



Mehran University of Engineering and Technology, Jamshoro
Department of Software Engineering

ORIGINAL SUBMITTED SYLLABUS

Title of Subject	:	Semantic based Software Development
Code	:	SE702
Discipline	:	Software Engineering (3 rd Semester)
Effective	:	20 ME SE and onwards
Pre-requisite	:	None
Assessment	:	10% Sessional 30% Mid Semester 60% Final Semester Examination
Credit Hours	:	02+ 00
Minimum Contact Hours:		Marks : 50 + 00

Specific Objectives of course:

- The main areas of semantics, different ways to define meaning, the interface of semantics and pragmatics, ways of analysing and contrasting meanings, formal semantics using propositional logic, cognitive semantics, conceptual semantics, the interface of semantics and morphology, the interface of semantics and syntax, semantic change

Course outline:

XML

XML basics, XML Tree, XML Syntax, XML Elements, XML Attributes, XML Namespaces, XML Encoding, Viewing XML, XML and CSS

DTDs and XML SCHEMAS

XML Doctypes, XML Validator, Document Type Definition, XML Schema

Resource Description Framework

Introduction to RDF, RDF rules, examples of RDF, RDF Elements, RDF Containers, RDF Collections, RDF Schema, RDF Dublin Core, RDF OWL

Web Ontology Language

Ontology, OWL, OWL Sublanguages, OWL lite, OWL DL, OWL full

SPARQL

Structure of SPARQL query, SPARQL architecture, Datapoints, Friend of a Friend Ontology

SEMANTIC WEB SERVICES

Web Service Description Language, Web Ontology Language Schema, Semantic Annotation for Web Service Description Language

Advanced Topics

Semantic Opinion Mining,

BOOKS RECOMMENDED

1. Practical RDF by Shelly Powers. O'Reilly Media; latest edition
2. Programming the Semantic Web by Toby Segaran, Colin Evans and Jamie Taylor. O'Reilly Media; latest edition

Approval:

Board of Studies:

Res.No.02

Dated:25-09-2018

AS&RB:

Res.No.154.17(a)

Dated:04-12-2018

Academic Council:

Res.No.94.4

Dated:27-03-2019