

Indiana University Southeast Bulletin 2003-2005

Associate of Science in Computer Science

This program is designed to meet the needs of students who plan a career in computer science or whose career area requires extensive first-hand knowledge of computer science. Together, the basic curriculum and electives afford students considerable flexibility in planning a degree program to meet their career objectives.

CSCI C201 Computer Programming II is a required prerequisite to subsequent computer science courses and should be taken during the first semester of the first year. However, students who have not completed two years of high school algebra or who do not score high enough to enter MATH M122 College Algebra on the math placement test must take MATH M007 Elementary Algebra and/or MATH M117 Intermediate Algebra before taking CSCI C201. Because of prerequisite relationships, the computer science courses must be taken in sequence. The social sciences and arts and letters electives may be satisfied by taking any courses in those areas. In the final semester of the program, the student may, after obtaining the approval of a sponsoring full-time faculty member, undertake a project in CSCI C390 Individual Programming Laboratory. Finally, the general requirements for all degrees at IUS include a research writing requirement to be completed during the first 60 credit hours at IUS. Students must petition the department coordinator for acceptance of any computer science-related coursework more than seven years old.

The Associate of Science in Computer Science requires at least 61 credit hours:

I. General Education Core:

a. Communication 9

English W131

English W234

Speech S121

Research Writing R200

b. Mathematics 6-9

Mathematics K300 or

Economics E280-E281

CSCI C251

c. Social sciences electives 6

Any social sciences course satisfies

this elective requirement, but the following are recommended:

Psychology P101

Sociology S163

d. Arts and letters elective 3

Any arts and letters course satisfies

this elective requirement, but the following is recommended:

Philosophy P250

e. General electives 9

It is recommended that you select general electives that satisfy specific computer science B.S. degree requirements.

f. Computer competency..... 3

An IUS general requirement.

CSCI C106

II. Computer Science Requirements:

a. Core 19-20

CSCI C201 (4)

CSCI C202 (4)

CSCI C237 (4)

CSCI C335 (4)

CSCI B/C/P 3XX/4XX (3-4)

b. Concentration area (one area required).....6-7

1) Computer Media Option

CSCI A346 (3)
CSCI A348 (3)
2) Computer Networking Option
CSCI A247 (3)
3) Database Systems Option
CSCI B461 (3)
CSCI C343 (4)
4) Client Server Option
CSCI A348 (3)
CSCI N211 (3)

Bachelor of Science in Computer Science

Students must petition the department coordinator for acceptance of any computer science-related coursework more than seven years old.

Note: These specific requirements may change so as to affect individuals who begin programs during the 1997 fall semester and thereafter. Candidates for the bachelor of science degree should first review “General Requirements for All Degrees at IUS” in this bulletin.

Requirements To be admitted to the B.S. degree program in computer science a student must satisfy the IUS admission requirements. In addition, admission into the B.S. degree program requires that a student complete the following courses with a GPA of at least 2.5 and have an overall GPA of at least 2.5: C201 Computer Programming II, C202 Computer Programming, C237 Operating Systems Concepts, and C335 Computer Structures. These requirements must be met before attaining junior status (56 credit hours) in order to maintain a normal four-year schedule. Admission to this program will be limited to the number of students that can be effectively accommodated given the available resources. While completing the required basic computer science course work, the student is also required to fulfill the basic mathematics requirement (C251, and M119-M120 or M215-M216). This is necessary to maintain a normal four-year schedule and to meet the mathematics prerequisite requirements of the upper-level computer science courses.

Each student will select one of two major option areas in which to pursue advanced courses: (1) information systems and (2) science/mathematics. Within each option area there are required advanced sequences in computer science and related disciplines that enable students to tailor their advanced course work to meet any one of several career objectives. Please note that taking the course requirements for both options on this degree may add up to a number less than the required 120 credit hours. The student should fulfill the remaining hours with electives.

