

**Course number and name:** 240 CIS-3 Information System Analysis & Design

**Credits and contact hours:** 3 crs.; 4hrs (3hrs theory and 1 hr. Tutorial)

**Instructor's Name:** Mr. Samiul Islam

**Text book, Title, Author, and Year:** **Modern System Analysis & Design-** Jeffrey Hpffer, Joey George, Joseph Valacich, 6<sup>th</sup> edition, Pearson, (Available in Prince Mishal Library)

**a. Supplemental Materials:**

- “Systems Analysis and Design”, (latest edition), Kendall & Kendall, Prentice-Hall
- “Systems Analysis and Design Methods”, (latest edition), J.L. Whitten, L.D. Bentley, K.C. Dittman, Prentice-Hall.

**Specific Course Information**

**a. Catalog Description:** This course is concerned with the fundamental knowledge, methods and skills needed to analyze, design and implement computer-based systems. It addresses the role of the systems analyst, and the techniques and technologies used. The structured software development life cycle approach, modeling techniques and development phases are comprehensively discussed and reviewed. In modeling techniques, process models, information models, system architecture models, and object oriented models are thoroughly described. A project is given to all students that should cover analysis and design phases of a relatively data-oriented business case; with emphasis on data modeling (ER diagrams), process modeling (DFDs), and architectural system design issues (DD, HIPO, IPO).

**b. Pre-requisites or Co-requisites:** None

**c. Required, Elective, or Selected elective:** Required

**Specific Goals for the Course**

**a. Specific Outcomes of the Instruction**

- Define system analysis & design fundamentals
- Describe the steps involved in the project initiation and planning process.
- Design system process using different methods
- Analyze system performances (risk assessment, technical/economical assessment, etc.) based on that system's design
- Analyze different implementing methods and their managements.

**b. Students Outcomes Addressed by the Course:** a, b, c, i

**Brief List of Topics to be Covered**

- Introduction
- System Development in an Organizational Context
- Managing the Information System Projects

- Determining System Requirements
- Analyzing System Process Requirements
- Object Oriented Analysis and Design: Use cases
- Object Oriented Analysis and Design: Activity Diagrams
- Object Oriented Analysis and Design: Sequence Diagrams
- Analyzing System Data Requirements
- Object Modeling: Class Diagrams
- Database, Forms & Reports Design
- Interface & Dialogue Design
- Implementing and Maintaining the System