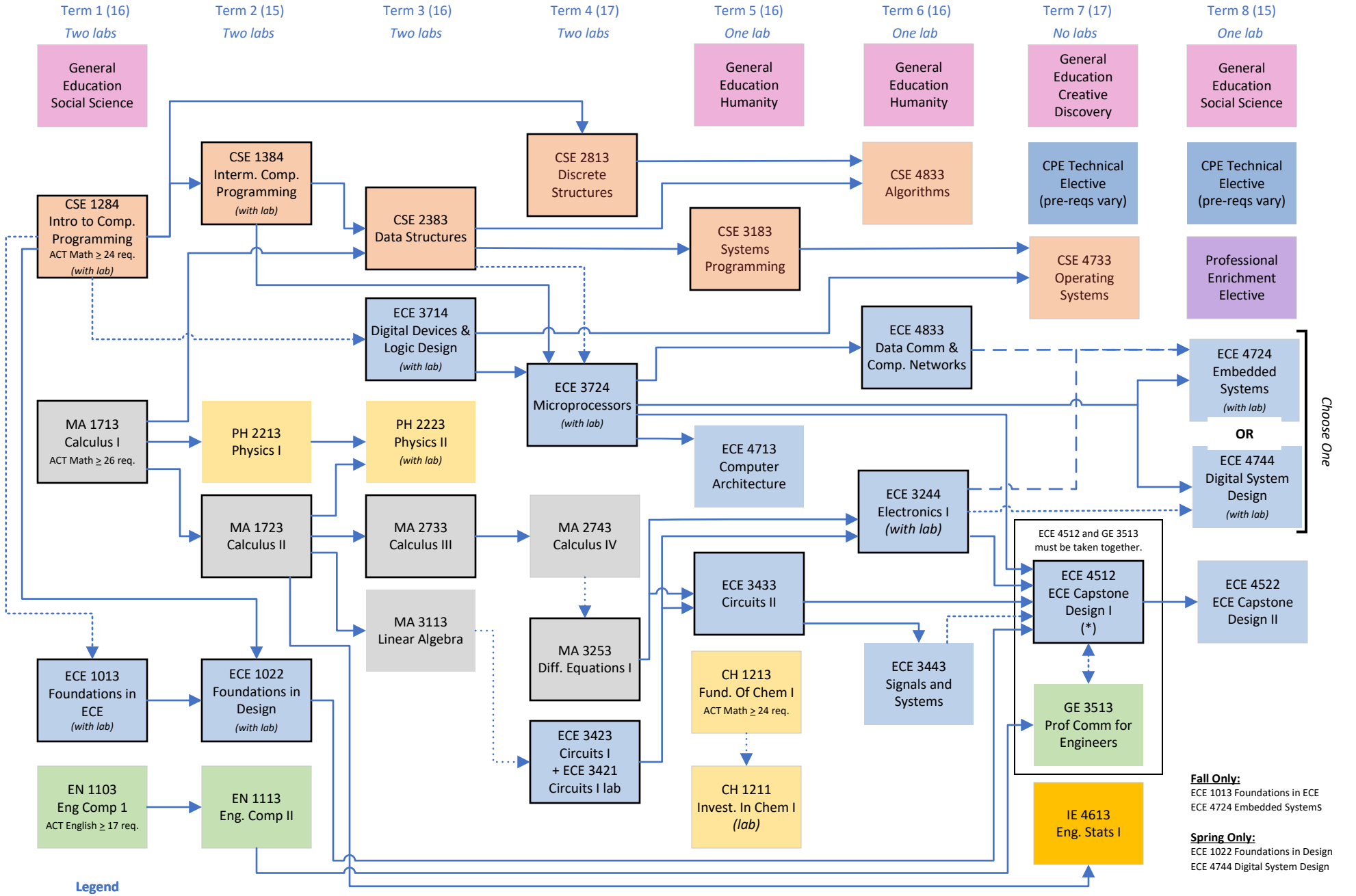
MISSISSIPPI STATE UNIVERSITY
JAMES WORTH BAGLEY COLLEGE OF ENGINEERING

Computer Engineering (CPE) 2025 Curriculum Guide



Fall Only:
ECE 1013 Foundations in ECE
ECE 4724 Embedded Systems

Spring Only:
ECE 1022 Foundations in Design
ECE 4744 Digital System Design

Legend
- Prerequisite (credit required with min. grade shown)
- Corequisite (credit in or registration for course is required)
- Either/Or (credit required for one of these two courses)

General Education electives must come from MSU Core-Approved list • Courses outlined in black require a grade of "C" or better.
See advisor for elective options • If you meet pre-reqs, you can take the class • You are not required to take these classes in this exact order
* must be 70% complete with program requirements • See www.ece.msstate.edu/academics/undergraduate/

Computer Engineering (CPE) Curriculum

First Semester

Course		Hours
EN 1103	English Composition I	3
MA 1713	Calculus I	3
CSE 1284	Intro to Computer Programming with lab	4
ECE 1013	Foundations in ECE with lab*	3
	General Education Social/Behavioral Science	3
	Total Credit Hours	16
	Total Labs	2

Second Semester

Course		Hours
EN 1113	English Composition II	3
MA 1723	Calculus II	3
CSE 1384	Intermediate Computer Programming with lab	4
ECE 1022	Foundations in Design with lab^	2
PH 2213	Physics I	3
	Total Credit Hours	15
	Total Labs	2

First Year:
31 Credits, 4 labs

Third Semester

Course		Hours
MA 2733	Calculus III	3
MA 3113	Intro to Linear Algebra	3
CSE 2383	Data Structures	3
ECE 3714	Digital Devices and Logic Design with lab	4
