Course Name   : Diploma in Electronics Engineering
Course Code   : DElnE
Semester   : Second
Subject Title   : Mathematics-II
Subject Code   : 133MA21b

Teaching & Examination Schemes

Teaching Scheme			Paper Hours	Examination Scheme												Total Marks
L	**T**	**P**		**Theory**		**Test**	**Total**		**P**		**O**		**TW**			
				Max	**Min**		**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**		
3	2	-	3	80	32	20	100	40	-	-	-	-	25	10	125	

Rationale:

The study of mathematics is necessary to develop in the student, the skills essential for studying engineering subjects. The subject is an extension of basic mathematics of first semester which is a prerequisite for engineering studies.

Objective:

1. To lay a strong foundation in study of calculus which is the backbone for study in engineering.
2. To make students well versed in the prerequisites for further studies in mathematics and engineering.

Sr. No.	Contents	L	M
	Section- I		
1	**Function** 1.1 Definition of function. 1.2 Types of Functions: Polynomial, constant, explicit function, implicit function, periodic function, even and odd functions, inverse function, exponential function, logarithmic function, composite function. 1.3 Simple problems based on function.	05	10
2	**Limits** 2.1 Concept of limit of a function. 2.2 Theorems on limits (Without proof) 2.3 Limits of algebraic, trigonometric functions. 2.4 Standard limits	10	10

3	**Derivatives** 3.1 Derivatives of standard functions by first principle. 3.2 Rules of differentiation. 3.3 Derivative of composite function. (chain rule). 3.4 Derivative of implicit function, parametric function. 3.5 Logarithmic differentiation.	11	20
	Section- II		
4	**Second ordered derivative.**	02	04
5	**Applications of derivatives** 5.1 Equation of tangent and normal to the given curve. 5.2 Maxima and minima of function. 5.3 Rate problems.	10	16
6	**Partial derivatives** Partial derivatives of first order of functions of two variables.	02	06
7	**Vector Algebra** 7.1 Definition of vector, types of vector, vector addition, subtraction, multiplication by scalar. 7.2 Dot product, cross product and their properties.	08	14
	Total	**48**	**80**

REFERENCE BOOKS:

1) Basic Mathematics – II by B.M.Patel, J.M.Rawal and others - Nirali Prakashan**,** 6th edition -Jan 2010
2) Mathematics for Polytechnic - S. P. Deshpande- Pune Vidyarthi Griha Prakashan, Revised edition – Aug.2010

Course Name   : Diploma in Electronics Engineering.
Course Code   : DElnE
Semester   : Second
Subject Title : Physics
Subject Code   : 133PH22

Teaching & Examination Schemes

Teaching Scheme			Paper Hours	Examination Scheme											Total Marks
				Theory		Test	Total		P		O		TW		
L	T	P		Max	Min		Max	Min	Max	Min	Max	Min	Max	Min	
3	-	2	3	80	32	20	100	40	25	10	-	-	25	10	150

Rationale:–
        Physics is the foundation of any engineering discipline. Its principles, laws, rules, results and conclusions drawn from observations and predictions of various phenomena occurring in nature; play important role in solving field problems in engineering and technology.
        Though the span of physics is from quark to galaxy or particle physics to astrophysics; here certain topics are carefully selected for particular discipline. These topics will provide sufficient fundamental as well as background knowledge for the particular branch. Proper attention is given to the selection of sub-topics and their depth so that student will be able to cope up with innovations and new technologies in his field.
        Various phenomena, principles, laws, rules discovered and invented by physics are used for industrial, engineering and technological applications. The overall growth of various engineering disciplines, namely, mechanical, electrical, electronics, civil and environmental and so on depends upon the development of physics and its detail understanding.

Objectives:–
Students should be able to;
- Identify different systems of units and convert units from one system to other as well as conversant with practical units.
- Solve problem on kinetics and kinematics.
- Analyze rectilinear, circular and simple harmonic motion and use it for solving engineering problems.
- Identify the phenomena of interference, diffraction and polarization of light and its industrial applications.
- Identify, analyze, discriminate and interpret logical sequence of field problems with the study of physics.

