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Spring 2-1-2017

M 132.01: Number and Operations for K-8 School Teachers

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Math 132 Number and Operations for K-8 Teachers
MWF 8:00-8:50 am CRN 33868

Semester: Spring 2017
Location: LA 235

Instructor: Bonnie Spence, Office Math 004A
Office hours MWF 9:30-10:30 am, or by appointment
Contact email bonnie.spence@mso.umt.edu, phone 243-4808

Course Description: The study of number and operations for prospective elementary and middle school teachers, including whole numbers, decimals, fractions, percent, integers, operations, numeration systems, and problem solving.

Prerequisites: M 095, M 115, or ALEKS placement ≥ 4

Course Materials: Required Textbook, *Sybilla Beckmann: Mathematics for Elementary Teachers with Activities Plus NEW Skills. 4th edition.* (Pearson, 2014).
with MyMathLab access ISBN 9780321825728

Notebook of choice, pencil, colored pen, calculator

Learning Outcomes: Upon completion of this course, a student will be able to:

- Explain the meanings of whole numbers, integers, fractions, and decimals, as well as representations of those numbers;
- Explain the meanings of operations and the connections between those operations, concepts, and procedures in doing computations (using both standard and nonstandard algorithms), interpreting story problems, and writing story problems;
- Evaluate the efficiency of and use various representations of numbers and operations, as well as their applications to problem solving;
- Employ various modeling strategies to solve problems in real world contexts;
- Recognize some common misconceptions and be able to understand the faulty reasoning behind those misconceptions;
- Explain their reasoning, both verbally and in writing, while solving problems.

Classwork: Class activities are a mix of individual, partner, group and all class participation. Activities with manipulatives and related discussions are difficult to replicate in the case of an absence from class. Deeper learning occurs when students are in attendance to share their explanations and methods of solving problems with each other. Please attend regularly.

Homework: Homework is a mix of online and offline assignments.

Offline assignments may be preparation for the next class, or completion of an activity from a prior class. Not all offline homework will be graded. Assignments are expected to be turned in on time.

Online assignments focus on skills practice. All students are required to activate their MyMath Lab accounts (see attached instructions). Online assignments are assigned weekly and due the following week. All online assignments are graded, thus a student may retry the assignment until 100% is achieved. Students are encouraged to start homework as soon as it opens and seek help when needed through the instructor, other students, or the Math Support Centers on campus.

Due dates for online homework will be posted in MyMath Lab.

| | | |
|---------------------|--|-----|
| Assessments: | Homework (drop 2 lowest scores) | 15% |
| | Quizzes (drop 2 lowest scores) | 15% |
| | Test Chapter 1 and 2 | 20% |
| | Test Chapters 3 and 4 | 20% |
| | Test Chapters 5 and 6 with Final Exam* | 30% |

*The Final Exam will focus on Chapters 5 and 6 along with content from earlier in the course. **The Final exam is scheduled from 10:10-12:10, Thursday, May 11 in LA235.**

Weekly quizzes are given every Friday with the exception of testing weeks. Students must be in attendance to take a quiz. NO MAKEUP QUIZZES are given. Two lowest quiz scores are dropped.

Exam make-ups will ONLY be given under special and extenuating circumstances, such as a death in the family or illness, provided that: a note from the Health Service or doctor is furnished by the student AND permission is obtained from the instructor prior to the exam. The final exam is compulsory and no exceptions can be made about the date/time at which it is held- this date is determined by the University Administration.

Grading Policy: You must earn a C- or better in this course to pass the requirement in the School of Education. You may change to Credit/No Credit up to the last day of the class. Credit will be awarded to students earning a D- or better. However, if you choose this option the grade cannot be counted towards the School of Ed requirement nor the UM graduation requirement.

Letter Grades will be determined using the following scale:
89.5-100 A ; 79.5-89.4 B ; 69.5-79.4 C ; 59.5-69.4 D ; Below 59.5 F
(In each band: lowest two percent = minus, highest three percent = plus)

Support: Math support can be obtained by attending the Math Support Lab in the Math Building and in Mansfield Library, visiting your instructor’s office hours, and by working on homework or studying with classmates. Do not wait until the week of exams to get help. Ask questions regularly both in class and out of class.

Accommodation: The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors and Disability Services for Students (DSS). If you have a disability that adversely affects your academic performance, and you have not already registered with Disability Services, please contact Disability Services in Lommasson 154 or 406.243.2243. I will work with you and Disability Services to provide an appropriate accommodation.

Academic Honesty: All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code. The Code is available for review online at the following web address:
http://life.umt.edu/vpsa/student_conduct.php.

Important Dates:

| Dates | Description |
|-------------------|--|
| January 23, 2017 | Spring classes begin |
| February 10, 2017 | Last day to drop individual Spring classes on CyberBear with refund + no “W” on transcript |
| February 20, 2017 | President’s Day Holiday – no classes, offices closed |
| March 20-24, 2017 | Spring Break – no classes |
| April 3, 2017 | Last day to drop using a Course Drop form with instructor’s & advisor’s signatures. A ‘W’ will appear on the transcript for dropped courses. |
| May 5, 2017 | Last instructional day of Spring-- Last day to drop with instructor, advisor, and Dean’s signatures. A ‘WP’ or ‘WF’ will appear on the transcript for dropped classes. |
| May 8-12, 2017 | Spring Finals Week M132 FINAL 10:10-12:10, Thursday, May 11 |

Acceptable reasons for a late drop are listed in the university catalog and include reasons such as accident, illness, family emergency or a change in work schedule. The following examples are not considered sufficient for a late drop: protecting GPA, forgetting to turn in the change slip, losing financial aid, losing eligibility to engage in sports.

M132 Spring 2017 Schedule

Please note: All MyMath Homework assignment dates will appear in your MyMath Lab account. Homework will always be due on Thursdays by midnight.

| Week | Chapter | Notes |
|---|--------------------|--|
| 1 (1/23) | Chapter 1 | Set up MyMathLab and begin first assignments |
| 2 (1/30) | Chapter 1 | Friday Quiz #1 |
| 3 (2/06) | Chapter 1/2 | Friday Quiz #2 |
| 4 (2/13) | Chapter 2 | Friday Quiz #3 |
| 5 (2/20*) | Chapter 2 | *No class Monday |
| Chapter 1 and 2 Test | | |
| 6 (2/27) | Chapter 3 | Friday Quiz #4 |
| 7 (3/06) | Chapter 3 | Friday Quiz #5 |
| 8 (3/13) | Chapter 4 | Friday Quiz #6 |
| Spring Break | | |
| 9 (3/27) | Chapter 4 | |
| Chapter 3 and 4 Test | | |
| 10 (4/03) | Chapter 5 | Friday Quiz #7 |
| 11 (4/10) | Chapter 5 | Friday Quiz #8 |
| 12 (4/17) | Chapter 6 | Friday Quiz #9 |
| 13 (4/24) | Chapter 6 | Friday Quiz #10 |
| 14 (5/01) | Chapter 6 + Review | |
| | | |
| 05/11 10:10-12:10 Final Exam on Chapters 1-6 | | |