

SCHOOL OF BUSINESS AND TECHNOLOGY DEPARTMENT OF COMPUTER SCIENCE

FACULTY

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DEPARTMENTAL GOALS

Goals/Objectives of the B.S. programs in Computer Science:

1. Relate the fundamentals of problem solving, communication, and team work to the fields of Computer Science and Information Systems.
2. Demonstrate the ability to obtain, modify, and share programming code with a team.
3. Given a professional project, evaluate possible solutions, and justify and critique the chosen solution.

The Department of Computer Science provides students the opportunity to prepare for professional opportunities in industry and education.

Particular areas of preparation attempt to address:

1. The delivery of broad-based technical programs that allow the graduate to accommodate new and advancing technologies.
2. The preparation of an adequate work force to meet area state and regional demands for technology in industry and education.
3. The maintenance of quality curriculum content, faculty, equipment and facilities to meet the standards set by appropriate state and national accrediting agencies.

PROGRAMS OF STUDY

Majors: B.S. Computer Science

- Computer Science Option
- Information Systems Option

Minors: Computer Science

Forensics
Information Systems

GENERAL INFORMATION

Career opportunities are numerous in all technology fields and command competitive salaries. Examples of recent graduate placements are manufacturing engineering technologists, quality assurance managers, plant and production supervisors, production analysts, planners and schedulers, and estimators.

Within the Department of Computer Science, the student organization – the Computer Club – promotes professional development and social activities. The club meets on a regular basis and organizes activities such as industrial plant tours, robotics competitions, and educational conferences.

For more information visit our web site at:

<http://www.swosu.edu/academics/>

BACHELOR OF SCIENCE COMPUTER SCIENCE (COMSC.BS and CSIS.BS) (Old Codes No. 110/113)

GENERAL EDUCATION (Min. 40 hours)

Courses that are required. *Courses that are recommended.*

Communication..... 9

ENGL	1113	English Composition I
ENGL	1213	English Composition II
COMM	1313	Introduction to Public Speaking OR
TECH	3143	Technical Presentations (<i>if permitted by degree program</i>)

Quantitative Reasoning..... 3

Select one course.

MATH	1143	Mathematical Concepts
MATH	1153	Mathematical Applications
MATH	1193	Elementary Statistics
MATH	1313	Functions and Modeling
MATH	1513	College Algebra
or a higher numbered math course		

U. S. History..... 3

Select one course.

HIST	1043	U.S. History to 1877
HIST	1053	U.S. History since 1877

American Government..... 3

POLSC	1103	American Government & Politics
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Science..... 7-8

Select one course from Life Science and one course from Physical Science. One Science course must be a lab science.

Life Science.....3-4

BIOL	1004	Biological Concepts w/Lab
BIOL	1013	Current Issues in Biology
BIOL	1054	Principles of Biology I w/Lab

Physical Science.....3-4

ASTRO	1904	Astronomy
CHEM	1004	General Chemistry w/Lab
GEOL	1934	Physical Geology w/Lab
PHY	1044	Basic Physics I w/Lab
PHY	1063	General Physics (or a higher numbered chemistry or physics course)
SCI	1501	Concepts of Physical Science Lab
SCI	1513	Conc of Phy Science (can be taken w/wo lab)

Humanities and Social Science.....12

Select one course from each sub-category and one additional course from any subcategory below.

Humanities..... 3

GEOG	1103	World Cultural Geography
HIST	1033	World History
HUM	1103	Introduction to Humanities

Fine Arts..... 3

ART	1223	Art Survey
COMM	1263	Introduction to Theatre
LIT	2333	Introduction to Film
LIT	2413	Introduction to Literature
MUSIC	1013	Introduction to Music I
MUSIC	1103	Music and Culture (Music majors only)
MUSIC	1123	History of Rock-n-Roll
PHILO	1453	Introduction to Philosophy

Social and Human Sciences..... 3

ASL	2163	American Sign Language I
ECONO	2263	Intro to Macroeconomics
ECONO	2363	Intro to Microeconomics
ENTRP	1123	Intro to Business
FINAN	2113	Personal Financial Planning
ITAL	1004	Elementary Italian I
KINES	1133	Wellness Conc & Exercise Applications
LATIN	1054	Elementary Latin I (or higher number)
PSYCH	1003	General Psychology
SOCIO	1003	Introduction to Sociology
SPAN	1054	Elementary Spanish I (or higher number)
TECH	1223	Technology and Society

Computer Proficiency..... 3

COMSC	1023	Computers and Info Access
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COMPUTER SCIENCE MAJOR

Required Courses..... 27

COMSC	1033	Computer Science I
COMSC	1053	Computer Science II
COMSC	1103	Introduction to Information Security
COMSC	2043	Discrete Structures
COMSC	3053	Operating Systems
COMSC	3153	Data Comm. & Networks
COMSC	4173	Mobile Applications
COMSC	4953	CS/IS Capstone I
TECH	3143	Technical Presentations

Approved Computer Science Electives..... 15

1000/2000 Level Computer Science Electives (0-3)	
3000/4000 Level Computer Science Electives (12-15)	

Choose an option below..... 21-22

Computer Science Option (Code No. 110)

Computer Science Core..... 15

COMSC	2413	Data Structures
COMSC	3013	Computer Architecture
COMSC	3133	Software Engineering
COMSC	3603	Hardware/Software Concepts
COMSC	4603	Adv Hardware/Software Concepts

Auxiliary Requirements†.....6-7

MATH	1834	Calculus I
OR MATH 2823 Applied Calculus		

MATH	3433	Statistics I
OR MATH 3413 Statistical Methods		

† Auxiliary Requirements may have prerequisite course requirements. Please check the SWOSU Course Descriptions prior to enrollment.