Syllabus

Part I:- Theory

No	Contents	L	M
	SECTION – I		
1	**Measurements** 1.1 Units	6	10

	Necessity of measurement, concept of unit of a physical quantity, requirements of standard unit, Various system of units (CGS, MKS, SI, FPS), conversions, practical units, fundamental and derived physical quantities and their units, dimensions and dimensional analysis 1.2 Measuring instruments Vernier caliper, micrometer screw gauge, spherometer, thermometer, galvanometer, voltmeter, ammeter with least count and range, errors in them and correction to it.		
2	**Properties of matter** 2.1 Elasticity Deformation, restoring force, stress, strain, Hooke's law, Moduli of elasticity (Young, bulk and rigidity), relation between them, problems, stress-strain diagram for some materials (steel, aluminium, cast iron, concrete), breaking stress, factor of safety. 2.2 Viscosity Newton's law of viscosity, coefficient of viscosity, unit, streamline and turbulent flow, critical velocity, Reynold's number, problems, Stokes' law, determination of viscosity, factors affecting viscosity. 2.3 Surface tension Cohesive and adhesive forces, angle of contact, surface tension, capillary action, problems, factors affecting surface tension.	11	16
3	**Kinetics** 3.1 Newton's laws of motion Momentum, impulse, impulsive force, Newton's laws of motion with equations and their applications, problems, pulleys, motion of lift. 3.2 Work, power and energy Definitions of work, power and energy, equations for potential energy and kinetic energy, work energy principle, representation of work by graph, torque, work done by torque, problems	7	14
	SECTION – II		
4	**Kinematics** 4.1 Linear motion Equations of motion, distance traversed by object in nth second, velocity-time diagrams, uniform acceleration and retardation, equations for motion under gravity, problems 4.2 circular motion Angular displacement, angular velocity, angular acceleration, relation between angular velocity and linear velocity, equations of circular motion, angular distance traversed by object in nth second, S.H.M., uniform circular motion as S.H.M., equation for displacement, velocity and acceleration in SHM, problems,	12	20

	graphical representation of displacement, velocity and acceleration of particle performing SHM, starting from mean position and extreme position.			
5	**Optics** 5.1 Wave theory of light Huygen's theory, wavefronts, wavenormals, laws of reflection and refraction, total internal reflection, dispersion, angle of deviation, problems 5.2 Interference and diffraction Principle of superposition, constructive and destructive interference, conditions to obtain steady interference pattern, Young's double slit experiment, diffraction, single slit and many slits diffraction, grating, applications, problems. 5.3 Polarization Polarized and unpolarized light, qualitative treatment of polarizer and analyzer, polarimeter, applications	12	20
	Total	48	80

List of Laboratory experiments (10 experiments should be performed)
1. Use of vernier caliper and observations with traveling microscope
2. Use of micrometer screw gauge and observations with spectrometer
3. Determination of Young's modulus of material of wire using Searle's method.
4. To find "g" by Simple Pendulum.
5. Capillarity with different bores of capillary Tubes.
6. Determination of specific rotation/optical activity of given solution with polarimeter.
7. Determination of surface tension of liquid using capillary action
8. Determination of coefficient of viscosity using Stokes' method
9. Determination of Refractive Index of glass with Snell's law.
10. To determine wavelength of given Laser light using diffraction grating.
11. Calculation of grating element of given grating.
12. To determine the wavelength of given source of light using Newton's Rings Pattern.

