

ACADEMIC PLAN FOR EEE V-SEMESTER, 2011-12

SUBJECT : DIGITAL ELECTRONICS

Subject Code: ETEE – 301

Total Teaching Weeks in semester : 14 weeks

L T C
3 1 4

Total Lecture Classes Available : 40

Total Tutorial Classes Available :

S.No.	TOPICS TO BE COVERED	Total No. of Lecture	Tutorial
1	Analog & Digital signals and introduction number system	01	
2	Introduction to logic gates i.e. NOT, NAND, NOR & XOR	01	
3	Boolean Algebra	02	01
4	Standard representation of Logical functions, K-map representation and simplification of logical functions Don't care conditions	02	01
5	X-OR & X-NOR simplification of K-maps	01	
6	Combinational Circuits:- Multiplexers, demultiplexers, Decoders & Encoders	02	
7	Adder (Ripple adder, full adder, half adder, BCD adder) & Subtractor (BCD subtractor)	03	
8	Comparators, Code Converters	03	
9	Decoder/Drivers for display devices	01	
	FIRST SESSIONAL		
10	Logic Implementations using ROM, PAL, & PLA	02	
11	Flip Flops: S-R, J-K, D & T flip-flops, excitation table of a flip-flop, race around	04	
12	Sequential Circuits: - Shift Registers (SIPO, PIPO, SISO, PISO), Universal Shift Register	02	
13	Synchronous counters Asynchronous counter	02	01
14	Analysis and design circuit state table, state diagram, state reduction and state assignment	02	02
15	Mealy & Moore Machines	01	
	SECOND SESSIONAL		
16	Semiconductor Memories: Memory organization & operation, classification and characteristics of memories like RAM, ROM	03	
17	Logic families: Characteristics of logic families TTL & CMOS logic families	03	

Text Books: R.P. Jain – Digital electronics, PHI
Morries Manno – Digital Electronics, PHI

ACADEMIC PLAN FOR EEE V-SEMESTER, 2011-12

SUBJECT : ORIENTED PROGRAMMING USING C++

Subject Code: ETEE – 303

Total Teaching Weeks in semester : 13 weeks

L T C

Total Lecture Classes Available : 39

3 1 4
Total Tutorial Classes Available : 13

S.No.	TOPICS TO BE COVERED	Total No. of Lecture	Tutorial
	FIRST TERM		
	UNIT – 1		
1	Introduction to OOPS approach, Characteristics	2	
2	Review of C & diff. between C & C++	1	
	UNIT – 2		
3	Classes and Objects	2	
4	Constructor and Destructors	2	
5	Copy Constructor	2	
6	Abstract datatypes, default parameters values	1	
7	Static, constant class data	1	
8	Storage Classes	1	
9	Garbage Collection	1	
10	Dynamic memory allocation (new, delete)	2	
11	This pointer	1	
	SECOND TERM		
	UNIT – 3		
12	Inheritance	1	
13	Types of inheritance, class hierarchy	1	
14	Derivation- private, public and protected	1	
15	Aggregation, Composition	1	
16	Polymorphism, types of polymorphism	2	
17	Method and parametric polymorphism	1	
18	Operator overloading	3	
19	Overloading inheritance methods (virtual function)	2	
20	Generic function – template function	2	
	UNIT – 4		
21	Exception Handling	2	
	THIRD TERM		
22	File Handling	3	
23	Standard template library, overviews, Containers, Algorithms, Iterators, Other STL elements	4	

