COMPUTER SCIENCE - COMPUTER SCIENCE EMPHASIS BA/BS

The Computer Science program is designed to prepare students for industrial work or graduate work in Computer Science or Management Information Systems. The Computer Science major is a traditional computer science curriculum, mathematically rigorous and is based on the Association of Computing Machinery (ACM) core curricula recommendations.   The curriculum is designed to be very flexible and allow students to use credits from the Associates of Information Systems and Information Systems Analysis towards this degree. The degree is also designed to allow students to use biology courses towards the degree for students who are interested in pursuing a bioinformatics degree in graduate school.

General Education Core

Code	Title	Credits
Written Communication		
Select one of the following:		6.00
ENGL-101	COLLEGE WRITING	
& ENGL-102	and RESEARCH WRITING	
ENGL-109	COLLEGE WRITING AND RESEARCH	
Oral Communication		
Select one of the following:		3.00
COMM-101	PRINCIPLES OF SPEECH	
COMM-202	INTERPERSONAL COMMUNICATION	
COMM-203	SMALL GROUP COMMUNICATION	
COMM-204	PUBLIC SPEAKING	
Mathematical Ways of Knowing		
MATH-170	CALCULUS I	4.00
Humanistic & Artistic Ways of Knowing		
Select one of the following:		3.00
ENGL-150	INTRODUCTION TO LITERATURE	
ENGL-257	WORLD CLASSICS	
ENGL-258	INTERNATIONAL LITERATURE	
Select one of the following:		3.00
ART-100	SURVEY OF ART	
HUM-101	THE ART AND HISTORY OF THE MOTION PICTURE	
HUM-150	INTRODUCTION TO THE ARTS	
MUS-101	SURVEY OF MUSIC	
MUS-102	MUSIC IN AMERICA	
MUS-150	WORLD MUSIC	
MUS-151	HISTORY OF MUSICAL THEATER	
THEA-101	SURVEY OF THE THEATER	
Scientific Ways of Knowing		
CS-108	INTRODUCTION TO COMPUTER SCIENCE	4.00
Select one of the following:		4.00
BIOL-102	SCIENCE FOR LIFE	
BIOL-120	PLANTS AND PEOPLE	
BIOL-175	HUMAN BIOLOGY	
BIOL-252	HUMAN ANATOMY AND PHYSIOLOGY I	
CHEM-102	THE CHEMISTRY OF DAILY LIFE	
CHEM-105	GENERAL, ORGANIC AND BIOCHEMISTRY	
CHEM-111	PRINCIPLES OF CHEMISTRY I	
FSCI-101	INTRODUCTION TO FORENSIC SCIENCE	
GEOL-100	ENVIRONMENTAL EARTH SCIENCE	
GEOL-120	INTRODUCTION TO EARTH SYSTEMS	
GIS-271	GEOGRAPHIC INFORMATION SYSTEMS	
NS-150	INTRODUCTION TO NATURAL SCIENCES	
NS-174	NATURAL SCIENCE FOR ELEMENTARY EDUCATOR	

PHYS-111	GENERAL PHYSICS I	
PHYS-171	PHYS SCIENCES FOR ELEMENTARY EDUCATORS	
PHYS-205	DESCRIPTIVE ASTRONOMY	
PHYS-211	ENGINEERING PHYSICS I	

Social & Behavioral Ways of Knowing

HRPT/SS-185	HUMAN RELATIONS IN ORGANIZATIONS	3.00
Select one of the following:		3.00
ANTH-102	CULTURAL ANTHROPOLOGY	
ANTH-120	WORLD PREHISTORY	
ANTH-170	INTRODUCTION TO NATIVE AMERICAN STUDIES	
ECON-201	PRINCIPLES AND THEORY OF MACROECONOMICS	
ECON-202	PRINCIPLES AND THEORY OF MICROECONOMICS	
GEOG-102	INTRODUCTION TO GEOGRAPHY	
HIST-101	HISTORY OF CIVILIZATION	
HIST-102	HISTORY OF CIVILIZATION	
HIST-111	UNITED STATES HISTORY TO 1865	
HIST-112	UNITED STATES HISTORY SINCE 1865	
POLS-101	AMERICAN NATIONAL GOVERNMENT	
POLS-285	COMPARATIVE GOVERNMENT	
PSYC-101	INTRODUCTION TO PSYCHOLOGY	
PSYC-205	DEVELOPMENTAL PSYCHOLOGY	
SOC-101	INTRODUCTION TO SOCIOLOGY	
SOC-102	CURRENT SOCIAL PROBLEMS	