Text Book: -
Engineering Physics by Gaur R. K. and Gupta S. L., Dhanpat Rai Publications, New Delhi, Eighth Edition, 2001., Physics Text Book of 11th & 12th std.(NCERT)

References:-
1. Fundamentals of Physics Extended, By Halliday D., Resnik R. and Walker, Wiley – India, New Delhi, Eighth Edition, 2008.
2. Physics for scientists and Engineers by Serway R. A. and Jewett, Jr. J. W., Thomson Learning (Indian reprint), New Delhi, Sixth Edition, 2007

Course Name : **Diploma in Electronicsa Engineering**
Course Code : **DElnE**
Semester : **Second**
Subject Title : **Communication Skills- II**
Subject Code : **133HM23z**

Teaching Scheme			Paper Hours	Examination Scheme												Total Marks
				Theory		Test	Total		P		O		TW			
L	T	P		Max	Min		Max	Min	Max	Min	Max	Min	Max	Min		
3	-	2*	3	80	32	20	100	40	-	-	-	-	50	20		150

Rationale:

The main objective of this subject is to enable students to develop effective communication skills. The basic concepts of oral, written and nonverbal communication will train them to become efficient and effective speakers. The study of Body Language will enable them to comprehend the effective use of gestures and posture. The students have been exposed to the Language Skills pertaining to English and principles of written communication will enhance their confidence and make them well versed in technical writing skills. In order to give students a proper exposure to good writing, a text book containing selected passages is introduced. Some inspirational stories and quotes will widen their horizons of knowledge and will also guide them to use these quotes in appropriate context.

Objectives:

The student will be able to:
1. Understand and use the basic concepts of communication and speak and write effectively.
2. Instill self-confidence and presence of mind through impromptu activities.
3. Drafting effective letters in the proper format.
4. Developing student's scientific curiosity through topics like scientific queries and the universe.
5. Make technical presentations to develop scientific bent of mind.

LEARNING STRUCTURE

Application:

Enable students to communicate effectively by using the concept of communication. Using appropriate oral, written and non-verbal skills.

Procedure:

1. Technique of providing responses to short and long questions
2. Principles governing the appropriate use of non verbal and oral skills
3. Technique of effective writing, speaking and reporting.

Principles:

1. Principles of comprehending the basic of communication
2. Principles of appropriation and contextualization of the use of body language

3. Principles of drafting coherent, logical and simple sentences

Concepts:
1. Concept of spoken, written and non-verbal types of communication
2. Concept of Body Language and spoken communication through presentations
3. Formats of letters, reports and technical descriptions.

Facts:
1. Theory of communication skills
2. Theory of Body Language
3. Formats of letters: official letters pertaining to day- to -day situations and campus related situations.

CONTENT: Theory

Section I

Name of Topic	L	M
Communication Skills-II 1.1.Definition, Communication Cycle/process 1.2.The elements of communication: sender, message, channel, receiver, feedback and context 1.3.Definition of communication process 1.4.Stages in the process: defining the context, knowing the audience, designing the messages, encoding, selecting proper channels, transmitting, receiving, decoding and feedback 1.5.Introduction to effective oral communication 1.6.Communication Barriers and how to overcome them 1.7. Developing effective messages: thinking about purpose, knowing the audience, structuring the messages, selecting proper channels, minimizing barriers and facilitating feedback	16	40
Section - II		
1 **Various Aspects of language and communication** 2.1.Idioms used in day-today conversation and inter-industry communication 2.2.Phrasal verbs in conversation 2.3.Learning sentence structures to enhance writing skills and formal written communication 2.4. Correction of errors to eliminate commonly made mistakes while speaking and writing.	 02 02 02	10

2	**Introduction to Communication by way of presentation- process , types , barriers , body language.**	06	10
	Effective Oral Communication		
	3.4.Conversation through role play to understand barriers		
	3.5. Explaining proverbs orally in one's own words	02	
	3.7.Power point presentation on technical topics		
		02	
		02	
3	**Effective Written Communication**		
	4.1.Drafting formal letters using appropriate style		
	4.2.Description of objects and process through power point presentation	06	10
	4.3.Summarizing Newspaper Reports		
	4.4. Preparing a list of famous and inspirational quotes.		
4	**Formal Oral Skills**	06	10
	5.1.Speech Practices		
	5.2. Conversation sessions		
	5.3.Pronunciation and Diction		
	5.4.Success stories and character building		
	Total no of tutorials ……………………………………..	32	
	Total	**16+32=48**	**80**

