

# E.G.S. PILLAY ENGINEERING COLLEGE

(Autonomous)

Approved by AICTE, New Delhi | Affiliated to Anna University, Chennai  
Accredited by NAAC with 'A' Grade | Accredited by NBA (CSE, EEE, MECH)

NAGAPATTINAM – 611 002



## B.E. Civil Engineering

### Full Time Curriculum and Syllabus

#### Second Year – Third Semester

Course Code	Course Name	L	T	P	C	Maximum Marks		
						CA	ES	Total
<b>Theory Course</b>								
1701MA301	Engineering Mathematics III	3	2	0	4	40	60	100
1702CE301	Engineering Surveying I	3	0	0	3	40	60	100
1702CE302	Solid Mechanics I	3	0	0	3	40	60	100
1702CE303	Fluid Mechanics	3	0	0	3	40	60	100
1702CE304	Engineering Geology	3	0	0	3	40	60	100
1702CE305	Building Materials & Resource Planning	3	0	0	3	40	60	100
<b>Laboratory Course</b>								
1702CE351	Surveying Lab I	0	0	4	2	50	50	100
1702CE352	Strength Of Materials Lab	0	0	2	1	50	50	100
1704CE353	Technical Seminar I	0	0	2	1	50	50	100
1704GE351	Life Skills: Soft Skills	0	0	2	0	100	0	100

L – Lecture | T – Tutorial | P – Practical | C – Credit | CA – Continuous Assessment | ES – End Semester

1701MA301

**ENGINEERING MATHEMATICS III**  
(Common to B.E - Civil, CSE, EEE, Mech  
B.Tech- IT Degree Programmes )

L	T	P	C
3	2	0	4

**PREREQUISITE :**

1. Engineering Mathematics I
2. Engineering Mathematics II

**COURSE OBJECTIVES:**

1. To introduce Fourier series analysis and applications in Engineering, apart from its use in solving boundary value problems.
2. To acquaint the student with Fourier transform techniques used in wide variety of situations.
3. To introduce the effective mathematical tools for the solutions of partial differential equations that model several physical processes and to develop Z transform techniques for discrete time systems.

**UNIT I FOURIER SERIES**

**12 Hours**

Dirichlet's conditions – General Fourier series – Odd and even functions – Half range sine series – Half range cosine series – Parseval's identity – Harmonic analysis – Simple Applications

**UNIT II FOURIER TRANSFORMS**

**12 Hours**

Statement of Fourier integral theorem – Fourier transform pair – Fourier sine and cosine transforms – Properties – Transforms of simple functions – Convolution theorem – Parseval's identity

**UNIT III PARTIAL DIFFERENTIAL EQUATIONS**

**12 Hours**

Formation of partial differential equations – Singular integrals — Solutions of standard types of first order partial differential equations – Lagrange's linear equation — Linear partial differential equations of second order with constant coefficients of homogeneous type- Applications

**UNIT IV APPLICATIONS OF PARTIAL DIFFERENTIAL EQUATIONS**

**12 Hours**

Classification of PDE – Solutions of one dimensional wave equation – One dimensional equation of heat conduction – Steady state solution of two dimensional equation of heat conduction.

**UNIT V Z – TRANSFORMS AND DIFFERENCE EQUATIONS**

**12 Hours**

Z - transforms – Elementary properties – Inverse Z – transform (using partial fraction and residues) – Convolution theorem – Formation of difference equations – Solution of difference equations using Z – transform.

**TOTAL: 60 HOURS**

**FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR :**

1. Linear Algebra
2. Numerical Solution of non-homogeneous partial differential equations

**COURSE OUTCOMES:**

On the successful completion of the course, students will be able to

- CO1 Use Fourier series analysis which is central to many applications in engineering
- CO2 Apply Fourier transform techniques used in wide variety of situations
- CO3 Compute the solution of partial differential equations
- CO4 Solve boundary value problem using partial differential equation
- CO5 Apply Z transform techniques for discrete time systems

