Session wise – Course Plan

Department of Information Science and Engineering

SEMESTER : VIII
BRANCH : ISE
SUBJECT : Software Architecture
SUBJECT CODE: 10IS81
NO OF HRS/WK: 5

NAME OF THE FACULTY : Prasad M S
DATE OF COMMENCEMENT: 19/01/2017
DATE OF CLOSING : 20/05/2017
CLASS STRENGTH : 98
TOTAL HRS : 65

Session No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter
1	**1/1**	16-2-2017	**UNIT 1: Introduction:** Revision of concepts of software engineering. Introduction about Software architecture, Flow of the subject.	Power Point Presentation	
2	**2/1**	16-2-2017	Where do architectures come from? Software processes and the architecture business cycle.	,,	
3	**3/1**	23-2-2017	What makes a "good" architecture? What software architecture is and what it is not; Other points of view.	,,	
4	**4/1**	23-2-2017	Architectural patterns, reference models and reference architectures; Importance of software architecture.	,,	
5	**5/1**	2-3-2017	Architectural structures and views, Classification of views.	,,	
6	**6/1**	3-3-2017	Revision of Unit 1	,,	
7	**1/2**	3-3-2017	**UNIT 2: Architectural Styles and Case Studies :** Architectural styles: Definition and classification.	‘’	
8	**2/2**	4-3-2017	Data abstraction and object-oriented organization; Event-based, implicit invocation; Layered systems.	,,	Assignment- I
9	**3/2**	4-3-2017	Repositories; Interpreters; Process control.	,,	

10	**4/2**	9-3-2017	Other familiar architectures; Heterogeneous architectures.	,,	
11	**5/2**	10-3-2017	Case Studies: Keyword in Context.	,,	
12	**6/2**	10-3-2017	Case Studies: Instrumentation software, Mobile robotics.	,,	
13	**7/2**	11-3-2017	Case Studies: Cruise control, Three vignettes in mixed style.	,,	
14	**8/2**	11-3-2017	Revision of Unit 2	,,	
15	**1/3**	16-3-2017	**UNIT 3: Quality :** Functionality and architecture; Architecture and quality attributes.	‘’	
16	**2/3**	17-3-2017	System quality attributes; Quality attribute scenarios in practice; Other system quality attributes	,,	Assignment - II
17	**3/3**	17-3-2017	Business qualities; Architecture qualities. Achieving Quality: Introducing tactics.	,,	
18	**4/3**	23-3-2017	Availability tactics; Modifiability tactics; Usability tactics	,,	
19	**5/3**	23-3-2017	Performance tactics; Security tactics; Testability tactics.	,,	
20	**6/3**	24-3-2017	Relationship of tactics to architectural patterns; Architectural patterns and styles.	,,	
21	**7/3**	25-3-2017	Revision of Unit 3.	,,	
22	**1/4**	25-3-2017	**Unit 4: Architectural Patterns – 1 :** Introduction;	,,	
23	**2/4**	30-3-2017	From mud to structure.	‘’	
24	**3/4**	30-3-2017	Pipes and Filters	,,	Assignment – III
25	**4/4**	31-3-2017	Blackboard	,,	
26	**5/4**	1-4-2017	VTU Question Answers discussion	,,	
27	**6/4**	1-4-2017	Revision of Unit 4	,,	
28	**1/5**	6-4-2017	**UNIT 5: Architectural Patterns – 2 :** Distributed Systems:	,,	
29	**2/5**	6-4-2017	Broker	,,	
30	**3/5**	7-4-2017	Interactive Systems	,,	
31	**4/5**	8-4-2017	Model View Controller	,,	

