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