Diversity

Select one of the following:		3.00
ANTH-102	CULTURAL ANTHROPOLOGY	
ANTH-120	WORLD PREHISTORY	
ANTH-170	INTRODUCTION TO NATIVE AMERICAN STUDIES	
ANTH-360	RACE AND ETHNICITY	
COMM-345	COMMUNICATION AND DIVERSITY	
ENGL-258	INTERNATIONAL LITERATURE	
ENGL-474	NATIVE AMERICAN WRITTEN LITERATURE	
GEOG-102	INTRODUCTION TO GEOGRAPHY	
HIST-101	HISTORY OF CIVILIZATION	
HIST-102	HISTORY OF CIVILIZATION	
HIST-111	UNITED STATES HISTORY TO 1865	
HIST-112	UNITED STATES HISTORY SINCE 1865	
HRPT/SS-184	DIVERSITY IN ORGANIZATIONS	
NP-101	ELEMENTARY NEZ PERCE LANGUAGE I	
NP-102	ELEMENTARY NEZ PERCE LANGUAGE II	
POLS-285	COMPARATIVE GOVERNMENT	
SOC-101	INTRODUCTION TO SOCIOLOGY	
SPAN-101	ELEMENTARY SPANISH I	
SPAN-102	ELEMENTARY SPANISH II	
SPAN-201	INTERMEDIATE SPANISH I	
SPAN-202	INTERMEDIATE SPANISH II	

Integrative Seminar: Ethics & Values

Select one of the following:		3.00
ID 300A - 300T (See course descriptions for options)		
ID-301A		

Foreign/Heritage Language

Take 16 credits of language if selecting Bachelor of Arts degree		16.00
Total Credits		39.00

Program Requirements

Code	Title	Credits
Major Courses		
CS-101	COMPUTER SCIENCE SEMINAR	1.00
CS-111	FOUNDATIONS OF PROGRAMMING	4.00
CS-213	ALGORITHMS AND DATA STRUCTURES	4.00
CS-226	SQL: STRUCTURED QUERY LANGUAGE	3.00
CS-228	LINUX AND TOOLS	3.00
CS-250	COMPUTER ORGANIZATION AND ARCHITECTURE	4.00
CS-312	OBJECT-ORIENTED DESIGN AND IMPLEMENTATION	4.00
CS-360	SOFTWARE ENGINEERING	4.00
CS-401	FUTURE PROFESSIONALS SEMINAR	1.00
CS-430	OPERATING SYSTEMS	4.00
CS-435	COMPUTER NETWORKS	4.00
CS-445	DATABASES AND KNOWLEDGE MANAGEMENT	4.00
CS-480	CAPSTONE DESIGN PROJECT	4.00
MATH-186	DISCRETE MATHEMATICS	3.00
Select 8 credits of Computer Science at the 400 level		8.00
Computer Science Electives		
Choose your track		
Track 1 - Complete 34 credits from the following:		34.00
Computer Science at the 400 level or above		
PHYS-211	ENGINEERING PHYSICS I	
PHYS-212	ENGINEERING PHYSICS II	
COMM-205	LOGIC AND ARGUMENTATION	
MATH-175	CALCULUS II	
MATH-300	INTRODUCTION TO MATHEMATICAL REASONING	
MATH-320	PROBABILITY AND STATISTICS	
MATH-340	LINEAR ALGEBRA	
CITPT-111	web development basics	
BIOL-181	ECOLOGY, EVOLUTION, DIVERSITY OF LIFE	
BIOL-182	CONCEPTS IN CELLULAR MECHANISMS	
Track 2 - ISATI AAS Required		34.00
Track 3 - CITPT AAS Required		34.00
Total Credits		89.00

Notes:

1. This program has been developed following the guidelines established by the CS 2001 "Computer Science Curriculum," and the CS 2008 "Computer Science Curriculum Interim Update" developed by the Association of Computing Machinery (ACM) and the IEEE Computer Society (IEEE-CS).
2. This program complies with all requirements for a Minor in Mathematics.
3. WBL: Work-based Learning.

Summary

Code	Title	Credits
General Education Core		39
Major Program Courses		55
Computer Science Electives		34

Bachelor of Science Total	128