Fond du Lac Tribal and Community College
COURSE OUTLINE FORM

Updated 9/23/14

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: ______________ Date revised __09/23/14__

4. Department/discipline: ________________________________

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

6. Course Title: __Beginning Algebra__
Abbreviated course title (25 characters or less): ______________________

7. Course Designator: __MATH 0020__ 8. Course Level: __1XXX__ 9. __2XXX__

10. Number of Credits: Lecture ___3___ Lab ______

11. Control Number (on site) ___30___ Control Number (online)_______

12. Catalog/Course description:
Beginning Algebra applies algebra and geometry to problem solving. Featured topics are problem modeling, linear programming, plane coordinate geometry, solid geometry, and appropriate computational methods. A review of basic topics is included: operations with real numbers and rational expressions, linear equations, systems of linear equations, geometry, set theory and logic, and operations with polynomials. (Prerequisite: MATH 0010 OR placement OR instructor permission).

13. Course prerequisite(s) or co-requisite(s): Accuplacer scores/ Other courses
Prerequisite(s): MATH 0010 Math Concepts OR placement OR instructor permission.
Co-requisite:

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

1) Textbook: One suitable textbook is Algebra: Introductory & Intermediate, Aufmann/Barker/Lockwood

2) scientific calculator

3) Web browser access to online course materials.

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

1. Sets, Boolean logic, and computational methods
2. Variable expressions and coordinate geometry
3. Linear equations & Inequalities, modeling, and graphing
4. Plane and solid geometry
5. Systems of linear equations & inequalities, linear programming
6. Functions and polynomials

16. 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, students will be able to:

1. Solve linear equations and inequalities, then express solutions in set form as well as visually on the real number line. (C)
2. Manipulate elementary literal equations (for example, PV=nRT) to solve for any variable, and evaluate expressions using numerical methods. (C)
3. Model and solve applied problems using linear equations. (C)
4. Solve geometric problems involving area and volume with units. (C)
5. Prove theorems by visual and algebraic arguments. For example, prove the Pythagorean theorem. (C)
6. Solve systems of linear equations using substitution, elimination, and Cramer’s rule. (C)
7. Model and solve applied problems using systems of linear equations, and illustrate solutions by graphing. (C)
8. Illustrate solutions to systems of linear inequalities with graphs showing vertices of the solutions set. (C)
9. Model and solve linear programming problems with 2 variables. (C)
10. Perform polynomial arithmetic and demonstrate the specific link between polynomials and the decimal number system. (C)

17. 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):__________
Goal and Outcomes: