

**System Analysis and Design (CSC-252)**  
**Tribhuvan University**  
**Soch College of Information Technology**  
**Bachelor of Science in Computer Science and Information Technology**

**Course Title:** System Analysis and Design

**Course no:** CSC-252 ----- Full Marks: 60+20+20

**Credit hours:** 3 ----- Pass Marks: 24+8+8

**Nature of course:** Theory (3 Hrs.) + Case Study

**Course Synopsis:** This course help launch the careers of successful systems analyst – or of users assuming an active role in building systems that satisfy their organization’s information needs.

Also provides a solid foundation of systems.

**Goal:** This course will provide the concept of system representation.

### **Course Contents**

**Unit 1. Overview of Systems Analysis and Design** ----- 4 Hrs.

Introduction to system analysis and design, Types of Information Systems and Systems Development, Developing Information Systems and the Systems Development Life cycle, Systems analysis and design tools

**Unit 2. Modeling Tools for Systems Analyst** ----- 5 Hrs.

Modeling with Data Flow Diagrams, Drawing DFDs with CASE, Modeling with Entity – Relationship Diagrams

**Unit 3. Structured Methodologies** ----- 6 Hrs.

The need for a Structured Methodology, CASE as an Enabling Technology, Advantages and Disadvantages of Modeling and Data Dictionaries, Other Specification Tools

**Unit 4. Systems Analysis** ----- 8 Hrs.

Systems planning and initial Investigation, Information Gathering, The tools of Structured Analysis, Feasibility Study, Cost/ Benefit Analysis

**Unit 5. Systems Design** ----- 8 Hrs.

The process and Stages of systems Design, Input/ Output Forms Design, File Organization and Data Base Design

**Unit 6. System Implementation** ----- 8 Hrs.

System Testing and quality Assurance, Implementation and Software Maintenance, Hardware / Software Selection and the Computer Contract, Project Scheduling and Software

**Unit 7. Object-Oriented Analysis and Design** -----6 Hrs.

Object-Oriented Development Life Cycle, the Unified Modeling Language, Use-Case Modeling, Object Modeling: Class Diagrams, Dynamic Modeling: State Diagrams

Dynamic Modeling: Sequence Diagramming, Analysis Verses Design

Case studies: Student must have to do one case study covers all chapters.

**Text books:** Jeffrey A. Hoffer, Joey F. George, Joseph S. Valacich, Modern Systems Analysis

and Design, Pearson Education, Second Edition

**References:**

Englewood Cliffs, New Jersey, Systems Analysis and Design.

Jeffrey L. Whitten, Loonnie D. Bentley, 5rd Edition, Systems Analysis and Design Methods.

Grady Booch, Pearson Education, Object Oriented analysis and design with applications.