

Department of Computer Science

University of South Carolina A Guide for Undergraduate Majors - 1982-83

THE DEPARTMENT

The objective of this bulletin is to give information concerning an undergraduate major in Computer Science. The Department of Computer Science in the College of Science and Mathematics is a young department formed in July, 1980.

In order to earn a Bachelor of Science degree in the College of Science and Mathematics, a student must successfully complete 120 hours of approved courses. These courses are divided into several categories. These categories and the section in which each is described are:

General education requirements ---Section 2
Major courses (including nonmajor required
and prerequisite courses) -----Section 3
Cognate courses -----Section 4
Electives -----Section 5
Complete sample program -----Section 6
Work sheet -----Section 7

The curriculum presented in this booklet gives you several options from which to choose as you progress toward your degree. It is, therefore, important that you give careful thought to these so that you may obtain a well-rounded education and maximize your potential for employment or further study after graduation. By the time you have reached your junior year, you should have given some thought to your activities after graduation, and consulted with your advisor to prepare major and cognate programs consistent with your aims. While the program you prepare as you go along is never binding, the closer you get to graduation, the more difficult things are to change.

The facilities of this Department are extensive and are available to you as you need them for your study. The Department has a versatile faculty covering the areas of data base management, data structures, design and analysis of algorithms, operating systems, languages and automata,

numerical analysis, computer architecture, artificial intelligence and software engineering. In addition, it has computing facilities including access to the University's Amdahl 470 digital computer and access to the Department's own PDP-11 systems.

We hope that you will find this booklet useful, and we will be happy to answer any questions or receive comments.

WHOM TO SEE

When you become a major in the Department of Computer Science, you will be assigned an advisor to assist you with your plan of study, give you information about changes and developments in the Department, and see that you have a proper start toward the mechanics of registration each semester. At the beginning of each semester, advisor assignments will be posted in one of the shadow boxes on the second floor of LeConte College.

Plan to see your advisor during the regular advisement period which occurs during the latter part of each regular semester. During this visit, you and your advisor will plan your program for the following semester and will check your progress up to that point. Your advisor is also available to assist you throughout the semester during his posted office hours.

When you have a special problem which is beyond your advisor's authority (such as variations on requirements, special cognates), or when your advisor is unavailable and you need assistance with academic matters, see the Director of Undergraduate Studies - Mrs. DeLaine Timney, phone 777-7849.

In an emergency, or when you have a complaint, see the Chairman of the Department - Dr. Robert Cannon, phone 777-2880.

Section 2. GENERAL EDUCATION REQUIREMENTS

The following curriculum is required in the College of Science and Mathematics. This list has been adjusted to correspond to the requirements for majors in Computer Science. The general education requirements are divided into five groups.

GENERAL EDUCATION REQUIREMENTS	53 hours
MAJOR	
General Major	24 hours
or	
Intensive Major	36 hours
COGNATE	12 hours
ELECTIVES	31 or 19 hours
(any course except skill-building courses such as sports or typing)	
TOTAL HOURS REQUIRED	120 hours

COURSES FOR GENERAL EDUCATION REQUIREMENTS

GROUP	AREA	COMMENTS	SUGGESTED COURSES
I*	English Foreign Language History Math Sequence	Not 100, 101, 102	ENGL 101, 102 LANG 101, 102 HIST 101-110(any two) MATH 125, 141, 142
II 6 hours**	Math or Stat for CSCI majors	Not 100, 101, 102	MATH 241
III 6 hours	Afro Studies English Fine Arts History Foreign Language History Philosophy Religious Studies University	Not ENGL 101, 102, 245, 450, 459,466 Arts History Music History & Literature Theatre History Not below the 201 level Not HIST 101-110 Not 110, 111, 511 Only UNIV 201	AFRO 201,202 ENGL 281-295 ARTH 101, 105, 106 MUSC 110, 145 THEA 161,162,561,562 HIST 201, 202 PHIL 102 RELG 101,102,103,104
IV 6 hours	Anthropology Economics Geography Govt./Int. Studies Psychology Sociology	Not ECON 291, 292 Not PSYC 225, 396 Not SOCY 220	ANTH 101 ECON 221, 222 GEOG 103 GINT 100, 101, 102, 201, 202 PSYC 101, 103 SOCY 101
V 7 hours (1 lab)	Astronomy Biology Chemistry Geology Marine Science Physics	Not BIOL 120	ASTR 111,111A,112,112A BIOL 101, 102 CHEM 111, 112 GEOG 101, 102, 103 MSCI 101, 102 PHYS 211,212,201,202

*The Group I English, foreign language, and mathematics requirements are level of proficiency requirements. Students may exempt any part of these requirements by advanced placement.

**If a computer science major passes Math 141 and 142 at USC, he needs only 3 hours to complete Group II.

Section 3. MAJOR PROGRAM
IN COMPUTER SCIENCE

I. REQUIREMENTS

A. CSCI 140, 210, and 240, though not part of the major, are prerequisites for later courses and therefore must be taken first.

B. For a General Major:

1. Calculus through MATH 142, plus MATH 542 and 544 and STAT 514.

2. Major Program Requirements: CSCI 310, 320, 420, 511, 530, 541; and at least 6 additional credits in CSCI courses numbered 500 or higher.

