

OHLONE COLLEGE
Ohlone Community College District
OFFICIAL COURSE OUTLINE

I. Description of Course:

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| <ol style="list-style-type: none">1. Department/Course: <u>MATH - 155</u>2. Title: <u>Math for the Associate Degree</u>3. Cross Reference:4. Units: <u>3</u>
Lec Hrs: <u>3</u>
Lab Hrs:5. Repeatability: <u>No</u>6. Grade Options: Grade Only (GR) | <ol style="list-style-type: none">7. Degree/Applicability:
Credit, Degree Applicable, Not Transferable (D)8. General Education: District General Education (Plan A)
IV-C. Math Proficiency9. Field Trips: <u>Not Required</u>10. Requisites:
Prerequisite
MATH 151 Algebra I or
MATH 151A Algebra I (Part 1) and
MATH 151B Algebra I (Part 2)
or Assessment test placement |
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12. Catalog Description:

This course meets the minimum general education mathematics requirement. It uses the concepts of beginning algebra (Algebra I), problem solving skills, and analytic thinking to investigate areas such as consumer concerns, recreational math, probability, math in sports, statistics, geometry, trigonometry, and math in the work place.

13. Class Schedule Description:

A survey math course emphasizing problem solving in various real world areas. Minimum general ed math requirement.

14. Counselor Information:

Math 155 meets the General Ed AREA IV, C Math Proficiency requirement. Other courses at a higher level than this also fulfill the requirement (M152, M152A, M152B, M153, M156, M159, M160, M163, M166, M167, M181, M188, M101A,B,C etc). Math 155 is non-transferable course that develops problem solving skills and analytical thinking by investigating areas such as consumer concerns, recreational math, probability, math in sports, statistics, geometry, trigonometry, and math in the work place. M155 is does not fulfill the prerequisite for M152, M153, M156, M159, M160, M167, or M181.

II. Student Learning Outcomes

The student will:

1. Demonstrate problem solving skills by applying mathematical principles and techniques in real world areas.
2. Demonstrate critical thinking by examining and solving mathematical puzzles.
3. Analyze games of chance using probability theory and formulas.
4. Examine statistical principles used to display, interpret and analyze data.
5. Investigate how math is used in various professions such as sports, carpentry, nursing, music,

cooking, etc.

III. **Course Outline:**

- A. Consumer Concerns:
 - percentage:markups, markdowns, commissions
 - simple and compound interest
 - annuities and loans
 - credit cards
- B. Recreational Math:
 - number systems
 - numbers of technology
 - math puzzles
 - mental computation
 - estimation techniques
- C. Geometry and Trigonometry:
 - measurement geometry and building materials
 - geometry and art
 - right triangle trigonometry
 - law of sines and cosines
- D. Probability and Statistics:
 - elementary and conditional probability
 - odds, expected value, and games of chance
 - reading statistical graphs
 - mean, mode, median, and standard deviation
 - understanding polls and margins of error
- E. Math in Sports:
 - statistics and scoring
 - distances in sports
 - speed in sports
 - race tracks
- F. Math in the WorkPlace
 - examine the use of math in various professions

IV. **Course Assignments:**

- A. Reading Assignments
 - 1. Read explanations and examples in text.
- B. Writing Assignments
 - 1. Answer "explain" problems in problem sets using complete sentences, proper grammar, and correct spelling.
 - 2. Short Math Research Papers
- C. Projects, Activities, and other Assignments
 - 1. Problem Sets - worked out solutions to problems
 - 2. Projects - creative problem solving experiences

V. **Methods of Evaluation/Assessment:**

- A. Quizzes and Chapter Exams (50%)
- B. Homework (Problem Sets) (15%)

- C. Projects/Research Papers (10%)
- D. Final Exam (25%)

VI. Methods of Instruction:

- A. Discussion
- B. Demonstration
- C. Lecture

VII. Textbooks:

Required

1. Ronald Staszko and Robert Bradshaw *Math for the Associate Degree* 1st Edition, Thompson, 2007
2. Notes and handouts will be used until the text is published.

Optional

VIII. Supplies:

CID 1445