Computer Engineering 2024-2025

Computer Engineering Course Plan (CpE)

Years 1 and 2

Semester 1
15 Credit Hours

- **UNIV 1111** — Intro to OSU — 1/0
- **CS 1113** — Comp. Science I — 2/2 — Subsequent: CS2433
- **CHEM 1414** — Gen Chemistry — 3/2, Note 1
- **MATH 2144** — Calculus 1 — 4/0 — Subsequent: MATH2153, ENSC2113, PHYS2014
- **ENGL 1113** — Freshman Comp I — 3/0, Note 2 — Subsequent: ENGL3323

Semester 2
17 Credit Hours

- **ECEN 2233** — Digital Logic Des — 2/2 — Prerequisites*: Adv Perm — Subsequent: ECEN3213, ECEN4013
- **CS 2433** — C/C++ Prog — 3/0 — Prerequisites*: CS1113 — Subsequent: ECEN3213
- **PHYS 2014** — General Physics I — 3/2, Note 5 — Prerequisites*: MATH2144 — Subsequent: PHYS2114, ENSC2113
- **MATH 2153** — Calculus II — 3/0 — Prerequisites*: MATH2144 — Subsequent: MATH2233, MATH3013, ECEN2714, IEM3503, MATH2163
- **HIST 1103** — American History — 3/0
- **CS 2351** — UNIX Prog — 1/0 — Prerequisites*: CS1113

Semester 3
15 Credit Hours

- **ECEN 2714** — Fund Elec Circuits — 3/2, Note 4 — Prerequisites*: MATH2153, MATH2233cc, PHYS2114cc — Subsequent: ECEN3714
- **CS 3653** — Discrete Math — 3/0 — Prerequisites*: MATH2144 — Subsequent: CS3353
- **PHYS 2114** — General Physics II — 3/2, Note 5 — Prerequisites*: PHYS2014 — Subsequent: ECEN3714, ECEN3903
- **MATH 2233** — Diff Equations — 3/0 — Prerequisites*: MATH2153 — Subsequent: ECEN3714
- **ENSC 2611** — Elec Fab Lab — 0/2 — Prerequisites*: ECEN2714cc — Subsequent: ECEN3714

Semester 4
16 Credit Hours

- **ECEN 3714** — Network Analysis — 3/2 — Prerequisites*: ECEN2714, MATH2233, PHYS2114, ENSC2611 — Subsequent: ECEN3314, ECEN3513, ECEN3613, ECEN4013
- **ECEN 3213** — Comp Based Systems — 2/2 — Prerequisites*: CS2433, ECEN2233, ECEN2714 — Subsequent: ECEN4013
- **ECEN 3903** — Intro Semicon Dev — 3/0 — Prerequisites*: PHYS2114, ECEN2714 — Subsequent: ECEN3314
- **MATH 2163** — Calculus III — 3/0 — Prerequisites*: MATH2153 — Subsequent: ECEN3613
- **POLS 1113** — American Gov't — 3/0

Course Number
Course Name
Lecture/Lab
See Note #

Prerequisites*

Subsequent Requirement**

*Only the last prerequisite in a sequence is listed. All earlier prerequisites must also be satisfied before taking the course.

**See your Advisor, the ECE Advising Document, and Banner for additional information.

Suggested Course Plan

The anticipation at OSU and most institutions of higher education is that for *one* semester credit hour (SCH) the student spends one hour per week in lecture (two for lab courses) and two hours studying outside of class (one for lab courses). A three credit hour class requires about nine hours per week. This study plan is recommended for students who will devote full time to university studies and do not have excessive extracurricular activities or other obligations.

NOTES:

1) CHEM 1515 may be substituted for CHEM 1414 and should be taken by all students considering medical school.
2) Students with less than a "B" in ENGL 1113 or 1313 must take ENGL 1213 or 1413 prior to ENGL 3323.
3) A total of at least 6 hours designated "H" and 3 hours designated "S" is required. Of these, 3 hrs must meet the International Dimension "I" component and 3 hrs must meet the Diversity "D" component.
4) MATH 2233 and PHYS 2114 must be taken prior to or at the same time as ECEN 2714.
5) General Physics I and II are key prerequisites and should be taken at the earliest possible time.
6) Must be at least 3 SCH.

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Years 3 and 4

Semester 5
16 Credit Hours

- **ECEN 3314** Electr Dev & Appl — 3/2
  - Prereq: ENSC2611, ECEN3714, ECEN3903
  - Coreq: ECEN4013
- **ECEN3613** Appl Fields and Waves — 3/0
  - Prereq: ECEN3714, MATH2163
  - Coreq: ECEN4013
- **ECEN 3513** Signal Analysis — 3/0
  - Prereq: ECEN3714
  - Coreq: ECEN4503, ECEN4013
- **ENGL 3323** Technical Writing — 3/0
  - Prereq: ENGL1113, JR Standing
  - Coreq: ECEN4013
- **CS 3353** Data Structures — 3/0
  - Prereq: CS3653, CS2433
  - Coreq: CS4323

Semester 6
15 Credit Hours

- **ECEN 4503** Prob & Stat to Random Signals — 3/0
  - Prereq: ECEN3513
  - Coreq: ECEN4024
- **ECEN 4243** Computer Arch — 2/2
  - Prereq: ECEN2233, ECEN3213, ECEN3714
- **IEM 3503** Engr Economics — 3/0
  - Prereq: MATH2153
- **MATH 3013** Linear Algebra — 3/0
  - Prereq: MATH2153
- **"H" Elective** (3) — Note 3,6

Semester 7
15 Credit Hours

- **ECEN 4013** Design Engr Sys — 1/4
  - Prereq: ECEN3213, ECEN2233, ECEN3314, ECEN3513, ECEN3613, ECEN3714, ENGL3323
  - Coreq: ECEN4024
- **ECEN 4213** Emb Comp Sys — 2/2
  - Prereq: ECEN2233, ECEN3213, ECEN3714
- **ECEN 4303** Dig Elec Ckt Des — 3/0
  - Prereq: ECEN2233, ECEN3314
- **ECEN Elective** (3) — Note 6
  - Prereq: VARIES
- **"S" Elective** (3) — Note 3,6

Semester 8
16 Credit Hours

- **ECEN 4024** Capstone Design — 1/8
  - Prereq: ECEN4013, ECEN4503
- **ECEN 4283** Comp Networks Or CS 4323 Op Systems — 3/0
  - Prereq: ECEN3213, ECEN3714
- **ECEN Elective** (3) — Note 6
  - Prereq: VARIES
- **Controlled Elective** (3) — Note 6
  - Prereq: VARIES
- **"H" Elective** (3) — Note 3,6

Diversity Attribute

International Attribute

- **From the OSU University Handbook: 7.1 Graduation Requirements**: "The responsibility for satisfying all requirements for a degree rests with the student. Advisors, faculty members and administrators offer help to the student in meeting this responsibility."
- This flowchart serves as an advising instrument and visual guide, not as a substitute for the official Degree Requirement sheet found in the University Catalog. When conflicts occur, the official 2024-2025 Degree Requirement Sheet takes precedence.
- This flowchart represents one path of many to graduation. While students do not have to follow the flowchart, prerequisites and course sequencing limit path options.
- Please use the most recent version of the flowchart. Pay attention to course prerequisites, grade requirements, and other official information on Banner. Prerequisites can change from year to year. Always check the most recent University Catalog for course prerequisites. Note that grade requirements are not shown on this flowchart.
- Students are strongly encouraged to consult their Advisor before enrolling in or dropping any course. As always, consult your Advisor if you have any questions or need clarification about the flowchart or official degree requirements.

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