

Computer Science (Bachelor)

I. Fundamental Training Areas and Disciplines

◆ Mathematics

Mathematics

◆ Discrete Structures

Discrete Structures

◆ Programming Fundamentals

Programming Fundamentals

◆ Principles of Management

Introduction to Management

Management in Computer Science

◆ 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

Parallel Algorithms – *elective*

◆ Computer Architecture

Theory of Logical Design

Computer Organization (Processors)

Assembly Language Programming

Computer Architectures

◆ Operating Systems

Theory of Operating Systems

Operating Systems: User Level – *elective*

Operating systems: Administration – *elective*

◆ Programming Languages and Methodologies

Programming Languages

Object-Oriented Programming

◆ Databases and Information Systems

Databases

Information Systems

Data Warehouse – *elective*

◆ Computer Networks

Computer Networks

Network Operating Systems

Information and Coding Theory – *elective*

◆ **Computer Security**

Cryptographic Methods and Algorithms
Network Security – *elective*

◆ **Computer Graphics**

Fundamentals of Computer Graphics
Multimedia Systems – *elective*

◆ **Human-Computer Interaction**

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

◆ **Artificial Intelligence**

Artificial Intelligence
Logical Programming – *elective*
Expert Systems – *elective*

◆ **Software Engineering**

Software Development and System Programming
Software Tools and Environments – *elective*
Software Project Management – *elective*

◆ **Internet Technologies**

Internet Technologies
Building Web Applications – *elective*