

E.G.S.PILLAYENGINEERINGCOLLEGE

(Autonomous)

Approved by AICTE, New Delhi | Affiliated to Anna University, Chennai
Accredited by NAAC with „A“ Grade | Accredited by NBA (CSE, EEE, MECH,
ECE, CIVIL, IT)

NAGAPATTINAM–611002



B.E. Civil Engineering Full Time Curriculum and Syllabus

First Year – Second Semester

Course Code	Course Name	L	T	P	C	Maximum Marks		
						CA	ES	Total
Theory Course								
1901MA201	Engineering Mathematics – II (Differential equations)	3	2	0	4	40	60	100
1901CH201	Water Technology and Green Chemistry	3	0	0	3	40	60	100
1901GEX03	Programming for Problem Solving	3	0	0	3	40	60	100
1901ENX01	English for Engineers	2	0	0	2	40	60	100
1901GE201	Engineering Exploration	2	0	0	2	40	60	100
Laboratory Course								
1901CHX51	Engineering Chemistry Lab	0	0	2	1	50	50	100
1901GE253	Basic Workshop Lab	0	0	2	1	50	50	100
1901GEX52	Computer Programming Lab	0	0	2	1	50	50	100
1901HSX51	Communication Skill Lab	0	0	2	1	50	50	100
1901GE252	Engineering Intelligence - II	0	0	2	1	100	0	100

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

1901MA201	ENGINEERING MATHEMATICS –II (Differential equations)	L	T	P	C
		3	2	0	4
<p>Aim of the course: This course focuses on acquiring sound knowledge of techniques involved in application of differentiation, eigen values and eigen vectors and using transformation of quadratic form into canonical form through orthogonal transformation acquaint with the concepts of multiple integrals, needed for problems in all engineering disciplines, develop an understanding of the standard techniques of Linear algebra theory so as to enable the student to apply them with confidence, in application areas such as Computer Graphics, Robotic Automations, Computer Vision Problems, Simulations and also make the student appreciate the purpose of using transforms to create a new domain in which it is easier to handle the problem that is being investigated.</p>					
<p>PREREQUISITES: Matrices and determinants, differentiation, differential equations</p>					
<p>MODULE I : ORDINARY DIFFERENTIAL EQUATIONS OF HIGHER ORDERS Second order linear differential equations with variable coefficients, method of variation of parameters.</p> <p>MODULE II: COMPLEX VARIABLE – DIFFERENTIATION Cauchy-Riemann equations, analytic functions, harmonic functions, finding harmonic conjugate; Conformal mappings, Mobius transformations</p> <p>MODULE III :COMPLEX VARIABLE – INTEGRATION Contour Integrals, Cauchy Integral formula (without proof), Taylor’s series, zeros of analytic functions, singularities, Laurent’s series; Residues, Cauchy Residue theorem (without proof), Evaluation of definite integral involving sine and cosine, Evaluation of certain improper integrals using the Bromwich contour.</p> <p>MODULE IV: SOLUTION OF ALGEBRAIC AND TRANSCENDENTAL EQUATIONS Solution of algebraic and transcendental equations – Newton-Raphson method. Finite differences, Interpolation using Newton’s forward and backward difference formulae. Interpolation with unequal intervals: Lagrange’s formulae. Numerical Differentiation (first two derivatives) Numerical integration: Trapezoidal rule and Simpson’s 1/3rd and 3/8 th rules (single integral)</p> <p>MODULE V: SOLUTION OF ORDINARY DIFFERENTIAL EQUATIONS Ordinary differential equations: Taylor’s series, Euler and modified Euler’s methods. RungeKutta method of fourth order for solving first order Equation. Milne’s and Adam’s predictor-corrector methods.</p> <p>For Further Reading : https://nptel.ac.in/courses/111/105/111105134/</p>					
<p>COURSE OUTCOMES</p> <p>After completion of this course, students can able to CO1: Identify the solutions to second order linear homogeneous differential equations with variable coefficients. CO2: Construct analytic functions and describe the transformation of real plane into imaginary plane using conformal mappings. CO3: Determine complex contour integrals by using fundamental theorem, Cauchy theorem and residues. CO4: Utilize numerical differentiation and integration whenever and wherever routine methods are not applicable. CO5: Develop the appropriate numerical technique and interpret the results for initial values problems governed by ordinary differential equations.</p>					
<p>REFERENCE BOOKS:</p> <ol style="list-style-type: none"> 1. Erwin Kreyszig, Advanced Engineering Mathematics, 9th Edition, John Wiley & Sons, 2006. 2. W. E. Boyce and R. C. DiPrima, Elementary Differential Equations and Boundary Value Problems, 9th Edition, Wiley India, 2009. 3. S. L. Ross, Differential Equations, 3rd Ed., Wiley India, 1984. 4. E. A. Coddington, An Introduction to Ordinary Differential Equations, Prentice Hall India, 1995. 5. E. L. Ince, Ordinary Differential Equations, Dover Publications, 1958. 6. G.F. Simmons and S.G. Krantz, Differential Equations, Tata McGraw Hill, 2007. 7. J. W. Brown and R. V. Churchill, Complex Variables and Applications, 7th Ed., McGraw Hill, 2004. 8. Veerarajan T., Engineering Mathematics for first year, Tata McGraw-Hill, New Delhi, 2008. 9. N.P. Bali and Manish Goyal, A text book of Engineering Mathematics, Laxmi Publications, Reprint, 2010. 10. B.S. Grewal, Higher Engineering Mathematics, Khanna Publishers, 35th Edition, 2000. 11. P. Kandasamy, K. Thilagavathy, K. Gunavathi, Numerical Methods, S. Chand & Company, 2nd Edition, Reprint 2012. 12. S.S. Sastry, Introductory methods of numerical analysis, PHI, 4th Edition, 2005. 					

