

Courses directly following CSC150

- Winter 2003
 - 165: Mathematical Expression and Reasoning (a new course)
 - 270: Fundamental Data Structures and Techniques
 - 238: Discrete Mathematics for Computer Science
 - 258: Computer Organization
- Fall 2003 and following
 - 165: Mathematical Expression and Reasoning
 - 207: Software Design
 - 236/240: Introduction to the Theory of Computation
 - 258: Computer Organization (same as above)

CSC165: Mathematical Expression and Reasoning

- Introduction to abstraction and rigour.
- Precise expressions of mathematical ideas, including definitions and theorems.
- Informal introduction to logical notation and reasoning.
- Representation of floating point numbers and introduction to numerical computation.
- Intended to be taken after or concurrently with CSC148/CSC150.

CSC258: Computer Organization

- The first hardware course
- Organization of the CPU - control and arithmetic units.
- Memory storage devices
- Laboratory periods where you conduct experiments with digital logic circuits.
- Assignments tend to be pencil and paper type assignments.
- This course does not change in the new curriculum.

CSC238, CSC236/240

- **Discrete Math / Introduction to the Theory of Computation**
 - Mathematical induction
 - Correctness proofs
 - Recurrence relations
 - Automata and formal languages
 - Old (238) and new (236/240) are similar.
 - 238 has more logic in it.
 - 236 has CSC165 as a prereq.
 - 240 is the enriched version of 236 and does not require CSC165.

CSC270: Fundamental Data Structures

- Current course that will be replaced by 207
- Teaches C++ and C using classes to represent ADTs
- Covers 4 areas:
 - Graph representation and graph algorithms
 - Simulation: event driven model
 - Representation of floating point numbers and intro to numerical methods.
 - Dynamic programming.

CSC207: Software Design

- Serves the same role in the programs as 270
- Goals:
 - writing larger programs
 - deeper understanding of OOP and design
 - introduction to common software tools
- Topics
 - Object-Oriented Programming and Design.
 - Scripting
 - Unit testing and debugging
 - Version control and build management

Other Courses

- CSC 209: Software Tools and Systems programming
 - requires CSC270 or CSC207
 - in the future will require CSC258
 - will teach C and systems programming
- CSC 263/265: Data Structures and Analysis
 - requires CSC207H/270H, 236H/238H/240H; and a stats course.
 - algorithm analysis
 - ADTs: dictionaries, priority queues, balanced binary trees, B-trees, hashing, heaps
 - 265 is the enriched version of 263