

MANGALORE UNIVERSITY

DEPARTMENT OF M.Sc. COMPUTER SCIENCE

MASTER OF COMPUTER APPLICATIONS (MCA) PROGRAMME

MCAH403 :ADVANCED WEB PROGRAMMING		
Hours/Week: 4 Credits : 4		I.A. Marks: 30 Exams. Marks: 70
<u>Course Outcomes:</u> CO1: Develop WebPages using HTML/XHTML markup languages. CO2: Develop WebPages applying CSS for Real World Scenarios. CO3: Illustrate the use of Java Scripts in dynamic WebPages. CO4: Design and develop a web based project.		
	UNIT-I	12 Hours
RESTful Web Services: Introduction, Architectural Principles; Designing RESTful Services - The Object Model, Model and URIs, Defining the Data Format, Assigning HTTP Methods. JAX-RS: Developing a JAX-RS RESTful Service, Deploying, Writing a Client. HTTP Method and URI Matching: Binding HTTP Methods, @Path, Sub-resource Locators, Gotchas in Request Matching; JAX-RS Injection: Basics, Injecting Different Types of Parameters, Common Functionality.		
	UNIT-II	12 Hours
JAX-RS Content Handlers: Built-in Content Marshalling, JAXB, Custom Marshalling. Server Responses and Exception Handling: Default Response Codes, Complex Responses, Exception Handling. JAX-RS Client API: Introduction, Client Builder, Client and Web Target, Building and Invoking Requests. Configuration Scopes.		
	UNIT-III	12 Hours
Node.js: JavaScript and Node.js – Introduction, Server-Side JavaScript, Hello Word application; Node.js Use Cases, Application Stack. Building the Application Stack: Basic HTTP Server and Analysis, Passing Functions Around, Server Working, Event-Driven Asynchronous Callbacks, Handling Requests, Placing Server Module, Route Requests – Basics and Real Handlers, Execution, Responding, Serving, Handling POST Request, Handling File Uploads.		

	UNIT-IV	12 Hours
Search Engines and SEO: What is SEO? Needs for SEO; SEO in Social Media; Doing SEO on Your Own; Finding Sites; Working of Search Engines – Google, Bing, Yahoo!, International Searches; SEO Techniques – Friendliness, Keywords and Keyword Research, Creating Content for Customers, Myths and Facts; Tools for Tracking and Managing SEO: Sitemaps, robots.txt, Canonical Links, Duplicate Content, Checking, Tracking, Paying for Links.		
REFERENCE BOOKS: 1. Bill Burke, RESTful Java with JAX-RS 2.0 – Designing and Developing Distributed Web Services, O'Reilly, 2013, 2nd Edition. 2. Manuel Kiessling, The Node Beginner Book, Leanpub, 2016 3. Laura Lemay et.al, Sams Teach Yourself HTML, CSS & JavaScript Web Publishing in One Hour a Day, Pearson Education, 2016, 7th Edition 4. Martin Kalin. Java Web Services: Up and Running, O'Reilly Media, 2013, 2nd Edition. 5. SandroPasquali, Mastering Node.js, Packt, 2013		