1901CH201	WATER TECHNOLOGY AND GREEN CHEMISTRY (for CIVIL ENGINEERING)	L	T	P	C
		3	0	0	3
Aim of the course: Imparting knowledge on the principles of Aqua chemistry, structural polymer, light weight materials, constructional materials and metals for constructions with their applications.					
PREREQUISITES: Knowledge of chemistry in higher secondary level					
MODULE-I AQUA CHEMISTRY Aqua chemistry -Chemical speciation in the environment and major pollutants in the environment (in atmosphere and aqueous system some examples mercury, cadmium, arsenic and fluoride)- Aqua chemistry -Sources, hard & soft water- sampling techniques Degree of hardness and its estimation (EDTA method)– Water Quality Parameters. boiler feed water- requirements - softening of hard water -external treatment –demineralization, Zeolite process internal treatment- desalination of sea water –reverse osmosis- Domestic water treatment –disinfection of water -Physical and chemical principles applied to water and wastewater treatment.-mixing, coagulation, sedimentation, filtration, and chemical precipitation.					
MODULE-II STRUCTURAL POLYMERS Structural Polymers- Structural Plastics and Composites- Polymer Membranes - Coatings - Adhesives, Non Weathering Materials - Flooring and Facade Materials - Glazed Brick - Photo Catalytic Cement - Acid Etched Copper and Composite Fibres (frp)					
MODULE-III LIGHTWEIGHT MATERIALS Lightweight Materials -Neoprene, Bridge pads, thermocole, Smart and Intelligent Materials – Special features –Case studies showing the applications of smart and Intelligent Materials. Petroleum products, Bituminous Materials-Fly ash –rice husk ash - properties and its application.					
MODULE-IV CONSTRUCTIONAL MATERIALS Constructional Materials- Refractories: definition, classification, properties –Manufacture of alumina, magnesite and silicon carbide, Portland cement- manufacture and properties - setting and hardening of cement, special cement- waterproof and white cement– Nanotube concrete -properties and uses.					
MODULE-V METALS FOR CONSTRUCTIONS Metals For Constructions- Basic composition of mild steel, High yield deformed steel (Tor), Stainless Steel, High tensile steel and TMT steel. Corrosion and lubricant. Welding and soldering of ferrous and non-ferrous metals- Aluminium, Brass, Copper and Titanium.					
COURSE OUTCOMES					
After completion of the course, the student will be able to CO1: Explain the Aqua chemistry and domestic water treatment process CO2: Describe the polymeric materials in construction work. CO3: Explain the Lightweight Materials and its application wave equations. CO4: Describe the various types of construction materials and its properties. CO5: Explain the role of metals for Constructions					
TEXT BOOKS:					
<ol style="list-style-type: none"> 1. 1 Dara.S, Umare.S, “Engineering Chemistry”, S. Chand & Company Ltd., New Delhi 2010. 2. Sivasankar B., “Engineering Chemistry”, Tata McGraw-Hill Publishing Company, Ltd., New delhi 2010. 3. Gowariker V.R., Viswanathan N.V. and Jayadev Sreedhar, “Polymer Science”, New Age 4. Kumar Mehta P. and Paulo J. M. Monteiro, (2014), Concrete: Microstructure, Properties and Materials, 4th Edition, McGraw-Hill, New Delhi. 5. Shetty. M. S., (2017), Concrete Technology, S. Chand and Company Ltd, New Delhi. 6. Neville. A. M, (2012), Properties of Concrete, Pearson, New Delhi. 7. ACI 211.1-91 Reapproved 2009, Standard Practice for selecting Proportions for Normal, Heavyweight, and Mass Concrete, USA 					
REFERENCES (WEBSITES):					
<ol style="list-style-type: none"> 1. https://www.ccdc.cam.ac.uk/solutions/csd-system/components/csd/ 2. onlinelibrary.wiley.com/doi/10.1002/9780470661345.smc107/pdf 					

