



Course Outline

Program	B. Sc. In Computer Science
Course Code / Title	CS343 / Systems Analysis and Design
Year / Term	2024/ Spring
Instructor	Miftah Hassen (Email: miftah.hassen@aau.edu.et)
Course Description	The course is about phases/steps and approaches to information systems development. To this end, the course contains concepts such as Systems theory; systems thinking; roles in IS development; IS development life cycle; information systems development methodologies; fact finding techniques; analysis tools and techniques for requirements structuring; techniques for systems design, systems implementation and operation.
Objectives	<p>The general objective of the course is to familiarize students with common problems and approaches to their solutions in studying, analyzing, developing and maintaining information systems.</p> <p>Up on the successful completion of the course students are expected to:</p> <ul style="list-style-type: none">• Know concepts underlying system development• Understand the System Development Life Cycle• Acquire qualities to solve system analysis and design problems• Be familiar with the widely used methodologies, techniques, and tools of system development, operation and evaluation• Study existing systems, Model and Design new Systems
Text Book	<ul style="list-style-type: none">• Modern systems analysis and design / Jeffrey A. Hoffer, Joey F. George, and Joseph S. Valacich. — Eighth edition.
Reference	<ul style="list-style-type: none">• Systems Analysis and Design / Scott Tilley and Harry Rosenblatt. — Eleventh Edition.• Systems Analysis and Design / Kenneth E. Kendall and Julie E. Kendall. — Ninth Edition.
Assessment Method	<ul style="list-style-type: none">• Project: 25%• Mid-term exam: 30%• Final exam: 45%

COURSE CONTENT

1. Basic concepts in Information System development
 - 1.1. System analysis and design, Systems, Information Systems, System thinking
 - 1.2. Types and Characteristics of Information Systems
 - 1.3. Participants in Information System Development
 - 1.4. Roles and qualities of System Analyst
 - 1.5. System development methodologies, Processes/Phase
2. System Development: Identification, Selection and Planning Phase
 - 2.1. Purpose, Components and deliverables
 - 2.2. System Project Identification and Selection
 - 2.3. Project Initiation and Planning:
 - 2.4. Planning tools and techniques: Gantt & PERT.

3. System Development: Analysis Phase
 - 3.1. Analysis tasks, outcomes
 - 3.2. System requirement determination/determination: sources, tools and techniques
 - 3.3. Requirement validation
 - 3.4. System requirement Specification/structuring: Modeling
 - 3.5. Design Strategies Selection
4. System Development: Design Phase
 - 4.1. Purpose and deliverables
 - 4.2. Logical and physical design
 - 4.3. Architectural, Interface and Database Design
5. System Development: Implementation and Maintenance Phase
 - 5.1. Building and installing information systems
 - 5.2. PL selection and Coding style
 - 5.3. Documentation: User and System
 - 5.4. Testing (Testing strategies, validation and verification)
 - 5.5. System Maintenance: types and procedures
6. Current trends in Systems Development