**REFERENCES:**

1. Veerarajan. T., "Transforms and Partial Differential Equations", Second reprint, Tata McGraw Hill Education Pvt. Ltd., New Delhi, 2012
2. Grewal. B.S., "Higher Engineering Mathematics", 42nd Edition, Khanna Publishers, Delhi, 2012.
3. Bali.N.P and Manish Goyal, "A Textbook of Engineering Mathematics", 7th Edition, Laxmi Publications Pvt Ltd , 2007
4. Ramana.B.V., "Higher Engineering Mathematics", Tata Mc-GrawHill Publishing Company Limited, New Delhi, 2008.
5. Narayanan.S., Manicavachagom Pillay.T.K and Ramanaiah.G "Advanced Mathematics for Engineering Students" Vol. II & III, S.Viswanathan Publishers Pvt Ltd. 1998.
6. [www.nptelvideos.in/2012/11/mathematics-iii.html](http://www.nptelvideos.in/2012/11/mathematics-iii.html)

1702CE301

**ENGINEERING SURVEYING 1**

L	T	P	C
3	0	0	3

**PREREQUISITE :**

Basic Civil and Mechanical Engineering

**COURSE OBJECTIVES:**

To introduce the principles of various surveying methods and applications to Civil Engineering projects.

**UNIT I INTRODUCTION TO CHAIN SURVEYING**

**9 Hours**

Definition – Objectives and uses of surveying – Chain Surveying – Instrument used for chaining – Chains and tape types – Definition of terms commonly used in chain surveying : survey stations, Base line , check line and tie line – Ranging : Direct and indirect ranging – Chain surveying : Equipments required , field work and recording field work and recording field notes – Errors in Chaining – Obstacles in Chaining : Types and problems – Tape Correction : Simple Problem.

**UNIT II COMPASS SURVEYING**

**9 Hours**

Angular measurements – Necessity – Instruments used – Prismatic compass : Construction details functions and Temporary adjustment – Types of meridians – Types of bearings : whole circle and reduced bearings, Fore and Back Bearings – Computation of bearings from included angles – Problems – Local Attraction : Detection, correction and problems – Dip and declination – Compass traversing – Errors in compass surveying.

**UNIT III LEVELING**

**9 Hours**

Leveling – Definition – Level – Parts – Functions – Accessories – Types of levels : Dumpy level, Modern Tilting level, Quick setting level, Automatic and laser level – Leveling staff – Types – component parts of Leveling instruments – Definitions of terms used : Level surface, Horizontal and vertical surfaces, Datum Bench marks, Reduced level, Rise, Fall, Line of Collimation, Axis of telescope, Axis of Bubble tube, Station Back site, Fore site, Intermediate site, Change point, Height of instruments – Reduction of levels – Height of collimation and Rise and Fall Method – Missing entry calculation : Problems.

**UNIT IV CONDITION LEVELING**

**9 Hours**

Types of Leveling – Check Leveling : Definition, Field Procedure and use – Profile leveling or Longitudinal section(L.S) : Definition, uses, field procedure and plotting the profile – Cross section leveling(C.S) : Definition , Uses, Field procedure and plotting the Cross-section – Specimen Field book for L.S and C.S – Reciprocal leveling : Definition, Uses, and problems on difference in elevation – Curvature and Refraction : Effects, Correction and problems .

**UNIT V CONTOUR SURVEYING**

**9 Hours**

Definition – Contour – Contouring – Characteristics of contours – Methods of contouring – Direct and indirect methods – Tacheometric contouring – Interpolation of contours – Different methods – Contouring gradient – Used of contour plan and map – Calculation of capacity of reservoir: Simple problems.

**TOTAL: 45 HOURS**

**FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR :**

1. Advanced Surveying Instruments
2. Easy to measure the critical location areas

**COURSE OUTCOMES:**

On the successful completion of the course, students will be able to

- CO1 Appreciate the need for accurate and through note taking in field work to serve as a legal record.
- CO2 Gain a basic understanding of the principles and operation of the global position system
- CO3 Gain the ability to measure difference in elevation, draw and utilize contour plots and calculate volumes for earthwork.
- CO4 Improve ability to function as a survey party in completing the assigned field work.
- CO5 Appreciate the need for licensed surveyors to establish positioning information for property and structures.

**REFERENCES:**

1. Roy S.K., “Fundamentals of Surveying”, 2<sup>nd</sup> Edition, Prentice Ha of India, 2004
2. AroraK.R.,”SurveyingVol 1 & 2”, Standard Book House, 10<sup>th</sup> Edition 2008
3. Alfred Leick, "GPS satellite surveying", JohnWiley& Sons Inc., 3rd Edition, 2004.
4. GuochengXu, " GPS Theory, Algorithms and Applications", Springer - Berlin, 2003.