Assignments:

1. Communication Cycle (with the help of diagram) and process (2 hrs)
2. Conversation sessions-enacting from newspaper report   (4hrs)
3. Barriers that hinder a particular communication situation(1 hr)
4. Developing a story based on a proverb/ spin a yarn-(2hrs)
5. Speech sessions(3 hrs)
6. Identify the errors in sentences –(2hrs)
7. Description of objects and process (4 hrs)
8. Composition-2 hrs
9. Conversational Skills: Role Plays (6 hrs)
   Students are going to perform the role on any 6 situations, given by the teacher.
10. Dialogue writing for the given situations. (2 hrs-2 assignments
11. Newspaper Report Writing (4 hrs- 2 assignments)
 Write any two events from the newspaper as it is.
 Write any two events on the given situations by the teacher.

Skills to be developed:

Intellectual Skills:
1. Skills of Speaking in correct English
2. Compiling information and summarizing
3. Understanding the barriers in communication

Motor Skills:
1. Use of appropriate body language
2. Use of appropriate medium for communication
3. Assessing audience

Listening Skills:
1. Skills of listening and Comprehension

LANGUAGE LABORATORY :-

SR. NO	TOPIC	Practical Hours
1	**LISTENING SKILLS** • Introduction to listening skills, listening to recorded text, speeches of famous Indian orators and answering questions • Listening to conversations and panel discussions and encouraging students' comments. • Introduction to phonetics ; listening to the correct articulation of words • Recording and listening to one's own voice	6
2	**SPEAKING SKILLS** • Extempore • Role play and video recording • Mock interviews • JEST a minute • Technical quiz (to update knowledge in their respective discipline) • Correction of commonly mispronounced words	6
3	**READING SKILLS** • **Techniques of reading – silent reading and reading aloud** • **Summarization** **Reading Passages** • Pause • Diction • Enunciation • Voice modulation • Posture • Accent • pitch	4
	Total	**16**

Learning Resources:
Text Book: Communication Skills II-
Compiled by Mrs. Thomas & Mrs. Krishnamurthy, H&M Dept

Reference Books:
1. Developing Communication Skills, Mohan Krushan, Banerji Meera, Macmillan, India, First Edition,,2000
2. Communication Skills, Bhattacharya Joyeeta, Reliable Skills, Mumbai, First Edition, 2003
3. Eveyones Guide to Effective Writing, J Ayakaran, Apple Publishing, First edition,2001.

Course Name :   **Diploma in Electrical Engineering**
Course Code :   **DElnE**
Semester :   **Second**
Subject Title :   **Basics of Electrical Engineering**
Subject Code :   **133EX24**

Teaching and Examination Scheme:-

Teaching Scheme			Paper Hours	Examination Scheme												Total Marks
				Theory		Test	Total		P		OR		TW			
L	T	P		Max	Min		Max	Min	Max	Min	Max	Min	Max	Min		
3	1	3	3	80	32	20	100	40	50	20	-	-	25	10		175

Rationale:-
        The subject gives information of the basic circuit elements and network theorems using basic circuit elements. This helps the students in understanding the application and analysis of these elements.

Objectives:-
     Students should be able to:
1)   Apply Laws and Theorems to various series/parallel electric circuits.
2)   Analyze the circuit performance with current and voltage sources.
3)   Analyze circuit behavior of resistance, capacitance and inductance.
4)   Explain transient behavior of capacitor charging and discharging circuit,
     and RL transients.