	L	T	P	C
PROGRAMMING FOR PROBLEM SOLVING (Common for all B.E./B.Tech Programme)	3	0	0	3

1901GEX03

COURSE OBJECTIVES:

- 1.To prepare students to comprehend the fundamental concepts
- 2.To demonstrate fine grained operations in number system
- 3.To gain exposure in programming language using C
- 4.To develop programming skills using the fundamentals and basics of C Language

MODULE I INTRODUCTION TO PROGRAMMING 9 Hours

Components of Computers and its Classifications- Problem Solving Techniques – Algorithm- Flowchart– Pseudo code – Program-Compilation -Execution

MODULE II BASICS OF C PROGRAMMING 9 Hours

Structure of C program - C programming: Data Types – Storage classes - Constants – Enumeration Constants - Keywords – Operators: Precedence and Associativity - Expressions - Input/output statements – Decision making statements - Switch statement - Looping statements – Pre-processor directives.

MODULE III ARRAYS AND STRINGS 9 Hours

Introduction to Arrays: Declaration, Initialization – One dimensional array – Two dimensional arrays – Example Program: Matrix Operations - String operations

MODULE IV FUNCTIONS AND POINTERS 9 Hours

Introduction to functions: Function prototype, function definition, function call, Built-in functions – Recursion – Example Program – Pointers – Pointer operators – Pointer arithmetic – Arrays and pointers – Array of pointers – Example Program: Sorting of names – Parameter passing: Pass by value, Pass by reference – Example Program: Swapping of two numbers and changing the value of a variable using pass by reference

MODULE V STRUCTURES & FILE PROCESSING 9 Hours

Structure - Nested structures – Pointer and Structures – Array of structures – Example Program using structures and pointers – Dynamic memory allocation -Files – Types - File processing: Sequential access, Random access -Command line arguments

TOTAL: 45 HOURS

FURTHER READING:

Object Oriented Programming Approach.

COURSE OUTCOMES:

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

CO1: Describe basic concepts of computers

CO2: Paraphrase the operations of number system

CO3: Describe about basic concepts of C-Language

CO4: Understand the code reusability with the help of user defined functions

CO5: Analyze the structure concept, union, file management and preprocessor in C language

REFERENCES:

1. Paul Deitel and Harvey Deitel, —C How to Program, Seventh edition, Pearson Publication
2. Juneja, B. L and Anita Seth, —Programming in C, CENGAGE Learning India pvt. Ltd., 2011
3. Pradip Dey, Manas Ghosh, —Fundamentals of Computing and Programming in C, First Edition, Oxford University Press, 2009.
4. Anita Goel and Ajay Mittal, —Computer Fundamentals and Programming in C, Dorling Kindersley (India) Pvt. Ltd., Pearson Education in South Asia, 2011.
5. Byron S. Gottfried, "Schaum's Outline of Theory and Problems of Programming with C", McGraw-Hill Education, 1996.