1702CE302

**SOLID MECHANICS - I**

L	T	P	C
3	2	0	4

**PREREQUISITE :**

1. Basic Civil and Mechanical Engineering
2. Engineering Mechanics

**COURSE OBJECTIVES:**

1. To impart knowledge on fundamental concepts of Stress, Strain and deformation of solids with applications to bars, beams and thin cylinders.
2. To acquire the ability to analyze the mechanism of load transfer in beams, the induced stress resultants and deformations.
3. To develop the clear understanding of the effect of torsion on shafts and springs.

**UNIT I STRESS AND STRAIN**

**12 Hours**

Stress and strain at a point – Tension, Compression, Shear Stress – Hooke's Law – Relationship among elastic constants – Stress Strain Diagram for Mild Steel, TOR steel, Concrete – Ultimate Stress – Yield Stress – Factor of Safety – Thermal Stresses – Thin Cylinders and Shells – Strain Energy due to Axial Force – Resilience – Stresses due to impact and Suddenly Applied Load – Compound Bars.

**UNIT II SHEAR AND BENDING IN BEAMS**

**12 Hours**

Beams and Bending- Types of loads, supports – Shear Force and Bending Moment Diagrams for statically determinate beam with concentrated load, UDL, uniformly varying load. Theory of Simple Bending – Analysis of Beams for Stresses – Stress Distribution at a cross Section due to bending moment and shear force for Cantilever, simply supported and overhanging beams with different loading conditions - Flitched Beams.

**UNIT III DEFLECTION OF BEAMS**

**12 Hours**

Double integration method-Macaulay's methods-Area moment method-conjugate beam method for computation of slopes and deflections of determinant beams.

**UNIT IV TORSION**

**12 Hours**

Torsion of Circular and Hollow Shafts – Elastic Theory of Torsion – Stresses and Deflection in Circular Solid and Hollow Shafts – combined bending moment and torsion of shafts - strain energy due to torsion - Modulus of Rupture – Power transmitted to shaft – Shaft in series and parallel – Closed and Open Coiled helical springs – Leaf Springs – Springs in series and parallel – Design of buffer springs.

**UNIT V COMPLEX STRESSES AND PLANE TRUSSES**

**12 Hours**

2 D State of Stress – 2 D Normal and Shear Stresses on any plane – Principal Stresses and Principal Planes – Mohr's circle - Plane trusses: Analysis of plane trusses - method of joints - method of sections

**TOTAL: 60 HOURS**

**FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR :**

1. Analysis of all types of horizontal determinate flexural members.
2. Categorize various materials by virtue of its different strength properties.

**COURSE OUTCOMES:**

On the successful completion of the course, students will be able to

- CO1 Understand the fundamental concepts of stress and strain in mechanics of solids and structures.
- CO2 Analyze the determinate beams and trusses to determine shear forces, bending moments and axial forces
- CO3 Compute the maximum deflection of beam.
- CO4 Analyze laminar and turbulent flows in circular pipes and energy losses in pipes
- CO5 Discuss about the Principal Plane and stresses.

**REFERENCES:**

1. Rajput.R.K. "Strength of Materials", S.Chand and Co, New Delhi, 2007.
2. Gambhir. M.L., "Fundamentals of Solid Mechanics", PHI Learning Private Limited., New Delhi, 2009.
3. Vazirani.V.N and Ratwani.M.M, "Analysis of Structures", Vol I Khanna Publishers, New Delhi,1995.
4. Junnarkar.S.B. and Shah.H.J, "Mechanics of Structures", Vol I, Charotar Publishing House, New Delhi 1997.
5. Bansal.R.K "Strength of materials", Laxmi Publications (P) Ltd, New Delhi 2014
6. Timoshenko.S.B. and Gere.J.M, "Mechanics of Materials", Van NosReinhold, New Delhi1995.

