

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI

COURSE PLAN – PART I			
Course Title	SERVICE ORIENTED ARCHITECTURE AND WEB SECURITY		
Course Code	CS 604	No. of Credits	3
Course Code of Pre-requisite subject(s)	NIL		
Session	Jan. 2018	Section (if, applicable)	NA
Name of Faculty	Dr.C.Mala	Department	C.S.E.D
Email	mala@nitt.edu	Telephone No.	0431-2503208
Name of Course Coordinator(s) (if, applicable)	---		
E-mail		Telephone No.	
Course Type	Core course		
Syllabus (approved in BoS)			
Do refer Pg 12 in https://www.nitt.edu/home/academics/curriculum/M.Tech-CS-CS-2016.pdf			
COURSE OBJECTIVES			
<ul style="list-style-type: none"> • To provide an overview of XML Technology and modeling databases in XML • To provide an overview of Service Oriented Architecture and Web services and their importance • To introduce Security solutions in XML and Web Services and to introduce Security standards for Web Services 			

COURSE OUTCOMES (CO)

Course Outcomes	Aligned Programme Outcomes (PO)
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<p>1. The students will understand the basics of XML</p> <p>2. The students will learn the concepts of SOA and Web services, some of the prevailing standards and technologies of Web Services</p> <p>3. The students will also learn the approaches for providing security for XML documents as well as messages exchanged among Web Services</p>	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
	S	B	M	S	B	B	M	B
	S	B	M	S	B	M	M	B
	S	M	S	S	M	S	M	B

S = 0.6 M = 0.4 B = 0.0

COURSE PLAN – PART II

COURSE OVERVIEW

Service Oriented Architecture and Web Security Course discusses about the basics of Web services , WS technologies and Web security

COURSE TEACHING AND LEARNING ACTIVITIES

S.No.	Contact Hours	Topic	Mode of Delivery	
			C & T	PPT
		UNIT I		
1	1	XML Technology	√	√
2	2,3	XML and Web - Name Spaces	√	√
3	4,5	XML Document Structure - Structuring with Schemas and DTD	√	√
4	6,7	Modeling Databases in XML – XQuery	√	√

		UNIT II		
5	8,9	SOA Basics Service Oriented Architecture (SOA)	√	√
6	10	Comparing SOA with Client-Server and Distributed architectures	√	√
7	11	Characteristics of SOA – Benefits of SOA	√	√
8	12	Principles of Service orientation	√	√
9	13	Service layers -Business Process management	√	√
		UNIT III		
10	14,15	Web Security, Services (WS) SOA and Web Services	√	√
11	16,17	Web Services Protocol Stack – Service descriptions – WSDL	√	√
12	18,19	Messaging with SOAP – Service discovery – UDDI.	√	√
13	20,21	Service-Level Interaction patterns – XML and Web Services	√	√
14	22	Enterprise Service Bus - .NET and J2EE Interoperability.	√	√
		UNIT IV		
15	23	WS Technologies and Standards	√	√

16	24,25	Web Services Technologies - JAX-RPC, JAX-WS	√	√
17	26,27	Web Service Standards – WS-RM, WS-Addressing, WS-Policy.	√	√
18	28	Service Orchestration and Choreography – Composition Standards - BPEL.	√	√
19	29	Service-Oriented Analysis and Design	√	√
UNIT V				
20	30,31	XML and WS Security	√	√
21	32,33	XML Security Overview – Canonicalization	√	√
22	34,35	XML Security Framework – XML Encryption – XML Signature	√	√
23	36,37	XKMS Structure. Web Services Security	√	√
24	38,39	XACML - WS-Security	√	√

COURSE ASSESSMENT METHODS (shall range from 4 to 6)

S.No.	Mode of Assessment	Week/Date	Duration	% Weightage
1	Cycle Test – 1	6 th week	1 Hour	20
2	Cycle Test – 2	12 th week	1 Hour	20
3	Seminar	7 th week		10
CPA	Compensation Assessment*	14 th week	1 Hour	20
4	Final Assessment *	May 2 nd Week	3 Hours	50

*mandatory;

COURSE EXIT SURVEY (mention the ways in which the feedback about the course shall be assessed)

Through MIS Feedback system / Any standard format (Before End Sem exam)

COURSE POLICY (preferred mode of correspondence with students, policy on attendance, compensation assessment, academic honesty and plagiarism etc.)

75% attendance is mandatory to write the end semester examination.

MODE OF CORRESPONDENCE (email/ phone etc)

Email : mala@nitt.edu

ATTENDANCE

75% attendance is mandatory to write the end semester examination

COMPENSATION ASSESSMENT

One Retest will be conducted for absentees in Cycle Tests

ACADEMIC HONESTY & PLAGIARISM

Students indulging in academic dishonest activities will be penalized.

ADDITIONAL INFORMATION

The Course Coordinator is available for consultation from 3pm to 4pm on all working days

FOR APPROVAL

Course Faculty

CH 25
11/1/18

CC-Chairperson

S. S. Subramanian
31 01 18

HOD

[Signature]
31/1/2018