1901ENX01	ENGLISH FOR ENGINEERS	L	T	P	C
	(Common for all B.E./B.Tech. Programme)	3	0	0	3

MODULE I FOCUS ON LANGUAGE (Vocabulary and Grammar) 9 Hours

Vocabulary -The Concept of Word Formation - Prefixes- Suffixes- Synonyms – Antonyms - Grammar - Articles- Preposition- Adjective-Adverb-Connectives -Tenses (present, past & future) - Conditional Clauses - Active voice –passive voice and Impersonal passive voice - Wh- Questions.

MODULE II LISTENING SKILLS 9 Hours

Listening-Types of Listening -listening to short or longer texts- listening and Note taking- -formal and informal conversations- telephonic etiquettes- narratives from different sources. - Correlative verbal and nonverbal communication - listening to panel members (how to response to panel members after listening panel members) – listening to facing online interviews (or) interviews on video conferencing mode - listening webinars.

MODULE III SPEAKING SKILL 9 Hours

Speaking - Stress and intonation –Communication skills- Role of ICT in Communication, -Process of communication- oral presentation skills- verbal and non verbal communication-individual and group presentations- impromptu presentation- public speaking- Group discussion- speaking to the panel members (online interviews , video conferencing, online meeting and webinars.

MODULE IV READING SKILLS 9 Hours

Reading– Intensive Reading –Predicting the content -Comprehending general and technical articles -Cloze reading - Inductive reading- Short narrative and descriptions from newspapers – Skimming and scanning-reading and interpretation-critical reading interpreting and transferring graphical information- sequencing of sentences- analytical reading on various Projects.

MODULE V WRITING SKILLS 9 Hours

Writing- Precise writing –Summarizing- Interpreting visual texts (pie chart, bar chart, picture, advertisements etc., - Proposal writing (launching new units or department in a institution or industry & to get loan from bank) -Report writing (accident, progress, project, survey, Industrial visit)- job application- e- mail drafting- letter writing (permission, accepting and decaling)- e.mail drafting instructions – recommendations –checklist- uses of Print and electronic media (internet, fax, mobile, interactive video and teleconferencing, computer) e-governance.

TOTAL: 45 HOURS

REFERENCES:

1. Raman, Meenakshi and Sangeetha Sharma, “Technical Communication: Principles and Practice”, Oxford University Press, New Delhi, 2011.
2. Rizvi and Ashraf M., “Effective Technical Communication”, Tata McGraw-Hill, New Delhi, 2005.
3. G. Radhakrishna Pillai, “English for Success”, Central Institute of English and Foreign Languages”, Emerald Publishers ,Hyderabad, 2003
4. Jones, D, “The Pronunciation of English”, CUP, . Cambridge,2002.

Course Outcomes

- | | |
|-----|---|
| CO1 | Compose grammatically correct sentences for oral as well as written communication. |
| CO2 | Interpret perfectly after paying attention to an audio on any theme |
| CO3 | Organize formal presentations effectively. |
| CO4 | Explain the content of any written or visual material. |
| CO5 | Generate technical and non-technical documents with appropriate contents and context. |

1901GE201	ENGINEERING EXPLORATION	L	T	P	C
		2	0	0	2

COURSE OBJECTIVES:

- Build mindsets & foundations essential for designers
- Learn about the Human-Centered Design methodology and understand their real-world applications
- Use Design Thinking for problem solving methodology for investigating ill-defined problems.
- Undergo several design challenges and work towards the final design challenge
- Apply Design Thinking on the following Streams to Project Stream 1: Electronics, Robotics, IOT and Sensors Project Stream 2: Computer Science and IT Applications Project Stream 3: Mechanical and Electrical tools
Project Stream4: Eco-friendly solutions for waste management, infrastructure, safety, alternative energy sources, Agriculture, Environmental science and other fields of engineering.

HOW TO PURSUE THE PROJECT WORK?

- The first part will be learning-based-asking students to embrace the methodology by exploring all the phases of design thinking through the wallet/ bag challenge and podcasts.
- The second part will be more discussion-based and will focus on building some necessary skills as designers and learning about complementary material for human- centered design.
- The class will then divide into teams and they will be working with one another for about 2 – 3 weeks. These teams and design challenges will be the basis for the final project and final presentation to be presented.
- The teams start with Design Challenge and go through all the phases more in depth from coming up with the right question to empathizing to ideating to prototyping and to testing.
- Outside of class, students will also be gathering the requirements, identifying the challenges, usability, importance etc
- At the end, Students are required to submit the final reports, and will be evaluated by the faculty.

