# COURSE SYLLABUS

## Course Title:
Number Systems

## Department:
Mathematics & Science

## Curriculum:
Mathematics

## Date submitted:
Spring 2014 (AAC: 17-25)

## Course Code:
MAT*141

## Prerequisites:
C- or better in Intermediate Algebra (MAT*137), Intermediate Algebra for Liberal Arts (MAT*137L), OR Elementary Algebra/Intermediate Algebra Combined (MAT*139), OR appropriate placement test score

## Elective Type:
G/LAS/M

## Corequisites:
None

## Other Requirements:
None

## Course Descriptors:
Make certain that the course descriptors are consistent with college and Board of Trustees policies, and the current course numbering system.

## Course Code:
(eg. ACC 101)

## Course Type:
L

## Credit Hours:
3

## Developmental:
No

## Lecture:
3

## Clinical:
0

## Lab:
0

## Studio:
0

## Other:
0

## TOTAL:
3

## Class Maximum:
30

## Semesters Offered:
F/Sp/Su

## Course Type:

### Catalog Course Description:
Nature of Mathematics and theory of sets and logic are studied. Starting with natural numbers, the number system is extended by analysis of its properties to integers, rationals, reals and complex numbers. Various numeration systems are investigated. This course is recommended for students in Early Childhood, Elementary or Middle School Education Programs.

### Topical Outline:
- 1. Sets
- 2. Logic
- 3. Metric system
- 4. Mathematical Systems
- 5. Systems of Numeration
- 6. Sets of numbers and their structure

### Outcomes:
Describe measurable skills or knowledge that students should be able to

#### COURSE:
At the successful completion of this course, the student will demonstrate the following abilities:
1. define or describe the terms of set theory
### PROGRAM:
Does not apply

### GENERAL EDUCATION:

7. Quantitative Reasoning - Students will learn to recognize, understand, and use the quantitative elements they encounter in various aspects of their lives. Students will develop a habit of mind that uses quantitative skills to solve problems and make informed decisions.

**Demonstrates:** Interprets numerical information and applies sufficient laws of logic and mathematics to solve problems using numbers, symbols, graphs and/or descriptions.

**Does Not Demonstrate:** Misinterprets numerical information or insufficiently applies laws of logic and mathematics to solve problems using numbers, symbols, graphs and/or descriptions.

### Evaluation:
List how the above outcomes will be assessed.

**Assessment will be based on the following criteria:**
- Quizzes
- Exams
- Projects and group work

### Instructional Resources:
List library (e.g. books, journals, on-line resources), technological (e.g. Smartboard, software), and other resources (e.g. equipment, supplies, facilities) required and desired to teach this course.

**Required:** Classrooms with sufficient seating and board space

Classroom manipulatives related to K-8 Mathematics

**Desired:** Storage cabinet for the manipulatives

### Textbook(s):

**Mathematical Reasoning for Elementary Teachers, 5th edition by Long/DeTemple/Millman**