

# Information Systems (Bachelor)

## I. Fundamental Training Areas and Disciplines

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### **◆ Mathematics**

Mathematics

### **◆ Discrete Structures**

Discrete Structures

### **◆ Programming Fundamentals**

Programming Fundamentals

### **◆ Software Engineering**

Software Development and System Programming

Software Tools and Environments

Software Requirements and Specifications – *elective*

### **◆ Social and Professional Issues**

History of Computing

Social Context of Computing

Professional and Ethical Responsibilities

Intellectual Property

## II. Special Training Areas and Disciplines

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### **◆ Algorithms and Complexity**

Algorithms and Data Structures

Algorithm Design and Analysis

### **◆ Computer Science Fundamentals**

Computer Organization (Processors)

Computer Architectures

Operating Systems

Computer Networks

### **◆ Programming Languages**

Programming Languages

Object-Oriented Programming

### **◆ Information Technologies and Management**

Data Modeling

Databases

Information Models and Systems

Information Storage and Retrieval

Information Systems Management

Project and Risk Management

Decision Theory – *elective*

General Organization Theory – *elective*

Managing the Process of Change – *elective*

**◆ Information System Development**

Approaches to System Development  
Systems development Concepts and Methodologies  
Application Planning  
Systems Testing and Implementation Strategies  
Specific Information Systems Development

**◆ Business Fundamentals**

Information and Business Analysis  
Electronic Document Management Systems  
Technology of Electronic Business  
Economical Aspects of Software Engineering – *elective*  
Economic Issues in Computing – *elective*

**◆ Project Management and Systems Integration**

Information Management  
Electronic Document Management Systems

**◆ Legal and Ethical Aspects of Information Systems**

Legal and Ethical Aspects of Information Systems  
Risks and Liabilities of Computer-Based Systems  
Privacy and Civil Liberties  
Computer Crimes – *elective*  
Interpersonal Skills – *elective*