Syllabus

Part I:- Theory

Sr. No	Contents	L	M
	Section I		

1	Electric Current and Ohm's Law
	    Review of numerical based on series and parallel combination of resistor, capacitor and inductor.
	    Review of numerical on current divison ,voltage division rule
		02	05

2	Network Theorems (for DC circuits)
	    Concept of Passive, Active, Unilateral & bilateral circuit. Kirchhoff's Laws, Maxwell's Loop Current (Mesh) Analysis, Nodal Analysis, Voltage source, Current source, source transformation.
	    THEOREMS: Superposition, Thevenin's, Norton, Maximum Power Transfer, & Millman Theorem.Star/ Delta & Delta/ Star Transformations.
		20	30

3	Work, Power and Energy Heating effect of Electric Current & Joule's Law of Electric Heating.	02	05

		Section II		

4	Electrostatics and Capacitance
	    ELECTROSTATICS: Static Electricity, Absolute & Relative Permittivity
	    of a Medium, Coulombs Laws of electrostatics, Electric Field, Electrostatic
	    induction,
	    Electric Flux, Electric flux Density, electric potential & energy, potential
	    Difference, Breakdown voltage & dielectric strength.
	    CAPACITANCE : Capacitor, Capacitance, parallel plate capacitor,
	    multiplate capacitor, Cylindrical Capacitor,Capacitors in series & parallel,
	    Energy stored in a capacitor, charging & discharging of a capacitor.
		10	17

5	Magnetism and Electromagnetism
	    MAGNETISM:Absolute and Relative Permeabilities of a Medium, Laws of
	    Magnetic Force, Magnetic field strength, Flux & Flux Density.
	    ELECTROMAGNETISM: Oersted experiment, magnetic field, magnetic flux,
	    magnetic flux density, Biot-Savart law, magnetic field near straight
	    conductor and at the centre of current carrying coil, Force on a current
	    carrying conductor lying in a magnetic field, Force between two parallel
	    conductors.
	    Magnetic circuit & related definitions, Composite Magnetic circuit,
	    Problems based on calculation of Ampere Turns. Electric & Magnetic
	    circuit comparison.
		10	17

6	Electromagnetic Induction
	    Production of induced emf and current, Faraday's Laws of
	    Electromagnetic Induction, Lenz'sLaw, statically & dynamically
	    Induced emf, self inductance, mutual inductance with example of transformer
	coupling coefficient,flemmings left hand and right hand rule
	    magnetic hysteresis, energy stored
	    in a magnetic field, Comparision of motor and generator
		04	06

		Total	**48**	**80**

Part II:- Practicals

List of Laboratory Experiments:-
1) Verification of Kirchhoff's Current & Voltage Laws.
2) Study of Superposition Theorem.
3) Study of Thevenin's Theorem.
4) Study of Norton's Theorem
5) Study of Maximum Power Transfer Theorem.
6) Transient Response of RC charging & discharging circuits.

One problem for each of the above experiments should be performed on MULTISIM (Electronic Work Bench) software.

Learning Resources:-

Text Book:-

A text book of Electrical Technology Volume - I , 2005 Edition,
by   B L Theraja, A K Theraja, S Chand and Company Limited.

Reference Books :-

1)   Electrical Technology, 8th Edition by Edward Hughes, , Pearson Education.
2)   Circuits & Networks 4th Edition by Sudhakar & Shyammohan,
      (Tata McGraw - Hill Publishing Company Limited).
      Engineering Circuit Analysis 6th Edition by William H. Hayt, Jr. &
      Jack E. Kemmerly, (Tata McGraw - Hill Publishing Company Limited).

Course Name   : Diploma in Electronics Engineering
Course Code   : DElnE
Semester   : Second
Subject Title   : Mechanical Workshop Practice
Subject Code   : 133ME25

Teaching & Examination Scheme:-

Teaching Scheme			Paper Hours	Examination Scheme											Total Marks
L	**T**	**P**		**Theory**		**Test**	**Total**		**P**		**O**		**TW**		
				Max	Min		Max	Min	Max	Min	Max	Min	Max	Min	
1	-	3	-	-	-	-	-	-	-	-	-	-	50	20	50

Rationale:-
Mechanical diploma student is expected to know basic workshop practice like Wood working and hot working processes. The students are required to identify, operate and control various machines. The students are required to select and use various tools and equipments related to Wood working and smithy processes.

