



Memo

To: Randy Smith, Vice Provost for Academic Programs

From: Rosie Quinzon-Bonello, Assistant Dean for Curriculum and Assessment

Date: December 5, 2023

Re: Informational Item – BS Computer Science and Engineering Program Change

On December 4, 2023, The College of Engineering Committee for Academic Affairs approved the program change proposal to the BS in Computer Science and Engineering which would

- remove CSE 5916 as a capstone option
- replace PHIL 1338 with PHIL 2338 as an Ethics requirement

This would be effective Summer 2024 onwards.

Attached is the proposal.

Yours sincerely,

Rosie Quinzon-Bonello



November 17, 2023

To: Boyd Panton, CCAA Chair

Re: Changes to CSE Program

1. Currently students in our CSE program are able to take one of a number of capstone courses (numbered as CSE 591x). During our recent ABET accreditation review one of these capstone courses (CSE 5916 - Capstone Design: Research-Focused Projects) was identified as a concern for meeting the ABET requirements for an engineering design capstone. To deal with this concern this course is being transitioned to a technical elective that will not fulfil the requirements of a capstone. We would like to remove this course from the list of capstone courses that CSE students are allowed to take to fulfil the program requirement of a capstone. We would like this to take effect as of the start of Summer of 2024 and allow students already enrolled for Spring of 2024 to count CSE 5916 for their capstone requirement.
2. Currently students in our CSE program are listed in the system as being required to take either CSE 2501 or PHIL 1338 to fulfill the ethics requirement of the program. PHIL 1338 is a service course offered by the Philosophy department for our students. During the transition to the new GE Philosophy was originally going to keep the numbering on this course and our curriculum sheet for the new GE was submitted with this understanding. However, as the course was developed the plan changed to Philosophy making the course one that could be used to fulfil the Citizen for a Diverse and Just World GE Theme requirement and gave it a new course number. We did not update our curriculum sheets to indicate this change.

We would like to formally update our curriculum to switch students on the new GE to use 2338 to fulfill their ethics requirement and Themes course. We would also like this change to take effect at the start of Summer 2024.

I have included a new curriculum sheet for our CSE program so you can see the changes, as well as a copy of our current curriculum sheet on file with the college. The current sheet has the changes from our new sheet highlighted.

If you have any further questions, please contact me at morris.343@osu.edu.

Sincerely,

Jeremy Morris
Assistant Professor of Practice
Computer Science & Engineering

Bachelor of Science Computer Science Engineering

Students in this major will complete a minimum of 126 hours outlined as follows

| General Education Requirements | | |
|---|------------------------|-----------------------------------|
| Requirement | Course Options | Hours |
| GE Launch Seminar | ACADAFF 1201 | 1 |
| Foundations: Writing and Information Literacy ^a | <i>Student Choice</i> | 3 |
| Foundations: Mathematical & Quantitative Reasoning/Data Analysis ^a | <i>Student Choice*</i> | 0-5 |
| Foundations: Literary, Visual and Performing Arts ^a | <i>Student Choice</i> | 3 |
| Foundations: Historical & Cultural Studies ^a | <i>Student Choice</i> | 3 |
| Foundations: Natural Science ^a | <i>Student Choice*</i> | 0-5 |
| Foundations: Social & Behavioral Sciences ^a | <i>Student Choice</i> | 3 |
| Foundations: Race, Ethnic and Gender Diversity ^a | <i>Student Choice</i> | 3 |
| Theme: Citizenship for a Diverse & Just World ^b | <i>Student Choice</i> | 4 |
| Theme: Student Choice ^b | <i>Student Choice</i> | 4 |
| GE Reflection | Capstone** | Embedded into Major Core Capstone |
| Total | | 24-34 |

| College / Degree Requirements ^{a, b} | | |
|--|----------------|-----------|
| Requirement | Course Options | Hours |
| MATH 1151*, 1172*, (Math & Quantitative Reasoning / Data Analysis) | | 10 |
| PHYSICS 1250* (Nat Sci) | | 5 |
| ENGR 1181.0x, 1182.0x | | 4 |
| ENGR 1100.01 | | 1 |
| Total | | 20 |

^a Some coursework required by the major or college may satisfy GE requirements. Please add an asterisk to "student choice" for any GE category where that category can be satisfied by a required course. Please indicate in parentheses following the course listing within College/Degree requirements or Major Coursework what GE category the course satisfies (e.g., "Biology 1113 (Nat Sci)" in the Major Core for programs that require this as a prerequisite to major coursework). There is no limit to the number of courses that may overlap between the GE Foundations and the rest of the academic program

^b Students complete either a 4-credit course or two 3-credit courses in each of two General Education Theme areas: Citizenship for a Diverse & Just World (required), and the student's choice of available GE Themes. If major-required courses are approved as a GE Theme course, one course in each GE Theme area may double count in the GE and major hours. Theme courses are identified with a ❖ symbol.

