Computer Engineering 2023-2024

Computer Engineering – Software Engineering Course Plan (CpE-SOFT)

Years 1 and 2

Semester 1 — 15 Credit Hours	Semester 2 — 17 Credit Hours	Semester 3 — 15 Credit Hours	Semester 4 — 16 Credit Hours

Semester 1 — 15 Credit Hours

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

Semester 2 — 17 Credit Hours

- **ECEN 2233** — Digital Logic Des — 2/2 — Prereq: Adv Perm — Subsequent: ECEN3213, ECEN4013
- **CS 2433** — C/C++ Prog — 3/0 — Prereq: CS1113 — Subsequent: ECEN3213
- **PHYS 2014** — General Physics I — 3/2, Note 5 — Prereq: MATH2144 — Subsequent: PHYS2114, ENSC2113
- **MATH 2153** — Calculus II — 3/0 — Prereq: MATH2144 — Subsequent: MATH2233, MATH3013, ECEN2714, IEM3503, MATH2163
- **POLS 1113** — American Gov't — 3/0
- **CS 2351** — UNIX Prog — 1/0 — Prereq: CS1113

Semester 3 — 15 Credit Hours

- **ECEN 2714** — Fund Elec Circuits — 3/2, Note 4 — Prereq: MATH2153, MATH2233cc, PHYS2114cc — Subsequent: ECEN3714
- **PHYS 2114** — General Physics II — 3/2, Note 5 — Prereq: PHYS2014 — Subsequent: ECEN3714, ECEN3903
- **MATH 2233** — Diff Equations — 3/0 — Prereq: MATH2153 — Subsequent: ECEN3714
- **CS 3653** — Discrete Math — 3/0 — Prereq: MATH2144 — Subsequent: CS3353
- **ENSC 2611** — Elec Fab Lab — 0/2 — Prereq: ECEN2714cc — Subsequent: ECEN3314

Semester 4 — 16 Credit Hours

- **ECEN 3714** — Network Analysis — 3/2 — Prereq: ECEN2714, MATH2233, PHYS2114 — Subsequent: ECEN3314, ECEN3513, ECEN3613, ECEN4013
- **ECEN 3903** — Intro Semicon Dev — 3/0 — Prereq: PHYS2114 — Subsequent: ECEN3314
- **ECEN 3213** — Comp Based Systems — 2/2 — Prereq: CS2433, ECEN2233, ECEN2714 — Subsequent: ECEN4013
- **MATH 2163** — Calculus III — 3/0 — Prereq: MATH2153 — Subsequent: ECEN3613
- **HIST 1103** — American History — 3/0

