Course code: Course Title	Course Structure			Pre-Requisite
	L	T	P	
SE327: Web Technology	3	0	2	Fundamentals of Programming

Course Objective: To understand the Internet & the Web phenomena. Comprehend the evolution, development and research in the area of Web.

S. NO	Course Outcomes (CO)
CO1	Understand the concept of internet, history of internet and the terminology of internet, and also describes how the internet works.
CO2	Understand and evaluate the use of various internet applications.
CO3	Describe the evolution, applications, and technologies of web 1.0, web 2.0, and web 3.0.
CO4	Understand client side and server-side technologies and create dynamic and interactive web applications.
CO5	Apply and evaluate web search and mining techniques, search optimization techniques, web mining, and text mining.

S.No.	Contents	Contact Hours
UNIT 1	**Inter-Networking:** Internet, Growth of Internet, Owners of the Internet, Anatomy of Internet, APRANET and Internet history of the World Web, Basic Internet Terminology, Net etiquette. Working of Internet: Packet switching technology, Internet Protocols: TCP/IP, Router. Internet Addressing Scheme: Machine Addressing (IP address), E-mail Address, and Resource Addresses.	6
UNIT 2	**Internet Applications:** E-mail, file transfer (FTP), telnet, usenet, Internet chat, Web.	4
UNIT 3	**Evolution of Web:** Web 1.0: Hypertext & linking documents, HTTP, Client-Server, peer-to-peer; Web Browser (Lynx, Mosiac, Netscape, Internet Explorer, Firefox, and Safari, the mobile web); Impact: Opportunities & Challenges. **Web 2.0:** From 1.0 to 2.0; Framework; Technologies: Client-side & server-side; Web 2.0 development technologies; Examples: social networking sites, blogs, wikis, video sharing sites, hosted services (web services, location-based services), web applications, mashups & folksonomies; Practical Usage. **Web 3.0:** From 2.0 to 3.0; Semantic Web: What, How, Why; From Web 3.0 to Web 4.0	10
UNIT 4	**Web Development:** Phases; Web Page, Website, and Web Application: Example, Technology Framework for development. Client-side technology: HTML (HTML 5). Client-side scripting: JavaScript. **Server-side technology:** PHP. Server-side scripting: Server-side JavaScript. Web application development frameworks: Django & Ruby on Rails. Web Database: Database Connectivity: JDBC, ODBC; Database-to-web connectivity.	14
UNIT 5	**Web Search and Mining:** Web IR System: Search Engines, Web Crawling, Search Engine Optimization, Web Analytics, Web Mining Taxonomy; Web Mining Framework; Social Web Mining. Text Mining: Opinion Mining, Recommendation System, Topic Detection and Tracking.	8
	TOTAL	42

REFERENCES		
S.No.	**Name of Books/Authors/Publishers**	**Year of Publication / Reprint**
1.	Raj Kamal, "Internet and Web Technologies", Tata McGraw Hill edition.	**2002**
2.	Mark Levene, "An Introduction to Search Engines and Web Navigation", Pearson Education.	**2010**
3.	Pierre Baldi, Paolo Frasconi, and Padhraic Smyth, "Modeling the Internet and the Web", John Wiley and Sons Ltd.	**2003**
4.	Wendy Willard, "HTML: A Beginner's Guide", Tata McGraw-Hill.	**2009**
5.	Larry Ulman, "PHP and MySQL for Dynamic Web Sites", Peachpit Press, 5th Edition.	**2017**