32	**5/5**	8-4-2017	Presentation-Abstraction-Control.	‘’	
33	**6/5**	13-4-2017	VTU Question Answers discussion	,,	
34	**7/5**	13-4-2017	Revision of Unit 5	,,	
35	**1/8**	20-4-2017	**UNIT 8: Designing and documenting Software Architecture:** Architecture in the life cycle; Designing the architecture.	,,	
36	**2/8**	21-4-2017	Forming the team structure; Creating a skeletal system.	,,	
37	**3/8**	21-4-2017	Uses of architectural documentation; Views;	,,	
38	**4/8**	27-4-2017	Documenting a view;	,,	Assignment - IV
39	**5/8**	27-4-2017	Documentation across views.	‘’	
40	**6/8**	28-4-2017	Choosing the relevant views;	,,	
41	**1/7**	4-5-2017	**UNIT 7: Some Design Patterns:** Structural decomposition:	,,	
42	**2/7**	4-5-2017	Whole – Part, Organization of work	,,	
43	**3/7**	5-5-2017	Master – Slave	,,	
44	**4/7**	5-5-2017	Access Control	,,	
45	**5/7**	6-5-2017	Proxy.	,,	Assignment - V
46	**6/7**	11-5-2017	VTU Question Answers discussion	,,	
47	**7/7**	11-5-2017	Revision of Unit 7	‘’	
48	**1/6**	11-5-2017	**UNIT 6: Architectural Patterns – 3:** Adaptable Systems:	,,	
49	**2/6**	11-5-2017	Microkernel	,,	
50	**3/6**	12-5-2017	Reflection	,,	
51	**4/6**	12-5-2017	Model View Controller	,,	
52	**5/6**	12-5-2017	VTU Question Answers discussion	,,	
53	**6/6**	13-5-2017	Revision of Unit 6	‘’	

54		13-5-2017	Revision of Unit 1	,,	
55		13-5-2017	Revision of Unit 2	,,	
56		18-5-2017	Revision of Unit 3	,,	
57		18-5-2017	Revision of Unit 4	,,	
58		19-5-2017	Revision of Unit 5	,,	
59		19-5-2017	Revision of Unit 6	,,	
60		20-5-2017	Revision of Unit 7	,,	
61		20-5-2017	Revision of Unit 8	,,	

Syllabus for Internal Assessment Tests (IAT)*

Sessional #	Syllabus
T1	Class # 01 – 21
T2	Class # 22 – 40
T3	Class # 41 –53

*: See calendar of events for the schedules of IATs.

Literature:

Book Type	Code	Author & Title	Publication info	
			Edition & Publisher	ISBN #
Text Book	TB1	Len Bass, Paul Clements, Rick Kazman: Software Architecture in Practice (Chapters 1, 2, 4, 5, 7, 9)	2nd Edition, Pearson Education, 2003.	978-81-7758-996-2
Text Book	TB2	Frank Buschmann, Regine Meunier, Hans Rohnert, Peter Sommerlad, Michael Stal: Pattern-Oriented Software Architecture, A System of Patterns Volume 1, John Wiley and Sons, 2007. (Chapters 2, 3.1 to 3.4)	Volume 1, John Wiley and Sons, 2007.	978-81-265-1611-7
Text Book	TB3	Mary Shaw and David Garlan: Software Architecture- Perspectives on an Emerging Discipline, (Chapters 1.1, 2, 3)	PHI, 2007.	978-81-203-1470-2
Reference	RB1	E. Gamma, R. Helm, R. Johnson, J. Vlissides: Design Patterns- Elements of Reusable Object-Oriented Software	Pearson Education, 1995.	978-81-317-0007-5

Signature of faculty Signature of HOD Signature of Principal

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CMR INSTITUTE OF TECHNOLOGY

Session wise – Course Plan

Department of Information Science and Engineering

SEMESTER : VIII -A & B
BRANCH : ISE
SUBJECT : System Modeling & Simulation
SUBJECT CODE : 10CS82
NO OF HRS/WK : 5

NAME OF THE FACULTY : D.Sudha
DATE OF COMMENCEMENT : 13-2-2017
DATE OF CLOSING :2-6-2017
CLASS STRENGTH : 99
TOTAL HRS : 55

Session No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter	Topics covered As per plan
1	**1/7**	16-2-2017	**PRE-REQUISITES** **UNIT – 1 INTRODUCTION : When simulation is the appropriate tool and when it is not appropriate**	Chalk & Talk		
2	**2/7**	16-2-2017	Advantages and disadvantages of Simulation, Areas of application	,,		
3	**3/7**	17-2-2017	Systems and system Environment , Components of a system-Discrete and continuous systems,	,,		
4	**4/7**	17-2-2017	Model of a system, Types of Models, Discrete-Event System Simulation	,,	Assignment-I	
5	**5/7**	18-2-2017	Steps in a Simulation Study, The basics of SpreadSheet-Simulation	Power Point		
6	**6/7**	23-2-2017	Simulation Example: Simulation of queuing systems in a spreadsheet	,,		
7	**7/7**	23-2-2017	Revision	Chalk & Talk		
8	**1/8**	2-3-2017	**UNIT-2 - General Principles, Simulation**	,,		

