Course Outline

COURSE: MATH 415  DIVISION: 10  ALSO LISTED AS:

TERM EFFECTIVE: Spring 2017  CURRICULUM APPROVAL DATE: 03/28/2016

SHORT TITLE: MATH IMMERSION REVIEW ALGEBRA

LONG TITLE: Math Immersion Review - Algebraic Concepts

<table>
<thead>
<tr>
<th>Units</th>
<th>Number of Weeks</th>
<th>Type</th>
<th>Contact Hours/Week</th>
<th>Total Contact Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 TO 3</td>
<td>18</td>
<td>Lecture</td>
<td>1 TO 3</td>
<td>18 TO 54</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>1 TO 3</td>
<td>18 TO 54</td>
</tr>
</tbody>
</table>

COURSE DESCRIPTION:

A remedial mathematics course designed for those students who need to learn, or re-learn the fundamental concepts of math. The primary emphasis is on algebraic expressions, linear/quadratic equations and applications, polynomials, graphing, and functions. This is a pass/no pass course. Units earned in this course do not count toward the associate degree and/or certain certificate requirements. This class is an intense preparation for Math 240, Math 242, Math 8A.

PREREQUISITES:

COREQUISITES:

CREDIT STATUS: C - Credit - Degree Non Applicable

GRADING MODES

P - Pass/No Pass

REPEATABILITY: N - Course may not be repeated

SCHEDULE TYPES:

02 - Lecture and/or discussion

STUDENT LEARNING OUTCOMES:

1. Identify and analyze functions and find their domains and ranges.

Measure: Homework assignment, exam

PLO:

4/12/2016 1
2. Analyze and solve linear equations in one and two variables

Measure: HW, exam
PLO:
ILO: 1,2,3
GE-LO:
Year assessed or anticipated year of assessment: Spring 2019

3. Solve a variety of problems involving applications of linear and quadratic functions

Measure: Homework assignment, exam
PLO:
ILO: 2,1
GE-LO:
Year assessed or anticipated year of assessment: Spring 2019

4. Identify and solve quadratic equations.

Measure: class report, exam
PLO:
ILO: 2,7
GE-LO:
Year assessed or anticipated year of assessment: Spring 2019

5. Graph linear and non-linear relations and utilize the graph in problem solving.

Measure: Exams, quizzes, HW assignment and group class work
PLO:
ILO: 2,4,7
GE-LO:
Year assessed or anticipated year of assessment: Spring 2019

CONTENT, STUDENT PERFORMANCE OBJECTIVES, OUT-OF-CLASS ASSIGNMENTS
Curriculum Approval Date: 03/28/2016
1 Unit Class:
5 Hours
Content: Solving linear equations and formulas.
Student Performance Objectives (SPO): Students will be able to evaluate formulas, solve a wide variety of linear equations.
Out-of-Class Assignments: Homework assignment: practice handouts for solving formulas and equations.
5 Hours
Content: Cartesian coordinate system, graphing linear and non-linear relations.
Student Performance Objectives (SPO): Students will be able to plot points, given the equation to graph the relation.
Out-of-Class Assignments: Homework assignment: extensive practice in graphing.
8 Hours
Content: Slopes, intercepts, equations of a line, applications + final test
Student Performance Objectives (SPO): Students will be able to find the equation of a line, solve application problems.
Out-of-Class Assignments: Homework assignment: establishing the equations of the line given a. slope and y-intercept, b. point and slope, c. two points, and d. other types of information about the line. Project: solving real life problems using the linear model.
2 Unit Class:
Covers all the topics of 1 unit class plus:
8 Hours
Content: Functions, inverse functions, domains and ranges of the relations, inverse functions, compositions of the functions.
Student Performance Objectives (SPO): Students will be able to identify the function, find the domain and the range, given two functions f and g, find f+g, f-g, and fg as well as composite functions.
Out-of-Class Assignments: Homework assignment: operations with functions and functional notation.
8 Hours
Content: Solving systems of equations in two and three variables and applications
Student Performance Objectives (SPO): Students will be able to solve systems of equations using graphing, substitution, and elimination, and solve application problems involving systems of equations.
Out-of-Class Assignments: Homework assignment: solving real life problems involving the systems of equations
2 hours
Final Exam
3 Unit Class
Covers all the topics of 2 Unit class plus:
5 Hours
Content: Operations with polynomials.
Student Performance Objectives (SPO): Students will be able to add, subtract, divide, and multiply polynomials.
Out-of-Class Assignments: Homework assignment: multiplying and dividing polynomials
6 Hours
Content: Factoring Polynomials.
Student Performance Objectives (SPO): Students will be able to factor any polynomial using grouping, special products, factoring out the common factor.
Out-of-Class Assignments: Homework assignment: factoring polynomials.
7 Hours
Content: Solving polynomial equations and applications involving polynomial equations
Student Performance Objectives (SPO): Students will be able to solve polynomial equations by factoring and by using the quadratic formula and applications involving polynomials
Out-of-Class Assignments: Homework assignment: applying quadratic formula for solving the equations and applications.

METHODS OF INSTRUCTION:
Lectures, group work

METHODS OF EVALUATION:
CATEGORY 1 - The types of writing assignments required:
Percent range of total grade: 0 % to %
CATEGORY 2 - The problem-solving assignments required:
Percent range of total grade:  90 % to 100 %
Homework problems
Exams

CATEGORY 3 - The types of skill demonstrations required:
Percent range of total grade:   % to   %

CATEGORY 4 - The types of objective examinations used in the course:
Percent range of total grade:  0 % to 10 %
Multiple Choice
True/False
Matching Items
Completion

REPRESENTATIVE TEXTBOOKS:
Required:
ALial Hornsby, Beginning and Intermediate Algebra, Addison Wesley, 2015, or other appropriate college level text.
Reading level of text, Grade: 12th    Verified by: Ken Wagman
Other textbooks or materials to be purchased by the student: none

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: N
CAN:
CAN Sequence:
CSU Crosswalk Course Department:
CSU Crosswalk Course Number:
Prior to College Level: B
Non Credit Enhanced Funding: N
Funding Agency Code: Y
In-Service: N
Occupational Course: E
Maximum Hours: 3

4/12/2016
Minimum Hours: 1
Course Control Number: CCC000532285
Sports/Physical Education Course: N
Taxonomy of Program: 170100