

Fond du Lac Tribal and Community College
COURSE OUTLINE FORM

03/19/19

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 03/09/2021

4. Department/discipline: Mathematics

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

6. Course Title: Beginning Algebra
Abbreviated course title for Transcripts (25 characters or less): _____

7. Course Designator: MATH 8. Course Level: 0020

9. Number of Credits: Lecture 3 Lab _____

10. Control Number (on site) 30 Control Number (online) _____

11. Catalog/Course description:

Beginning Algebra applies algebra and geometry to problem solving. Featured topics are problem modeling, linear programming, plane coordinate 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, and operations with polynomials. (Prerequisite: MATH 0010 Or placement Or instructor permission).

12. Course prerequisite(s) or co-requisite(s): Accuplacer scores/ Other courses

Prerequisite(s): MATH 0010 Math Concepts Or placement Or instructor permission
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).

- 1) Textbook: One suitable textbook is Algebra: Introductory & Intermediate, Aufmann/Barker/Lockwood
- 2) scientific calculator
- 3) Web browser access to online course materials

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

1. Préalgebra review of integers, fractions, decimals, and percents
2. Variable expressions
3. Coordinate geometry
4. Linear equations & Inequalities, modeling, and graphing
5. Plane and applied geometry

- 6. Systems of linear equations & inequalities
- 7. Functions and polynomials

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.)

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

Learning Outcomes	Possible topics to support these outcomes may include (but are not limited to) the following:	Competencies (CAC)	Cultural Standards
Solve authentic, multistep problems in a variety of contexts by applying two or more mathematical strategies or concepts.	<ul style="list-style-type: none"> • Proportional relationships and percentages • Linear models and applications • Problem-solving strategies 	C	1
Interpret and communicate quantitative information, quantitative relationships, and mathematical concepts using appropriate mathematical language for the context.	<ul style="list-style-type: none"> • Fractions, decimals, integers • Developing number sense • Linear models and applications • Rates of change/slope • Proportional relationships and percentages 	B, C	
Support answers by providing appropriate mathematical justifications.		B, C	4
Assess the reasonableness of solutions.	<ul style="list-style-type: none"> • Estimation and prediction • Use technology 	C	

Evaluate expressions involving real numbers.	<ul style="list-style-type: none"> Evaluate algebraic expressions for given value(s) Order of operations Rational number operations 	C	
Formulate algebraic representations necessary to model problems.	<ul style="list-style-type: none"> Proportional relationships and percentages Linear models and applications 	C	
Simplify and manipulate algebraic expressions and equations.	<ul style="list-style-type: none"> Algebraic properties Polynomial operations 	C	
Solve linear equations and inequalities in one variable.		C	
Translate among verbal, numeric, symbolic, and graphical forms of mathematics.		C	2
Apply appropriate formulas to solve problems.	<ul style="list-style-type: none"> Applications of geometry Percentages 	C	
Create graphical representations of quantitative information and equations.	<ul style="list-style-type: none"> Graph points and linear equations Use technology when appropriate 	B, C	
Interpret graphs and data displays.	<ul style="list-style-type: none"> Rates of change Key graph features Use technology when appropriate for a given context. 	B, C	

WINHEC Cultural Standards:

- 1. GIKENDAASOWIN – *Knowing knowledge:*** To develop human beings who value knowledge, learning, and critical thinking and are able to effectively use the language, knowledge, and skills central to an Ojibwe-Anishinaabe way of knowing.
- 2. GWAYAKWAADIZIWIN – *Living a balanced way:*** To develop balanced human beings who are reflective, informed learners who understand the interrelatedness of human society and the natural environment, recognize the importance of living in harmony with creation, and are able to apply a systems approach to understanding and deciding on a course of action.
- 3. ZOONGIDE'EWIN – *Strong hearted:*** To increase the students' capacity to live and walk with a strong heart, humble and open to new ideas and courageous enough to confront the accepted truths of history and society.
- 4. AANGWAAMIZIWIN – *Diligence and caution:*** To develop students' capacity to proceed carefully, after identifying, discussing, and reflecting on the logical and ethical dimensions of political, social, and personal life.

- 5. **DEBWEWIN – *Honesty and integrity***: To increase students’ capacity to think and act with honesty and integrity as they understand and face the realities of increasingly interdependent nations and people.
 - 6. **ZAAGI' IDIWIN – *Loving and Caring***: To encourage students' acceptance of the diversity within their school, community, and environment by developing healthy, caring relationships built on respect for all.
 - 7. **ZHAWENINDIWIN – *Compassion***: To expand students' knowledge of the human condition and human cultures and the importance of compassion especially in relation to behavior, ideas, and values expressed in the works of human imagination and thought.
16. **Minnesota Transfer Curriculum (MnTC)**: List which goal area(s) – up to two – this course fulfills.

See www.mntransfer.org

Goal Area(s): _____

Provide the specific learning outcomes as listed on the mntransfer.org website that pertain to this course.

17. Are there any additional licensing/certification requirements involved?
 _____ Yes No

Provide the required documentation to show course meets required licensing/certification standards.

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