1702CE303

**FLUID MECHANICS**

L	T	P	C
3	0	0	3

**PREREQUISITE :**

Basic Civil and Mechanical Engineering

**COURSE OBJECTIVES:**

1. To impart knowledge on the basic properties of the fluid
2. To impart knowledge in the area of fluid kinematics and fluid dynamics
3. To analyze and appreciate the complexities involved in solving the fluid flow problems

**UNIT I FLUID STATICS**

**9 Hours**

Definitions - Continuum concept – Units and dimensions - Fluid Properties – Classification of fluids - Fluid Pressure and its measurements (manometers) - forces on immersed plane and curved surfaces – buoyancy – Meta centric height – fluid mass under relative equilibrium – Micro fluidics.

**UNIT II KINEMATICS OF FLUIDS**

**9 Hours**

Lagrangian and Eulerian methods – Classification of fluids - Streamlines, path lines and streak lines - Continuity equation - Velocity potential and Stream function – Flow nets.

**UNIT III FLUID DYNAMICS**

**9 Hours**

Euler and Bernoulli's equation – Application of Bernoulli's equation – Flow measurement – Laminar flow through parallel plates and pipes – Darcy-Weishbach friction factor – Turbulent flow.

**UNIT IV PROBLEMS IN PIPE FLOW**

**9 Hours**

Major and minor losses in pipe flows – Pipes in series and parallel – Pipe networks – Concept of Boundary Layer Theory

**UNIT V DIMENSIONAL ANALYSIS**

**9 Hours**

Rayleigh's method – Buckingham's Pi-theorem – model study and similitude – Practical applications.

**TOTAL: 45 HOURS**

**FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR :**

1. To analyze and create a solution for Fluid flow issues.
2. To minimize the losses in conveyance of fluids

**COURSE OUTCOMES:**

On the successful completion of the course, students will be able to

- CO1 Understand the basic properties of fluids, and apply Newton's Law of Viscosity in solving practical problems
- CO2 Understand the principles of kinematics with specific emphasis on application of continuity equation, stream function etc
- CO3 Apply the principles of Bernoulli's equation in measurement of discharge in pipes, and in other pipe flow problems.
- CO4 Apply fundamental concepts of fluid mechanics in solving fluid flow problems in pipes, design of pipe, and analysis of pipe networks.
- CO5 Understand the fundamentals of dimensional analysis and application of Buckingham  $\pi$ -theorem in fluid flow problem

**REFERENCES:**

1. Bansal, R.K., Mechanics of Fluids, Laxmi Publications, Pvt. Ltd, New Delhi, 1<sup>st</sup> Edition, 2005.
2. Rama Durgaiyah,D., Fluid Mechanics and Machinery, New Age International Publishers, New Delhi, 1<sup>st</sup> Edition, Reprint, 2006.
3. Jain A.K "fluid mechanics" khanna publishers, 2010
4. White f.m "fluid mechanics" tatamcgraw hill 5<sup>th</sup> edition, new 2000
5. K.L.kumar "fluidmechanichs" Eurasia publishing house(P)LTD. S.CHAND and company limited

1702CE304

**ENGINEERING GEOLOGY**

L	T	P	C
3	0	0	3

**PREREQUISITE :**

Basic Civil and Mechanical Engineering

**COURSE OBJECTIVES:**

1. To summarize the origin, development and ultimate fate of various surface features of the earth.
2. To impart the understanding of rock forming minerals, their properties and classifications of rocks.
3. To analyze the geological structures and their effects due to geological factors.

**UNIT I GENERAL GEOLOGY**

**9 Hours**

Geology in civil engineering – Branches of geology – Earth structures and composition –Elementary knowledge on continental drift and plate tectonics - Earth processes –Weathering – Geological work of rivers, wind and sea - Engineering importance – Earthquake belts in India - Groundwater – Mode of occurrence – Prospecting – Importance in civil engineering.

**UNIT II MINERALOGY**

**9 Hours**

Introduction – Crystallography – Elements – Symmetry – Axes – Forms – Systems –Properties - physical - optical – Study of rock forming minerals - Felspar group - Orthoclase, microcline, albite, anorthite - pyroxenogroup - Enstatite, augite - Amphibole group - Anthophyllite, hornblende - Mica group – Muscovite, biotite - Oxide minerals - Quartz, corundum - Carbonate minerals – Calcite, dolomite, magnesite - Coal and petroleum – Origin and occurrence in India.

