

Program of Study: Computer Engineering 2022-2023

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| General Education | | |
| For detailed GE curriculum requirements and course lists click here . | | |
| *Philosophy 1332 is required of all ECE students. This course will fit into the "Historical and Cultural Studies" category | | |
| The most efficient path to complete the GE theme requirement is to take two 4-hour courses | | |

| Correlate Courses | | Hours |
|-------------------|--|---------------|
| Engr 1100.15 | Introduction to Ohio State and Electrical and Computer Engineering | 1 |
| Engr 1181 | Fundamentals of Engineering I | 2 |
| Engr 1182 | Fundamentals of Engineering II | 2 |
| Math 1151 | Calculus I | 5 |
| Math 1172 | Engineering Mathematics A | 5 |
| Physics 1250 | Mechanics, Thermal Physics, Waves | 5 |
| Physics 1251 | Electricity and Magnetism, Optics, Modern Physic | 5 |
| Chem 1250 | General Chemistry for Engineers (will accept Chem 1210) | 4 |
| CSE 1222 | Introduction to Computer Programming in C++ for Engineers and Scientists | 3 |
| Math 2568 | Linear Algebra | 3 |
| Math 2415 | Ordinary and Partial Differential Equations | 3 |
| Stat 3470 | Introduction to Probability and Statistics for Engineers | 3 |
| ISE 2040 | Engineering Economics | 2 |
| Total | | 43 hrs |

| Major Core Courses | | |
|--------------------|---|-----------|
| ECE 2060 | Introduction to Digital Logic | 3 |
| ECE 2020 | Introduction to Analog Systems and Circuits | 3 |
| ECE 2050 | Introduction to Discrete Time Signals & Systems | 3 |
| ECE 2560 | Introduction to Microcontroller-Based Systems | 2 |
| ECE 3020 | Introduction to Electronics | 3 |
| ECE 3027 | Electronics laboratory | 1 |
| ECE 3561 | Advanced Digital Design | 3 |
| ECE 3567 | Microcontroller Lab | 1 |
| ECE 5362 | Computer Architecture and Design | 3 |
| ECE 3906 | Capstone Design I | 4 |
| ECE 4905 | Capstone Design II | 3 |
| CSE 2221 | Software I: Software Components | 4 |
| CSE 2321 | Foundations I: Discrete Structures | 3 |
| CSE 2231 | Software II: Software Development and Design | 4 |
| CSE 2451 | Advanced C Programming | 2 |
| CSE 2431 | Systems II: Introduction to Operating Systems | 3 |
| Total | | 45 |

Engineering Electives (16 hours)

Major Technical Electives (choose at least 9 hrs)

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| <ul style="list-style-type: none"> • <i>Must select at least one 5000 level from the ECE or CSE technical elective list below</i> • <i>Students must waitlist CSE courses on this list and will only be admitted if space permits.</i> |
| Humans & Justice: ECE 5570, 5050, 5550 |
| VLSI & Computer Aided Design: ECE 5020, ECE 5560 |
| Cyber Security: ECE 5555, ECE 5561, ECE 5567.01, ECE 5567.02 |
| Microprocessor Based Systems: ECE 5465, ECE 5466 |
| Digital Design and Computer Architecture: ECE 5462 |
| Computer Networks: ECE 5101, CSE 3461, ECE 4567 (counts as 5000 level) |
| Signals & Systems: ECE 3050 |
| Robotics and Control Automation: ECE 3551, ECE 5463, |
| Digital Signal/Image Processing, Machine Learning: ECE 5200, ECE 5206, ECE 5460, ECE 5307 or CSE 5523 |
| Database/Algorithms: CSE 3241, CSE 5242 |
| High Performance Computing: CSE 5441 |

Non-Major Electives (choose at most 7 hours)

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| At most 7 hours of non-ECE courses approved by the ECE department see link here: https://ece.osu.edu/students/program-highlights/worksheets-curricula-information |
| At most 7 hours of physical or biological science courses below the 2000-level |



Other details:

- Minimum 128 hours required for degree
- At least 30 hours of ECE courses must be completed at Ohio State
- Must complete 30 hours of Basic Math and Science Courses
- Need both Major and Cumulative GPA to be a 2.0 or higher to graduate
- Philosophy 1332 is required of all ECE students. This course fulfills Historical and Cultural Studies Foundations GE
- The most efficient path to complete the GE Theme requirement is to take two 4-hour courses

Computer Engineering Sample Schedule (128 hrs)

| | Autumn | | Spring | |
|--------|----------------------|----|----------------------|----|
| Year 1 | Engr 1100 | 1 | Engr 1182 | 2 |
| | Engr 1181 | 2 | Math 1172 | 5 |
| | Math 1151 | 5 | Chem 1250 | 4 |
| | Physics 1250 | 5 | CSE 1222 | 3 |
| | GE Foundation | 3 | GE Launch Seminar | 1 |
| | | 16 | | 15 |
| Year 2 | Physics 1251 | 5 | ECE 2050 | 3 |
| | CSE 2221 | 4 | ECE 3020 | 3 |
| | ECE 2060 | 3 | ECE 2560 | 2 |
| | ECE 2020 | 3 | CSE 2321 | 3 |
| | Math 2568 | 3 | CSE 2231 | 4 |
| | | 18 | GE (philos 1332) | 3 |
| | | 18 | | 18 |
| Year 3 | Math 2415 | 3 | Stat 3470 | 3 |
| | ECE 3027 | 1 | ECE 3567 | 1 |
| | ECE 3561 | 3 | ECE 5362 | 3 |
| | CSE 2451 | 2 | GE Theme | 4 |
| | GE Theme | 4 | GE | 3 |
| | GE | 3 | ISE 2040 | 2 |
| | | 16 | | 16 |
| Year 4 | CSE 2431 | 3 | ECE 4905 | 3 |
| | ECE 3906 | 4 | Engineering Elective | 3 |
| | Engineering Elective | 3 | Engineering Elective | 3 |
| | Engineering Elective | 3 | Engineering Elective | 1 |
| | Engineering Elective | 3 | GE | 3 |
| | | 16 | | 13 |