

Software Engineering (Bachelor)

I. Fundamental Training Areas and Disciplines

◆ Mathematics

Mathematics

◆ Discrete Structures

Discrete Structures

◆ Programming Fundamentals

Programming Fundamentals

◆ Software Engineering

Software Development and System Programming

Software Development and Professional Practice

Software Tools and Environments

Software Requirements and Specifications – *elective*

◆ Principles of Management

Economical Aspects of Software Engineering

Introduction to Management

Software Project Management

Economic Issues in Computing – *elective*

◆ Social and Professional Issues

History of Computing

Social Context of Computing

Professional and Ethical Responsibilities

Intellectual Property

II. Special Training Areas and Disciplines

◆ Algorithms and Complexity

Algorithms and Data Structures

Algorithm Design and Analysis

◆ Computer Science Fundamentals

Computer Organization (Processors)

Computer Architectures

Operating Systems

Computer Networks

Databases

◆ Programming Languages

Programming Languages

Object-Oriented Programming

◆ Software Architectures

Software Architectures

Software Quality and Reliability

Software Processes – *elective*

◆ **Human-Computer Interaction**

Fundamentals of Computer Graphics
Human-Computer Interaction
Graphical User-Interface Design and Applications – *elective*

◆ **Artificial Intelligence**

Artificial Intelligence
Logical Programming – *elective*
Genetic Algorithms – *elective*
Symbolic Calculations – *elective*

◆ **Embedded Systems**

Embedded Systems

◆ **Information Management**

Information Management
Electronic Document Management Systems

◆ **Legal Aspects of Software Development**

Risks and Liabilities of Computer-Based Systems
Privacy and Civil Liberties
Computer Crimes