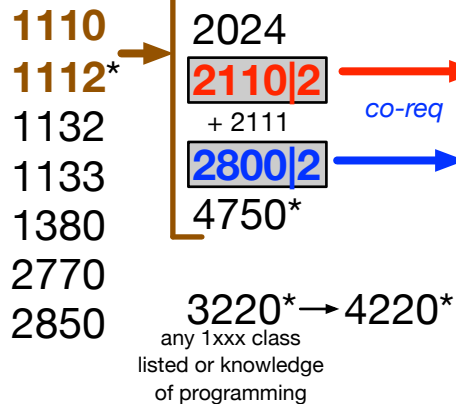


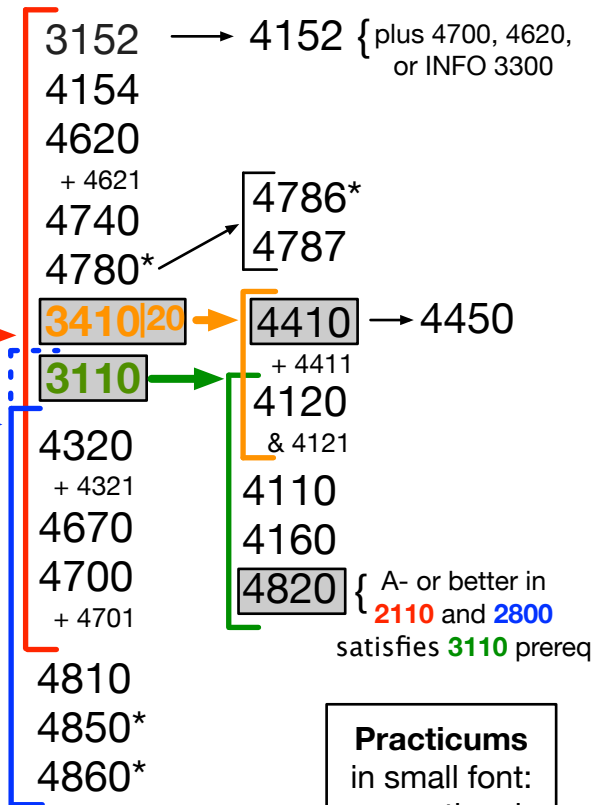
CS Undergraduate Prerequisite Structure

bold & colored courses
(with corresponding arrows) indicate prerequisites



core classes

starred (*) courses have at least 1 MATH pre- or co-requisite
See Roster.



Practicums
in small font:
+ : optional
& : required

- 3110:** Data Structures and Functional Programming
- 3152: Introduction to Computer Game Architecture
- 3220: Introduction to Scientific Computation
- 3410:** Computer System Organization and Programming
- 3420:** Embedded Systems (*prereq: ENGRD 2300, not shown*)
- 4110: Programming Languages and Logics
- 4120: Introduction to Compilers
- 4152: Advanced Topics in Computer Game Architecture
- 4154: Analytics-driven Game Design
- 4160: Formal Verification
- 4220: Numerical Analysis: Linear and Nonlinear Problems
- 4320: Introduction to Database Systems
- 4410: Operating Systems
- 4450: Introduction to Computer Networks
- 4620: Introduction to Computer Graphics
- 4670: Introduction to Computer Vision
- 4700: Foundations of Artificial Intelligence
- 4740: Natural Language Processing
- 4750: Foundations of Robotics
- 4780: Machine Learning for Intelligent Systems
- 4786: Machine Learning for Data Science
- 4787: Principles of Large-Scale Machine Learning
- 4810: Introduction to Theory of Computing
- 4820: Introduction to Analysis of Algorithms
- 4850: Mathematical Foundations for the Information Age
- 4860: Applied Logic

- 1110:** Introduction to Computing Using Python
- 1112:** Introduction to Computing Using MATLAB
- 1132: Short Course in MATLAB
- 1133: Short Course in Python
- 1380: Data Science for All
- 2024: C++ Programming

- 2110:** Object-Oriented Programming and Data Structures
- 2112:** Object-Oriented Design and Data Structures - Honors
- 2770: Excursions in Computational Sustainability
- 2800:** Discrete Structures
- 2802:** Discrete Structures - Honors
- 2850: Networks

