

Proposed Changes in the BA-CIS, BS-CIS and BS-CSE Programs

Background

The university recently approved changes in the GEC requirements for degree programs in Engineering and in Arts and Sciences. The result is to reduce, by varying amounts, the GEC requirements in each program; One goal of the change was to reduce the overall size of the programs with the goal of bringing the individual programs to be as close to 181 credit hours as possible (but not below 181). Thus the reduction in the GEC requirements are not meant to be used to increase the major requirements (unless the total number of hours would go below 181).

Summary of changes

In the case of engineering programs, the result is a reduction by one GEC course; thus the BS-CSE program will go from 196 to 191 hours.

The changes for BS programs in Arts and Sciences is more complicated (see the document at www.cse.ohio-state.edu/neelam/ugsc/changes/collegeDocs.pdf for details) but the net results are that the number of GEC hours is somewhat reduced and includes some additional flexibility; and the 15 hours of “free electives” is eliminated. With no other changes, this would make the program size 176 hours. Hence we propose adding 5 hours to the major program, four hours for a capstone design course, and one for CSE 601 (Social and Ethical Issues in Computing).

In the case of BA programs in ASC, the net results are that the number of GEC hours is somewhat reduced and includes some additional flexibility; and the 15 hours of “free electives” is eliminated. This brings the program size to 181 hours, hence no changes in the number of hours in the major portion of the program is being proposed. However, given the importance of the topic, especially to BA students, it is proposed that CSE 601 be added to the *core* portion of the major and the number of elective hours correspondingly reduced by one hour.

The details of these changes appear on pages 3, 4, and 5 of this document.

Additional changes

Some changes are also being proposed in the technical electives portions of the BS-CSE and BS-CIS programs. In the case of BS-CSE, the main changes are the inclusion of a *suggested* capstone design course in each option; the inclusion of specific *tracks* in the *Individualized* option; and the removal of BusMgmt 630 as a required course in the *Information Systems* option. For students interested in business information systems, the new *Business Information Systems* track in the *Individualized* option should be attractive.

In the case of BS-CIS, the main changes are the inclusion, with the addition described above of a capstone course requirement for all BS-CIS students, of a *suggested* capstone design course in each option; the inclusion of specific *tracks* in the *Individualized* option; the removal, given its very low popularity, of the *Advanced Studies* as an option and the addition of a corresponding track in the *Individualized* option; and the removal of BusMgmt 630 as a required course in the *Information Systems* option. Again the new *Business Information Systems* track in the *Individualized* option should be attractive to students interested in business information systems.

These changes are described on pages 6 and 7.

Process/Recommendation

These changes were discussed extensively at a number of UGSC meetings during October and November. Student representatives from both the BS-CIS and the BS-CSE programs were part of these discussions. The committee approves all of these changes and recommends them to the faculty for its approval. Once the faculty approves these changes, they will have to be approved by the academic affairs/curriculum committees of the respective colleges and then by the *Council on Academic Affairs*. Since the changes are consistent with, and indeed dictated by, the GEC changes approved by CAA, these approvals are expected to be straightforward.

BA-CIS

Summary of changes

The main changes are in the GEC requirements. The only changes in the major are the addition of CSE 601 as a required course, the reduction of electives by 1 hour, and the moving of Stat 245 to the GEC category (for counting purposes).

Net result: Program size reduced by 10 hrs.

Details of new program

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GEC (100 hrs):

Engl 110, Second writing:	10 hrs
Math & data analysis:	10 hrs
Math 151, Stat 245	
Nat. Sc.@1	15 hrs
Foreign language through 104@2	20 hrs
Soc. Sc.@3	10 hrs
Arts & Hum.@4	10 hrs
Historical study@5	10 hrs
Issues of contemp. world	5 hrs
Two additional courses from	10 hrs
Nat.Sc./Soc.Sc./Arts & Hum.	

@1: must include one 2-course sequence in biological or physical sc;
at least one course from each of bio. and phy. sc.

@2: some/all of these hours may be EM hours;

@3: two courses selected from two of the following three categories:
Individuals and groups; Organizations & Politics; Human,
Natural, and Economic resources.

@4: at least five hours from the Literature category; and
at least five hours from the second from Visual/Perf. Arts (VPA);

@5: This *doesn't* have to be a sequence.

