

Title of the course: Internet Engineering

Lecturer: Dr.Y. Kord Tamandani

yahya.kord@gmail.com

yahya.kord@cs.usb.ac.ir

References:

1. Networking the Complete Reference, 3rd Edition, by Bobbi Sandberg
ISBN: 9780071827645
2. HTML, CSS, and JavaScript All in One, by Julie C. Meloni, Jennifer Kyrnin
ISBN-13: 978-0672338083

Helpful Links: <https://www.w3schools.com/>

Assessments:

Mid-term Exam (programming is included)	6 points
Final Exam	9 points
Class Activity	3 points
Attendance	2 points

Subjects to be discussed:

TOPICS	SESSIONS	OBJECTIVES
INTRODUCTION TO COMPUTER NETWORKS, NETWORK TOPOLOGIES, HISTORY OF INTERNET	1st and 2nd sessions	<ul style="list-style-type: none">• What is a computer network and its benefits• Different computer network topologies and their advantages and disadvantages
OSI AND TCP/IP REFERENCE MODELS	3rd and 4th sessions	<ul style="list-style-type: none">• Different OSI layers and their applications• TCP/IP layers and their applications

<p>PHYSICAL AND LOGICAL ADDRESSING</p>	<p>5th and 6th Sessions</p>	<ul style="list-style-type: none"> • What is a MAC address and how it is used • What is an IP address and subnet mask, Different classes of IPs • Sub-netting and its applications
<p>TCP AND UDP PROTOCOLS AND SOME OTHER IMPORTANT PROTOCOLS</p>	<p>7th and 8th session</p>	<ul style="list-style-type: none"> • TCP protocol and its applications • UDP protocol and its application • Learning Important protocols such as SMTD, FTP etc.
<p>HTML, CSS</p>	<p>9th and 10th sessions</p>	<ul style="list-style-type: none"> • HTTP protocol and its methods • Design of HTML pages, forms, tables, menus etc. using HTML tags • Formatting HTML pages using CSS
<p>PROGRAMMING USING PHP</p>	<p>11th, 12th and 13th sessions</p>	<ul style="list-style-type: none"> • What is PHP and its applications • Different type of variables and built-in functions in PHP • Writing applications for handling user data using PHP and MySQL
<p>PROGRAMMING USING JAVA SCRIPT</p>	<p>14th, 15th and 16th sessions</p>	<ul style="list-style-type: none"> • Java Script and its applications • Different type of variables and built-in functions in Java Script • Writing applications using Java Script programming
<p>NETWORK SECURITY</p>	<p>17th and 18th sessions</p>	<ul style="list-style-type: none"> • HTTPS protocol • Network Firewall • Best security approaches and practices • Different types of attack such as DoS and DDoS