MANIPAL INSTITUTE OF TECHNOLOGY

(A constituent college of Manipal University, Manipal)
Manipal Karnataka 576 104

DEPARTMENT OF INFORMATION & COMMUNICATION TECHNOLOGY

COURSE PLAN

Department : **Information & Communication Technology**

Subject : **Software Engineering & Project Management**

Subject code : **ICT 208**

Semester & branch : **IV BTech.,(Information Technology)**

Name of the faculty : **Mrs. Sucheta V. Kolekar, Mr. Rajesh K**

No of contact hours/week : **4 lecture**

Assignment Portion	
Assignment/Quiz No.	**Topics**
A1	**L1 – L8**
A2	**L9 – L15**
A3	**L16 – L23**
A4	**L24 – L31**
A5	**L32 – L39**
Test Portion	
Test No.	**Topics**
1	**L1 – L17**
2	**L18 – L37**

Submitted by:

(Signature of the faculty)
Date:

Approved by: Dr. Preetham Kumar

(Signature of HOD)
Date:

Lecture No.	Topic to be covered
1	Software and Software Engineering, Changing nature of Software
2	Legacy Software, Software Myths
3	Phases in Software Development, The Waterfall Model
4	Evolutionary Models
5	Incremental Models, Specialized Models,
6	Unified models
7	Requirements Engineering Tasks
8	Requirements Engineering Process
9	Eliciting Requirements
10	Developing Use Cases, Building Analysis Model
11	Negotiating requirements, Validating Requirements
12	Requirement Analysis
13	Analysis Modeling Approaches
14	Data Modeling Concepts
15	Object Oriented Analysis
16	Scenario Based Modeling
17	Class Based Modeling: Class-Responsibility-Collaborator Modeling, Associations and Dependencies
18	Creating a behavioral model: Identifying events with the Use-Case, State representations
19	Flow oriented modeling: Creating a data flow model
20	Design process and quality

21	Design concepts: Abstraction, modularity
22	Design concepts: Functional independence, Information hiding
23	Structured/ function oriented design methodology –explanation
24	Structured design methodology details with example
25	Design representation –graphical notation
26	Tabular design notation and PDL
27	Object oriented design using class
28	Object oriented design case study
29	Design case study
30	Testing Strategies-Strategic Approach to Software Testing
31	Strategic issues- Strategic issues for conventional software-unit testing, integration testing
32	Strategic strategies for object oriented software, Validation testing, System testing-recovery testing
33	Security testing, stress testing, performance testing, Debugging
34	Testing tactics- Black box testing with examples
35	White box testing with examples
36	Basis path testing with examples
37	Control structure testing-condition testing, data flow testing, loop testing with examples
38	Black box testing-graph based testing methods, equivalence partitioning, boundary value analysis, orthogonal array testing
39	Project Management –People
40	Process and project
41	Project Scheduling and defining a task set
42	Scheduling-timeline charts, tracking the schedule ,tracking progress for OO project

43	Metrics, Size oriented metrics
44	Function based metrics
45	Process based models
46	Empirical estimation model-COCOMO II model
47	Case study-Design and development of software application using OODM and SDM
48	Case study continued…