ACADEMIC PLAN FOR EEE V-SEMESTER, 2011-12

SUB : COMMUNICATION SYSTEMS & CIRCUITS

Subject Code: ETEE – 305

Total Teaching Weeks in semester : 14 weeks

L T C
3 1 4

Total Lecture Classes Available : 39

Total Tutorial Classes Available : 13

S.No.	TOPICS TO BE COVERED	Total No. of Lecture	Tutorial
	FIRST TERM		
	UNIT – 1		
1	Introduction to Signals & Fourier Transform	1	
	ANALOG MODULATION		
2	Generation & Demodulation of AM Waves	2	
3	Generation & Coherent Detection of DSBSC Waves	1	
4	Quadrature – Carrier Multiplexing	1	
5	Generation & Demodulation of SSB Waves	2	
	ANALOG MODULATION		
6	Frequency & Phase Modulation, Narrow & Wide-band FM Waves, BW of FM Waves	2	
7	Generation & Demodulation of FM Waves, S/N Ratio, Comparison of AM, FM & PM	2	
	UNIT – II		
	PULSE ANALOG MODULATION		
8	Sampling theorem, Sampling of Low Pass & Band Pass Signals, Aliasing, Aperture effect	1	
9	PAM, PWM & PPM generation & demodulation	2	
10	TDM, Crosstalk, spectral analysis of PAM, PWM & PPM Waves, S/N Ratio for different pulse modulation	2	
	SECOND TERM		
12	Probability, Random Variable	1	
13	Probability density, mean, moments, transformation of random variables, stationary process, mean auto correlation & covariance function, ergodicity & Power Spectral Density	2	
14	Response of linear system to random signals, Gaussian distribution, central limit theorem	1	
	PULSE DIGITAL MODULATION:		
15	Pulse Code Modulation, signal to noise quantization ratio, companding	1	
16	Probability of error for PCM in AWGN Channel	1	
17	DPCM, DM, ADM modulators & Demodulators	2	
18	Prediction filter, line coding, Inter Symbol Interference	1	
	CARRIER MODULATION & DEMODULATION:		
19	Amplitude, Shift Keying, FSK, CPFSK, MSK	2	
20	PSK, DPSK, QPSK, QAM	2	
21	Probability of error calculation, Matched Filter	3	
	THIRD TERM		
	Introduction to Information Theory		
22	Measurement of information theory, mutual information Shannon's Theorem	3	
23	Sourz Coding, Channel coding, Channel Capacity Theorem, Huffman Code, Lempel z Code	4	

ACADEMIC PLAN FOR EEE V-SEMESTER, 2011-12

SUB : ELECTRICAL MEASUREMENT & INSTRUMENTATION **Subject Code: ETEE – 307**

Total Teaching Weeks in semester : 14 weeks

L T C

3 1 4

Total Lecture Classes Available : 42

Total Tutorial Classes Available : 14

S.No.	TOPICS TO BE COVERED	Total No. of Lecture	Tutorial
	FIRST TERM		
1	Classification of measuring Instruments and concept of different torques	1	1
2	Moving Iron Instruments, expression for torques errors and compensation.	1	
3	MOVING COIL (PMMC) INSTRUMENTS, EXPRESSION FOR TORQUE ERRORS AND COMPENSATION (N)	1	
4	Extension of range in Ammeter and Voltmeters (N)	1	1
5	Electrostatic Voltmeter principle	1	
6	Construction and working of different type of Electrostatic Voltmeter	1	
7	Extension of Range of Electrostatic Voltmeters (N)	1	1
8	Instrument Transformer construction, working and applications.	1	
9	Ratio of Phase angle errors and design consideration	1	
10	Testing of CT by Silsbee's method & variable mutual inductance method	1	1
11	Construction and working of dynamometer Wattmeter (Single Phase)	1	
12	Design consideration for LPF & UPF Wattmeter	1	
13	Double element and three elements Wattmeter	1	1
14	Expression for torques & extension of range using Instrument Transformer	1	
15	Construction & working of Induction Type energy meter	1	
16	Torque, Errors & Compensation and Testing of single Phase Induction Type Energy Meter	1	1
17	Tri Vector Meter and Maximum Demand Meter	1	
	SECOND TERM	1	
18	Measurement of Power Factor Using Dynamometer and MI Instruments in Single Phase and Three Phase AC Circuits	2	1
19	Frequency measurement; resonance type & Weston type synchroscope	1	
20	Principle and operation of DC Crompton Potentiometer	1	1
21	Standardization and Measurement of Resistance, Current & Voltage	1	
22	Principle & Operation of AC Potentiometer	1	
23	Standardization & Applications.	1	1
24	Methods of measuring resistance, sensitivity of wheat stone bridge. (N)	1	
25	Measurement of Low Resistance using Carey-Foster's Bridge, Kelvin's double bridge (N)	1	
26	Measurement of high resistance using (N) (i) Loss of Charge Method (ii) Price's Method (iii) Megger	2	1
27	Concept of AC Bridges; Maxwell's Bridge (N)	1	
28	Hay's Bridge and its modifications (N)	2	
29	Heaviside and its modifications (N)	1	1
30	Measurement of capacitance using (N), Desauty bridge, Wien's bridge and Schering bridge	2	
	THIRD TERM		
31	Principle of Strain Gauge & Types, Circuitry and temperature compensation, Load Cell (N)	2	1
32	Measurement of pressure using Primary & Secondary transducers (Vacuum Gauges)	1	
33	Measurement of torque and angular velocity using tachometers	1	1
34	LVDT type Accelerometer and measurement of Torque & Angular Velocity (Digital Method)	1	
35	Measurement of Flow using, electromagnetic Flow meter, hotwire Anemometer & Ultrasonic method	2	
36	Measurement of Liquid Level using capacitance transducer	1	