PH 2223	Physics II with lab	3
	Total Credit Hours	16
	Total Labs	2

Fourth Semester

Course		Hours
MA 2743	Calculus IV	3
MA 3253	Differential Equations	3
CSE 2813	Discrete Structures	3
ECE 3724	Microprocessors with lab	4
ECE 3423	Circuits I	3
ECE 3421	Circuits I lab	1
	Total Credit Hours	17
	Total Labs	2

Second Year:
33 Credits, 4 labs

Fifth Semester

Course		Hours
CH 1213	Fundamentals of Chemistry	3
CH 1211	Investigations in Chemistry	1
CSE 3183	Systems Programming	3
ECE 4713	Computer Architecture	3
ECE 3433	Circuits II	3
	General Education Humanity	3
	Total Credit Hours	16
	Total Labs	1

Sixth Semester

Course		Hours
ECE 3443	Signals and Systems	3
ECE 4833	Data Comm Networks	3
CSE 4833	Algorithms	3
ECE 3244	Electronics I with lab	4
	General Education Humanity	3
	Total Credit Hours	16
	Total Labs	1

Third Year:
32 Credits, 2 labs

Seventh Semester

Course		Hours
IE 4613	Engineering Statistics	3
CSE 4733	Operating Systems	3
ECE 4512	ECE Capstone Design I with lab	2
GE 3513	Professional Communication for Engineers	3
	CPE Technical Elective	3
	General Education Creative Discovery/Fine Art	3
	Total Credit Hours	17
	Total Labs	1

Eighth Semester

Course		Hours
ECE 4724/4744	Embedded Systems* or Digital System Design^ w/ lab	4
	CPE Technical Elective	3
ECE 4522	ECE Capstone Design II with lab	2
	Professional Enrichment Elective	3
	General Education Social/Behavioral Science	3
	Total Credit Hours	15
	Total Labs	2

Fourth Year:
32 Credits, 3 labs

128 Total CPE Credit Hours

All prerequisites and minimum grades must be met for courses
**Fall only ^Spring only*

2025 Curriculum