* These courses are can also fulfill certain GE Requirements above (may be degree requirements, pre- or co-requisites, or major courses).

| Major Coursework ^{a, b} | | |
|--|--|-----------------|
| Course | Title | Hours |
| Major Core | | |
| CSE 2221 | Software I | 4 |
| CSE 2231 | Software II | 4 |
| CSE 2321 | Foundations I | 3 |
| CSE 2331 | Foundations II | 3 |
| CSE 2421 | Systems I | 4 |
| CSE 2431 | Systems II | 3 |
| CSE 3341 | Programming Languages | 3 |
| CSE 3231 or 3241 | Software Engineering OR Databases | 3 |
| CSE 3421 or 3461 | Architecture OR Networking | 3 |
| CSE 3521 or 3541 | AI OR Graphics and Game Design | 3 |
| CSE 390x | Project: Design, Development and Documentation | 4 |
| CSE59xx** | Capstone | 4 |
| CSE 2501 (or PHIL 1338) | Ethics in Computing | 1 |
| Total | | 42 |
| Required Non-Major General Courses | | |
| ECE 2020 | Introduction to Analog Systems and Circuits | 3 |
| ECE 2060 | Introduction to Digital Logic | 3 |
| MATH 2568 | Linear Algebra | 3 |
| MATH 3345 | Foundations of Higher Math | 3 |
| STAT 3470 | Introduction to Probability and Statistics for Engineers | 3 |
| Science | Elective | 3 |
| Science/Math | Elective | 5 |
| Total | | 23 |
| Required Technical / Directed / Targeted Electives; Career Courses | | |
| Technical Electives | | Total 17 |

| | |
|--|------------|
| General Education | 24-34 |
| College / Degree | 20 |
| Major Core | 42 |
| Required Non-Major | 23 |
| Required Technical / Directed / Targeted Electives; Career Courses | 17 |
| Minimum Total Credit Hours for Degree | 126 |

Bachelor of Science in Computer Science and Engineering Computer Science and Engineering

Students in this major will complete a minimum of 126 credit hours as outlined below.

| General Education Requirements | | |
|--|---------------------------|-----------------------------------|
| Requirement | Course Options | Hours |
| GE Launch Seminar | GENED 1201 | 1 |
| Foundations: Writing and Information Literacy | Student Choice | 3 |
| Foundations: Mathematical & Quantitative Reasoning/Data Analysis | Math 1151 | Overlap w/ College requirement |
| Foundations: Literary, Visual and Performing Arts | Student Choice | 3 |
| Foundations: Historical & Cultural Studies | Student Choice | 3 |
| Foundations: Natural Science | Physics 1250 | Overlap w/ College requirement |
| Foundations: Social & Behavioral Sciences | Student Choice | 3 |
| Foundations: Race, Ethnic and Gender Diversity | Student Choice | 3 |
| Theme: Citizenship for a Diverse & Just World | Student Choice | 4 |
| Theme: Student Choice | Student Choice | 4 |
| GE Reflection | Program required capstone | Embedded into Major Core Capstone |
| General Education Credit Hours: | | 24 |

| College/Degree Requirements | | |
|--|----------------|-----------|
| Requirement | Course Options | Hours |
| Math 1151, 1172, (Math & Quantitative Reasoning / Data Analysis) | | 10 |
| Physics 1250 (Nat Sci) | | 5 |
| ENGR 1181.0x, 1182.0x | | 4 |
| ENGR 1100.01 | | 1 |
| Credit Hours: | | 20 |

| | |
|---|--------------|
| General Education Requirements | 24 |
| College/Degree Requirements | 20 |
| Major Core | 42-45 |
| Required Non-Major Courses | 23 |
| Technical/Directed/Targeted Electives; Career Courses | 17 |
| Minimum Total Credit Hours | 126 |