ACADEMIC PLAN FOR EEE V-SEMESTER, 2011-12

SUB : Database Management Systems

Subject Code: ETCS – 309

Total Teaching Weeks in semester : 14 weeks

L T C
3 1 4

Total Lecture Classes Available : 39

Total Tutorial Classes Available : 13

S.No.	TOPICS TO BE COVERED	Total No. of Lecture	Tutorial
	FIRST TERM		
	UNIT – 1		
1	Basic concepts and Conceptual Database, Design: Database administrator & Database Users, Characteristics of the Database, Database Systems, Concepts and Architecture	2	
2	Data Models, Schemes & Instances, DBMS Architecture & Data Independence, Database Languages & Interfaces	2	
3	Overview of hierarchical, Network & Relational Database Management systems	1	
4	Data Modeling Using the Entity Relationship Model Entities, Attributes and Relationships, Cardinality of Relationships, Strong and Weak Entity Sets.	3	
5	Generalization, Specialization, and Aggregation	2	
6	Translating Your ER model into Relational model	2	
	UNIT – 2		
7	Relational model, Languages & Systems: Relational data model & Relational Algebra, Relational model concepts, Relational model Constraints, Relational Algebra	2	
8	SQL- A Relational database language, Data definition in SQL, View and queries in SQL, specifying constraints	2	
	SECOND TERM		
9	Indexes in SQL, Practicing SQL commands using ORACLE	1	
	UNIT – 3		
10	Relational Database Design and Oracle Architecture: Functional Dependencies & Normalization for relational Database, Functional Dependencies, Normal Forms Based on primary keys, (1 NF, 2 NF, 3 NF & BCNF), Lossless join and dependency preserving Decomposition	4	
11	Oracle 8 Architecture, Database Storage, Oracle Software Structures, shared database access mechanism, Database protection	2	
	UNIT – 4		
12	Transaction Management: transaction concept and state, Implementation of atomicity and durability, Concurrent executions, Serializability, Recoverability, implementation of isolation.	2	
13	Concurrency control techniques, Lock based protocols, Time-stamp based protocols, Deadlock handling, Recovery system, Failure classification, storage structure	3	
14	Recovery and Atomicity, Log-based recovery, Shadow paging; Recovery with concurrent Transaction	4	
	THIRD TERM		
15	Buffer management, Indexing, hashing	1	
16	Query processing: Query processing, overview, Measures of Query cost, Selection Operation, Sorting, Join operation, Other operations, Evaluation of Expressions	3	
17	Concepts of object oriented database management systems, Distributed data base management systems.	3	

Text Books: 1. Korth, Silberschatz, "Database System Concepts", 4th Ed., TMH, 2003.

2. Steve Bobrowski, "Oracle 8 Architecture", TMH, 2000.

References Books: 1. C.J. Date, "An Introduction to Database Systems", 7th Ed., Narosa Publishing, 2004.

2. Elmsari and Navathe, "Fundamentals of Database Systems", 4th Ed., A. Wesley, 2004.

3. J.D. Ullman, "Principles of Database Systems", 2nd Ed., Galgotia Publications, 1999.

ACADEMIC PLAN FOR EEE V-SEMESTER, 2011-12

SUB : Organizational Behaviour

Subject Code: ETMS – 311

Total Teaching Weeks in semester : 14 weeks

L T C
3 1 4

Total Lecture Classes Available : 38

Total Tutorial Classes Available : 15

S.No.	TOPICS TO BE COVERED	Total No. of Lecture	Tutorial
FIRST TERM			
	UNIT – I		
1	Meaning and Nature of Management	1	1
2	Management Systems & Processes	1	1
3	Managerial Skills	1	
4	Tasks & Responsibilities of a Professional Manager	1	
	UNIT – II		
5	Planning Types & Processes	1	
6	Management by Objectives	1	
7	Decision – Making Models/Organisational Context of Decisions	2	
8	Problem – Solving Techniques	2	1
9	Controlling: Process & Techniques	2	1
	UNIT – III		
10	Organizational Structure & Design	2	1
11	Managerial Communication	2	1
SECOND TERM (Unit III Continued)			
12	Organizational Culture & Climate/Managerial Ethos	2	1
	UNIT – IV		
13	Individual Determination of OB	2	
14	Perception	1	1
15	Learning	1	
16	Personality	1	2
17	Motivation	2	
18	Job Anxiety & Stress	1	
19	Group Dynamics	2	
20	Analysing Interpersonal Relations	2	1
21	Leadership Theories, Styles & Influence	2	1
THIRD TERM			
	(Unit IV continued)		
22	Management of Change	2	1
23	Management of Organizational Conflicts	2	1
23	Review & Revision	2	1