are poor qualities for a teacher to possess and indicate that you are not serious about being the best teacher you can be. At this juncture in your college career, the instructor expects you to exhibit behavior that reflects your dedication to the students that you will one day influence with your teaching, behavior, and attitude.

Regular attendance is expected and will be reflected in your participation and professionalism grade. **The instructor will not determine whether an absence is excused or not excused.** All absences will be treated with the same consequences. These are outlined below in the section on Participation and Professionalism.

In the event you must miss a class, **YOU** are responsible for finding out what work you missed during your absence. For any class session you may miss, you will be expected to submit any assignments that were given to the instructor during your absence upon returning to class. **It will be your responsibility to obtain this information from your classmates before returning to class.** Furthermore, students with excessive absences do not normally do as well on tests, assignments, and assessments. **Excessive absences will be reflected in the participation and professionalism grade for this class.** (See below.)

Assessment / Evaluation:
This course will utilize an eight-point grading scale as follows:

**Grading Scale:** 92 – 100% A  84 – 91% B  76 – 83% C  68 – 75% D  0 – 67% F

Final course grades will be calculated as follows:

**Tests (300 POINTS):** There will be 3 module tests. All students will take each of these tests on the scheduled date, and tests will be completed in the allotted time. The only exceptions will be for students that have written permission from the Office of Student Disability Services. You must make a 76% or higher on each module test to pass the class.

**Please note:** There will be no planned make-up tests, and missing a test will result in a grade of zero. Only under the most extenuating circumstances will a make-up test be considered if the instructor is aware of the absence in advance.

**Assignments (450 POINTS):** You will have several different types of assignments during the class (writing assignments, homework, projects, and class-work). The requirements for each will vary and will be communicated at the time the assignment is made. Regularly assigned homework or class-work may be collected at any time. **Late assignments will not be accepted.**

**Participation and Professionalism (200 POINTS):** Students are expected to attend and be prepared for **every** class. Poor attendance, punctuality or poor preparation habits will result in the unsatisfactory completion of this course. Your grade for professionalism will be evaluated on the
following (to name a few): cooperation/participation in lessons; participation in class discussions and group work; attendance; thoughtful reflection; and communication with your peers and the instructor.

**Attendance** will be a key part of the participation and professionalism grade. Each time you miss class, you will be required to get the notes and assignments from another student. **Everyone will be allowed one absence without penalty.** Every day after the first day that you miss a class will result in a deduction of **30 points** from your participation and professionalism grade. **Three tardies will count as one absence.**

**Final Exam (200 POINTS):** A comprehensive final exam will be given at the time designated by the university. A grade of at least 70% must be made on the final to pass this course.

In addition to earning a 76% average to pass the course with a C or better, you must also earn a 76% or higher on all module assessments and a 70% or higher on the final exam. **There will be NO RETAKES of tests and assessments for this class.**

**SUMMARY:**
**In order to pass the course with a grade of C or better you must:**
- Attain a minimum grade of 76% on each of the three module tests,
- Attain a minimum grade of 70% on the final exam, AND
- Attain an overall average of 76% for all work in the class.