

## MATH 157 SYLLABUS

<b>DATE:</b>	Fall, 2008
<b>COURSE NUMBER AND TITLE:</b>	MA 157, Foundations of Elementary Math I
<b>CREDIT HOURS:</b>	Three (3)
<b>PREREQUISITE:</b>	Math 108 or satisfactory Compass score
<b>INSTRUCTOR:</b>	Robert E. Yeoman
<b>E-MAIL/TELEPHONE</b>	<a href="mailto:byeoman@lcsc.edu">byeoman@lcsc.edu</a> . 208.792.2295 (message)
<b>TEXT:</b>	<u>Mathematics for Elementary School Teachers</u> , Billstein, Libeskind, Lott; Ninth Edition, 2007.
<b>CLASS MEETING LOCATION:</b>	ADM 201

### PURPOSE:

The course is designed to acquaint students with various mathematical concepts and prepare them to teach these concepts in an elementary school setting.

### COURSE GOALS:

The specific goals for all students are:

1. To become a mathematical problem solver
2. To learn to communicate mathematically
3. To learn to reason mathematically
4. To learn to value mathematics
5. To acquire confidence in his/her ability to do mathematics
6. To promote positive regard to mathematics while reducing anxiety and fear

### COURSE OBJECTIVES

The National Council of Supervisors of Mathematics emphasizes strongly that all students who hope to participate successfully in society must be knowledgeable in the following essential skills:

1. Problem solving
2. Applying mathematics to everyday situations
3. Alertness to reasonableness of result
4. Estimation and approximation
5. Appropriate computation skills
6. Reading, interpreting, and constructing tables, charts, and graphs
7. Mathematical reasoning
8. Algebraic thinking

### COURSE OUTLINE:

- I. Problem Solving
- II. Sets, Whole Numbers, and Functions
- III. Numeration Systems and Whole-Number Computation
- IV. Integers and Number Theory
- V. Rational Numbers as Fractions

### METHODS OF INSTRUCTION and HOMEWORK

Information, techniques, and applications are presented by lecture and discussion with emphasis on student involvement. Homework is fundamental to the learning of mathematics. Time will be reserved each class period for the discussion of homework problems. One cannot learn a skill without regular practice and math is no different. Regular practice is crucial and one will learn best if some time is spent every day working the problems. Do not wait until just before class and rush to try and finish an assignment. Students should not leave a particular homework assignment until they are reasonably certain they understand every problem given. There is an expectation that students work cooperatively on homework with each other or with someone of their choosing. For some students, mathematics brings out their worst fears. Rest assured that support is available. Tutors are available at the Math Lab located in MLH and if you qualify, TRiO Academic Services and Native American/Minority Student Services also offer tutoring help. One method of study that many students find helpful is a group study session. Groups can be arranged in class.

- Homework will generally be graded for completeness.
- Be neat and legible and use a pencil only. Show all important steps for working out each problem and circle your answer.
- Title the paper with your name, the assignment number, the page number, and problems assigned.

## **CLASS POLICIES**

- Late homework will be accepted for 1 week, for half credit.
- Tests may not be made up without prior arrangement. Unannounced quizzes and in-class assignments may be given at any time and cannot be made up.
- Changes to the syllabus, schedule and/or assignments may be announced in class. It is the student's responsibility to be aware of any such changes.
- Chapter exams are administered at the end of each unit. Basic skills tests will be administered approximately once every week or two – some are scheduled on the syllabus while some are not. These will involve number facts, fundamental skills, and problems from previous assignments. Generally, no calculators are allowed on these assessments.
- Students should be familiar with the Lewis-Clark State College Code of Conduct.
- A minimum **final grade penalty of 5 percent** will occur after the third absence/tardy.

## **SOFT SKILLS**

The most valued soft skills that school principals seek from their teachers include communications (both verbal and written), interpersonal, teamwork, problem-solving, time-management, punctuality, and dependability. The same skills apply to this class – most noticeably that attendance is mandatory and that you're prepared to start class on time.

## **ODDS AND ENDS**

Learning to communicate mathematically is essential for everyone but most importantly for an elementary teacher. Youngsters require solid teaching in problem solving strategies, numeracy, and fundamental skills. The National Council of Teachers of Mathematics (NCTM) is also recommending that teaching of pre-algebra skills begin in the primary grades and that 80 percent of all students complete Algebra 1 by the end of 8<sup>th</sup> grade.. This necessitates that prospective teachers possess algebra proficiency. This class is your initial contact regarding many of these competencies.

It is necessary that each student has a scientific calculator available for class and homework. For example, a Texas Instrument Model 30 would be appropriate. However, it is expected that the calculator not be used for number facts and basic skill operations.

On another note, making one's self readily employable after a college degree is one objective for all the hard work. I highly encourage any of you who have found mathematics interesting to pursue a minor in the field. Mathematics teachers are in short supply and the situation is predicted to worsen. Indeed, some school districts are paying large bonuses for qualified math and science teachers. See me for details.

## **METHOD OF EVALUATION:**

The final grade is based on a percentage of total points. These points will come from weighted exams and skills tests (80%), homework, attendance/punctuality (3 without penalty), and the final exam. Grades will be assigned on the following basis: 93 - 100% A, 90 - 92 A-, 86 - 89% B+, 83 - 85 B, 80 - 82% B-, 76 - 79% C+, 73 - 75 C, 70 - 72% C-, 66 - 69% D+, 60 - 65 D.

## **DISABILITY STATEMENT:**

If you need course adaptations or accommodations because of a disability, if you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please make an appointment to talk with me.