### Computer Engineering

**Catalog Term: Fall 2018**

#### 15 Freshman

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| ENGL 101 (3)  
College English I  
Grade C- or better | ENGL 102 (3)  
College English II  
Prereq: ENGL 101  
Grade C- or better |
| MATH 242 (5)  
Calculus I  
Prereq: See Course Catalog | MATH 243 (5)  
Calculus II  
Prereq: MATH 242  
Grade C or better |
| General Education (3)  
H/FA/S&BSc  
Note b | General Education (3)  
H/FA/S&BSc  
Note b |
| CS 194 (4)  
Introduction to Digital Design  
Grade C- or better or equivalent | CS 211 (4)  
Introduction to Programming  
Prereq: MATH 111 or equivalent |

#### 16 Sophomore

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| COMM 111 (3)  
Public Speaking  
Grade C- or better | MATH 555 (3)  
Differential Equations I  
Prereq: MATH 243 Grade C or better or Departmental Consent |
| MATH 321/CS 321 (3)  
Discrete Structures I  
Prereq: MATH 242 or equivalent  
Grade C or better | PHYS 314 (4)  
Physics for Scientist I  
Prereq: MATH 243 and PHYS 313  
Grade C or better |
| PHYS 313 (4)  
Physics for Scientist I  
Coreq: MATH 243  
Grade C or better | EE 284 (3)  
Circuits II  
Prereq: EE 282 & MATH 243 C- or better  
Coreq: MATH 355 |
| CS 238 (3)  
Assembly Language Programming  
Prereq: CS 211  
Grade C- or better | EE 285 L (1)  
Programming w/MATLAB for EECS  
Prereq: CS 211  
Coreq: EE 284 |
| EE 282 (4)  
Circuits I  
Coreq: MATH 243 | CS 311 (4)  
Object-Oriented Programming  
Prereq: CS 211  
Grade C- or better |
| PHYS 316 (1)  
University Physics Lab II |  |

#### 15 Junior

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| CS 338 (4)  
FPGA-Based System Design  
Prereq: CS 194 and CS 211  
Grade C- or better | PHIL 354 (3)  
Ethics and Computers  
OFFERED SPRING ONLY  
Prereq: Junior standing or Departmental consent  
Note c |
| CS 400 (4)  
Data Structures  
Prereq: CS 311 Grade C- or better | IME 254 (3)  
Engineering Portability & Statistics I  
Prereq: MATH 243 or MATH 252  
Grade C or better |
| EE 492 (4)  
Electronic Circuits I  
Coreq: EE 284 | CS 394 (3)  
Introduction to Computer Architecture  
OFFERED SPRING ONLY  
Prereq: CS 194 and CS 211  
Grade C- or better |
| General Education  
H/FA/S&BSc (3)  
Note b | CS 540 (3)  
Operating Systems  
Prereq: CS 238 and CS 311  
Grade C- or better |
| Engineer of 2020 Requirement (1 of 3) | MATH 511 (3)  
Linear Algebra  
Prereq: MATH 243  
Grade C or better |
| Engineer of 2020 Requirement (2 of 3) |  |

#### 16 Senior

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| General Education  
H/FA/S&BSc (3)  
Note b | General Education  
H/FA/S&BSc (3)  
Note b |
| ME 398 (3)  
Thermodynamics I  
Prereq: MATH 243 and PHYS 313  
Grade C or better | IME 255 (3)  
Engineering Economy  
Coreq: MATH 242 or MATH 251 |
| CS 594 (4)  
Microprocessor Based System Design  
OFFERED FALL ONLY  
Prereq: CS 238 and CS 394  
Grade C- or better | CS 464 (3)  
Computer Networks  
OFFERED SPRING ONLY  
Prereq: CS 311 and IME 254  
Grade C- or better |
| Technical Elective (4) | Technical Elective (4) |
| Note a | Note a |
| Engineer of 2020 Requirement (1 of 3) | EE 585 (2)  
Senior Design Project I  
Prereq: Senior standing, CS 480 or EE 492 and PHIL 354 or 385  
Grades C- or better in each |
| Engineer of 2020 Requirement (3 of 3) | EE 595 (2)  
Senior Design Project II  
Prereq: EE 585  
Grade C- or better |

#### Notes

(a) At least 6 of the 8 Technical Elective hours must be from the EECS Dept. Up to 2 credit hours of Co-op courses can be used as non-dept technical electives. (b) Humanities/Fine Arts/Social & Behavioral Science/Natural Science courses must be from an approved list which appears in the Schedule of Courses. Prereq = Prerequisite. Coreq = Corequisite. All prerequisites for EECS courses must be passed with a C- or better.