			Software : Concepts in Discrete-Event Simulation			
9	**2/8**	2-3-2017	The Event-Scheduling / Time-Advance Algorithm, World Views	,,		
10	**3/8**	9-3-2017	Manual simulation Using Event Scheduling	,,	Assignment –II	
11	**4/8**	10-3-2017	List processing ,Basic properties, Operations-Using Arrays	,,		
12	**5/8**	10-3-2017	Dynamic Allocation ,Linked Lists	,,		
13	**6/8**	11-3-2017	Simulation in Java	,,		
14	**7/8**	11-3-2017	Simulation in GPSS	,,		
15	**8/8**	16-3-2017	Revision	‘’		
16	**1/7**	17-3-2017	**UNIT 3- Statistical Models in Simulation :** Review of terminology and concepts	‘’		
17	**2/7**	17-3-2017	Useful statistical models	‘’		
18	**3/7**	18-3-2017	Discrete Distributions	,,		
19	**4/7**	18-3-2017	Continuous Distributions	,,	Assignment –III	
20	**5/7**	23-3-2017	Poisson Process, Empirical distributions	,,		
21	**6/7**	24-3-2017	Poisson Process, Empirical distributions	,,		
22	**7/7**	24-3-2017	Revision	,,		
23	**1/8**	31-3-2017	**UNIT 5- Random-Number Generation, Random-Variate Generation** Properties of random numbers	,,		
24	**2/8**	31-3-2017	Generation of pseudo-random numbers ,Techniques for generating random numbers	,,		
25	**3/8**	1-4-2017	Tests for Random Numbers	‘’		
26	**4/8**	6-4-2017	Tests for Random Numbers	,,	Assignment –IV	
27	**5/8**	6-4-2017	Random-Variate Generation ,Inverse transform technique	,,		

28	**6/8**	7-4-2017	Acceptance-Rejection technique	,,		
29	**7/8**	7-4-2017	Special properties	,,		
30	**8/8**	8-4-2017	Revision	,,		
31	**1/6**	13-4-2017	**UNIT 6 -Input Modeling :** Data Collection	,,		
32	**2/6**	13-4-2017	Identifying the distribution with data, Parameter Estimation	,,		
33	**3/6**	20-4-2017	Goodness of Fit Tests	,,		
34	**4/6**	20-4-2017	Fitting a non-stationary Poisson process	‘’		
35	**5/6**	21-4-2017	Selecting input models without data	,,	Assignment - V	
36	**6/6**	22-4-2017	Multi-variate and Time-Series input models	,,		
37	**1/7**	22-4-2017	**UNIT 7 –Estimation Of Absolute performance[Output Analysis For A Single Model :** Types of simulations with Respect to Output analysis	,,		
38	**2/7**	27-4-2017	Stochastic Nature of Output Data	,,		
39	**3/7**	27-4-2017	Measures of Performance and their Estimation	,,		
40	**4/7**	28-4-2017	Output Analysis for Terminating Simulations	,,		
41	**5/7**	4-5-2017	Output Analysis for Terminating Simulations	‘’	Assignment –VI	
42	**6/7**	4-5-2017	Output analysis for steady-State Simulations. Problems	,,		
43	**7/7**	5-5-2017	Output analysis for steady-State Simulations. Problems	,,		
44	**1/5**	5-5-2017	**UNIT - 8 -Verification, Calibration, and Validation; Optimization of simulation Models :** Model Building	,,		
45	**2/5**	11-5-2017	Verification, Validation, Verification of simulation models	,,	Assignment –VII	