TASKS TO BE DONE:

Task 1: Everyone is a Designer

- Understand class objectives & harness the designer mindset

Task 2: The Wallet/Bag Challenge and Podcast

- Gain a quick introduction to the design thinking methodology
- Go through all stages of the methodology through a simple design challenge
- Podcast: Observe, Listen and Engage with the surrounding environment and identify a design challenge.

Task 3: Teams & Problems

- Start Design Challenge and learn about teams & problems through this
- Foster team collaboration, find inspiration from the environment and learn how to identify problems

Task 4: Empathizing

- Continue Design Challenge and learn empathy
- Learn techniques on how to empathize with users
- Go to the field and interview people in their environments
- Submit Activity Card

Task 5: Ideating

- Continue Design Challenge and learn how to brainstorm effectively
- Encourage exploration and foster spaces for brainstorming
- Submit Activity Card

Task 6: Prototyping

- Continue Design Challenge and learn how to create effective prototypes
- Build tangible models and use them as communication tools
- Start giving constructive feedback to classmates and teammates
- Submit Activity Card

Task 7: Testing

- Finish Design Challenge and iterate prototypes and ideas through user feedback

- Evolve ideas and prototypes through user feedback and constructive criticism
 - Get peer feedback on individual and group performance
 - Submit Activity Card Task 8:
 - Final Report Submission and Presentation
-
- Method of Evaluation: Same as Mini project category. Project exhibition may be conducted.

REFERENCES:

1. Tom Kelly, The Art of Innovation: Lessons in Creativity From IDEO, America's Leading Design Firm (Profile Books, 2002)
2. Tim Brown, Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation (HarperBusiness, 2009)
3. Jeanne Liedtka, Randy Salzman, and Daisy Azer, Design Thinking for the Greater Good: Innovation in the Social Sector (Columbia Business School Publishing, 2017)

OTHER USEFUL DESIGN THINKING FRAMEWORKS AND METHODOLOGIES:

1. Human-Centered Design Toolkit (IDEO); <https://www.ideo.com/post/design-kit>
2. Design Thinking Boot Camp Bootleg(Stanford D-School); <https://dschool.stanford.edu/resources/the-bootcamp-bootleg>
3. Collective Action Toolkit (frogdesign); https://www.frogdesign.com/wpcontent/uploads/2016/03/CAT_2.0_English.pdf
4. Design Thinking for Educators (IDEO); <https://designthinkingforeducators.com/>

1901CHX51	ENGINEERING CHEMISTRY LAB	L	T	P	C
		0	0	2	1
<p>Aim of the course: Engineering Chemistry laboratory course is designed to provide basic chemistry and its application to the first year engineering students. The course includes the study of applications of water quality chemistry, identification of acidic and alkaline nature of water, molecular weight determination and explaining the principles behind each experiments.</p>					
<p>List of Practical Experiments</p> <ol style="list-style-type: none"> 1. Determination of total, temporary & permanent hardness of water by EDTA method 2. Determination of strength of given hydrochloric acid using pH meter 3. Estimation of iron content of the given solution using potentiometer 4. Estimation of sodium present in water using flame photometer 5. Corrosion experiment – weight loss method 6. Determination of molecular weight of a polymer by viscometry method 7. Conductometric titration of strong acid Vs strong Base 8. Estimation of dissolved oxygen in a water sample/sewage by Winklers method. 9. Comparison of alkalinities of the given water samples 10. Determination of concentration of unknown colored solution using spectrophotometer 11. Determination of percentage of copper in alloy 12. Determination of ferrous iron in cement by Spectrophotometry method 13. Adsorption of acetic acid on charcoal 14. Determination the flash point and fire point of a given oil using Pensky martine closed cup apparatus 15. Determination the calorific value of solid fuels 16. Determination the structural of the compound using chemo software. 					
<p>COURSE OUTCOMES</p> <p>After completion of the course, the student will be able to</p> <p>CO1: Measure the hardness and alkalinity of given water sample</p> <p>CO2: Find the amount and percentage of iron in unknown sample using EMF and photometric methods</p> <p>CO3: Determine the amount of strong acid present in the given sample using PH metric and conductometric methods</p> <p>CO4: Determine the amount of dissolved oxygen and heavy metal present in the given sample</p> <p>CO5: Determine the molecular weight of the given polymer</p>					
<p>TEXT BOOKS:</p> <ol style="list-style-type: none"> 1. Experimental organic chemistry, Daniel R. Palleros, John Wiley & Sons, Inc., New Yor (2001) 2. “Engineering Chemistry”, Jain & Jain, 15th edition, Dhanpat Rai Publishing company, New Delhi. 3. Vogel’s Textbook of practical organic chemistry, Furniss B.S. Hannaford A.J, Smith P.W.G and Tatchel A.R LBS Singapore (1994). 4. LBS Singapore (1994). Kolthoff I.M., Sandell E.B. et al Mcmillan, Madras 1980. 					

