FACULTY OF COMPUTER SCIENCE
Bachelor of Computer Application (Sem-IV)
In Effect from Academic Year 2017-18

Subject Code : 1CS1010403	**Subject Title: SYSTEM ANALYSIS AND DESIGN**
Pre-requisite :	**-NONE-**

Course Objective:
The course is intended to make students aware of various terminology used for system development life cycle. This course aims to develop different analysis and design techniques in students. Students are expected to design system using various designing tools.

Teaching Scheme (Hours per week)				**Evaluation Scheme (Marks)**				
				Theory		**Practical**		
Lecture	**Tutorial**	**Practical**	**Credit**	**University Assessment**	**Continuous Assessment**	**University Assessment**	**Continuous Assessment**	**Total**
3	-	2	4	70	30	30	20	150

Subject Contents			
Sr. No	**Topics**	**Total Hours**	**Weight (%)**
1	**Introduction of System**: System definition, Element and General Model of System, System Concept, Characteristics of System, Types of system ,Types of user System development strategies (SDLC). **DFD**: Symbols of DFD, Rules for to Draw a DFD, Physical and Logical DFD, Data Dictionary.	**10**	**20**
2	**System analysis:** Role of system analyst, System investigation, Fact Finding Techniques ,Tools for Documenting Procedures & Decision : Decision Tree, Decision Table ,Structured English	**9**	**20**
3	**Code design:** Principle of Code Design, Types of code **Form design :** Principle of form ,Types of form **Output design** : principle of output, types of output ,output media **Input design :**Data capture, data validation: validation check, transaction check, steps of data capture	**10**	**20**
4	**System Engineering and Quality Assurance** : Design of software , Software design and documentation tools:-Structure Flowchart , HIPO Chart, Warnier /Orr Diagrams Testing Documentation Managing System Implementation :- Training , Conversion	**10**	**20**
5	**Case Studies :** (Input, Output, DFD) • Financial Accounting System • Payroll System • Library System • Inventory / Stock System • Billing System	**9**	**20**

Course Outcomes:
At the end of this course, the students would be able to :
- Understand the role of systems analysis within various systems development.
- Develop an awareness of the different approaches to systems analysis.
- Understand the systems analyst's activities, and apply current tools and techniques.
- Learn various systems analysis approaches and explain their strengths and weaknesses

List of References:

1. System Analysis & Design, 5th Edition, - S.Parthasarthy & B.W.Khalkar,Master Academy Publication
2. Analysis & Design of Information Systems - James A. Senn Mc Graw Hill
3. System Analysis & Design, 2nd Edition, Elias M awad,Galgotia Publication
4. Introduction to System Analysis & Design, 3rd Edition, I.T Hawryszkiewycz3.

E-Resources/ Web Links:

- https://www.tutorialspoint.com/system_analysis_and_design/index.htm
- http://www.freetutes.com/systemanalysis/
- http://www.bcanotes.com/Sad.html

List of Experiments:

Note: The experiment list provided beneath is for reference only. The course teacher may change/formulate it as per his/her methodology and requirement.

1. Project Planning
    I. Project Scheduling
    II. System Definition
    III. System Analysis
    IV. Data Collection
2. System Diagram
    I. E- R Diagram
    II. Data Flow Diagram
    III. Hierarchy Diagram
3. Data Dictionary Creation
4. Form Design
    I. Input Design
    II. Output Design
5. Coding
6. Testing
7. Implementation

Note: The Experiments are based on Case Studies.