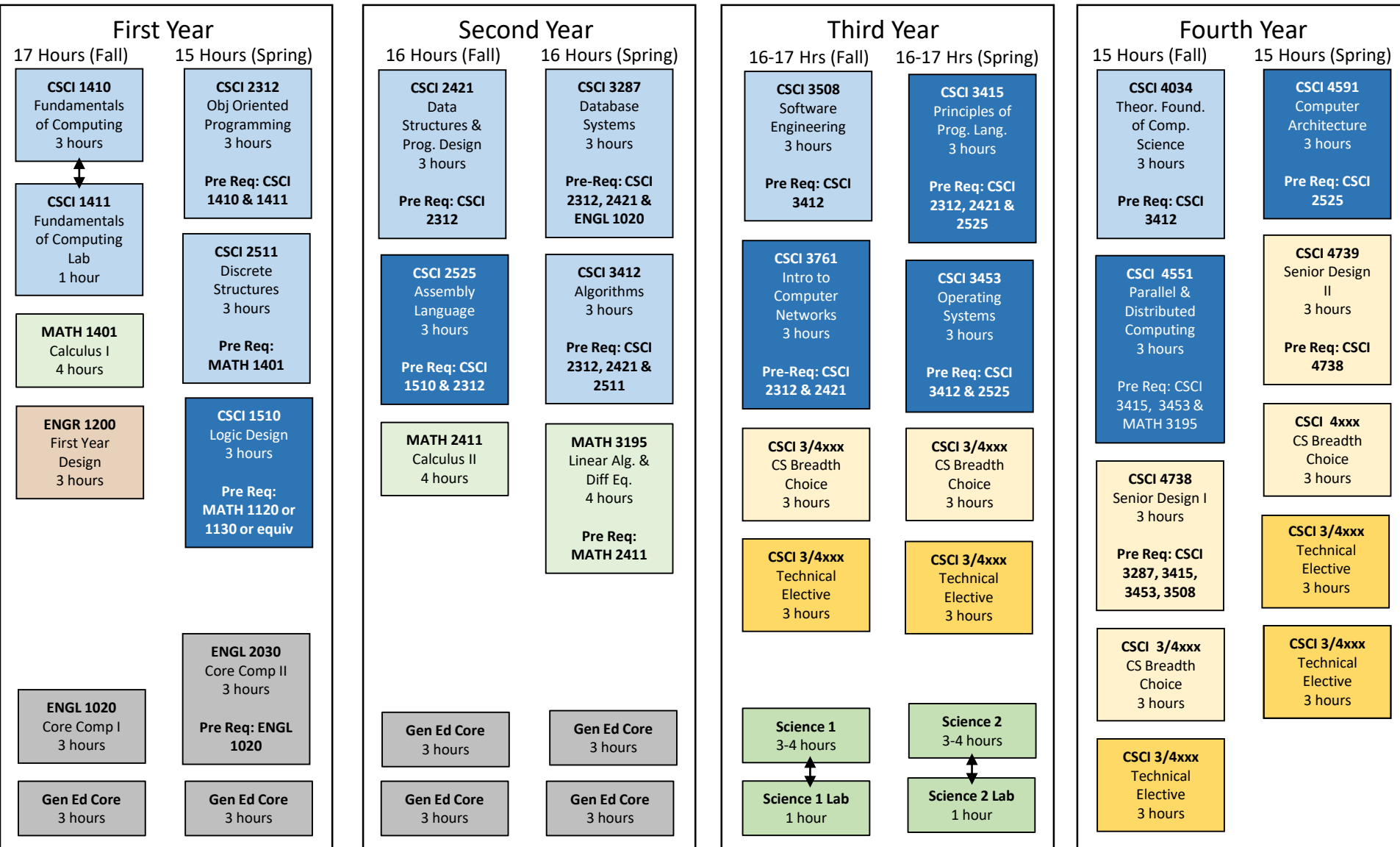


CS Undergraduate Curriculum – Fall 2025

3000 & 4000 level CSCI courses are semester dependent. Courses may be offered more frequently as resources allow, but students cannot expect them to be offered off-semester. Students should use the rotation shown on this flowchart as a guide for planning their upper level courses.

CSCI 4551, 4738 & 4739 will not be offered off-cycle.



CS CORE

CS SYSTEMS CORE

CS BREADTH

CS ELECTIVE

MATH

SCIENCE

GEN ED CORE

Computer Science Breadth Areas

Courses offered rotationally. Not all courses will be offered every year.

CS Breadth: Capstone Project (take two)			
CSCI 4738	Senior Design I – Fall only	3 credits	Pre=CSCI 3287, CSCI 3415, CSCI 3453 & CSCI 3508
CSCI 4739	Senior Design II – Spring only	3 credits	Pre=CSCI 4738
CS Breadth: Data Science (take one)			
CSCI 4455	Data Mining	3 credits	Pre=MATH 3191 or 3195, CSCI 3287 & CSCI 3412
CSCI 4580	Data Science	3 credits	Pre=MATH 3191 or 3195, CSCI 3287 & CSCI 3412
CSCI 4930	Machine Learning	3 credits	Pre= MATH 3191 or 3195 & CSCI 3412
CSCI 4931	Deep Learning	3 credits	Pre= MATH 3191 or 3195 & CSCI 3412
CSCI 4951	Big Data Systems	3 credits	Pre = MATH 3191 or 3195, CSCI 3287 & CSCI 3412
CSCI 4702	Big Data Mining *	3 credits	Pre = MATH 3191 or 3195, CSCI 3287 & CSCI 3412
CS Breadth: Scientific Computing (take one)			
CSCI 3560	Probability and Computing	3 credits	Pre=Math 2411 & CSCI 2511
CSCI 4650	Numerical Analysis I	3 credits	Pre=Math 2411, Math 3191 or 3195
CSCI 4110	Applied Number Theory	3 credits	Pre= 2511 or MATH 3000
CSCI 4407	Security & Cryptography	3 credits	Pre = CSCI 3412
CSCI 4620	Computational Motor Control *	3 credits	Pre = CSCI 3412
CS Breadth: Secure Computing (take one)			
CSCI 4741	Principles of Cyber Security	3 credits	Pre= CSCI 3761
CSCI 4742	Cybersecurity Programming	3 credits	Pre= CSCI 3415
CSCI 4743	Cyber and Infrastructure Defense	3 credits	Pre= CSCI 3761
CS Breadth: System Software (take one)			
CSCI 3511	Hardware/Software Interface	3 credits	Pre=CSCI 2525
CSCI 4287	Embedded Systems Programming	3 credits	Pre=CSCI 3453
CSCI 4565	Introduction to Computer Graphics	3 credits	Pre=CSCI 3412 & Math 3191 or 3195

* Students admitted 2024 and after.

Science Choices

Choice 1 and 2 will require additional credits to meet the 10 required credits. Please see the handbook for more information.

Choice 1: BIOL 2010 & 2011; BIOL 2020 & 2021

Choice 2: CHEM 2031 & 2038; CHEM 2061 & 2068

Choice 3: PHYS 2311 & 2321; PHYS 2331 & 2341

Course prerequisites change regularly. Students are responsible for consulting advisors & the class schedule in the student portal for prerequisite information.