

**Math 132      Number and Operations for K-8 Teachers**

**Fall 2015**

*“There are many questions which fools can ask that wise men cannot answer” – George Polya, mathematician*

**Time:** MWF 10:10 – 11:00

**Place:** LA 235

**Instructor:** Dr. Sriraman

**Office:** Math 301

**Office Hours:** MWF: 9.10-10.00

**Phone & E-mail:** 243-6714; sriramanb@mso.umt.edu

**Pre-Requisite:** Open to elementary ed (or pre-ed) majors only.

**Required Text:** *Sybilla Beckmann: Mathematics for Elementary Teachers with Activities Plus NEW Skills.* Pearson.

**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),
- interpret story problems, and write 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.

Course Agenda: We will cover material from chapters 1-6.

**Important Dates:**

<b>Dates</b>	<b>Description</b>
<b>August 31, 2015</b>	Autumn classes begin
<b>September 7, 2015</b>	Labor Day Holiday – no classes, offices closed
<b>November 11, 2015</b>	Veteran’s Day Holiday – no classes, offices closed
<b>November 25, 2015</b>	Student Travel Day – no classes
<b>November 26 – 27, 2015</b>	Thanksgiving Break – no classes, offices closed
<b>December 14 – 18, 2015</b>	Final Examinations

*For detailed Add/Drop dates and deadlines, refer to the last page of this syllabus*

#### Other Information:

*Academic misconduct* is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. Academic misconduct is defined as all forms of academic dishonesty and the Student Conduct Code. In particular, Student Conduct Code Section IV.a.5 identifies the following violations: Submitting false information: Knowingly submitting false, altered, or invented information, data, quotations, citations, or documentation in connection with an academic exercise

*Students with disabilities* may request reasonable modifications by contacting me. The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students (DSS). “Reasonable” means the University permits no fundamental alterations of academic standards or retroactive modifications. For more information, please consult <http://www.umt.edu/disability>

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#### **Grading Distribution:**

Homework Quizzes:	100
Project:	50
2 Mid-term exams	200
Final exam	150
<b>Total:</b>	<b>500</b>

**Grading Scale:** 90-100 A ; 80-89.9 B ; 70-79.9 C ; 60-69.9 D ; Below 60 F

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 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 Education requirement nor the UM graduation requirement

#### **Endnotes:**

**Homework Quizzes/Labs** There will be homework assigned on a regular basis, which will be reviewed in class on Fridays. Expect to receive 10 “spot” homework quizzes over the course of the semester- These will NOT be announced ahead of time.

**Project:** I will assign a project over Moodle, which will involve “story problems and the teaching of fractions”. Periodically supplementary materials will also be made available on Moodle. Stay tuned for more details.

## **Mid-terms and Final**

Mid-terms 1 and 2 will be given approximately 1/3 and 2/3, respectively, of the way through the semester. The final will be cumulative in the traditional sense. It will be longer than the mid-term exams and will feature some questions relating directly to material taught earlier in the course.

## **SOME “FREE” ADVICE**

### *Factors that affect your grade*

- Homework: There will be homework assigned on a regular basis, which will be reviewed periodically in class. It is your prerogative to keep up with the material.
- Attendance: Students are expected to attend class, and although class attendance is NOT a component of the course grade, absences will impact your performance since you will miss the material covered in the lectures. Late assignments will not be accepted.
- Make-ups:
- **THERE ARE NO MAKE-UPS** regardless of the reason. 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 given by me 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 is decided a priori by the University Administration.

The Final exam is scheduled from 8.00-10.00, Wednesday December 16

Come to class, work hard, participate in the planned activities, and you will do well in this course. Good luck and welcome to 132.

# Autumn 2015 Registration Deadlines

	August 31 – Sept. 9 @ 5pm	September 10 – Sept. 21 @ 5pm	September 22 – November 2 @ 5pm	November 3 – December 11 @ 5pm	December 12 & Beyond
Instructional Days	Day 1 – 7	Day 8 – 15	Day 16 – 45	Day 46 – Last Class Day Before Finals	After Last Regular Class Day
<b>Add a Course</b>	CyberBear	<i>Registration Override (paper or electronic) with instructor signature</i>	<i>Course Add/Change Form<sup>1</sup> with advisor<sup>2</sup> &amp; instructor signatures + \$10.00 fee</i>	<i>Course Add/Change Form<sup>1</sup> with advisor<sup>2</sup> &amp; instructor signatures + \$10.00 fee</i>	Only to fix registration errors (see reg. counter)
<b>Drop a Course<sup>3</sup></b> (see reg. counter to drop all/only course)	CyberBear	CyberBear	<i>Course Drop Form with advisor<sup>2</sup> &amp; instructor signatures + \$10.00 fee (W on transcript)</i>	<i>Course Drop Form with advisor<sup>2</sup>, instructor, &amp; Dean’s signatures + \$10.00 fee (WP or WF on transcript)</i>	Not permitted
<b>Switch Sections</b>	CyberBear	<i>Registration Override (paper or electronic) with instructor signature to add; CyberBear to drop</i>	<i>Course Add/Change Form with both instructors’ signatures</i>	<i>Course Add/Change Form with both instructors’ signatures</i>	Only to fix registration errors (see reg. counter)
<b>Credit/No Credit Grading Option</b> (change to or from)	CyberBear	CyberBear	<i>Course Add/Change Form with advisor<sup>2</sup> &amp; instructor signatures</i>	<i>Course Add/Change Form with advisor<sup>2</sup> &amp; instructor signatures</i>	Not permitted
<b>Adjust Variable Credit Load</b> (variable credit courses only)	CyberBear	CyberBear	<i>Course Add/Change Form with advisor<sup>2</sup> &amp; instructor signatures</i>	<i>Course Add/Change Form with advisor<sup>2</sup> &amp; instructor signatures</i>	Not permitted
<b>Audit (change to or from)</b>	CyberBear (See reg. counter if not allowed online)	CyberBear (See reg. counter if not allowed online)	Not permitted	Not permitted	Not permitted

For assistance or questions about registration deadlines, please call the Office of the Registrar at (406)243-2995 or email [registration@umontana.edu](mailto:registration@umontana.edu).

<sup>1</sup> Starting September 21<sup>st</sup> after 5pm, anyone not successfully registered for at least one credit or is re-registering after cancellation must instead [petition to late register](#).

<sup>2</sup> Advisor’s signature not required for Graduate & Post-Baccalaureate students.

<sup>3</sup> Courses dropped after September 21<sup>st</sup> result in a “W”, “WP”, or “WF” on the student’s transcript, do not generate a refund, and may affect financial aid eligibility. If all courses are dropped, the Semester Withdrawal policy must be followed. **See Business Services for Semester Withdrawal [partial refund eligibility](#) by September 21.**