**UNIT III PETROLOGY**

**9 Hours**

Classification of rocks – Distinction between igneous, sedimentary and metamorphic rocks- Occurrence, engineering properties and distribution - Igneous rocks– Granite, syenite, diorite, gabbro, pegmatite, dolerite and basalt- sedimentary rocks - Sandstone, limestone, shale, conglomerate and breccia-Metamorphic rocks- quartzite, marble, slate, phyllite, gneiss and schist.

**UNIT IV STRUCTURAL GEOLOGY AND GEOPHYSICAL METHOD**

**9 Hours**

Introduction – Basic terminologies – Study of structural features – Folds, faults and joints -Engineering considerations - Geophysical investigations- Seismic and electrical.

**UNIT V GEOLOGICAL INVESTIGATIONS IN CIVIL ENGINEERING**

**9 Hours**

Geological conditions necessary for construction of dams, tunnels, buildings, road cuttings- Landslides – Causes and preventions- improvement of sites.

**TOTAL: 45 HOURS**

**FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR :**

Geo Technical Engineering and Structural geology

**COURSE OUTCOMES:**

On the successful completion of the course, students will be able to

- CO1 Understand weathering process and mass movement
- CO2 Identify the available minerals by their properties and behavior.
- CO3 Differentiate three important major rock types based on their origin, occurrence, engineering properties and uses.
- CO4 Describe the geological structures fold, fault, joints etc, and identify the subsurface geological formations.
- CO5 Describe the applications of geological concepts in civil engineering projects.

**REFERENCES:**

1. Parbin Singh, “Engineering and General Geology”, S. K. Kataria & Sons, 2008.
2. Marland P.Billings, “Structural Geology”, PHI Learning Pvt. Ltd. New Delhi, 2012
3. F.G.Bell, “Engineering Geology”, Butterworth –Heinemann (An Imprint of Elsevier), 2007.
4. F.G.H. Blyth and M.H.de Freitas, “A Geology for Engineers”, Butterworth –Heinemann (An Imprint of Elsevier), 2006

<b>1702CE305</b>	<b>BUILDING MATERIALS &amp; RESOURCE PLANNING</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
		<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>

**PREREQUISITE :**

Basic Civil and Mechanical Engineering

**COURSE OBJECTIVES:**

1. To give students an understanding of typical and potential application of Building materials.
2. To ensure that students know about the manufacturing process of Building materials and mix designing procedure of concrete.
3. Give students an appreciation of the effective use of common and modern materials in construction.

**UNIT I STONES – BRICKS – CONCRETE BLOCKS 9 Hours**

Stone as building material – Criteria for selection – Tests on stones – Deterioration and Preservation of stone work – Bricks – Classification – Manufacturing of clay bricks – Tests on bricks – Compressive Strength – Water Absorption – Efflorescence – Bricks for special use – Refractory bricks – Cement, Concrete blocks – Lightweight concrete blocks.

**UNIT II LIME – CEMENT – AGGREGATES – MORTAR 9 Hours**

Lime – Preparation of lime mortar – Cement – Ingredients – Manufacturing process – Types and Grades – Properties of cement and Cement mortar – Hydration – Compressive strength – Tensile strength – Fineness– Soundness and consistency – Setting time – Industrial byproducts – Fly ash – Aggregates – Natural stone aggregates – Crushing strength – Impact strength – Flakiness Index – Elongation Index – Abrasion Resistance – Grading – Sand Bulking.

**UNIT III CONCRETE 9 Hours**

Concrete – Ingredients – Manufacturing Process – Batching plants – RMC – Properties of fresh concrete – Slump – Flow and compaction Factor – Properties of hardened concrete – Compressive, Tensile and shear strength – Modulus of rupture – Tests – Mix specification – Mix proportioning – BIS method – High Strength Concrete and HPC – Self compacting Concrete – Other types of Concrete – Durability of Concrete.

**UNIT IV TIMBER 9 Hours**

Timber – Market forms – Industrial timber– Plywood – Veneer – Thermacole – Panels of laminates – Steel Aluminium composite panel – Uses – Paints – Varnishes – Distempers – Bitumens.

**UNIT V MODERN MATERIALS 9 Hours**

Glass – Ceramics – Sealants for joints – Fibre glass reinforced plastic – Clay products – Refractories – Composite materials — Fibre textiles – Geo membranes and Geo textiles for earth reinforcement.