46	**3/5**	12-5-2017	Calibration, Validation of models	,,		
47	**4/5**	12-5-2017	Optimization, Optimization via Simulation	,,		
48	**5/5**	13-5-2017	Optimization, Optimization via Simulation	,,		
49	**1/7**	13-5-2017	**UNIT 4 - Queuing Models :** Characteristics of queuing Systems	‘’		
50	**2/7**	13-5-2017	Queuing notation	,,		
51	**3/7**	18-5-2017	Long-run measures of performance of queuing Systems	,,	Assignment - VIII	
52	**4/7**	19-5-2017	Steady-state behavior of M/G/1 queue	,,		
53	**5/7**	19-5-2017	Networks of queues	,,		
54	**6/7**	20-5-2017	Rough-cut modeling: An illustration	,,		
55	**7/7**	20-5-2017	Rough-cut modeling: An illustration	,,		

Syllabus for Internal Assessment Tests (IAT)*

Sessional #	Syllabus
T1	Class # 01 – 22
T2	Class # 23 – 43
T3	Class # 44 - 55

*: See calendar of events for the schedules of IATs.

Literature:

Book Type	Code	Author & Title	Publication info	
			Edition & Publisher	ISBN #
Text Book	TB1	Jerry Banks, John S. Carson II, Barry L. Nelson, David M. Nicol: Discrete-Event System Simulation. (Listed topics only from Chapters-1 to 12)	5th Edition, Pearson Education ©2013	978-8131796993

Reference	RB1	Averill M. Law: Simulation Modeling and Analysis	4th Edition, Tata McGraw-Hill, 2007.	9780070667334
Reference	RB2	Lawrence M. Leemis, Stephen K. Park: Discrete – Event Simulation:	A First Course, Pearson Education, 2006.	978-0131429178

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CMR INSTITUTE OF TECHNOLOGY

Session wise – Course Plan

Department of Computer Science and Engineering

SEMESTER	**: VIII**	NAME OF THE FACULTY	**: D.Gopika**
BRANCH	**: ISE**	DATE OF COMMENCEMENT	**: 13/02/2017**
SUBJECT	**: Information and network Security**	DATE OF CLOSING	**: 02/06/2017**
SUBJECT CODE	**: : 10CS835**	CLASS STRENGTH	**: 98**
NO OF HRS/WK	: 05	TOTAL HRS	**: 52**

LESSON PLAN

Serial Plan	Chapter Title / Reference Literature	Topic	Teaching Aids	Assignments/ Tests planned for the chapter
1	TB2	**Module I** Planning for Security Introduction; Information Security Policy,Standards, and Practices; The Information Security Blue Print;Contingency plan and a model for contingency plan	Chalk & Talk	Assignment-1
2	TB1 &TB2	**Module II** Security Technology-1 Introduction; Physical design; Firewalls; Protecting Remote Connections	Presentation	
3	TB1		Chalk talk	

		Module III Security Technology – 2 Introduction; Intrusion Detection Systems (IDS); Honey Pots, Honey Nets, and Padded cell systems; Scanning and Analysis Tools.		
4	TB2	**Module IV** **CRYPTOGRAPHY** Introduction; A short History of Cryptography; Principles of Cryptography; Cryptography Tools; Attacks on Cryptosystems.	,,	Assignment-2
5	TB1	**Part-B** **MODULE V** Introduction to Network Security, Authentication Applications Attacks, services, and Mechanisms; Security Attacks; Security Services; A model for Internetwork Security; Internet Standards and RFCs Kerberos, X.509 Directory Authentication Service.	,,	Assignment-3
6	TB1	**MODULE VI** **Electronic Mail Security** Pretty Good Privacy (PGP); S/MIME	,,	Assignment-4
7	TB1	**MODULEVII** **IP Security** IP Security Overview; IP Security Architecture; Authentication Header; Encapsulating Security Payload; Combining Security Associations; Key Management.	,,	
8	TB1	**MODULE VIII** **Web Security** Web security requirements; Secure Socket layer (SSL) and Transport layer Security (TLS); Secure Electronic Transaction (SET)	,,	

Syllabus for Internal Assessment Tests (IAT)*

IAT #	Syllabus
IAT-1	1,2,4(half)
IAT-2	3,5,6
IAT-3	4,7,8

*: See calendar of events for the schedules of IATs.

