

## Faculty of Computers and Information Technology

### Internet Technology

**Information :**

**Course Code :** DM324

**Level :** Undergraduate

**Course Hours :** 3.00- Hours

**Department :** Faculty of Computers and Information Technology

**Instructor Information :**

Title	Name	Office hours
Professor	Mohammed Abdelazize Abdelazize Abdelrazek	4
Teaching Assistant	Yousef Samir Saad Zaghloul Abdulazeem Allam	11
Teaching Assistant	Fatma Gaafar Ahmed Fouad Mohamed Elsayed	

**Area Of Study :**

Combine and evaluate different types of Internet protocols to show how they make the Internet works.  
Analyze the requirements of Internet technologies such as firewalls and proxy servers, and then design a solution for these requirements.  
Compare and evaluate methodologies from range of Internet-connected devices and security.  
Use effectively communication skills.

**Description :**

This course introduces intermediate to advanced web page design techniques. The students are introduced to planning and designing effective web pages; implementing web pages by writing HTML and CSS code; enhancing web pages with the use of page layout techniques, text formatting, graphics, images, and multimedia; and creating high-impact and highly functional web pages using different development environments as HTML/CSS programming language, java Script frameworks and libraries, XML markup language, Ajax and Web sockets or JSON.

**Course outcomes :**

**a. Knowledge and Understanding: :**

1 -	Identify the criteria for current use of HTTP transactions in Web pages.
2 -	Explain functional requirements and constrains for network and connection technologies including firewalls and proxy servers
3 -	Describe fundamental concepts of Internet administration and the Internet technology trends.

**b. Intellectual Skills: :**

1 -	Analyze the performance of multimedia over Web and internet server security.
2 -	Select appropriate methodologies and techniques to make the Internet works.
3 -	Evaluate and verify different types of network and connection technologies.

**c. Professional and Practical Skills: :**

1 -	Analyze, design, implement, test static, active and dynamic Web documents.
2 -	Acquire and manage files with FTP.
3 -	Apply IP addressing, routing and subnet masks in internet technologies.

**d.General and Transferable Skills :**

1 -	Work in a team effectively and efficiently considering time.
2 -	Apply communication skills and techniques in presentations and report writing for range of audiences using various methods and tools.

**ABET Course outcomes :**

1 -	Demonstrate adequate understanding and evaluating of different types of internet protocols to show how they make the internet works
2 -	Analyze the requirements of internet technologies such as firewalls and proxy servers, and then design a solution for these requirements
3 -	Compare and evaluate methodologies from range of internet-connected devices and security
4 -	Use effectively communication skills

**Course Topic And Contents :**

Topic	No. of hours	Lecture	Tutorial / Practical
Introduction to Internet: The Internet and the Changing IT World, The Internet Defined, History of the Internet	4	2	2
Introduction to Internet: Administration of the Internet, IT Foundations, The Internet and Technology Trends	4	2	2
World Wide Web: Development of the Web, URLs, HTTP, and HTML	4	2	2
World Wide Web: Web 2.0, Mobile Web, Social Web, Virtualization, Grids, Clouds, Using the Web	4	2	2
Network and Connection Technologies: Network Basics, OSI Network Reference Model, Network Hardware, Wired Network Topologies, Wireless Networks	4	2	2
Network and Connection Technologies: Protocols, Ethernet, Virtual Private Networks, Proxy Servers, Connecting to the Internet, Mobile and Cellular Data Services	4	2	2
Internet Technologies: Packet Switching, IP Packet Headers, ARP, TCP, UDP, and ICMP	4	2	2
Internet Technologies: IP Addressing, Routing and Subnet Masks, Firewalls and Proxy Servers, Domain Name System	4	2	2
Mid Term Exam	2		
Making the Internet Work: Email (SMTP, POP, IMAP), Real-Time Internet Connections, File Management with FTP	4	2	2
Making the Internet Work: Protocols for Information Services (Gopher, HTTP, HTTPS, SNMP and LDAP protocols)	4	2	2
Internet-Connected Devices and Security: Security Issues, Internet Server Security, Threats and Issues	4	2	2
Multimedia: Streaming Stored Audio/Video, Streaming Live Audio/Video, Real-Time Interactive Audio/Video, Voice Over IP	4	2	2
Final Exam	2		

**Teaching And Learning Methodologies :**

Interactive Lectures including Discussions
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Tutorials

Practical Lab Sessions

Self-Study (Project / Reading Materials / Online Material / Presentations)

Case Studies

Problem Solving

**Course Assessment :**

Methods of assessment	Relative weight %	Week No	Assess What
Assignments	5.00	4	
Final Exam	40.00	14	
Midterm Exam (s)	30.00	9	
Practical Exam	10.00		
Presentations	5.00	12	
Quizzes	5.00	5	
Team Work Projects	5.00	12	

**Course Notes :**

An Electronic form of the Course Notes and all the slides of the Lectures is available on the Students Learning Management System (Moodle)

**Recommended books :**

B. Forouzan, TCP/IP Protocol Suite, McGraw-Hill, last edition. ISBN: 978-0-07-337604-2

**Web Sites :**

Internet technology resources and information . ComputerWeekly  
www.computerweekly.com/resources/Internet-technolog