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Course Outline for LRNS 119A

LEARNING SKILLS BASIC MATHEMATICS

Effective: Fall 2013

I. CATALOG DESCRIPTION:

LRNS 119A — LEARNING SKILLS BASIC MATHEMATICS — 2.00 units

Assists students with learning related disabilities in the remediation of gaps in their mastery of basic arithmetic algorithms. There will be a review of whole number basic operations with an emphasis on number sense, calculations and solving word problems. Issues with math anxiety will also be addressed.

2.00 Units Lecture

Grading Methods:

Pass/No Pass

Discipline:

	MIN
Lecture Hours:	36.00
Total Hours:	36.00

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: 1

III. PREREQUISITE AND/OR ADVISORY SKILLS:

IV. MEASURABLE OBJECTIVES:

Upon completion of this course, the student should be able to:

- A. Gain a greater confidence for solving math problems while overcoming anxiety
 - 1. Demonstrate mastery of basic mathematic operations which involve whole numbers to include fractions, decimals, percents, ratios and proportions and measurements
 - 2. Demonstrate through written and oral response an understanding of the basic problem-solving steps needed to solve word (situational) problems
 - 3. Define math vocabulary and explain the language of math as it pertains to problem-solving situations
 - 4. Develop a range of study skills to improve math learning, retention of information and needed ability to demonstrate knowledge

V. CONTENT:

- A. Assessment of current level of basic math achievement
 - 1. identify math learning style
 - 2. create of personalized program of study at individual skill level
- B. How to study and learn math
 - 1. importance of practice and repetition for fluency
 - 2. compensating strategies for areas of learning disability
 - 3. identifying sources of help
 - 4. importance of creating study tools
- C. Sources of math anxiety and strategies to compensate
- D. Review of whole numbers, number theory and basic operations
- E. Conceptualization of fractions
 - 1. factors and multiples
 - 2. review of operations with fractions
 - 3. ratios and proportions
- F. order of operations and principles of addition and multiplication
- G. Exponents
- H. Decimals and percents
 - 1. conversions
 - 2. appropriate use of each

VI. METHODS OF INSTRUCTION:

- A. **Demonstration** - Lecture and video presentations on various areas of arithmetic operations
- B. **Individualized Instruction** - Students will conduct self-paced study to be accompanied by individualized instruction from the instructor
- C. **Student Presentations** - Students will be assigned typical word problems and will need to make a formal presentation to the class on following the steps to solve it
- D. **Audio-visual Activity** - Extensive use of math instruction videos will be used so students can be exposed to various styles of instruction and methods of problem-solving

E. Students will work in groups according to skill level and teach and support each other

VII. TYPICAL ASSIGNMENTS:

- A. Take a math learning styles inventory and complete a personal reflection paper identifying top two preferred modalities, corresponding strategies and how they can be applied to two areas of weakness.
- B. Practice homework given to the entire class as each topic area is covered
- C. Prepare a presentation (both visually and orally) that demonstrates to the class the steps followed to de-mystify and solve a word problem
- D. Complete at least 10 hours of self-paced work

VIII. EVALUATION:

A. **Methods**

1. Exams/Tests
2. Quizzes
3. Oral Presentation
4. Class Participation
5. Class Work
6. Home Work
7. Class Performance

B. **Frequency**

1. Quizzes will be every 2-3 weeks as major topics are covered
2. 20-30 minutes of self-paced work in assigned Key Curriculum Press Workbooks
3. One capstone word problem class presentation
4. Two written reflection papers (before and after) where student self-monitors his/her math strategies and study skills.
5. One comprehensive math final

IX. TYPICAL TEXTS:

1. Van Dyke, J., Rogers, J., Adams, H. *Fundamentals of Mathematics*. 10th ed., Cengage Learning, 2011.

X. OTHER MATERIALS REQUIRED OF STUDENTS:

- A. A calculator for basic arithmetic. Colored pencils/pens