Computer Science Electives

The following classes are approved electives for both the information systems and science/mathematics options:

A247 Network Technologies and Administration
A346 User-Interface Programming
A348 Mastering the World Wide Web
B438 Fundamentals of Computer Networks
B461 Database Concepts
B481 Interactive Graphics
C390 Individual Programming Lab
C421 Computer Organization
C422 Advanced Computer Organization
C431 Assemblers and Compilers I
C432 Assemblers and Compilers II
C435 Operating Systems I
C436 Operating Systems II
C463 Artificial Intelligence I
C464 Artificial Intelligence II
C490 Seminar in Computer Science
N211 Introduction to Databases
P423 Compilers
P436 Introduction to Operating Systems
P465-P466 Software Engineering for Information Systems I-II

Information Systems Option

The information systems option is for students who seek employment in business or industry after graduation or who may pursue a graduate degree in information systems. Within this option the students may select courses that prepare them for careers in areas such as applications programming, business systems design and implementation, and information systems management.

The Bachelor of Science in Computer Science—Information Systems Option requires at least 120 credit hours:

I. General Education Core:

a. Arts and Letters 6

Two courses including:

Philosophy P250

b. Communication 9

English W131

English W234

Speech S121

Research Writing R200

c. Computer competency 3

An IU Southeast general requirement.

CSCI C106

d. Mathematics 12-16

Mathematics M215-M216 or

Mathematics M119-M120

Mathematics K300 or

Economics E280-E281

e. Natural Sciences 5-10

Physics P100

Physics P221-P222 or

Physics P201-P202 or

f. Social Sciences 9

Three courses including:

Psychology P101

Sociology S163

II. Business Requirements..... 24

A business minor is within easy reach after taking these courses; ask a computer science advisor for help.

Accounting A201-A202

Business F301, L201, M301, P301

Economics E100-E200

III. Computer Science Requirements:

a. Core 45

CSCI B461 (3)

CSCI C201 (4)

CSCI C202 (4)

CSCI C237 (4)

CSCI C251 (3)

CSCI C311 (4)

CSCI C335 (4)

CSCI C343 (4)

CSCI C445 (4)

CSCI C446 (4)

CSCI C455 (4)

CSCI B/C/P 3XX/4XX (3 or 4)

Science/Mathematics Option

The science/mathematics option is designed for students who intend to work in the more technical areas of computer applications or who intend to pursue a graduate degree in computer science. Within this option students may select courses to prepare themselves for careers in areas such as systems software design and implementation and scientific computing applications.

The Bachelor of Science in Computer Science—Science/Mathematics Option requires at least 120 credit hours.

I. General Education Core:

a. Arts and Letters 6

Two courses including:

Philosophy P250

b. Communication 9

English W131

English W234

Speech S121

Research Writing

c. Computer competency 3

An IU Southeast general requirement.

CSCI C106

d. Social Sciences 9

e. General Electives 9-16

II. Mathematics and Science Requirements:

a. Mathematics 19

A math minor is within easy

reach after taking these courses; ask a

mathematics advisor for help.

Mathematics M215-M216, M303, M360

An approved Mathematics 300- or

400-level course

b. Biological and Physical Sciences..... 15

Including: Chemistry C105-C106 or

Physics P221-P222

III. Computer Science Requirements:

a. Core 46-50

CSCI C201 (4)

CSCI C202 (4)

CSCI C237 (4)

CSCI C251 (3)

CSCI C311 (4)

CSCI C335 (4)

CSCI C343 (4)

CSCI C455 (4)

CSCI B/C/P 4XX (12-16, 4 courses)

Requirements for a Minor in Computer Science

Minimum of 18 credit hours to include:

a. Core 11

CSCI C201 (4)

CSCI C202 (4)

CSCI C251 (3)

b. Concentration area (one area required).....7-14

1) Computer Networking Option

CSCI A247 (3)

CSCI B438 (3)

CSCI C237 (4)

CSCI C335 (4)

2) Database Systems Option

CSCI B461 (3)

CSCI C343 (4)

3) Client Server Option

BUS K321 (3)

CSCI A348 (3)

CSCI N211 (3)

4) Information Technology Option
CSCI A247 (3)
CSCI A346 (3)
CSCI A348 (3)