Information Systems Option (Code No. 113)

Information Science Core..... 12

COMSC	2603	Network Security
COMSC	3403	Database Systems
COMSC	3913	Web Development
COMSC	4513	Business Intelligence

Auxiliary Requirements†..... 9

ENTRP	3113	Intro to MIS
ECONO	2463	Business Statistics
3823		Quantitative Methods in Business

† Auxiliary Requirements may have prerequisite course requirements. Please check the SWOSU Course Descriptions prior to enrollment.

Electives to bring total to..... 120

TOTAL HOURS..... 120

REGULATIONS PERTAINING TO GRADUATION

Minimum credit hours for graduation.....	120
Minimum credit hours in the liberal arts & sciences.....	55
Minimum credit hours in upper-division (3000/4000 courses).....	40
Minimum credit hours (3000/4000 courses) in major completed at SWOSU.....	12
Minimum credit hours at SWOSU (15 of the last 30).....	30
Minimum Grade Point Average in all coursework.....	2.00
Minimum Grade Point Average in major.....	2.00

COMPUTER SCIENCE MAJOR
Computer Science Option (COMSC.BS) (Old Code 110)
Suggested Course Sequence

FIRST YEAR

FIRST SEMESTER	SECOND SEMESTER
1003 General Psychology (3) 1023 Computers & Info Access (3) 1033 Computer Science I.(3) 1051 SWOSUConnect* (1) 1113 English Composition I (3) 1513 College Algebra (3)	1053 Computer Science II (3) 1103 Intro to Info Security (3) 1103 American Government & Politics (3) 1213 English Composition II (3) SCIENCE Course #1 (4)
Total (16)	Total (16)

SECOND YEAR

FIRST SEMESTER	SECOND SEMESTER
1043 or 1053 U.S. History (3) 1313 Intro to Public Speaking (3) 1834 Calculus I OR 2823 Applied Calculus (3-4) 2043 Discrete Structures (3) 2413 Data Structures (3)	3013 Computer Architecture (3) Computer Science (COMSC) Elective** (3) Humanities & Social Sciences Course (6) SCIENCE Course #2 (3)
Total (15-16)	Total (15)

THIRD YEAR

FIRST SEMESTER	SECOND SEMESTER
3053 Operating Systems (3) 3433 Statistics I OR 3413 Statistical Methods (3) Computer Science (COMSC) Elective** (6) Humanities & Social Sciences Course (3)	3133 Software Engineering (3) 3153 Data Communication & Networks (3) 4173 Mobile Applications (3) Computer Science (COMSC) Electives** (3) Free Electives (3)
Total (15)	Total (15)

FOURTH YEAR

FIRST SEMESTER	SECOND SEMESTER
3143 Technical Presentations (3) 3603 Hardware/Software Concepts (3) Computer Science (COMSC) Elective** (3) Free Electives (6)	4603 Advanced Hardware/Software Concepts (3) 4953 CS/IS Capstone (3) Free Electives (6-7)
Total (15)	Total (12-13)

* First time entering SWOSU students need to take 1051 SWOSUConnect.

**1000-2000 level Computer Science (COMSC) course (0-3 hours); 3000-4000 level Computer Science (COMSC) course (12-15 hours)

COMPUTER SCIENCE MAJOR
Information Systems Option (CSIS.BS) (Old Code 113)
Suggested Course Sequence

FIRST YEAR

FIRST SEMESTER	SECOND SEMESTER
1003 General Psychology (3) 1023 Computers & Info Access (3) 1033 Computer Science I (3) 1051 SWOSUConnect* (1) 1113 English Composition I (3) 1513 College Algebra (3)	1053 Computer Science II (3) 1103 American Government & Politics (3) 1103 Intro to Info Security (3) 1213 English Composition II (3) SCIENCE Course #1 (4)
Total (16)	Total (16)

SECOND YEAR

FIRST SEMESTER	SECOND SEMESTER
1043 or 1053 U.S. History (3) 1313 Intro to Public Speaking (3) 2043 Discrete Structures (3) 2463 Business Statistics (3) 2603 Network Security (3)	3113 Intro to MIS (3) Computer Science (COMSC) Elective** (3) Humanities & Social Sciences Course (6) SCIENCE Course #2 (3)
Total (15)	Total (15)

THIRD YEAR

FIRST SEMESTER	SECOND SEMESTER
3053 Operating Systems (3) 3823 Quantitative Methods in Business (3) 3913 Web Development (3) Computer Science (COMSC) Elective** (3) Humanities & Social Sciences Course (3)	3153 Data Communication & Networks (3) 3403 Database Systems (3) 4173 Mobile Applications (3) Computer Science (COMSC) Elective** (3) Free Electives (3)
Total (15)	Total (15))

FOURTH YEAR

FIRST SEMESTER	SECOND SEMESTER
3143 Technical Presentations (3) Computer Science (COMSC) Electives** (6) Free Electives (6)	4513 Business Intelligence (3) 4953 CS/IS Capstone (3) Free Electives (7)
Total (15)	Total (13)

* First time entering SWOSU students need to take 1051 SWOSUConnect.

**1000-2000 level Computer Science (COMSC) course (0-3 hours); 3000-4000 level Computer Science (COMSC) course (12-15 hours).