Literature:

Book Type	Code	Author & Title	Publication information	
			Edition // Publisher	ISBN #
Text Book	TB1	Michael E whitman and Herbert J.Mattord : Principles of Information Security,2ndEdition,Cengage Learning 2005	Cengage Learning	978-81-315-0952-4
Text Book	TB2	William Stallings:Network Security Essentials:Application and Standards,3rd Edition	Pearson Education 2007	-
Reference	RB1	Behrouz A Forouzan :Cryptography and its principles	-	-

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Session wise – Course Plan

Department of Information Science

SEMESTER : VIII
BRANCH : ISE
SUBJECT : ADHOC NETWORKS
SUBJECT CODE : 10IS841

NAME OF THE FACULTY : Mrs. Divya Singh
DATE OF COMMENCEMENT : 19.01.17
DATE OF CLOSING : 20.05.17
CLASS STRENGTH : 98

Session No	Chapter no. (No of hrs planed for the chapter)	Date	Topics Planned for the Session	Teaching Aids	Assignments/Tests Planned for the Chapter	Topics Covered as per Plan
			UNIT 1: INTRODUCTION			
1.	**1/6**	16-2-2017	Introduction, Applications	Power Point Presentation		
2.	**2/6**	16-2-2017	Issues in Ad hoc wireless Networks	,,		
3.	**3/6**	23-2-2017	Issues in Ad hoc wireless Networks contd.	,,		
4.	**4/6**	23-2-2017	Wireless Mesh & Sensor Network	,,		
5.	**5/6**	2-3-2017	Wireless Mesh & Sensor Network contd.	,,		
6.	**6/6**	3-3-2017	Ad hoc wireless Internet, Revision	,,	Assignment 1 Issue date	

			UNIT 2: **MAC – 1**			
7.	**1/10**	3-3-2017	Introduction and Issues in designing goals for MAC protocol	,,		
8.	**2/10**	4-3-2017	Classification of MAC Protocols	,,		
9.	**3/10**	4-3-2017	Contention based protocols: MAC-Wireless, Floor acquisition protocol	,,		
10.	**4/10**	9-3-2017	Busy Tone Multiple Access Protocol	,,	Assignment 1 Submission date	
11.	**5/10**	10-3-2017	Contention based protocols with Reservation	"		
12.	**6/10**	10-3-2017	Distributed Packet Reservation Collision Avoidance Protocol	Board, chalk, duster		
13.	**7/10**	11-3-2017	Hop Reservation , Soft Reservation Protocol	,,		
14.	**8/10**	11-3-2017	5phase, MACA/Piggy Back	,,		
15.	**9/10**	16-3-2017	Real Time MAC Protocol	,,	Assignment 2 Issue date	
16.	**10/10**	17-3-2017	Revision	PPT		
			UNIT 3: **MAC – 2**			
17.	**1/9**	17-3-2017	Contention based protocols with Scheduling Mechanism-Distributed Priority Scheduling	,,		
18.	**2/9**	23-3-2017	Distributed wireless ordering Protocol	,,	Assignment 2 Submission date	
19.	**3/9**	23-3-2017	Distributed Laxity based Protocol	,,		
20.	**4/9**	24-3-2017	MAC with directional antenna	,,		
21.	**5/9**	25-3-2017	Multichannel MAC Protocol	,,		
22.	**6/9**	25-3-2017	Multichannel CSMA Protocol	,,		
23.	**7/9**	30-3-2017	Power Control MAC Protocol, Receiver Based Auto Rate protocol	,,		
24.	**8/9**	30-3-2017	Revision	PPT	Assignment 3 Issue date	

