

# Peralta Community College District

## Mathematics

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### Overview

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| College    | Laney College        |
| Originator | Katherine Williamson |
| Award Type | A.S. Degree          |

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### Codes and Dates

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| State Approval Date                | 7/04/2016                               |
| Curriculum Committee Approval Date | 12/04/2015                              |
| Board of Trustees Date             | 3/22/2016                               |
| Current Effective Date             | 8/22/2016                               |
| Program Control Number             | 35111                                   |
| Top Code                           | 1701.00 - Mathematics, General          |
| CIP Code                           | 13.1311: Mathematics Teacher Education. |

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### Description

This associate degree is designed for students who complete the first two years of college math. It differs from our transfer degree in the IGETC or CSU Breadth Requirements. Students interested in this degree should consult with a counselor and the chair of the Mathematics Department. The degree will be awarded upon completion of the major course requirements listed below and the General Education requirements for the Associate in Science Degree.

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### Career Opportunities

Scientists, researchers, mathematics teachers, actuaries, and in general workers in fields that require mathematical knowledge together with a scientific, computing, or business background.

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### Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Application Problems: Students should be able to read word problems, identify the type of problem, synthesize relevant information, create a mathematical relationship (equation) to determine unknown quantities and solve to determine the answer to the question posed.
  2. Solving Problems Algebraically: Students should be able to use algebraic manipulation to find solutions to problems/equations both with and without a calculator.
  3. Graphs: Students should be able to analyze, create and solve problems using graphs.
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### Degree Requirements:

|   |                                       |
|---|---------------------------------------|
| <b>Degree Major Requirements:</b>   | <b>Credit Hours: (15 Required)</b>    |
| MATH 003A      Calculus I   | 5                                     |
| MATH 003B      Calculus II  | 5                                     |
| MATH 003C      Calculus III   | 5                                     |
| <br><b>Select one from the following:</b><br><i>(if you choose both, other courses are optional):</i> | <br><b>Credit Hours: (3 Required)</b> |
| MATH 003E or      Linear Algebra  | 3                                     |

|           |                        |   |
|-----------|------------------------|---|
| MATH 003F | Differential Equations | 3 |
|-----------|------------------------|---|

**Select one course from the following****Credit Hours: (3 - 4 Required)***if necessary to complete at least 21 units for the major:*

|             |                            |   |
|-------------|----------------------------|---|
| MATH 013 or | Introduction to Statistics | 4 |
|-------------|----------------------------|---|

|          |                      |   |
|----------|----------------------|---|
| MATH 011 | Discrete Mathematics | 4 |
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**Total Major Units 21-22****Credit Hours:****General Education Requirements: 19 units****Credit Hours: (19 Required)****Electives****Credit Hours: (20 Required)****Total: 60.00 - 61.00**

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