



**TEACHING PLAN: B.TECH. (CSE) SEMESTER – 6<sup>TH</sup>**

|   |                         |  |  |                                     |  |
|---|-------------------------|--|--|-------------------------------------|--|
| <b>SCHOOL OF ENGINEERING &amp; TECHNOLOGY</b> |                         | <b>ACADEMIC SESSION: 2022-23</b>   |  | <b>FOR STUDENTS' BATCH: 2020-24</b> |  |
| <b>1</b>                                      | <b>Course Code</b>      | PEC-CSE-309  |  |                                     |  |
| <b>2</b>                                      | <b>Course Title</b>     | Web & Internet Technology  |  |                                     |  |
| <b>3</b>                                      | <b>Credits</b>          | 04   |  |                                     |  |
| <b>4</b>                                      | <b>Learning Hours</b>   | <b>Contact Hours</b>   | 04   |                                     |  |
|   |                         | <b>Practical Teaching</b>  | 00   |                                     |  |
|   |                         | <b>Project, Tutorial &amp; Assessment</b>  | 00   |                                     |  |
|   |                         | <b>Total Hours</b>   | 04   |                                     |  |
| <b>5</b>                                      | <b>Course Objective</b> | <ol style="list-style-type: none"> <li>To introduce students with Internet services.</li> <li>To interact with the Internet protocols.</li> <li>To bring in knowledge about Email &amp; Browsers.</li> <li>To introduce the Web designing languages.</li> </ol>  |  |                                     |  |
| <b>6</b>                                      | <b>Course Outcomes</b>  | <ol style="list-style-type: none"> <li>Students will be familiar with Internet.</li> <li>Students will be familiar with different protocols of internet.</li> <li>Students will learn different services of internet.</li> <li>Students will learn HTML, CSS, JAVA Scripts for web designing.</li> </ol> |  |                                     |  |
| <b>7</b>                                      | <b>Outline Syllabus</b> |  |  |                                     |  |
| <b>7.01</b>                                   | <b>Paper Code</b>       | <b>Unit</b>  | <b>Introduction</b>  | <b>Reference Number</b>             | <b>Teaching Method</b>                           |
|   | <b>PCC-CSE-301</b>      | <b>(I)</b>   | <b>INTRODUCTION TO INTERNET:</b> Internet, Growth of Internet, Owners of the Internet, Anatomy of Internet, ARPANET and Internet history of the World Wide Web, basic Internet Terminology, Net etiquette. Internet Applications – Commerce on the Internet, Governance on the Internet, Impact of Internet on Society – Crime on/through the Internet.  |                                     | Whiteboard, PPT slides, Tutorials, Demonstration |
|   |                         | <b>(II)</b>  | <b>TCP/IP – INTERNET TECHNOLOGY AND PROTOCOL:</b> Packet switching technology, Internet Protocols: TCP/IP, Router, Internet Addressing Scheme: Machine Addressing (IP address), E-mail Addresses, Resources Addresses.   |                                     | Whiteboard, PPT slides, Tutorials, Demonstration |
|   |                         | <b>(III)</b>   | <b>INTERNET CONNECTIVITY:</b> Connectivity types: level one, level two and level three connectivity, Setting up a connection: hardware requirement, selection of a modem, software requirement, modem configuration, Internet accounts by ISP: Telephone line options, Protocol options, Service options, Telephone line options – Dialup connections through the telephone system, dedicated connections through the telephone system, ISDN, Protocol options – Shell, SLIP, PPP, Service options – E-mail, WWW, News Firewall etc. |                                     | Whiteboard, PPT slides, Tutorials, Demonstration |
|   |                         | <b>(IV)</b>  | <b>INTERNET NETWORK AND SERVICES:</b> Network definition, Common terminologies: LAN, WAN, Node, Host, Workstation, bandwidth, Interoperability, Network administrator, network security, Network Components: Servers, Clients, Communication Media, Types of network: Peer to  |                                     | Whiteboard, PPT slides, Tutorials, Demonstration |