| Course | Title | Hours |
|--|--|--------------|
| Major Core | | |
| CSE 2221 and 2231 | Software 1 and 2 | 8 (4+4) |
| CSE 2321 and 2331 | Foundations 1 and 2 | 6 (3+3) |
| CSE 2421 and 2431 | Systems 1 and 2 | 7 (3+4) |
| CSE 3341 | Principles of Programming Languages | 3 |
| CSE 2501 or PHILOS 2338 | Social, Ethical, and Professional Issues in Computing or Computing Ethics for a Just and Diverse World | 1 or 4 |
| CSE 3901 or 3902 or 3903 | Project: Design, Development, and Documentation (Web Applications or Interactive Systems or Systems Software) | 4 |
| CSE 3231 or 3241 | Introduction to Software Engineering or Introduction to Databases | 3 |
| CSE 3421 or 3461 | Computer Architecture or Introduction to Networking | 3 |
| CSE 3521 or 3541 | Introduction to Artificial Intelligence or Introduction to Computer Graphics | 3 |
| CSE 5911 or 5912 or 5913 or 5914 or 5915 | Capstone Experience (Software Applications or Game Design and Development or Computer Animation or Knowledge-Based Systems or Information Systems) | 4 |
| Total Major Core | | 42-45 |

| Required Non-Major Courses | | |
|---|--|-----------|
| ECE 2020 | | 3 |
| ECE 2060 | | 3 |
| MATH 2568 | | 3 |
| MATH 3345 | | 3 |
| STAT 3470 | | 3 |
| Science/Math Elective | Choice from list (see Degree Audit for list) | 8 |
| Total Required Non-Major Courses | | 23 |

| Required Technical / Directed / Targeted Electives; Career Courses | | |
|--|--|--------------|
| CSE courses 3000-level or higher* | | >= 9 |
| Approved non-CSE courses 2000-level or higher* | | <= 8 |
| Total Required Technical Electives | | 17 |
| Total Required Major and Non-Major Credit Hours: | | 80-83 |

Additional information:
***Technical electives:**

- At most 2 hours of CSE 4251-4256 may be counted toward technical electives
- At most 2 hours of CSE 4193, 3 hours of CSE 4998, or 6 hours of CSE 4999, with no more than 6 hours total of CSE 4193, 4998, and 4999 combined, may be counted toward technical electives
- Non-CSE technical electives may be satisfied by completing an approved minor or through select courses (see list). Minors or courses not listed may be petitioned. More information is available at <https://cse.osu.edu/current-students/undergraduate/majors/bachelors-science-computer-science-engineering-bs-cse>

****Application to the major:**

- **An application to the major must be submitted online at <https://advising.engineering.osu.edu/current-students/applying-your-major> during the term in which admission requirements are being completed**

*****Graduation application:**

- **An application to graduate must be submitted online at <https://graduation.engineering.osu.edu> no later than the second Friday of the semester prior to the graduation term**

| | Autumn | | Spring | |
|--------|--------------------------|----|--|--------|
| Year 1 | Engr 1100 | 1 | CSE 2221 (need <i>C</i> or <i>better</i>) | 4 |
| | Engr 1181 | 2 | Engr 1182 | 2 |
| | Math 1151 | 5 | Math 1172 | 5 |
| | Physics 1250 | 5 | GE-Writing | 3 |
| | CSE 1223 | 3 | GE Launch Seminar | 1 |
| | | 16 | | 15 |
| Year 2 | CSE 2231 | 4 | CSE 2331 | 3 |
| | CSE 2321 | 3 | CSE 2421 | 4 |
| | Stat 3470 | 3 | ECE 2060 | 3 |
| | Math or Science Elective | 4 | Math 3345 | 3 |
| | GE-Social & Behavioral | 3 | GE-Diversity | 3 |
| | | 17 | | 16 |
| Year 3 | CSE 2431 | 3 | CSE 32X1 | 3 |
| | CSE 390X | 4 | CSE 34X1 | 3 |
| | ECE 2020 | 3 | CSE 35X1 | 3 |
| | Math 2568 | 4 | CSE 2501 or PHILOS 2338 | 1 or 4 |
| | GE-History | 3 | [GE-Theme if not PHILOS 2338 | 4] |
| | | 17 | | 17-18 |
| Year 4 | CSE 3341 | 3 | CSE 591X | 4 |
| | Technical Elective | 3 | Technical Elective | 3 |
| | Technical Elective | 3 | Technical Elective | 3 |
| | Technical Elective | 3 | Technical Elective | 2 |
| | GE-Lit/VPA | 3 | GE-Theme | 4 |
| | | 15 | | 16 |