Objectives:-
 The student will able to
- Know basic workshop processes.
- Read and interpret job drawing.
- Identify, select and use various marking, measuring, holding, striking and cutting tools & equipments.
- Operate, control different machines and equipments.
- Inspect the job for specified dimensions.
- Produce jobs as per specified dimensions.
- Adopt safety practices while working on various machines.

Syllabus

Part I - Theory

Sr.No.	Contents	L
01	**ENGINEERING MATERIALS:** Introduction. Different types of ferrous and non-ferrous materials. Properties of Engineering materials**.**	2
02	**CARPENTRY SHOP:** Introduction. Various types of woods. Different types of tools, machines and accessories.	3
03	**FITTING SHOP:** Introduction Various marking, measuring, cutting, holding and striking tools. Different fitting operation like chipping, filing, right angle,	3

	marking, drilling, tapping etc. Working Principle of Drilling machine, Tapping dies, its use. Safety precautions and safety equipments.	
04	**WELDING SHOP:** Introduction. Types of welding, ARC welding, Gas welding, Gas Cutting. Welding of dissimilar materials, Selection of welding rod material, Size of welding rod and work piece. Different types of flame. Elementary symbolic representation. Safety precautions in welding, safety equipments and its use in welding processes.	**3**
05	**SHEET METAL WORKING**: Introduction. Various types of tools, equipments and accessories. Different types of operations in sheet metal shop. Soldering and riveting. Safety precautions.	**3**
06	**LATHE:** Introduction. Various operations performed on Lathe machine. Main parts of Lathe machine.	**2**
	Total	**16**

Part II- Practicals

Sr.No.	List of Practicals
01	**CARPENTRY SHOP:** Demonstration of different wood working tools / machines Demonstration of different wood working processes, like plaining, marking, chiseling, grooving, turning of wood etc. One simple job involving any one joint like mortise and tenon, dovetail, bridle, half lap etc.
02	**WOOD TURNING:** One simple job involving turning, step turning, ball turning operation on wood.
03	**SMITHY SHOP:** Demonstration of different forging tools and Power Hammer. Demonstration of different forging processes like shaping, caulking, fullering, setting down operation etc. One job like hook peg, flat chisel or any hardware item.
04	**FITTING SHOP:** Demonstration of different fitting tools and drilling machines and power tools. Demonstration of different operations like chipping, filing, drilling, tapping, cutting etc.

	One simple fitting job involving practice of chipping, filing, drilling, tapping, cutting etc.
05	**WELDING SHOP:** Demonstration of different welding tools / machines. Demonstration of Arc Welding, Gas Welding, Gas Cutting and rebuilding of broken parts with welding. One simple job involving butt and lap joint.
06	**SHEET METAL SHOP:** Demonstration of different sheet metal tools / machines. Demonstration of different sheet metal operations like sheet cutting, bending, edging, end curling, lancing, soldering and riveting. One simple job involving sheet metal operations and soldering and riveting.
	METAL TURNING: Demonstration of Lathe machine. Demonstration of various parts of Lathe machine. Demonstration of various operations performed on Lathe. One simple job involving plain turning, step turning and chamfering.