**TOTAL: 45 HOURS**

**FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR :**

On completion of this course the students will be able to Compare the properties of most common and advanced building materials and understand the typical and potential applications of these materials

**COURSE OUTCOMES:**

On the successful completion of the course, students will be able to

- CO1 Summarize the most common and advanced materials used for construction.
- CO2 Explain the manufacturing process of various building materials
- CO3 Explain the properties of fresh and hardened concrete and performance of other types of concrete.
- CO4 Illustrate the usage of timber, plywood and aluminum, composite material, paints and distemper
- CO5 Choose the appropriate modern materials for construction

**REFERENCES:**

1. Varghese. P. C, "Building Materials", PHI Learning Pvt. Ltd, New Delhi, 2012.
2. Rajput. R.K., "Engineering Materials", S. Chand and Company Ltd., 2008.
3. Shetty. M. S., "Concrete Technology (Theory and Practice)", S. Chand and Company Ltd., 2008.
4. Gambhir M. L., "Concrete Technology", 3rd Edition, Tata McGraw Hill Education, 2004
5. Duggal. S. K., "Building Materials", 4th Edition, New Age International, 2008.

**1702CE351**

**SURVEYING LAB 1**

<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>0</b>	<b>0</b>	<b>4</b>	<b>2</b>

**PREREQUISITE :**

Basic Civil and Mechanical Engineering

**COURSE OBJECTIVES:**

To introduce the principles of various surveying methods and using the survey instrument to Civil Engineering projects.

**LIST OF EXPERIMENTS:**

1. Study about Chain and accessories
2. Aligning, Ranging and chaining
3. Compass Traversing
4. Plane table surveying : Radiation
5. Plane table surveying : Intersection
6. Plane table surveying : Two point Problem
7. Fly leveling using Dumpy level
8. Check Leveling
9. LS and CS
10. Study of Theodolite

**TOTAL: 45 HOURS**

**ADDITIONAL EXPERIMENTS / INNOVATIVE EXPERIMENTS :**

1. Using in the field for taking leveling checking and measurements.
2. Electronic instrument

**COURSE OUTCOMES:**

On the successful completion of the course, students will be able to

- CO1 On completion of this course student shall be able to understand the Surveying of the Lands and Pots use various method.
- CO2 Understanding the working principle.
- CO3 Understanding the methods of using the proper instrument for the method.

**REFERENCES:**

1. G. Brancato, S. Macchia, M. Murgia, M. Signore, G. Simeoni - Italian National Institute of Statistics, ISTAT
2. K. Blanke, T. Körner, A. Nimmergut - Federal Statistical Office Germany, FSO
3. P. Lima, R. Paulino - National Statistical Institute of Portugal, INE
4. J.H.P. Hoffmeyer-Zlotnik - German Center for Survey Research and Methodology, ZUMA



1702CE352

**STRENGTH OF MATERIALS LABORATORY**

L	T	P	C
0	0	4	2

**PREREQUISITE :**

Basic Civil and Mechanical Engineering

**COURSE OBJECTIVES:**

1. To find the strength properties of different construction materials like steel, concrete, brick and timber.
2. To evaluate stiffness properties of springs and to find the hardness properties of various metals.

**LIST OF EXPERIMENTS:**

1. Tension test on Mild steel rod
2. Tension test on tor steel rod
3. Torsion test on MS bar
4. Tension and compression test on springs
5. Compression test on bricks and concrete cubes
6. Water absorption test on bricks
7. Brinell and Rockwell Hardness test
8. Compression and bending test on wood specimens
9. Charpy and Izod Impact Test
10. Double shear test
11. Test on cement

**TOTAL: 45 HOURS**

**ADDITIONAL EXPERIMENTS / INNOVATIVE EXPERIMENTS :**

-

**COURSE OUTCOMES:**

On the successful completion of the course, students will be able to

- CO1 The experimental works involved in this laboratory make the student to determine the properties of different structural elements.
- CO2 The student should be able to obtain the strength of the material and stiffness properties of structural elements.

**REFERENCES:**

1. Strength of Materials Laboratory Manual, Anna University, Chennai - 600 025.
2. IS1786-2008, Specification for cold worked steel high strength deformed bars for concrete reinforcement, 2008.

