



## CURRICULUM GUIDE 2019-2020

### APPLIED MATHEMATICS

#### Certificate of Achievement in Applied Mathematics

The Certificate of Achievement in Applied Mathematics provides students with the mathematical background required to succeed in subsequent courses in math, physics, and engineering. Completion of a certificate in applied mathematics demonstrates that students possess good critical thinking skills and the ability to process complicated ideas. By earning this certificate, students have demonstrated that they possess the mathematical skills that are necessary to begin upper division coursework in applied mathematics. Completion of the Certificate of Achievement in Applied Mathematics represents a completion of 18 units applicable towards an Associate in Science in Physics for Transfer or an Associate in Science in Engineering.

#### Requirements for Certificate of Achievement:

- a) Complete Major Field courses.
- b) Complete at least six units at Ohlone College
- c) Maintain a 2.0 grade point average in Major Field courses.

#### Student Learning Outcomes

1. Learn the foundation mathematics necessary for further studies in engineering, mathematics, and science.
2. Demonstrate proficiency at problem solving techniques.
3. Apply problem solving techniques towards the solution of problems in engineering and science.

#### MAJOR FIELD

ENGI-130	Electric Circuit Analysis OR	4
ENGI-140	Materials Engineering OR	(4)
PHYS-141	Electricity and Magnetism OR	(4)
PHYS-142	Optics, Heat, and Modern Physics	(4)
MATH-101A	Calculus with Analytic Geometry	5
MATH-101B	Calculus with Analytic Geometry	5
PHYS-140	Mechanics	<u>4</u>
Total Required Units:		18