Learning Resources:-

Text Books:-
1. Mechanical Workshop Practice-K.C.John-PHI Learning Pvt Ltd. EEE 2010

Reference Books:-

1. B.S. Raghuwanshi- Workshop Technology – Dhanpat Rai and sons, New Delhi, 9 th Edition, 2002
2. S.K. Hajra Chaudhary- Workshop Technology Vol I & II – Media Promotors and Publisher, New Delhi. 8 th edition , 1986

Course Name : **Diploma in Electronics Engineering**
Course Code : **DElnE**
Semester : **Second**
Subject Title : **Electrical & Electronics Drawing**
Subject Code : **133EX26**

Teaching and Examination Scheme:-

Teaching Scheme			Paper Hours	Examination Scheme											Total Marks
				Theory		Test	Total		P		O		TW		
L	T	P		Max	Min		Max	Min	Max	Min	Max	Min	Max	Min	
1	-	3	-	-	-	-	-	-	-	-	50	20	50	20	100

Rationale:-
      Students have learned engineering drawing in Semester I course. Electrical & Electronics drawing requires the knowledge of engineering and machine drawing. In addition to this a large number of symbols are used in Electrical & Electronics drawing. The student thus requires the identification and use of these symbols.

OBJECTIVES: -
      Students should be able to
          1. Identify and use the symbols used in electrical & electronics circuits.
          2. Draw, read and interpret drawings and circuit diagrams.
          3. Prepare assembly drawings.

Learning Structure:

<center>**Syllabus**</center>

Part 1:- Theory

Sr. No	Contents	L
1	**Industrial Electrical & Electronic Symbols** Relays, Circuit Breaker, Limit Switches, Meter (Instrument), Pilot Lights, Inductors, Coils, Transformers, AC & DC Motors, Wiring, Connections, Resistors, Capacitors, Fuse, Bells, Buzzer, Horn, Siren, Batteries, Symbols Of Semiconductor Devices like Diodes, Transistors, SCR, Optoelectronic Devices & Others.	4

2	**Residential (House) Wiring of**
	    a) Hall
	    b) Kitchen
	    c) Bedroom
	Residential Building wiring diagram scheme
	Office Wiring
	Industrial wiring
		6

3	Control Panel wiring	2

4	LV applications
	    1) Fire Alarm & Smoke Detection System wiring diagram
	    2) Access Control System wiring
	    3) Closed Circuit Television (CCTV) wiring scheme
		4

	Total	**16**

Part II:- Practical (Drawing Term work):

Minimum **six** sheets based on the above topics.

Reference Books:

1) Electrical & Electronics Drawing by Charles J Baer and J R Ottaway
2) Electronic Engineering Drawing by A K Mittal, Asian Publishers.
3) Electrical & Electronics Drawing by Charles J Baer and J R Ottaway
4) Electronic Engineering Drawing by A K Mittal, Asian Publishers.
5) Electrical Engineering Drawing, by K.L. Narang
6) Electrical Engineering Drawing, by S.K. Bhattacharya
7) Electrical Drawing & Estimating, by C.R.Dargan
8) Electrical Drawing - Part B, by Dr. H.P. Inamdar
9) Electrical Domestic Appliances, by Prof. D.U. Tatpuje
10) Study of Electrical Appliances, by K.B. Bhatia
11) Electrical Drawing & Workshop, by J.A. Rajani & Kale

Course Name : Diploma in Electronics Engineering
Course Code : DElnE
Semester   : Second
Subject Title : Student Centered Activity/Test

Teaching Scheme			Paper Hours	Examination Scheme												Total Marks
				Theory		Test	Total		P		O		TW			
L	T	P		Max	Min		Max	Min	Max	Min	Max	Min	Max	Min		
-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	

Rationale:–

Most of the diploma holders join industries. Due to globalization and competition in the industrial and service sectors the selection for the job is based on campus interviews or competitive tests.

While selecting candidates a normal practice adopted is to see general confidence, ability to communicate and attitude, in addition to basic technological concepts.

The purpose of introducing professional practices is to provide opportunity to students to undergo activities which will enable them to develop confidence. Expert lectures, E-learning sources, E-library, Internet, seminars on technical topics and group discussion are planned in a semester so that there will be increased participation of students in learning process.

Objectives:

The Student will be able to:

1. Acquire information from different sources
2. Prepare notes for given topic
3. Present given topic in a seminar
4. Interact with peers to share thoughts
5. Take the advantages of E-learning sources