

Washtenaw Community College Comprehensive Report

MTH 034 Foundations of Numeracy

Effective Term: Winter 2015

Course Cover

Division: Math, Science and Health

Department: Mathematics

Discipline: Mathematics

Course Number: 034

Org Number: 12200

Full Course Title: Foundations of Numeracy

Transcript Title: Foundations of Numeracy

Is Consultation with other department(s) required: No

Publish in the Following: College Catalog , Time Schedule , Web Page

Reason for Submission: Course Change

Change Information:

Course description

Outcomes/Assessment

Rationale: Outcome 4 will be removed. This outcome is not connected to the rest of the course curriculum and more time is needed within the course to focus on fractions and rounding methods. Outcome 5 will also be removed since Mth034 is now paired with ACS101 and study skills are covered in that course.

Proposed Start Semester: Winter 2015

Course Description: In this first course in the developmental math sequence, students will develop their number sense and master the four basic operations. Topics of this course include addition, subtraction, multiplication, and division of whole numbers, integers, decimals, fractions. Other topics include rounding, prime numbers, factorization, and inequalities. Students who complete this course with a "C" or better are eligible to enroll in MTH 067.

Course Credit Hours

Variable hours: No

Credits: 4

Lecture Hours: Instructor: 60 Student: 60

Lab: Instructor: 0 Student: 0

Clinical: Instructor: 0 Student: 0

Total Contact Hours: Instructor: 60 Student: 60

Repeatable for Credit: NO

Grading Methods: Letter Grades

Audit

Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

Reduced Reading/Writing Scores

College-Level Math

No Level Required

Requisites

Prerequisite

Academic Reading Level 4

and

Prerequisite

no minimum writing level

and

Prerequisite

Academic Math Level 0, no higher than level 1

Corequisite

ACS 101

General Education

Degree Attributes

Below College Level Pre-Reqs

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Calculate mentally, problems involving addition, subtraction, multiplication, and division (without remainder), of one digit-by-one digit whole numbers and integers from the 0 through 9 tables.

Assessment 1

Assessment Tool: common final exam

Assessment Date: Fall 2014

Assessment Cycle: Every Three Years

Course section(s)/other population: All sections

Number students to be assessed: Random sample of a minimum of 30 students

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: At least 75% of students sampled will score at the 100% level.

Who will score and analyze the data: A member of the math faculty will be chosen to blind-score the tests.

2. Calculate problems involving addition, subtraction, multiplication, and division of whole numbers, integers, fractions, and decimals.

Assessment 1

Assessment Tool: common final exam

Assessment Date: Fall 2014

Assessment Cycle: Every Three Years

Course section(s)/other population: All sections

Number students to be assessed: Random sample of a minimum of 30 students

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: At least 75% of students sampled will score at the 100% level.

Who will score and analyze the data: A member of the math faculty will be chosen to blind-score the tests.

3. Identify inequalities involving whole numbers, integers, and fractions.

Assessment 1

Assessment Tool: common final exam

Assessment Date: Fall 2014

Assessment Cycle: Every Three Years

Course section(s)/other population: All sections

Number students to be assessed: Random sample of a minimum of 30 students

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: At least 75% of students

sampled will score at the 100% level.

Who will score and analyze the data: A member of the math faculty will be chosen to blind-score the tests.

Course Objectives

1. Master 0 through 9 addition tables (100% proficiency).

Matched Outcomes

1. Calculate mentally, problems involving addition, subtraction, multiplication, and division (without remainder), of one digit-by-one digit whole numbers and integers from the 0 through 9 tables.

2. Master 0 through 9 subtraction tables (100% proficiency).

Matched Outcomes

1. Calculate mentally, problems involving addition, subtraction, multiplication, and division (without remainder), of one digit-by-one digit whole numbers and integers from the 0 through 9 tables.

3. Master 0 through 9 multiplication tables (100% proficiency).

Matched Outcomes

1. Calculate mentally, problems involving addition, subtraction, multiplication, and division (without remainder), of one digit-by-one digit whole numbers and integers from the 0 through 9 tables.

4. Master division tables involving reversing the 0 through 9 multiplication table (100% proficiency).

Matched Outcomes

1. Calculate mentally, problems involving addition, subtraction, multiplication, and division (without remainder), of one digit-by-one digit whole numbers and integers from the 0 through 9 tables.

5. Calculate problems involving addition of whole numbers, integers, fractions, mixed numbers, and decimals by hand, and use rounding to estimate answers.

Matched Outcomes

6. Calculate problems involving subtraction of whole numbers, integers, fractions, mixed numbers, and decimals by hand, and use rounding to estimate answers.

Matched Outcomes

7. Calculate problems involving multiplication of whole numbers, integers, fractions, mixed numbers, and decimals by hand, and use rounding to estimate answers.

Matched Outcomes

8. Calculate problems involving division of whole numbers, integers, fractions, mixed numbers, and decimals by hand, and use rounding to estimate answers.

Matched Outcomes

9. Determine whether a number is prime or composite.

Matched Outcomes

10. Find the prime factorization of a two digit number.

Matched Outcomes

11. Find all factors of a two digit number.

Matched Outcomes

12. Distinguish the difference between withdrawal and deposit and their effect on the balance.

Matched Outcomes

13. Correctly identify the place value of a given digit in a decimal number.

Matched Outcomes

14. Convert between mixed numbers and improper fractions.

Matched Outcomes

15. Know the values of U.S. coins and be able to convert between different denominations.

Matched Outcomes

16. Memorize and use the formula for the area of a rectangle.

Matched Outcomes

17. Calculate problems involving exponents with both positive and negative bases.

Matched Outcomes

18. Find the square root of a perfect square.

Matched Outcomes

19. Given three line segments A, B, and C, such that, the length of $A = B + C$, and given the lengths of A and B, find the length of the line segment C.

Matched Outcomes

20. Convert a fraction to a decimal and vice versa.

Matched Outcomes

21. Find the absolute value of a number.

Matched Outcomes

22. Graph an integer on the number line.

Matched Outcomes

23. Identify inequalities involving whole numbers.

Matched Outcomes

24. Identify inequalities involving integers.

Matched Outcomes

25. Identify inequalities involving fractions.

Matched Outcomes

New Resources for Course

Course Textbooks/Resources

Textbooks

Miller O'Neill Hyde. *Prealgebra*, 1st ed. New York: McGraw-Hill, 2011, ISBN: 007745796X.

Manuals

Periodicals

Software

Equipment/Facilities

Level III classroom

Reviewer

Action

Date

Faculty Preparer:

Jason Davis

Faculty Preparer

May 12, 2014

Department Chair/Area Director:

Michael King

Recommend Approval

Jun 20, 2014

Dean:

Kristin Brandemuehl

Recommend Approval

Jul 08, 2014

Vice President for Instruction:

Bill Abernethy

Approve

Sep 16, 2014