SOFTWARE and SOFTWARE ENGINEERING

- Engineered Software
- Controlled Configuration Item
- History of Software Development
- Software as a Business Opportunity
- Problems in Software Development
- Myths about Software Development
- Approaches to Software Development
- Engineered Software Development Models
- Software Engineering Technology

Objectives of Module 1

- Present and discuss the idea that software is much more than just code -- *engineered* software is composed of *controlled configuration items* which include documents, data, and code
- Present and discuss the history of software development, including its evolution into a business
- Present and discuss many of the problems with doing software development, particularly when there is more than one person involved
- Present and discuss many myths about software development and explain why some of these myths are fallacies
- Present and discuss several different software engineering paradigms, showing different methods for developing engineered software:
  - Classic "waterfall" method
  - Rapid prototyping
  - Spiral method
  - Fourth generation method
  - Combinations of the above
- Present and discuss some of the technologies used in the support of software engineering:
  - *Computer-Aided Software Engineering* (CASE)
  - Ada programming language