1704CE353

**TECHNICAL SEMINAR I**

<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>

**PREREQUISITE :**

-

**COURSE OBJECTIVES:**

1. To develop self-learning skills of utilizing various technical resources to make a technical presentation.
2. To promote the technical presentation and communication skills.
3. To impart the knowledge on intonation, word and sentence stress for improving communicative competence, identifying and overcoming problem sounds.
4. To promote the ability for Interacting and sharing attitude.
5. To encourage the commitment-attitude to complete tasks.

The students are expected to make two presentations on advanced topics (recent trends) related to II year/ III semester subjects. A faculty guide is to be allotted and he / she will guide and monitor the progress of the student and maintain attendance also. Students are encouraged to use various teaching aids such as power point presentation and demonstrative models.

**TOTAL: 30 HOURS**

**COURSE OUTCOMES:**

On the successful completion of the course, students will be able to

- CO1 Identify and utilize various technical resources available from multiple field.
- CO2 Improve the technical presentation and communication skills.
- CO3 Improve communicative competence.
- CO4 Interact and share their technical knowledge.
- CO5 Understand and adhere to deadlines and commitment to complete the assignments.

**EVALUATION SCHEME:**

**Continuous Assessment (100 Marks)**

<b>Distribution of Marks for Continuous Assessment</b>	<b>Marks</b>
Presentation I	40
Report	10
Presentation II	40
Report	10
<b>Total</b>	<b>100</b>

1704GE351

**LIFE SKILLS : SOFT SKILLS**  
(Common to all B.E / B.Tech Degree Programmes )

L	T	P	C
0	0	2	0

**PREREQUISITE :**

1. Technical English
2. Communicative English

**COURSE OBJECTIVES:**

1. To develop the students basic soft skills and enable them to get a job.
2. To develop the students' interpersonal skills and to enable them to respond effectively.
3. To develop the students selling skills and to enable them to apply in their interview process.
4. To develop the students' Corporate Etiquettes and enable them to respond effectively.
5. To develop the students' learning by practice of giving different situations.

**UNIT I INTRODUCTION TO SOFT SKILLS**

**6 Hours**

Soft Skills an Overview - Basics of Communication – Body Language – Positive attitude –Improving Perception and forming values – Communicating with others.

**UNIT II TEAM Vs TRUST**

**6 Hours**

Interpersonal skills – Understanding others – Art of Listening - Group Dynamics – Networking - Individual and group presentations - Group interactions – Improved work Relationship .

**UNIT III SELLING ONESELF**

**6 Hours**

How to brand oneself – social media – job hunting – Resume writing – Group Discussion – Mock G.D - Interview skills – Mock Interview

**UNIT IV CORPORATE ETIQUETTES**

**6 Hours**

What is Etiquette – Key Factors – Greetings – Meeting etiquettes – Telephone etiquettes – email etiquettes – Dining etiquettes – Dressing etiquettes – Rest room etiquettes – Life etiquettes.

**UNIT V LEARNING BY PRACTICE**

**6 Hours**

1. My family. Myself. 2. Meeting people. Making Contacts. 3. A city. Getting about town. 4. Our flat. Home life.5. Travelling. Going abroad. 6. Going through Customs. 7. At a hotel. 8. Shopping. 9. Eating out. 10. Making a phone call. 11. A modern office.12 Discussing business.

**TOTAL: 30 HOURS**

**ASSESSMENT PATTERN**

1. Two assignments ( 2 x 25 marks = 50 marks)
2. Pragmatic assessment ( 50 marks)

**COURSE OUTCOMES:**

On the successful completion of the course, students will be able to

- CO1 Communicate effectively in their business environment.
- CO2 Improve their interpersonal skills which are mandatory in a corporate world.
- CO3 Brand themselves to acquire a job.
- CO4 Involve in corporate etiquettes.
- CO5 Survive in the different situations.

**REFERENCES:**

1. Dr.K.Alex, 'Soft Skills' Third Edition, S.Chand & Publishing Pvt Limited, 2009
2. Aruna Koneru, 'Professional Communication' Second Edition, Tata McGraw-Hill Education, 2008
3. D.K.Sarma, 'You & Your Career' First Edition, Wheeler Publishing & Co Ltd, 1999
4. Shiv Khera 'You Can Win' Third Edition, Mac Millan Publisher India Pvt Limited, 2005