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: ___________________ Date revised: 2/15/2015

4. Department/discipline: Mathematics

5. Department(s) endorsement(s): __________________________________

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

6. Course Title: Math Concepts

   Abbreviated course title (25 characters or less):

7. Course Designator: MATH

8. Course Level: 0010

9. Number of Credits: Lecture: 3  Lab: 0

10. Control Number (on site):  20
    Control Number (online):  0

11. Catalog/Course description:

    In-depth study of basic mathematics and pre-algebra skills. Topics include operations and principles using whole numbers, fractions, decimals, percent’s, and integers; solutions of first degree equations; exponents, applications and graphing.

12. Course prerequisite(s) or co-requisite(s):

    Prerequisite(s): None
    Co-requisite: None

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

    2. Scientific calculator. A graphing calculator may be useful for future courses,
but it is not used in this course.

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

1. Whole Numbers
   a. Operations
   b. Exponents
   c. Prime Numbers
   d. Application Problems
2. Fractions
   a. Least Common Multiple/Greatest Common Factor
   b. Operations
   c. Exponents
   d. Conversion
   e. Application Problems
3. Decimals
   a. Operations
   b. Conversion/Comparison
   c. Application Problems
4. Ratio & Proportion
5. Percents
   a. Conversion
   b. Equations
   c. Application Problems
6. Rational Numbers
   a. Operations
   b. Absolute Value
   c. Application Problems
7. Pre-Algebra Topics
   a. Variable Expressions
   b. Equations
   c. Translating Verbal to Mathematical Expressions
   d. Application Problems
   e. Exponents

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, students will be able to:

1. Identify and use key terms, symbols, and properties of numbers. (B,C)
2. Apply, analyze, and evaluate information to solve problems using basic skills and operations with the real number system. (C)
3. Translate and solve application problems applying basic mathematics skills. (A,B,C)
4. Identify formulas and use equation solving process. (A, B,C)

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](http://www.mntransfer.org)

Goal Area(s): N/A

Goal and Outcomes:
   Goal: N/A
   Outcome:
Complete the following only if you are proposing a new course:

1. Planned pattern of offering:
2. Rationale for course: If this course is an ADDITION or replacement to current offerings, add a detailed explanation of the necessity for the change.
3. Does this course overlap with any course(s) offered at FDLTCC? If so, justify such duplication or indicate other adjustments to be made. Obtain signatures from affected departments.
4. What is the apparent or expressed student need for this course?
5. If this course includes a Native American or specifically Anishinaabe component list campus resource person/s—i.e., campus cultural/spiritual resource person/s and, if necessary, elder/s—consulted and include specific comments and written responses as appropriate.
6. Are there any additional licensing/certification requirements involved?
   a. Provide a copy of the required licensing/certification standards to the AASC chair and to the vice president of academic affairs.
   b. Attach the required documentation to show course meets required licensing/certification standards.
7. What types of tutoring will be made available through the CAA to students taking this course?
8. How will the course be evaluated?
9. Special resources—e.g. faculty, space, equipment, library, etc
10. Special course fees:
11. Relationship of course to the college mission statement and goals.
12. Relationship of course to the department’s mission statement and goals.
13. Relationship of course to colleges/university offerings (include tribal colleges).

<table>
<thead>
<tr>
<th>College or University</th>
<th>Course Number &amp; Title</th>
<th>Credits Awarded</th>
<th>General Education</th>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hibbing CC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Itasca CC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mesabi CC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lake Superior</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leech Lake</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCO CC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bemidji State University</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College of St. Scholastica</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Minnesota - Duluth</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Wisconsin - Superior</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Tribal College</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEsOther</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>