Major (81 hours):

Core: CSE 221, 222, 321, 360, 560, 601, 670: 25 hrs

Electives: 19 hrs

 chosen from CSE 541, 551, 581, 616, 625, 630,
 655, 660, 671, 675.02, 680, 757

Additional major requirements: 37 hrs

 Math 152, 153, 366; CSE 459.xx;
 approved related field (intro course: 5 hrs,
 above intro level: 10 hrs);

 General elec. in major: 8 hrs
 (courses CSE, Math, or related field)

Total for degree: 181 hrs

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BS-CIS

Summary of changes

Changes with respect to the GEC as specified by ASC. Major is strengthened (to make it technically more comparable to the BS-CSE program) as follows: require CSE 601, and a capstone design course; the number of hours in each option (not including 601 or the capstone design course) will be 24 hours. *Net result:* Program size reduced by 10 hrs.

Details of new program

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GEC (100 hrs):

Engl 110, Second writing:	10 hrs
Quantitative/Logical Analysis:	10 hrs
Math 151, Math 152	
Foreign language through 104@1	20 hrs
Nat. Sc.:	20 hrs
Phys 111/112 or 131/132;	
two additional sc. courses, at least	
one must be biological;	
Soc. Sc.@2	10 hrs
Arts & Hum.@3	10 hrs
Historical study	10 hrs
Additional breadth	10 hrs

Math 153, 366; 2 hrs. of Stat 427

(these courses are "prerequisites" for the major but may be taken after the student has been admitted to the major.

Students also have the option of taking other courses as specified by the college to meet the "additional breadth" requirement; but they would they would still have to take these courses.)

@1: some or all of these hours may be EM hours;

@2: two courses selected from two of the following three categories:
Individuals and groups; Organizations & Politics; Human,
Natural, and Economic resources.

@3: at least five hours from the Literature category; and

at least five hours from the second from Visual/Perf. Arts (VPA);

@4: This *doesn't* have to be a sequence.

Major (81 hrs):

Core:	46 hrs
221, 222, 321, 360, 459, 541, 560,	
601, 625, 655, 660, 670, 675.02, 680	
Tech Option including capstone course (minimum):	28 hrs
Additional math	7 hrs
Math 566, 1 hr. of Stat 427, Stat 428	

Total for degree: 181 hrs

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BS-CSE

Background

The College of Eng. has, until now, required engineering programs to include 40 hrs of GEC courses. The Computing Accreditation Commission's accreditation criteria require CSE programs to include a minimum of 45 hours of general education courses but CAC's "general education" is, in some ways, more inclusive than OSU's GEC. CAC also required students' oral communication skills to "be developed and applied in the program" which has been interpreted to mean that the skills must be *first* developed and *then* applied; i.e., the requirement cannot be met by just having students make a couple of presentations in capstone design or other courses. So until now, we have required BS-CSE majors to have 40 hours of GEC courses plus Comm 321 which is a general education course although not a GEC course, thereby meeting both CoE and CAC requirements.

Summary of changes

CoE has now reduced its GEC requirements to 35 hours. Also, CAC is in the process of eliminating any specific number of general education credit hours. Further, CAC is also eliminating the "developed and applied" requirement for communication skills (although the outcome with respect to communication skills will very much remain). Hence the proposal is to reduce our requirements to 35 hours of GEC courses plus Comm 321. Given the repeated feedback from constituents about the importance of oral skills, it seems appropriate to retain Comm 321 as a requirement.

Net result: Program size reduced by 5 hrs.

Details of new program

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General Ed. Courses (79/80 hrs):

Oral/written skills:	15 hrs
Engl 110, Second writing, Comm 321	
Quantitative/Logical Analysis:	20 hrs
Math 151, 152, 153, 254	
Nat. Sc.:	19/20 hrs
Phys 131, 132; Chem 121;	
one of Phys 133/Chem 125/Biol 113	
Soc Sc + Arts & Hum + History@1	25 hrs

Major (112/113 hrs):

Core:	45 hrs
CSE 221, 222, 321, 360, 459, 541, 560,	
601, 625, 655, 660, 670, 675.01, 680	
Tech Option (incl. capstone course):	30 hrs
Additional math:	12 hrs
Math 366, 566, Stat 427, 428	
ECE courses:	13 hrs
ECE 261, 206, 300, 309, 320, 567	
Other Engineering courses:	12/13 hrs
Engr 181, 183; ISE 504;	
one of ME 410/ME 500/MSE 205	

Total (minimum) for degree:	191 hrs
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@1: Must include Econ 200/201 and satisfy CoE requirements: include ethics course; include diversity course; at least 1, no more than 2, courses in each of Soc. Sc., Arts & Hum., History; if more than one course in Soc. Sc. or Arts & Hum., they must be from distinct groups.

[Arts & Hum. groups: Literature, Visual/Perf. Arts, Culture & Ideas;

Soc. Sc. gps.: Individuals & Groups, Organizations & Pol., Human, Natural & Econ. Resources].

