Topics Covered

- **Algorithms (~2 weeks)**
  - Algorithm design and pseudocode
  - Algorithm efficiency
  - Order of magnitude
  - Search & sort algorithms
  - Abstraction

- **Hardware (~4 weeks)**
  - Binary numbers
  - Data representation
  - Boolean logic and gates
  - Circuit design
  - Machine language
  - Computer systems
  - Computer networking
  - Security and privacy

- **Software (~4 weeks)**
  - Assembly language
  - Operating systems
  - Internet Protocols
  - High-level programming languages
  - Python (covered in CSCI 102; tested in CSCI 101)

- **Application: Artificial Intelligence (~2 weeks)**
  - Data Science
  - Machine Learning
  - Neural networks
  - Robotics
  - HCI

- **Social Issues in Computing (~1 week)**
  - Social, ethical, and legal issues

Course Modules (social issues throughout)

- Introduction
- Algorithms
- Binary Numbers
- Logic/Gates/Circuits
- Computer Hardware
- Operating Systems
- Networking and the Internet
- Security and Privacy
- Data Science
- Artificial Intelligence (ML, Robotics, AR/VR)
- HCI