



**DEPARTMENT OF MANAGEMENT STUDIES**  
**NATIONAL INSTITUTE OF TECHNOLOGY**  
**TIRUCHIRAPPALLI - 620 015, TAMIL NADU, INDIA**

Phone : +91-431-2503700 (O) , +91-431-2503711 (Direct), Fax : +91-431-2500133 (O/o the Director), E-Mail : psridevi@nitt.edu

<b>COURSE PLAN – PART I</b>			
<b>Course Title</b>	<b>SYSTEM ANALYSIS AND DESIGN AND CASE</b>		
<b>Course Code</b>	<b>MB 805</b>	<b>No. of Credits</b>	<b>2</b>
<b>Course Code of Pre-requisite subject(s)</b>	<b>NIL</b>		
<b>Session</b>	<b>February -May 2022</b>	<b>Section</b>	
<b>Name of Faculty</b>	<b>Dr. P.Sridevi</b>	<b>Department</b>	<b>MBA</b>
<b>Email</b>	<a href="mailto:psridevi@nitt.edu">psridevi@nitt.edu</a>	<b>Telephone No.</b>	<b>041-2503711</b>
<b>Name of Course Coordinator(s) (if, applicable)</b>	<b>NIL</b>		
<b>E-mail</b>		<b>Telephone No.</b>	
<b>Course Type</b>	<input type="checkbox"/> Core course	<input checked="" type="checkbox"/> Elective course	

### **SYLLABUS**

#### **Unit I Structured Analysis & Design**

Software applications today – the changing scenarios – introduction to different SDLC models – methodologies for structured system analysis – problem identification – requirement analysis: tools and techniques – feasibility analysis – functional, operational, technical and economic feasibility – mini cases.

#### **Unit II Object-oriented Analysis & Design**

OOAD – OO concepts – Analysis & Design Tools and Techniques for analysis design – UML notation-structured concepts – cohesion and coupling – components – functions – functional decomposition – examples and case studies – modular programming

#### **Unit III Database Design & Development**

Database modeling – RDBMS concepts – E-R diagrams–normalization–data flow diagrams concepts–data dictionary concepts – structure charts–transportation–analysis – entity life histories (ELH) – standards and controls.

#### **Unit IV System Implementation and Maintenance**

System implementation and maintenance: Implementation strategies – SW / HW selection and procurement – control and security – issues of designing and implementing on-line systems – data communication requirements – system conversion approaches and selection issues.

<b>UnitV System Development using CASE</b> Project development selection of application – evaluation of design issues – cost/benefit analysis – project and resource planning–design and development–testing and documentation– presentation and demonstration- Agile methodologies.	
<b>COURSE OBJECTIVES</b>	
<i>To provide knowledge and necessary skills for systems development methodology and design in industry perspective and learning of use CASE tools</i>	
<b>COURSE OUTCOMES (CO)</b>	
<b>Course Outcomes</b>	<b>Aligned Programme Outcomes (PO)</b>
1. To understand the methodologies involved in system development environment	<b>1,4,5</b>
2. To analyze and develop process flow diagram (DFD's, E-R and logic diagram and Use Case using UML) for system development	<b>2,3,5,6</b>
3. To have better understanding on any system development project	<b>1,2, 6,8</b>

<b>COURSE PLAN – PART II</b>			
<b>COURSE OVERVIEW</b>			
This course describes system development methodologies			
<b>COURSE TEACHING AND LEARNING ACTIVITIES (Online – via Teams)</b>			
<b>Sl.No.</b>	<b>Week</b>	<b>Topic</b>	<b>Mode of Delivery **</b>
1.	3rd week of February 2022 <b>Class – 1<sup>st</sup> week (3 Contact Hours)</b>	System development environment – introduction to different SDLC - models - methodologies for structured system analysis	Lecture - Power Point Presentation
2.	<b>Class- 2<sup>nd</sup> week (3 Contact Hours)</b>	Planning - problem identification –Identifying and selecting IS projects	Lecture - Power Point Presentation
3.	<b>Class- 3<sup>rd</sup> week (3-4 Contact Hours)</b>	Feasibility analysis – functional, operational, technical and economic feasibility – BPP-Walkthrough <b>Assignment</b> : Allocation to groups – Project	Lecture - Power Point Presentation Assignment: Students should work on all concepts of SADC using given Case Study.
4.	<b>Class- 4<sup>th</sup> week (3-4 Contact Hours)</b>	Analysis – requirements determination Requirements structuring – process modelling - DFD's	Lecture - Power Point Presentation
5.	<b>Class- 5<sup>th</sup> week (3-4 Contact Hours)</b>	Use Case – Logic and data modelling	Lecture - Power Point Presentation
6.	<b>Class- 6<sup>th</sup> week (3 Contact Hours)</b>	Analysis using system development methodology – groups Demo & Training on open source data modeler / Star UML	Group analysis and presentation Demo on system development tool.

