



## **CURRICULUM GUIDE** **2006-2007**

### **MATHEMATICS**

#### **AS Degree: Transfer Major**

The Associate of Science Transfer Degree in Mathematics offered by Ohlone College is designed to prepare students for studying Mathematics at most universities. The core courses required in the AS Degree in Mathematics will fulfill the lower division requirements for most campuses of the UC and CSU systems. This program will enable students to develop a strong foundation in mathematics, physics, and computer studies. Furthermore, the theoretical knowledge and laboratory skills acquired by students in this program will also enhance their success with obtaining entry-level jobs that require two years of college-level math and science.

Since some curriculum requirements may vary among transfer universities, it is imperative that students entering Ohlone's AS degree program in Mathematics meet with a counselor at the start of their academic work. Counselors will assist students in preparing a Student Education Plan that will prepare them to transfer to the university of their choice. Counselors will also advise students on the general education plan that best prepares them for future transfer.

#### **Requirements for AS Degree:**

- a) Complete the Major Field courses with a 2.0 grade point average.
- b) Complete Plan A, B, or C General Education requirements. These are specified in the Ohlone College catalog.
- c) Complete at least 60 degree-applicable units with a 2.0 grade point average.
- d) Complete at least 12 units at Ohlone College.
- e) Complete at least 50% of the Major Field courses at Ohlone College.
- f) Complete MATH-101B, MATH-101C, MATH-103, and MATH-104 at Ohlone College.

#### **MAJOR FIELD**

MATH-101A	Calculus with Analytical Geometry	5
MATH-101B	Calculus with Analytical Geometry	5
MATH-101C	Calculus with Analytical Geometry	5
MATH-103	Introduction to Linear Algebra	3
MATH-104	Differential Equations	5
PHYS-140	Mechanics	4

Select two of the following courses:		6-10
CHEM-101A	General Chemistry	(5)
ENGI-120	Engineering Mechanics - Statics	(3)
MATH-159	Elements of Statistics and Probability	(5)
MATH-163	Discrete Mathematics for Computers	(3)
PHYS-141	Electricity and Magnetism	(4)
PHYS-142	Optics, Heat, and Modern Physics	(4)

Select one of the following courses:		4
CS-102	Introduction to Computer Programming Using C++	(4)
CS-104A	Visual Basic.NET Programming	(4)
CS-104B	Advanced Visual Basic.NET Programming	<u>(4)</u>
		37-41

### **RECOMMENDED COURSES**

The following courses are recommended because they are required in the lower division of some baccalaureate-granting universities:

ENGI-130	Electric Circuit Analysis	(4)
ENGI-140	Materials Engineering	(4)
MATH-110	Introduction to Mathematical Software	(.5)