

Proposal for Revisions in the BS-CIS Minor Program

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Background: The BS-CIS Minor program, as it exists currently, was created many years ago. There are two tracks in the program. The first, the *Information Systems* track, is intended for students interested in business applications of computing. The second, the Programming and Algorithms track, is intended for students who may be interested in scientific and other applications of computing. The revisions proposed below in the two tracks are motivated by some of the changes in the field as a whole as well as in some of our courses.

Current curriculum: Currently, the requirements for the BS-CIS Minor program are as follows:

- *Information Systems Track:*
 - Hours: 22 credit hours of required courses plus 3-5 hours of electives.
 - Required: CSE 201, 214, 314, 360, 670; Math 366.
 - Elective: One of: CSE 560, 616, 671.
- *Programming and Algorithms Track:*
 - Hours: 19 credit hours of required courses plus 6-8 hours of electives.
 - Required: CSE 221, 222, 321, 360; Math 366.
 - Elective: Two of: CSE 541, 560, 625, 655, 660, 670, 675, 680.

There are some important problems with the current curricula for both tracks. With respect to the Information Systems track, the first problem is that CSE 360 which is intended to provide an introduction to hardware-level issues, is not very relevant to students in this track. On the other hand, CSE 200 which allows students to get reasonable facility with many software packages that are widely used in business is very relevant but is not included in the track. Finally, CSE 560 which is intended as a keystone course for CIS majors and includes large scale programming projects, seems inappropriate for these students even as an elective.

With respect to the Programming and Algorithms track, the problems are as follows. First, CSE 221 has evolved over the years and now assumes that students taking the course already have a reasonable knowledge of basic programming; students who do not possess such knowledge take CSE 201 or 202 before enrolling in CSE 221. It seems reasonable that students pursuing the minor program should get credit for this prerequisite for CSE 221. Second, CSE 360, although somewhat more appropriate for students in this track than for students in the Information Systems track, is not, by itself, a very helpful course. Students who are interested in developing an understanding of computer architecture at the hardware level should take both CSE 360 and 675. So it would make more sense to include 360 (along with 675) among the electives rather than as a required course. And, as in the case of the IS track, CSE 560 is not really suitable for students in this track.

In addition, some of the recently developed courses such as CSE 551 (Information Security) would be of interest and accessible to students in both tracks. Hence they should be available as electives.

Proposal: Based on these considerations, the CSE faculty approved of changing the minor program as follows:

- *Information Systems Track:*

Hours: 19 credit hours of required courses plus 6-8 hours of electives.

Required: CSE 200, 201, 214, 670; *and* either Math 345 or Math 366.

Elective: Two of: CSE 314, 551, 616, 671.

- *Programming and Algorithms Track:*

Hours: 19 credit hours of required courses plus 6-8 hours of electives.

Required: CSE 201/202[†], 221, 222, 321; *and* either Math 345 or Math 366.

Elective: Two of: CSE 360, 541, 551, 581, 621, 625, 630, 670, 671, 675, 677, 680.

Note: [†]Two other courses currently under development (offered as CSE 294A and 294I in Wi '06) are first courses on computing/programming and are, in this respect, similar to CSE 201 and 202.

Hence either of these can be used in place of 201/202 once final versions of the courses are in place.

Other similar courses may be developed in the future; thus this requirement should really be read as "any CSE 200-level introductory programming course".

Process: The problems in the minor program as it currently exists and possible changes to it were discussed at the CSE Undergraduate Studies Committee meetings of Oct. 24 and Nov. 7. Following these discussions, the proposal for changes described above were approved unanimously at the Nov. 7 meeting.

Minutes of both meetings were posted on the electronic student and faculty newsgroups allowing both students and faculty to offer their comments. The CSE faculty approved the proposal electronically following the Nov. 7 committee meeting.

We request expeditious approval of the proposed changes in the CIS Minor program so that current students in both tracks can follow the revised program.