



CURRICULUM GUIDE 2006-2007

COMPUTER SCIENCE

AS Degree: Transfer Major

The Associate of Science Degree in Computer Science offered by Ohlone College is designed to prepare students for pursuing studies at the university level in computer science and engineering. The core courses in Computer Science, Math, and Physics required for this AS Degree will fulfill the lower division major requirements at many universities. This program will enable students to develop a strong foundation in computer and engineering sciences as well as a thorough training in applying their mathematical skills. In addition, students completing this program will acquire valuable cognitive skills (logic and common sense, reasoning and problem-solving skills) and practical laboratory skills. The theoretical and practical knowledge acquired through this program will enhance students' success with obtaining entry-level jobs that require two years of college-level computer science and math.

Since some curriculum requirements may vary among transfer universities, it is imperative that students entering Ohlone's AS degree program in Computer Science 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 at least three or more Computer Science courses at Ohlone College.

MAJOR FIELD

CS-102	Introduction to Computer Programming Using C++	4
CS-113	Discrete Mathematics for Computers	3
CS-116	C++ Programming: An Object-Oriented Language	4
CS-118	Introduction to Assembly Language Programming	4
CS-124	Advanced Programming with Data Structures	4
CS Electives	Any Computer Science course not listed above	2-4
MATH-101A	Calculus with Analytical Geometry	5
MATH-101B	Calculus with Analytical Geometry	5
MATH-103	Introduction to Linear Algebra	3
PHYS-140	Mechanics AND	4
PHYS-141	Electricity and Magnetism OR	4
CHEM-101A	General Chemistry AND	(5)
CHEM-101B	General Chemistry	(5)
		42-46

RECOMMENDED COURSES

To study programming, students must be familiar with computers and computer applications. To study calculus, students must have skills in algebra. The following courses are recommended:

CS-101	Introduction to Computers and Information Technology	(3)
CS-101L	Computer Applications	(2)
MATH-188	Pre-Calculus	(5)

RECOMMENDED CORE COURSES

The following courses are recommended because they are required in the lower division of some baccalaureate-granting universities. MATH-101C is a prerequisite for PHYS-141.

MATH-101C	Calculus with Analytical Geometry	(5)
MATH-104	Differential Equations	(5)
PHYS-142	Optics, Heat, and Modern Physics	(4)

RECOMMENDED CS ELECTIVES

Computer Science is a very diverse field. Ohlone offers many courses that enhance students' knowledge as preparation for advanced studies. Please see the Ohlone College catalog for electives such as Visual Basic.NET Programming (CS-104A, CS-104B, CS-104C, CS-104D); Java (CS-170, CS-171, CS-172); Perl (CS-176); PL/SQL (CS-137); Applied Programming in Visual C++ (CS-121); XML (CS-178); TCP/IP and Internetworking (CS-157); Data Communications (Network+) (CS-152); Shell Programming (CS-147).