7.	7 <sup>th</sup> week	<b>Cycle Test for III Trimester / MBA</b>	
8.	<b>Saturday &amp; Sunday</b>	<b>Workshop on System development using UML Case Tool</b> OOAD - OO concepts - Analysis & Design Tools and Techniques for analysis design – UML notation-structured concepts – cohesion and coupling	<b>Guest Lecture</b> Saturday & Sunday of trimester)
9.	Class- 8 <sup>th</sup> week (3 Contact Hours)	Database modeling - RDBMS concepts - E-R diagrams–normalization	Lecture - Power Point Presentation
10.	Class – 9 <sup>th</sup> week (3 Contact Hours)	Data dictionary concepts – structure charts–transportation–analysis – entity life histories (ELH) – standards and controls	Lecture - Power Point Presentation
11.	Class - 10 <sup>th</sup> week (3 Contact Hours)	System implementation strategies – SW / HW selection and procurement – control and security – issues of designing and implementing on-line systems	Lecture - Power Point Presentation
12.	<b>Class – 11<sup>th</sup> week</b> (3 Contact Hours)	Data communication requirements – system conversion approaches and selection issues. Project development selection of application – evaluation of design issues – cost/benefit analysis	Lecture - Power Point Presentation
13.	Class – 12 <sup>th</sup> week (3 Contact Hours)	Project and resource planning–design and development–testing and documentation–presentation and demonstration- Agile methodologies.	Lecture - Power Point Presentation ** Evaluation out off contact hours if required**
14.	May 2022	<b>Trimester Exam Begins</b>	

**\*\* All lectures to be delivered through online mode using MS-Teams with the aid of digital writing pad**

**TEXT / REFERENCES:**

Hoffer, George & Valacich, Modern Systems Analysis & Design, 7<sup>th</sup> Edition Pearson Education, © 2014.  
Dennis, B. Haley, D. Tegarde, Systems Analysis and Design with UML, 4<sup>th</sup> Edition, John Wiley & Sons, 2012

**REFERENCE BOOK:**

Whitten & Bentley, Systems Analysis and Design methods 6/E- McGraw Hill Publications, 2005  
User Manuals of Rational Enterprise Suite (CASE)

**COURSE ASSESSMENT METHODS**

Sl. No.	Mode of Assessment	Week / Date	Remarks	% Weightage
1.	Assignment	2 <sup>nd</sup> week of class	Tutorial with Demo	25%
2.	Assignment report presentation	6 <sup>th</sup> week of class	Demo and Assignment	10%
3.	Class Test	Any time	Online through Teams	25%
4.	Class Performance	Course time	Assessed in all classes	10%
5.	Trimester Examination	May 2022	2 Hours	30%

**Note:**  
A. Attending all the assessments (Assessment 1 to 5) is MANDATORY for every student.

B. Passing minimum for the course shall be the Class Average/2. If not scoring the minimum, the student would be declared fail and 'F' grade will be awarded.

### **COURSE EXIT SURVEY**

- Feedbacks are collected before final examination through MIS as per the institute guidelines
- Students, through their Class Representatives, may give their feedback at any time to the course faculty which will be duly addressed.

The students may also give their feedback during Class Committee Meeting.

### **ATTENDANCE:**

- Minimum 75% is mandatory to write the trimester examination. Students with less than 65% of attendance shall be prevented from writing the final assessment and shall be awarded 'V' grade.
- Medical Certificate / On Duty Certificate should be submitted for due reasons

### **COMPENSATION ASSESSMENT:**

- One compensation assessment will be given after completion of respective assessment for the students those who are absent for any assessment due to genuine reason.
- The prior permission and required document must be submitted for absence.

### **ACADEMIC HONESTY & PLAGIARISM:**

- Academic ethics to be followed as course operation is online
- The students are expected to come out with their original solution for the assignment. If found to copy from internet/other students, marks will be reduced.
- Need to maintain honesty & discipline in online class and exam

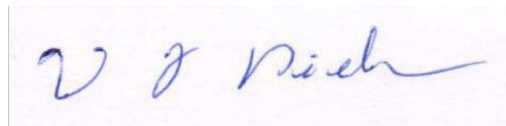
### **ADDITIONAL INFORMATION**

- The students can get their doubts clarified at any time with their faculty member with prior appointment.
- GL dates will be announced later based on the availability of experts
- Students with technical difficulty during course or assessment time will be considered with due intimation to course instructor.

### **FOR APPROVAL**



**Dr. P.SRIDEVI**  
Course Faculty



**Dr. V.J. Sivakumar**  
Chairman (Class Committee)



**Dr. G. Muruganatham**  
HoD