25.	**9/9**	31-3-2017	Revision			
			UNIT 6 TRANSPORT LAYER			
26.	**1/9**	1-4-2017	Introduction, Issues in designing a transport layer protocol for Ad hoc wireless Networks	,,		
27.	**2/9**	1-4-2017	Design goals of a transport layer protocol for Ad hoc wireless Networks	,,		
28.	**3/9**	6-4-2017	Classification of transport layer solutions	,,	Assignment 3 Submission date	
29.	**4/9**	6-4-2017	TCP over Ad hoc wireless Networks	,,		
30.	**5/9**	7-4-2017	Feedback TCP,TCP-ELFN	,,		
31.	**6/9**	8-4-2017	TCP BUS,ADHOC TCP	,,		
32.	**7/9**	8-4-2017	Split TCP,	Board, chalk, duster	Assignment 4 Issue date	
33.	**8/9**	13-4-2017	Adhoc Transport protocol	,,		
34.	**9/9**	13-4-2017	Revision	PPT		
			UNIT 7 SECURITY			
35.	**1/7**	20-4-2017	Network security requirements	,,		
36.	**2/7**	21-4-2017	Issues & challenges in security provisioning	,,	Assignment 4 Submission date	
37.	**3/7**	21-4-2017	Network security attacks	,,		
38.	**4/7**	27-4-2017	Key management	,,		
39.	**5/7**	27-4-2017	Secure routing in Ad hoc wireless Networks-SEAD	,,		
40.	**6/7**	28-4-2017	Secure aware Routing	,,		
41.	**7/7**	4-5-2017	Revision	PPT	Assignment 5 Issue date	
			UNIT 4 ROUTING - I			
42.	**1/9**	4-5-2017	Introduction, Issues in designing a routing protocol for Ad hoc wireless Networks	,,		
43.	**2/9**	5-5-2017	Classification of routing protocols	,,		
44.	**3/9**	5-5-2017	Table driven routing protocol - DSDV	,,		
45.	**4/9**	6-5-2017	Table driven routing protocol - DSR	,,		
46.	**5/9**	11-5-2017	Table driven routing protocol - WRP	,,	Assignment 5 submission date	

47.	**6/9**	11-5-2017	On-demand routing protocol - AODV	,,		
48.	**7/9**	11-5-2017	On-demand routing protocol-DORA	,,		
49.	**8/9**	11-5-2017	On-demand routing protocol-ABR	,,		
50.	**9/9**	12-5-2017	Revision	PPT		
			UNIT 5 ROUTING II			
51.	**1/7**	12-5-2017	Hybrid routing protocol-Core Extraction Routing	,,	Assignment 6 Issue date	
52.	**2/7**	12-5-2017	Zone Routing protocol			
53.	**3/7**	13-5-2017	Routing protocols with effective flooding mechanisms-Preferred Link Based, Optimized Link state routing,	,,		
54.	**4/7**	13-5-2017	Hierarchical state routing protocol	,,		
55.	**5/7**	13-5-2017	Fisheye state Routing Protocol	,,		
56.	**6/7**	18-5-2017	Power aware routing metrics	,,		
57.	**7/7**	18-5-2017	Revision	PPT	Assignment 6 Submission date	
			UNIT 8 QOS			
58.	**1/8**	18-5-2017	Introduction	Board, chalk, duster		
59.	**2/8**	19-5-2017	Issues and challenges in providing QoS in Ad hoc wireless Networks	,,		
60.	**3/8**	19-5-2017	Classification of QoS solutions	,,		
61.	**4/8**	19-5-2017	MAC layer solutions	,,		
62.	**5/8**	20-5-2017	MAC layer solutions contd.			
63.	**6/8**	20-5-2017	Network layer solutions.	,,		

Syllabus for Internal Assessment Tests (IAT)*

IAT #	Syllabus
T1	Sessions: 1-24
T2	Sessions: 25-49
T3	Sessions: 51-63

*: See calendar of events for the schedules of IATs.

Literature:

Book Type	Code	Author & Title	Publication information	
			Edition // Publisher	ISBN #
Text Book	TB1	C.Siva Ram Murthy & B.S Manoj: Ad hoc Wireless Networks,	2nd Edition, Pearson Education, 2005.	9788131759095
Reference	RB1	Ozan K. Tonguz and Gianguigi Ferrari: : Ad hoc Wireless Networks	John Wiley, 2007.	9788126523047
Reference	RB2	Xiuzhen Cheng, Xiao Hung, Ding-Zhu Du: Ad hoc WirelessNetworking	Kluwer Academic Publishers, 2004.	978-1402077128
Reference	RB3	C.K. Toh: Adhoc Mobile Wireless Networks-Protocols andSystems	Pearson Education, 2002.	9788131715109

CRC **HOD** **PRINCIPAL**