

**Course Outline**

**COURSE:** GUID 562                      **DIVISION:** 30                      **ALSO LISTED AS:**  
**TERM EFFECTIVE:** Spring 2018                      **CURRICULUM APPROVAL DATE:** 10/23/2017

**SHORT TITLE:** DIR STUDY LAB PRE ALGEBRA

**LONG TITLE:** Directed Study Lab in Pre-Algebra

Units	Number of Weeks		Contact Hours/Week		Total Contact Hours
1	18	Lecture:	0	Lecture:	0
		Lab:	3	Lab:	54
		Other:	0	Other:	0
		Total:	3	Total:	54

**COURSE DESCRIPTION:**

This course is designed for students who have demonstrated difficulty in mastering basic mathematics or pre-algebra and who are eligible to receive Learning Disability Services. Course content parallels Mathematics 400, 402 AND 411. Material is presented in a concrete, multi-sensory manner, and the lab allows opportunity for immediate practice, questions, repetition, and review. This is a pass/no pass course. **COREQUISITE:** Concurrent enrollment in MATH 400, MATH 402, or MATH 411 is required. **ADVISORY:** Completion of GUID 557 and/or a demonstrated deficit in arithmetic. Recommended for students with verified learning disability.

**PREREQUISITES:**

- Completion of MATH 400, as UG, with a grade of C or better., Concurrent OK
- OR
- Completion of MATH 402, as UG, with a grade of C or better., Concurrent OK
- OR
- Completion of MATH 411, as UG, with a grade of C or better., Concurrent OK

**COREQUISITES:**

**CREDIT STATUS:** C - Credit - Degree Non Applicable

**GRADING MODES**

- P - Pass/No Pass

**REPEATABILITY:** R - Course may be repeated  
 Maximum of 99 times, 100 credit hours

**SCHEDULE TYPES:**

04 - Laboratory/Studio/Activity

**STUDENT LEARNING OUTCOMES:**

1. Perform basic operations with whole numbers, integers, fractions and decimals without the aid of a calculator.

Measure of assessment: In class skill demonstration

Year assessed, or planned year of assessment: 2017

2. Implement critical thinking strategies to solve real-life problems and analyze and evaluate the solution in relation to the problem.

Measure of assessment: In class skill demonstration

Year assessed, or planned year of assessment: 2017

3. Simplify algebraic expressions and solve linear equations involving integers, fractions, decimals, proportions, ratios and percents.

Measure of assessment: In class skill demonstration

Year assessed, or planned year of assessment: 2017

4. Identify and analyze basic geometric shapes and compute their perimeters, areas, and volumes.

Measure of assessment: In class skill demonstration

**CONTENT, STUDENT PERFORMANCE OBJECTIVES, OUT-OF-CLASS ASSIGNMENTS**

Curriculum Approval Date: 10/23/2017

3 Hours

Content: Basic operation with whole numbers

Student Performance Objectives (SPO): Students will be able to add, subtract, divide, and multiply whole numbers.

Out-of-Class Assignments:

3 Hours

Content: Operations with real numbers /integers.

Student Performance Objectives (SPO): Students will be able apply all the operations to both positive and negative numbers

Out-of-Class Assignments:

5 Hours

Content: Order of operations and application problems.

Student Performance Objectives (SPO): Students will be able to evaluate a numerical expression involving integers and solve application problems without a calculator.

Out-of-Class Assignments:

5 Hours

Content: Introduce concept of variable. Simplifying algebraic expressions. Solving basic linear equations.

Student Performance Objectives (SPO): Students will be able to translate English statements into symbolic math expressions, simplify algebraic expressions, and solve basic linear equations w/o calculator. Students will be able solve basic application problems using linear equations.

Out-of-Class Assignments:

4 Hours

Content: Introduction to fractions. Simplifying fractions, Basic Principle of Fractions, improper fractions and mixed numbers. Multiplying and Dividing Fractions.

Student Performance Objectives (SPO): Students will be able to simplify fractions, convert between mixed numbers and improper fractions. Students will multiply and divide fractions.