Legend

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.
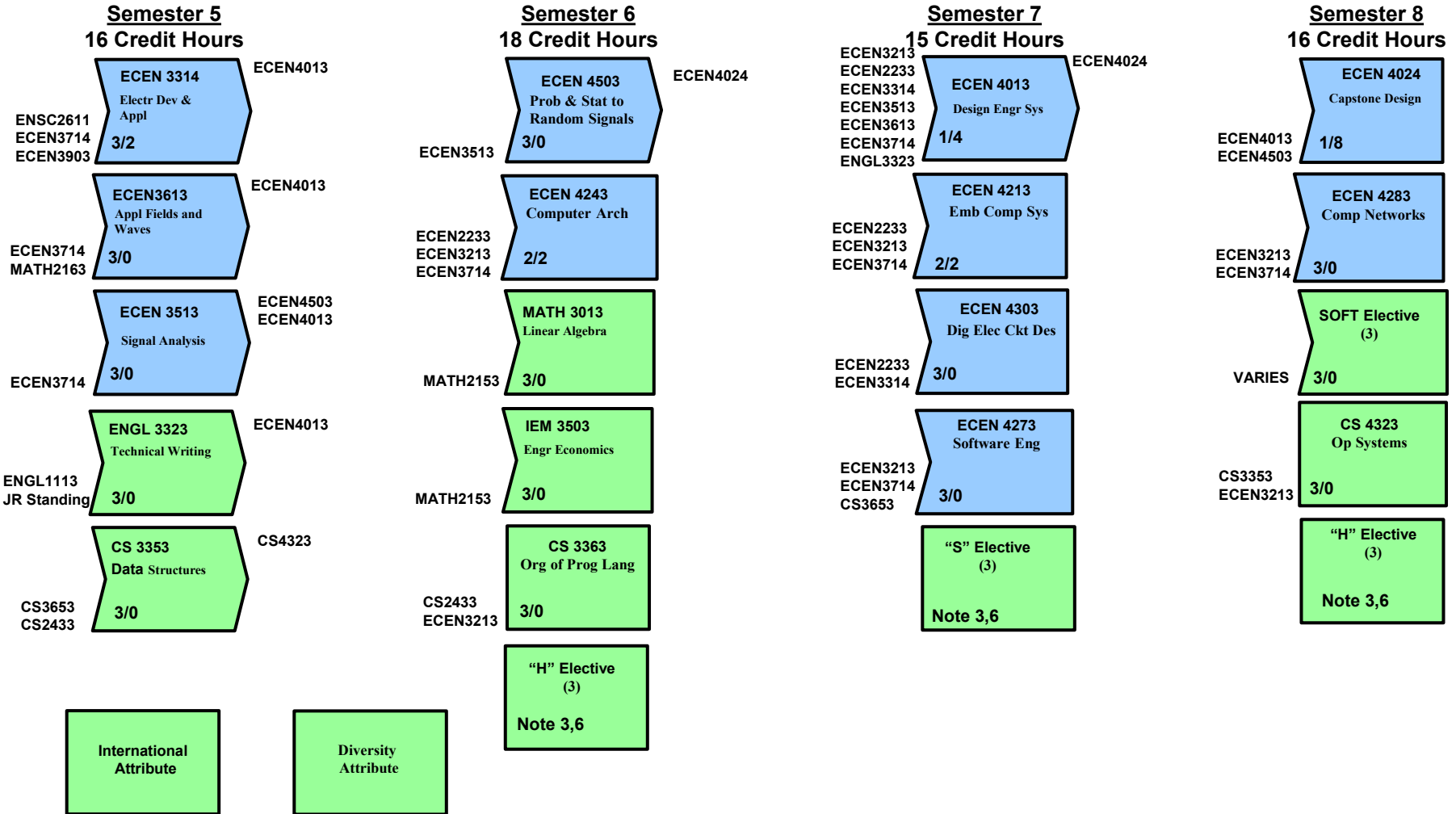
Suggested Course Plan

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.

Computer Engineering 2023-2024

Computer Engineering – Software Engineering Years 3 and 4
Course Plan (CpE-SOFT)

Semester 5
16 Credit Hours

ECEN 3314 — Electr Dev & Appl — 3/2
- Prereq: ENSC2611, ECEN3714, ECEN3903
- ECEN4013

ECEN3613 — Appl Fields and Waves — 3/0
- Prereq: ECEN3714, MATH2163
- ECEN4013

ECEN 3513 — Signal Analysis — 3/0
- Prereq: ECEN3714
- ECEN4503, ECEN4013

ENGL 3323 — Technical Writing — 3/0
- Prereq: ENGL1113, JR Standing
- ECEN4013

CS 3353 — Data Structures — 3/0
- Prereq: CS3653, CS2433
- CS4323

- International Attribute
- Diversity Attribute

Semester 6
18 Credit Hours

ECEN 4503 — Prob & Stat to Random Signals — 3/0
- Prereq: ECEN3513
- ECEN4024

ECEN 4243 — Computer Arch — 2/2
- Prereq: ECEN2233, ECEN3213, ECEN3714

MATH 3013 — Linear Algebra — 3/0
- Prereq: MATH2153

IEM 3503 — Engr Economics — 3/0
- Prereq: MATH2153

CS 3363 — Org of Prog Lang — 3/0
- Prereq: CS2433, ECEN3213

"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
- ECEN4024

ECEN 4213 — Emb Comp Sys — 2/2
- Prereq: ECEN2233, ECEN3213, ECEN3714

ECEN 4303 — Dig Elec Ckt Des — 3/0
- Prereq: ECEN2233, ECEN3314

ECEN 4273 — Software Eng — 3/0
- Prereq: ECEN3213, ECEN3714, CS3653

"S" Elective (3) — Note 3,6

Semester 8
16 Credit Hours

ECEN 4024 — Capstone Design — 1/8
- Prereq: ECEN4013, ECEN4503

ECEN 4283 — Comp Networks — 3/0
- Prereq: ECEN3213, ECEN3714

SOFT Elective (3) — 3/0
- Prereq: VARIES

CS 4323 — Op Systems — 3/0
- Prereq: CS3353, ECEN3213

"H" Elective (3) — Note 3,6

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