**Undergraduate Computer Science Course Structure**

**Math Electives**
- MATH 3530 Combinatorics
- MATH 1420 Calculus I
- MATH 1421 Calculus II
- MATH 3752 Intro to Probability
- MATH 3440 Numerical Analysis
- MATH 2500 Linear Algebra for Applications

**Computer Science Core**
- CS 1510 Intro to Computing
- CS 1800 Discrete Structures
- CS 1520 Data Structures
- CS 2530 Intermediate Computing
- CS 1410 Computer Organization
- CS 2720 Software Engineering
- CS 3120 User Interface Design
- CS 2420 Computer Architecture

**Math**
- MATH 1420 Calculus I
- MATH 1421 Calculus II
- MATH 3752 Intro to Probability
- MATH 3440 Numerical Analysis
- MATH 2500 Linear Algebra for Applications

** Foundations**
- CS 3810 Theory of Computation
- CS 3530 Design/Anal. Algorithms
- CS 3540 Program Para. & Lang.
- CS 4550** Translation of Programming Languages
- CS 4550** Project Course

**Software Engineering**
- CS 2720 Software Engineering
- CS 3120 User Interface Design
- CS 4740** Real-Time Systems
- CS 3750 Software V&V

**Data & Applications**
- CS 3150 Info. Storage & Retrieval
- CS 3610 Artificial Intelligence
- CS 3470 Systems Engineering
- CS 4410** System Security
- CS 3010 Networking
- CS 3030 Operating Systems
- CS 3650 Computational Biology
- CS 4620** Intelligent Systems
- CS 4620** System Security

**Computer Systems**
- CS 3730 Project Management
- CS 3430 Operating Systems
- CS 2420 Computer Architecture
- CS 3650 Computational Biology
- CS 4620** Intelligent Systems
- CS 4620** System Security
- CS 4410** System Security

**Legend**
- Green solid line: offered every semester
- Gold dashes: offered in the Fall
- Purple dots: offered in the Spring
- Green Arrow: Prerequisite
- Blue Arrow: Pre- or Co-requisite
- ** Project Course

Most focus area courses have CS 1800 and CS 1520 as Prerequisites (plus any shown in Core). CS 3810 & CS 2420 (yellow background) have different Prerequisites. MATH 3530 has the following Prerequisites: MATH 1420 or (CS 1800 + junior standing).

**CS 4800: Research in Computer Science** - Must be discussed with and approved by Advisor.

**CS 4880: Topics in Computer Science** - Counts as an elective or as an area course, depending on topic.