|             |   |   |  |  |
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|             |   | Peer, Clients Server, addressing in Internet: DNS, Domain Name and their organization, understanding the Internet Protocol Address. Network topologies: Bust, star and ring, Ethernet, FDDI, ATM and Intranet.  |  |  |
|             |   | <b>(V)</b><br><b>ELECTRONIC MAIL, WEB PUBLISHING AND BROWSING:</b> Email Networks and Servers, Email protocols –SMTP, POP3, IMAp4, MIME6, Structure of an Email – Email Address, Email Header, Body and Attachments, Email Clients: Netscape mail Clients, Outlook Express, Web based E-mail. Email encryption- Address Book, Signature File. Search and Meta Search Engines, WWW, Browser, HTTP, Publishing Tools.   |  | Whiteboard, PPT slides, Tutorials, Demonstration |
|             |   | <b>(VI)</b><br><b>HTML PROGRAMMING BASICS:</b> HTML page structure, HTML Text, HTML links, HTML document tables, HTML Frames, HTML Images, multimedia, Interactivity Tools ASP, VB Script, JAVA Script, JAVA and Front Page, Flash.   |  | Whiteboard, PPT slides, Tutorials, Demonstration |
| <b>8</b>    | <b>Course Evaluation</b>                    |   |  |  |
| <b>8.10</b> | <b>CA: 20%</b>                              |   |  |  |
| <b>8.11</b> | <b>Attendance</b>                           | 5%  |  |  |
| <b>8.12</b> | <b>Assignment</b>                           | 10%   |  |  |
| <b>8.13</b> | <b>Quizzes</b>                              | -   |  |  |
| <b>8.14</b> | <b>Projects</b>                             | -   |  |  |
| <b>8.15</b> | <b>Presentation</b>                         | 5% (2 Presentations)  |  |  |
| <b>8.16</b> | <b>Any Other</b>                            | -   |  |  |
| <b>8.2</b>  | <b>Mid-Term Exam. (Internal Assessment)</b> | 20%   |  |  |
| <b>8.3</b>  | <b>End-Term Examination</b>                 | 60%   |  |  |
| <b>9</b>    | <b>Textbooks &amp; References</b>           |   |  |  |
| <b>9.1</b>  | <b>Textbooks</b>                            | <ol style="list-style-type: none"> <li>1. Computer Networks “Mayank Dave” Cengage Learning</li> <li>2. Computer Networking – A Top-down Approach Featuring the Internet, “James F. Kurose, Keith W. Ross”, 3<sup>rd</sup> Edition, Pearson Education</li> <li>3. Computer Networking “Ed Tittel”, Adapted by “B Muthukumar”, Schaum’s Outlines (The McGraw-Hill Companies)</li> <li>4. The Internet Book “Doulas E. Comer”, 4<sup>th</sup> Edition, Pearson Education</li> <li>5. High-Speed Networks &amp; Internets – Performance &amp; Quality of Services “William Stallings”, 2<sup>nd</sup> Edition, Pearson</li> <li>6. ISDN &amp; Broadband ISDN with Frame Relay &amp; ATM, “William Stallings”, 4<sup>th</sup> Edition, Pearson</li> <li>7. ATM Networks – Concepts Protocols Applications, “Rainer Handel, Manfres N Huber &amp; Stefan Schroder”, Low Price Edition, Pearson Education</li> </ol> |  |  |
| <b>9.2</b>  | <b>Reference Books</b>                      | <ol style="list-style-type: none"> <li>1. Upgrading &amp; Troubleshooting Networks (The Complete Reference), “Craig Zacker”, TATA McGraw-Hill Edition</li> <li>2. Networking (The Complete Reference), “Craig Zacker”, TATA McGraw-Hill Edition</li> <li>3. Internet (The Complete Reference), “Margaret Levine Young” 2<sup>nd</sup> Edition, TATA McGraw-Hill Edition</li> </ol>  |  |  |
| <b>9.3</b>  |   | <ol style="list-style-type: none"> <li>1. <a href="https://www.youtube.com/watch?v=O--rkQNKqls&amp;list=PLbRMhDVUMngf-">https://www.youtube.com/watch?v=O--rkQNKqls&amp;list=PLbRMhDVUMngf-</a></li> </ol>  |  |  |

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| <b>Video References</b> | <p><a href="https://www.youtube.com/watch?v=peFloB7kyiA40EptH1up&amp;index=2&amp;ab_channel=IITKharagpurJuly2018">peFloB7kyiA40EptH1up&amp;index=2&amp;ab_channel=IITKharagpurJuly2018</a></p> <p>2. <a href="https://www.youtube.com/watch?v=h_RftxdJTzs&amp;ab_channel=NPTEL-NOCIITM">https://www.youtube.com/watch?v=h_RftxdJTzs&amp;ab_channel=NPTEL-NOCIITM</a></p> <p>3. <a href="https://www.youtube.com/watch?v=dlkWnDnO8ek&amp;ab_channel=NPTEL-NOCIITM">https://www.youtube.com/watch?v=dlkWnDnO8ek&amp;ab_channel=NPTEL-NOCIITM</a></p> <p>4. <a href="https://www.youtube.com/watch?v=pQN-pnXPavG&amp;ab_channel=freeCodeCamp.org">https://www.youtube.com/watch?v=pQN-pnXPavG&amp;ab_channel=freeCodeCamp.org</a></p> <p>5. <a href="https://www.youtube.com/watch?v=yfoY53QXEnI&amp;ab_channel=TraversyMedia">https://www.youtube.com/watch?v=yfoY53QXEnI&amp;ab_channel=TraversyMedia</a></p> <p>6. <a href="https://www.youtube.com/watch?v=6jKGStlvjY&amp;ab_channel=TutorialsPoint">https://www.youtube.com/watch?v=6jKGStlvjY&amp;ab_channel=TutorialsPoint</a></p> <p>7. <a href="https://www.youtube.com/watch?v=9fC9lIfGHYY&amp;ab_channel=TutorialsPoint">https://www.youtube.com/watch?v=9fC9lIfGHYY&amp;ab_channel=TutorialsPoint</a></p> |
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### Mapping of Outcomes Vs. Topics

| Course Outcomes | Program Outcome |   |   |   |   |   |   |   |   |    |    |    | PSO |   |   |   |
|-----------------|-----------------|---|---|---|---|---|---|---|---|----|----|----|-----|---|---|---|
|                 | 1               | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1   | 2 | 3 | 4 |
| <b>CO1</b>      | 3               | 3 | 2 | 3 | 1 | 2 | 1 |   | 2 | 2  | 1  | 2  | 3   | 3 | 2 | 2 |
| <b>CO2</b>      | 3               | 3 | 3 | 3 | 2 | 2 | 1 |   | 1 | 1  | 1  | 1  | 3   | 3 | 2 | 2 |
| <b>CO3</b>      | 3               | 3 | 3 | 3 | 3 | 2 | 2 |   | 2 | 2  | 2  | 2  | 3   | 3 | 2 | 2 |
| <b>CO4</b>      | 3               | 3 | 3 | 3 | 3 | 2 | 2 |   | 2 | 1  | 1  | 1  | 3   | 2 | 2 | 1 |
| <b>CO5</b>      | 3               | 2 | 1 | 1 | 3 | 3 | 2 |   | 1 | 1  | 1  | 2  | 3   | 2 | 3 | 2 |