BS-CIS technical elective options

(Note: Proposed changes are marked with “*”).

1. Information and Computation Assurance (28 hours):

Required: CSE 551, 651, 677, 678, capstone course: 16 hours;

Suggested capstone course: CSE 762 (*).

Electives: 12 hours; at least 3 of the 12 hours must be CSE;

the remaining 9 may be CSE or non-CSE or combination of the two.

2. Software Systems (28 hours):

Required: CSE 551, 677, 757 (*); capstone course: 13 hours;

Suggested capstone course: CSE 758 (*).

Electives: 15 hours; at least 10 of the 15 hours must be CSE.

Advanced Studies: Drop this option.

3. Information Systems (28 hours):

Required: CSE 616, 671; AMIS 211/310; capstone course: 16 hours;

(*omit: Bus Mgt 630 (4 hrs)*)

Suggested capstone course: CSE 772 (*).

Electives: 12 hours; at least 8 of the 12 hours must be CSE courses.

4. Individualized (28 hours):

Required: 18 hours of CSE courses including a capstone course;

Electives: 10 hours of CSE+non-CSE courses approved by advisor;

OR a minor program approved by advisor.

Students in this option may want to consider following one of the tracks listed below.

Tracks (*):

Graphics/Animation: Req: CSE 581;

Suggested capstone course: CSE 682 or 694G;

Other recommended courses: CSE 681, 694A, 781, 782, 784; 694G/682;

For students pursuing a minor, recommended minor(s):

Studio Art; Industrial, Interior & Visual Comm. Design.

AI: Req: CSE 630;

Suggested capstone course: CSE 694G or 731;

Other recommended courses: CSE 612, 634, 730, 732, 733, 735, 779, 731/694G;

For students pursuing a minor, recommended minor(s):

Linguistics; Psychology.

Advanced Studies:

Req: One of CSE 725/755/780; one of 760/775; one of Math 568/571/647/648 (or similar);

For students pursuing a minor, recommended minor(s):

Mathematics.

Business Information Systems:

Req: CSE 616, 671; Business Minor;

Suggested capstone course: CSE 772.

BS-CSE technical elective options

(Note: Proposed changes are marked with “**”).

1. Information and Computation Assurance (30 hours):

Required: CSE 551, 651, 677, 678, capstone course; Math 568/571/648 (*): 19 hours;

Suggested capstone course: CSE 762 (*).

Electives: 11 hours; at least 3 of the 11 hours must be CSE;

the remaining 8 may be CSE or non-CSE or combination of the two.

2. Software Systems (30 hours):

Required: CSE 551, 677, 757 (*); capstone course; Math 568/571/648 (*): 16 hours;

Suggested capstone course: CSE 758 (*).

Electives: 14 hours; at least 10 of the 14 hours must be CSE.

3. Hardware/Software Systems (30 hours):

Required: CSE 676 or ECE 765; CSE 677; ECE 561; capstone course; Math 415/568/571: 16/17 hours;

Suggested capstone course: CSE 778 (*).

Electives: 14/13 hours; at least 10 of these hours must be CSE.

4. Information Systems (30 hours):

Required: CSE 616, 671; AMIS 211/310; capstone course; Math 568/571/648: 19 hours;

(*omit: Bus Mgt 630 (4 hrs)*)

Suggested capstone course: CSE 772 (*).

Electives: 11 hours; at least 8 of the 11 hours must be CSE courses.

5. Individualized (30 hours):

Required: 18 hours of CSE courses including a capstone course;

Electives: 12 hours of CSE+non-CSE courses approved by advisor;

OR a minor program approved by advisor.

Students in this option may want to consider following one of the tracks listed below.

Tracks (*):

Graphics/Animation: Req'd: CSE 581;

Suggested capstone course: CSE 682 or 694G;

Other recommended courses: CSE 681, 694A, 781, 782, 784; 694G/682;

For students pursuing a minor, recommended minor(s):

Studio Art; Industrial, Interior & Visual Comm. Design.

AI: Req'd: CSE 630;

Suggested capstone course: CSE 694G or 731;

Other recommended courses: CSE 612, 634, 730, 732, 733, 735, 779, 731/694G;

For students pursuing a minor, recommended minor(s):

Linguistics; Psychology.

Advanced Studies:

Req'd: One of CSE 725/755/780; one of 760/775; one of Math 568/571/647/648 (or similar);

For students pursuing a minor, recommended minor(s):

Mathematics.

Business Information Systems:

Req'd: CSE 616, 671; Business Minor;

Suggested capstone course: CSE 772.