Fond du Lac Tribal and Community College
COURSE OUTLINE FORM

Updated 11/25/14

Please return this form to the college vice president of academic affairs and the chairperson of the Academic Affairs and Standards Council (AASC)

1. Prepared by:

2. Date submitted:

3. Date approved: ___Fall 1997___ Date revised ___05/13/15___

4. Department/discipline: ___Mathematics___

5. Department(s) endorsement(s):
(Signatures of the person(s) providing the endorsement are required.)

6. Course Title: ___College Algebra___
Abbreviated course title (25 characters or less):

7. Course Designator: ___MATH___   8. Course Level: 1010

9. Number of Credits: Lecture ___3___   Lab ___

10. Control Number (on site) ___35___   Control Number (online) ___

11. Catalog/Course description:

 The real numbers, first degree equations and inequalities with word problem applications and linear graphs. Second degree equations and inequalities in one and two variables with the quadratic formula and graphs. Relations, functions, absolute value, and variation. Exponential and logarithmic functions with applications. Polynomial equations and complex numbers. Systems of equations and inequalities. (Prerequisite: MATH 0030 OR placement by Accuplacer OR permission of instructor) (Meets MnTC goal area 4). (Prerequisite: MATH 0030 or placement by Accuplacer or permission of instructor)

12. Course prerequisite(s) or co-requisite(s): Accuplacer scores/ Other courses
 Prerequisite(s): MATH 0030 Higher Algebra or placement by Accuplacer OR permission of instructor
 Co-requisite:

13. **Course Materials** (Recommended course materials and resources. List all that apply, e.g. textbooks, workbooks, study guides, lab manuals, videos, guest lecturers).

 Textbook: A wide variety of college textbooks are available, one example would be College Algebra by Lia/Hornsby Schneider or College Algebra by Aufmann/Barker/Nation

 Graphing Calculator

14. **Course Content** (Provide an outline of major topics covered in course)

 1. Review of real numbers and basic set theory.
 2. Review of linear and quadratic equations and graphing.
 3. Review of functions, especially composition.
 4. Theory of polynomials including the fundamental theorem of algebra.

5. Conic sections in basic forms.
6. Exponential and logarithmic functions.
7. Linear systems and matrix algebra.
8. Series and sequences, recursion, arithmetic and geometric series, binomial theorem

15. **Learning Goals, Outcomes, and Assessment**
    At FDLTCC we have 4 Competencies Across the Curriculum (CAC) areas. They are as follows:

    A. Information Literacy (the ability to use print and/or non-print tools effectively for the discovery, acquisition, and evaluation of information)
    B. Ability to Communicate (the ability to listen, read, comprehend, and/or deliver information in a variety of formats.)
    C. Problem Solving (the ability to conceptualize, apply, analyze, synthesize, and/or evaluate information to formulate and solve problems.)
    D. Culture (knowledge of Anishinaabe traditions and culture, knowledge of one's own traditions and culture, knowledge of others' traditions and cultures, culture of work, culture of academic disciplines and/or respect for global diversity.)

Course Learning Outcomes will fulfill the identified competencies.

Course Learning Outcomes

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

1. Determine and describe the domain and range of functions as sets.
2. Solve applications by modeling with linear, quadratic, polynomial, logarithmic and exponential functions.
3. Analyze and graph linear, quadratic, polynomial, logarithmic and exponential functions.
4. Convert between geometric descriptions and standard quadratic forms of conic sections.
5. Solve systems of equations by a variety of methods.

16. **Minnesota Transfer Curriculum (MnTC):** If this course fulfills an MnTC goal area, state the goal area and list the goals and outcomes below:

See www.mntransfer.org

Goal Area(s): 4

Goal 4: Mathematical/Logical Reasoning