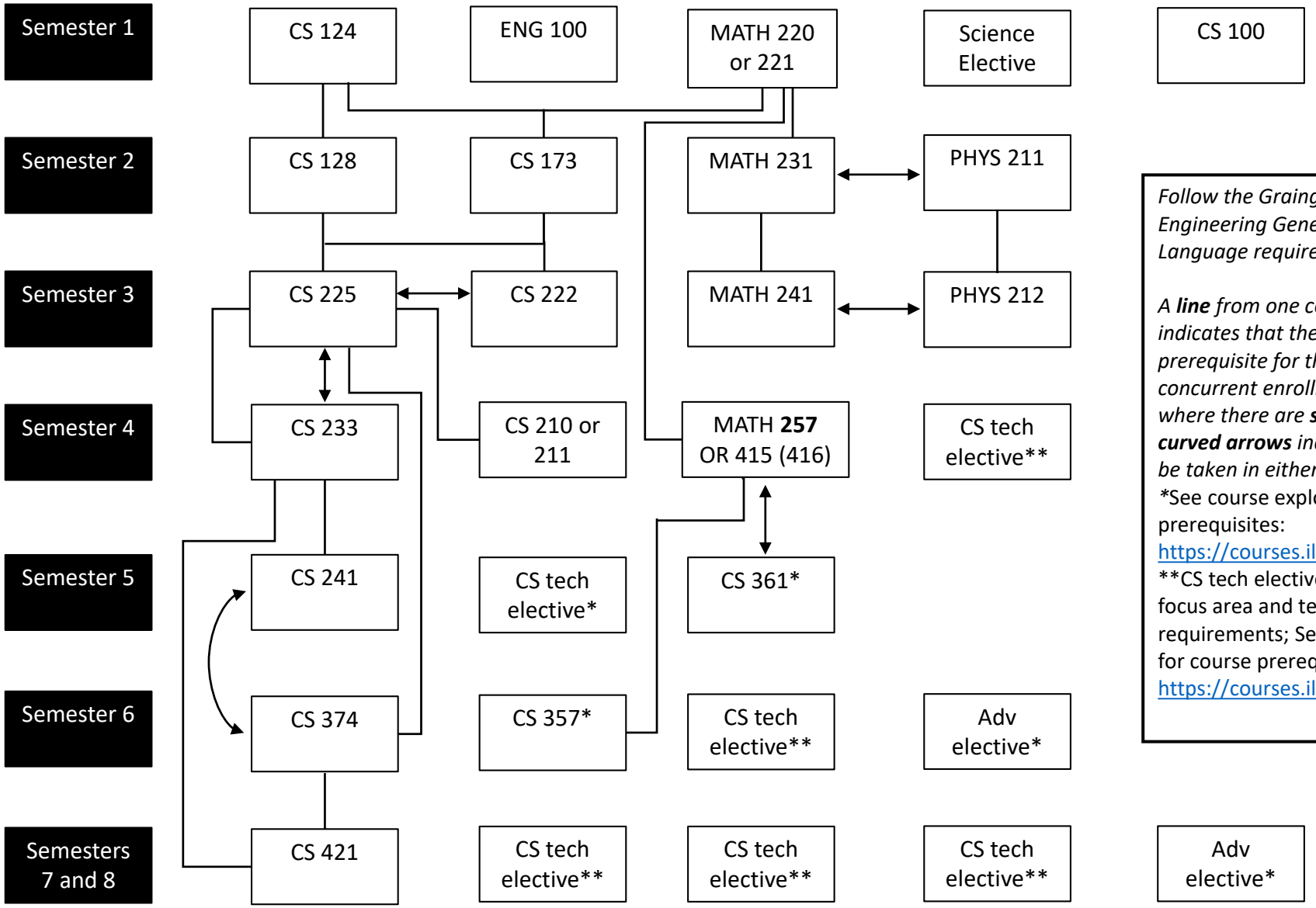
Curriculum Flow Chart for Computer Science in Grainger Engineering



Follow the Grainger College of Engineering General Education & Language requirements