C. For an Intensive Major:

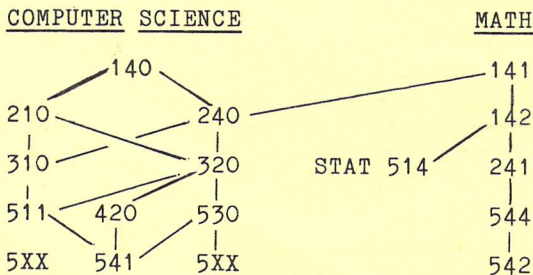
The requirements for the intensive major in Computer Science include all the requirements for the general major plus an additional 12 credits in CSCI courses numbered 500 or higher.

II. Diagram of Prerequisite Structure for Major and Required Math Courses

All courses at one level must be passed with at least a 'C' before enrolling in any courses at the next level.

The levels must be taken in order. Courses at the same level may be taken concurrently. To enroll in CSCI 140, a student must have completed Math 125 or be enrolled in Math 141.

PREREQUISITE FLOWCHART



II. Admission and Retention Standards

To be admitted to the Computer Science program a student must have a cumulative GPR of 2.00 or higher and must have received a minimum grade of C in both Computer Science 140 and Mathematics 141. Students may enroll in each of these courses a maximum of twice to receive the grade of C or better.

A minimum grade of C is required in all computer science courses. To remain in the program the student must meet the following standards:

1. Students may enroll in any computer science course a maximum of twice to earn the required grade of C or above.

2. A student may repeat a maximum of three computer science courses.

Section 4. COGNATES

A student's cognate program should be a concentration of twelve hours of advanced course work in a field related to his major. The usual procedure is to build upon the background the student has acquired from his general degree requirements. The following cognates are acceptable; other combinations must be approved in advance by the director of undergraduate studies. (Note that some cognate courses require prerequisites which are not part of the cognate and count only as electives. These courses are enclosed in parentheses). Students are encouraged to take ENGL 462, Technical Writing, as three hours of their cognate; this course may be used with any other cognate.

AERO - 301, 302, 401, 402

ARMY - 301, 302, 401, 402

BADM - one of the following areas may be used:

Management Science - (BADM 225, CSCI 205), BADM 390, 490, 590, 596

Accounting - (BADM 225), BADM 226, 331, 334, 363

Statistics - (BADM 291, 292 or STAT 201), BADM 393, 475, 591, 592, or 594

BADM 371 may be substituted for one of the BADM courses above.

CHEM - any combination of three or four courses (12 or more hours) from 221, 541, 542, 621, 643 and 644.

ECON - (ECON 224), 321, 322, 415, 526

ENGL - 462 may be used for 3 hours with any other cognate.

GEOG - any combination of 12 hours from 341, 345, 531, 541, 543, 545, 551, 552, 554, 555

MATH - any four courses at the 300, 400, or 500 level except 401, 501, and 502. (MATH 542 and MATH 544 may be used.)

Continued on next page

NAVY - 301, 302, 401 and 402 plus either GINT 342 or HIST 597.

PHIL - any combination of 12 hours from 309, 315, 510 511, 512, 517, 521, 523, 528

PHYS - (201 and 202 or 211 and 212), 301, 509, and 510.

STAT - any four 500 level courses. (STAT 514 may be used.)

Section 5. ELECTIVES

Requirements for the baccalaureate degree in the College of Science and Mathematics include at least 120 hours in academic subjects. Students in the College of Science and Mathematics may elect courses offered in other colleges of the University. Elective credits for participation in the University chorus, orchestra, or band may be counted up to a maximum of four credits.

Section 6. SAMPLE PROGRAM

<u>Semester 1</u>		<u>Semester 2</u>	
ENGL 101	3	ENGL 102	3
Lang 101	4	Lang 102	3
MATH 125	4	MATH 141	4
HIST 1XX	3	HIST 1XX	3
CSCI 101*.....	3	CSCI 140	3
	17		16

<u>Semester 3</u>		<u>Semester 4</u>	
CSCI 210	3	CSCI 310	3
CSCI 240	3	CSCI 320	3
MATH 142	4	MATH 241	4
Cognate prereq ...	3	Cognate prereq ...	3
Group III, IV		Group III, IV	
or V	3-4	or V	3-4
	15-16		15-16

<u>Semester 5</u>		<u>Semester 6</u>	
CSCI 420	3	CSCI 511	3
STAT 514	3	CSCI 530	3
MATH 544	3	MATH 542	3
Cognate	3	Cognate	3
Group III, IV		Group III, IV	
or V	3-4	or V	3-4
	15-16		15-16

<u>Semester 7</u>		<u>Semester 8</u>	
CSCI 541	3	CSCI 5xx	3
CSCI 5xx	3	Cognate	3
Cognate	3	Group III, IV, V..	3
Group III,IV,V ...	3	Elective	6
Elective	3		15
	15		

*Computer science majors are not required to take CSCI 101. It may be taken by the student who wants some experience with the computer before he begins CSCI 140. University 101 or a Group III or Group IV required course may be substituted.

Section 7. CHECK LIST

Enter courses and credits when completed.

General Education

Group I
 ENGL 101 _____
 ENGL 102 _____
 Lang 101 _____
 Lang 102 _____
 HIST 1xx _____
 HIST _____
 MATH _____
 MATH _____
 Total Credits _____

Group II (6 hours minimum)

 Total Credits _____

Group III (6 hours minimum)

 Total Credits _____

Group IV (6 hours minimum)

 Total Credits _____

Group V (7 hours minimum)

 Total Credits _____

Major (24 or more hours)

 Total Credits _____

Cognate (12 hours minimum)

 Total Credits _____

Electives

 Total Credits _____

Major program cards filed next to last semester.

Apply for graduation by Drop Date.