

4th Year Odd Semester

ETE 400: Project and Thesis

Credits: 1.50 Contact Hours: 3 Hours/Week

A detailed theoretical study of some problems in Telecommunications. This may be of investigative research nature or it may be laboratory research oriented. The report may be purely economic, technical or both and may include the comparative study of different choices for the solution of the problems.

ETE 401: Computer Network and Data Communication

Credits: 3.00 Contact Hours: 3 Hours/Week

Protocol Hierarchies, Data link Control; HLDC, DLL in Internet; DLL of ATM; LAN Protocols; Standards IEEE 802, Switches and Hubs, Bridges, FDDI, Fast Ethernet; Routing algorithm; Congestion Control, Internetworking, WAN, Fragmentation, Firewalls, IPV4, IPV6, ARP, RARP, Mobile IP, Network layer of ATM, Transport Protocols, Transmission Control Protocol, Connection Management, Transmission policy, Congestion Control, Timer mechanism, side-tone mechanism, local and central batteries and advanced features.

Switching System: Introduction to analog system, digital switching systems – space division switching, blocking probability and multistage switching, time division switching and two dimensional switching.

Traffic Analysis: Traffic characterization, grades of service, network blocking probabilities, delay system and queuing.

Modern Telephone Services and Network: Internet telephony, facsimile, integrated services digital network, asynchronous transfer mode and intelligent networks. Introduction to cellular telephony and satellite communication.

ETE 414: Sessional Based on ETE 413

Credit: 0.75 Contact Hours: 1.50 Hours/Week

Laboratory based on Telecommunication Engineering (ETE 413)

Management, UDP, AAL of ATM, Network Security; Cryptography, DES, IDEA, Public Key Algorithm, Authentication; Digital Signatures, Gigabit Ethernet, Domain Name system, Name Servers; Email and its privacy; SNMP, HTTP, World Wide Web, DSK and Radio link.

ETE 402: Sessional Based on ETE 401

Credit: 0.75 Contact Hours: 1.50 Hours/Week

Laboratory based on Computer Network and Data Communication (ETE 401)

Hum 411: Project Planning Management and Engineering

Credits: 2.00 Contact Hours: 2 Hours/Week

Definitions of project and project management in the engineering point of view.

Project Initiation: Project selection, project manager, project organization and project planning. Project feasibility study.

Project Implementation: Project management, budgeting and cost estimation, project control and human aspects of project management. Network techniques of project management, PERT, CPM and Gantt Charts.

ETE 411: Wireless and Mobile Communication

Credits: 3.00 Contact Hours: 3 Hours/Week

Introduction to wireless communication system, The cellular concept-system design fundamentals, Mobile radio propagation, Modulation techniques for mobile radio, Multiple access techniques for wireless communication, wireless networking, Wireless systems and standards, AMPS, GSM, Trunking theory, Wireless Application Protocol (WAP), Wireless Markup Language (WML), Bluetooth-compatible cellular telephone system.

ETE 412: Sessional Based on ETE 411

Credit: 0.75 Contact Hours: 1.50 Hours/Week

Laboratory based on Wireless and Mobile Communication (ETE 411)

ETE 413: Telecommunication Engineering

Credits: 3.00 Contact Hours: 3 Hours/Week

Introduction: Principle, evolution, networks, exchange and international regulatory bodies.

Telephone Apparatus: Microphone, speakers, ringer, pulse tone dialing mechanism, side-tone mechanism, local and central batteries and advanced features.

Switching System: Introduction to analog system, digital switching systems – space division switching, blocking probability and multistage switching, time division switching and two dimensional switching.

Traffic Analysis: Traffic characterization, grades of service, network blocking probabilities, delay system and queuing.

Modern Telephone Services and Network: Internet telephony, facsimile, integrated services digital network, asynchronous transfer mode and intelligent networks. Introduction to cellular telephony and satellite communication.

ETE 414: Sessional Based on ETE 413

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