Out-of-Class Assignments:

5 Hours

Content: Lowest Common Denominators. Adding/subtracting fractions and mixed numbers. Order of operations.

Student Performance Objectives (SPO): Students will be able to find LCD, add and subtract fractions and apply the order of operations to the problems with multiple operations.

Out-of-Class Assignments:

4 Hours

Content: Applying the rules for positive and negative numbers to fractions.

Student Performance Objectives (SPO): Students will be able to add/subtract, multiply/divide positive and negative fractions and mixed numbers.

Out-of-Class Assignments:

4 Hours

Content: Simplifying complex fractions, simplifying algebraic expressions involving fractions, and solving basic linear equations containing fractions.

Student Performance Objectives (SPO): Students will be able to simplify complex fractions and algebraic expressions with fractions and solve the equations and application problems involving fractions.

Out-of-Class Assignments:

4 Hours

Content: Basic operations with decimals. Order of operations. Conversion between decimals and fractions. Equations with decimals.

Student Performance Objectives (SPO): Students will be able to add, subtract, divide, and multiply operations with decimals and convert between decimals and fractions and evaluate the expressions involving decimals and solve basic decimal equations.

Out-of-Class Assignments:

3 Hours

Content: Ratios, Rates, Unit Rates, and Proportions. Application Problems with proportions.

Student Performance Objectives (SPO): Students will be able to simplify a ratio, compute a rate, determine a proportionality and solve an application problem.

Out-of-Class Assignments:

4 Hours

Content:

Percentage. Relation between Fraction and Percent and Decimal and Percent. Solving percent Problems.

Student Performance Objectives (SPO): Students will be able to convert percentage into decimal or fraction/ vice versa and solve applications problems such as sales tax, mark up and discounts.

Out-of-Class Assignments:

4 Hours

Content: Basic concepts from geometry - angles, triangles.

Student Performance Objectives (SPO): Students will be able to identify parallel lines, right angles, obtuse/acute angles and evaluate the perimeters of basic shapes.

Out-of-Class Assignments:

3 Hours

Content: Linear measurement. Measurement of volume and area.

Student Performance Objectives (SPO): Students will be able to convert between English and metric measurement system and to compute an area and volume of basic geometric objects.

Out-of-Class Assignments:

3 Hours

Content: Review for the Final Exam.

Student Performance Objectives (SPO): Students will review the semester context and get prepared for the Final exam.

## **METHODS OF INSTRUCTION:**

Lecture, problem demonstrations, questions and answers, discussion, group problem solving, and practice tests.

**OUT OF CLASS ASSIGNMENTS:**

Required Outside Hours: 3

Assignment Description:

Students will submit learning styles questionnaire, Problem analysis and learning organizer each month.

Students can use the Plato program online and complete assignments outside the lab with assistance.

Students will complete assessment preparation materials prior to exams.

**METHODS OF EVALUATION:**

Problem-solving assignments

Percent of total grade: 95.00 %

Percent range of total grade: 95 % to 100 % Homework Problems; Quizzes; Exams; Other: class attendance

Objective examinations

Percent of total grade: 0.00 %

Percent range of total grade: 0 % to 5 % Completion

**REPRESENTATIVE TEXTBOOKS:**

n/a

**ARTICULATION and CERTIFICATE INFORMATION**

Associate Degree:

CSU GE:

IGETC:

CSU TRANSFER:

Not Transferable

UC TRANSFER:

Not Transferable

**SUPPLEMENTAL DATA:**

Basic Skills: B

Classification: Y

Noncredit Category: Y

Cooperative Education:

Program Status: 2 Stand-alone

Special Class Status: S

CAN:

CAN Sequence:

CSU Crosswalk Course Department:

CSU Crosswalk Course Number:

Prior to College Level: C

Non Credit Enhanced Funding: N

Funding Agency Code: Y

In-Service: N

Occupational Course: E

Maximum Hours: 1

Minimum Hours: 1

Course Control Number: CCC000326477

Sports/Physical Education Course: N

Taxonomy of Program: 170200