*A **line** from one course to another indicates that the first course is a prerequisite for the second, concurrent enrollment acceptable where there are **straight arrows**, **curved arrows** indicate courses can be taken in either order.*

*See course explorer for course prerequisites: https://courses.illinois.edu/

**CS tech electives must cover CS focus area and teaming requirements; See course explorer for course prerequisites: https://courses.illinois.edu/

Curriculum Plan: Grainger Engineering Computer Science Beginning Fall 2021

____ ENG 100 (ENG 300 for transfer students)

General Education Requirements

_____ Composition I
_____ Advanced Composition
_____ 3rd Level Language (LOTE)

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Those listed below must equal 18 total separate hours

_____ 3hrs Humanities and the Arts
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_____ 3hrs Social and Behavioral Science
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_____ 3hrs Liberal Education (or add'l. HUM/SBS)
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Cultural Studies

_____ Western Culture
_____ Non Western Culture
_____ US Minority Culture

Math & Science

_____ MATH 221 4hrs, Calc I or
MATH 220 Calc 4 hrs (ENG)

_____ MATH 231 3hrs, Calc II

_____ MATH 241 4hrs, Calc III

_____ MATH 257 3hrs, Linear Alg w/Comp Apps (preferred)
MATH 415 3hrs, Linear Algebra or
MATH 416 3hrs, Abstract Lin Algebra

_____ PHYS 211 4hrs, Univ. Phys: Mechanics

_____ PHYS 212 4hrs, Univ. Phys: Elecricity & Mag

_____ Science Elective (Excludes: ASTR 100, PHYS 101 or 102, or CHEM 101; cannot be met with PHYS 211 and 212 requirements)

Computer Science Core Courses

_____ CS 100 1hr, Fresh Orientation *(Recommended)*

_____ CS 124 3hrs, Intro to Computer Science I

_____ CS 128* 3hrs, Intro to Computer Science II

_____ CS 173** 3hrs, Discrete Structures

_____ CS 210** 2hrs, Ethical & Professional Issues **or**
CS 211** 3 hrs, Ethical & Professional Conduct (ACP)

_____ CS 222* 1hr, Software Design

_____ CS 225** 4hrs, Data Structures

_____ CS 233 ** 4hrs, Computer Architecture

_____ CS 241** 4hrs, Systems Programming

_____ CS 357** 3hrs, Numerical Methods I

_____ CS 361** 3hrs., Probability and Statistic for Comp Sci.

_____ CS 374** 4hrs, Algorithms and Models of Comp.

_____ CS 421** 3hrs, Programing Languages and Compilers

*Has prerequisites and/or co-requisite; See Course Explorer
& if you have earned credit for CS 225, see a CS advisor

** Has prerequisites and/or co-requisite; See Course Explorer

Additional Notes

_____ 128 total hours required for graduation

_____ 60 residency hours required for graduation

Working ahead in your CS coursework does not guarantee entrance into the next CS course.
To meet a course's prerequisites you will need to have earned the listed prerequisite credit or be on path to earn the prerequisite credit before the course begins.

CS Tech Electives*

Minimum (6) CS courses, (3) must be from (1) focus area & (1) must satisfy the team project, for a total of 18 credit hours minimum

_____ CS tech (Focus Area)***

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_____ CS tech (Focus Area)***

_____ CS tech (Team Project)***

_____ CS tech***

_____ CS tech***

****Not Allowed - CS 400, CS 401, CS 402, CS 403 or CS 491. Check CS departmental website to determine if a course falls into a focus area and/or team project.*

Advanced Electives*, **

Minimum (2) courses for a total of (6) hrs of 400 level credit from any area (distinct from CS tech), including additional CS courses.

_____ 400 level in ANY Department
_____ 400 level in ANY Department

**CS 397 may be used for CS tech or CS advanced, with a maximum of 6 hours of CS 397 or CS 499 being used.*
**CS 491 and most other seminar courses are not allowed for CS tech or CS advanced.

It is recommended that you work in concert with your assigned academic advisor to ensure you are on track to successfully complete your degree.