

**College of Engineering
Proposed Catalog Changes
Effective Summer 2018**

COMPUTER SCIENCE

1. Add the following courses:

CS J431/J531 (s) SFS Professional Development (1 cr, max arr)

This seminar emphasizes critical thinking, leadership, presentation and publication skills.

CS 531 SFS (s) SFS Professional Development (1 cr, max arr)

See CS J431/J531.

Available via distance: No

Geographical Area: Moscow

Rationale: The number change will help avoid misunderstandings with the CS-400/501: Computer Science Seminar course which is a required course in the Computer Science program. The title change will help match the new name used by the U.S. Government for the CyberCorps(R) Scholarship for Service program.

The CS-400/501 Scholarship/Service seminar course has been taught for many years. The requested change is to ensure a clearer separation from the CS-400/501 Computer Science Seminar course numbers. The CS-400/501 seminar is a required course within the Computer Science program. The referred SEM:Scholarship/Service (old name) CyberCorps(R) Prof. Dev. (new name) course is required only for students in the CyberCorps(R) program. This separation will help avoid misunderstandings and accurate accountability within the degree audit. The current SEM: Scholarship/Service course is not listed on the course catalog [CS 400 and CS 501 are both listed in the catalog]. The new name CyberCorps(R) Prof. Dev. course should also not be listed on the general course catalog. This course can be taken multiple times.

ELECTRICAL AND COMPUTER ENGINEERING

1. Make the following curricular changes to the **Major in Computer Engineering (B.S.Comp.E.)**:

Required course work includes the university requirements (see regulation J-3) and:

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| CHEM 111 | Principles of Chemistry I | 4 cr |
| COMM 101 | Fundamntls Public Speaking | 2 cr |
| CS 120 | Computer Science I | 4 cr |
| CS 121 | Computer Science II | 3 cr |
| CS 150 | Computer Organization and Architecture | 3 cr |
| CS 210 | Programming Languages | 3 cr |
| CS 240 | Computer Operating Systems | 3 cr |
| CS 270 | System Software | 3 cr |
| ECE 101 | Foundations of Electrical and Computer Engineering | 2 cr |
| ECE 210 | Electrical Circuits I | 3 cr |
| ECE 211 | Electrical Circuits Lab I | 1 cr |

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| ECE 212 | Electrical Circuits II | 3 cr |
| ECE 213 | Electrical Circuits II Lab | 1 cr |
| ECE 240 | Digital Logic | 3 cr |
| ECE 241 | Logic Circuit Lab | 1 cr |
| ECE 292 | Sophomore Seminar | 0 cr |
| ECE 310 | Microelectronics I | 3 cr |
| ECE 311 | Microelectronics I Lab | 1 cr |
| ECE 340 | Microcontrollers | 3 cr |
| ECE 341 | Microcontrollers Lab | 1 cr |
| ECE 350 | Signals and Systems I | 3 cr |
| ECE 351 | Signals and Systems I Lab | 1 cr |
| ECE 440 | Digital Systems Engineering | 3 cr |
| ECE 482 | Computer Engineering Senior Design I | 3 cr |
| ECE 483 | Computer Engineering Senior Design II | 3 cr |
| ECE 491 | Senior Seminar | 0 cr |
| ENGL 317 | Technical Writing | 3 cr |
| MATH 170 | Analytic Geometry and Calculus I | 4 cr |
| MATH 175 | Analytic Geometry and Calculus II | 4 cr |
| MATH 176 | Discrete Mathematics | 3 cr |
| MATH 310 | Ordinary Differential Equations | 3 cr |
| MATH 330 | Linear Algebra | 3 cr |
| PHYS 211 | Engineering Physics I | 3 cr |
| PHYS 211L | Laboratory Physics I | 1 cr |
| PHYS 212 | Engineering Physics II | 3 cr |
| PHYS 212L | Laboratory Physics II | 1 cr |
| STAT 301 | Probability and Statistics | 3 cr |

Technical Electives (15 cr):

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| Technical Electives | 15 cr |
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Selected from upper-division computer engineering, electrical engineering, and computer science courses.

One of the following (3 cr):

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| AMST 301 | Studies in American Culture | 3 cr |
| PHIL 103 | Ethics | 3 cr |

One of the following (3-4 cr):

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| ECON 201 | Principles of Macroeconomics | 3 cr |
| ECON 202 | Principles of Microeconomics | 3 cr |
| ECON 272 | Foundations of Economic Analysis | 4 cr |

Courses to total 128 credits for this degree, not counting ENGL 101, MATH 143, and other courses that might be required to remove deficiencies.

Students majoring in computer engineering must earn a grade of P in ECE 292 and a grade of C or better in each of the following courses for graduation, and before registration is permitted in upper-division engineering courses: CHEM 111, CS 120, ECE 210, ECE 211, ECE 212, ECE 213, ECE 240 and ECE 241; MATH 170, MATH 175, and MATH 310; and PHYS 211, PHYS 211L, PHYS 212, and PHYS 212L. Students majoring in computer engineering must earn a grade of C or better in each of the following courses for graduation, and before registration is permitted in upper-division engineering

~~courses: ECE 210, ECE 212, ECE 240, ECE 241, MATH 170, MATH 175, MATH 310, PHYS 211, and PHYS 212. Students majoring in computer engineering must earn a grade of C or better in each of the following courses for graduation, and before registration is permitted in 200-level CS courses: Before registration is permitted in 200-level CS courses students majoring in computer engineering must earn a grade of C or better in~~ CS 120, CS 121 and CS 150 and MATH 176. Students majoring in computer engineering must earn a grade of C or better in each of the following courses for graduation, and before registration is permitted in upper-division CS courses: CS 210, CS 240, CS 270, and MATH 170, MATH 175, and MATH 176 ~~for graduation and before registration is permitted in upper-division CS courses.~~

Students majoring in computer engineering must meet the college requirements for admission to classes (see "Admission to Classes" under College of Engineering, part four).

Any student majoring in computer engineering may accumulate no more than five (5) letter grades of D's and F's in mathematics, science, or engineering courses that are used to satisfy graduation requirements. Included in this number are multiple repeats of a single class or single repeats in multiple classes and courses transferred from other institutions. Specifically excluded are D or F grades from laboratory sections associated with courses.

Available via distance: 50% or more of curricular requirements cannot be completed via distance

Geographical Area: Moscow

Rationale: The Computer Engineering degree program shares courses between both BSCS and BSEE programs. This wording change accomplishes two objectives: (1) it eliminates a "loophole" whereby students could register for a 200-level CS but then receive a D in CS 121 or Math 176 since a C or better was not explicitly stated as a requirement for graduation; and (2) standardizes the wording of the requirements and the list of courses across the degrees to prevent students from switching degrees to bypass requirements.

With an increased emphasis on dual-enrollment or advanced placement courses we are seeing a larger number of students entering UI with prior credit for STAT 251. While STAT 301 is preferable and thus still required for students without prior credit for STAT 251, there is sufficient overlap that there is no material benefit to asking students to take STAT 301 after having already completed the equivalent of STAT 251. This change in the degree requirements will facilitate the transition of high school and transfer students into the BSCompE degree program.