1901GE253	BASIC WORKSHOP AND MANUFACTURING PRACTICES LAB (Common to Civil, EEE and MECH.)	L	T	P	C
		0	0	2	1
List of Experiments					
1. Forming of simple object in sheet metal using suitable tools.(Example: Dust Pan, Rectangular tray and Cone making)					
2. Prepare V (or) Half round (or) Square (or) Dovetail joint from the given mild Steel flat.					
3. Fabrication of a simple component using thin and thick plates using arc welding. (Example: Butt , Lap and T - Joints)					
4. Making a simple component using carpentry power tools.(Example: Cross Lap, T-Lap and Dove tail joints)					
5. Construct a household pipe line connections using pipes, Tee joint, four way joint, elbow, union, bend, Gate valve and Taps.					

TOTAL: 30 Hours

REFERENCES: Lab manual

1901GEX52

COMPUTER PROGRAMMING LAB

L T P C

0 0 2 1

(Common for all B.E./B.Tech. Programme)

List of Experiments:

1. Working with word and style sheets
2. Write a C program to implement basic concepts
3. Write a C program to implement Decision Making and Branching statements
4. Write a C program to implement looping statements
5. Write a C program to implement Arrays
6. Write a C program to implement Strings
7. Write a C program to implement pointers
8. Write a C program to implement Structures
9. Write a C program to work with files in C

References:

Total: 45 Hours

1. Paul Deitel and Harvey Deitel, —C How to Program, Seventh edition, Pearson Publication
2. Juneja, B. L and Anita Seth, —Programming in C, CENGAGE Learning India pvt. Ltd., 2011
3. Pradip Dey, Manas Ghosh, —Fundamentals of Computing and Programming in C, First Edition, Oxford University Press, 2009.
4. Anita Goel and Ajay Mittal, —Computer Fundamentals and Programming in C, Dorling Kindersley (India) Pvt. Ltd., Pearson Education in South Asia, 2011.
5. Byron S. Gottfried, "Schaum's Outline of Theory and Problems of Programming with C", McGraw- Hill Education, 1996.

1901HSX51

COMMUNICATION SKILLS LAB
(Common to all B.E./B.Tech. Programme)

L	T	P	C
0	0	2	1

List of Experiments:

1. Activities on Fundamentals of Listening and Inter-personal Communication (6)

Listening to conversation, listening to technical presentation- listening to online video conferencing ,interviews and webinars -starting a conversation - responding appropriately and relevantly - using appropriate body language - Role Play in different situations & Discourse Skills- using visuals.

2. Activities on Reading Comprehension (6)

General Vs Local comprehension- reading for facts- guessing meanings from context- Scanning- skimming and inferring meaning- critical reading & effective googling- TOFEL,IELTS-reading online journals.

3. Activities on Writing Skills (6)

Structure and presentation of different types of writing - letter writing - Resume writing-e-correspondence - Proposal writing - Technical report writing - Portfolio writing - planning for writing - improving one's writing.

4. Activities on Presentation Skills (6)

Oral presentations (individual and group) through JAM sessions – presentation on online platform (webinars, online meeting) - seminars -PPTs and written presentations through posters- projects- report- e-mails- assignments etc.- creative and critical thinking.

5. Activities on Soft Skills (6)

Dynamics of group discussion, intervention, summarizing, modulation of voice, body language, relevance, fluency and organization of ideas and rubrics for evaluation-Concept and process, pre- interview planning, opening strategies, answering strategies, interview through tele-conference & video-conferencing and Mock Interviews-Time management-stress management –paralinguistic features- Multiple intelligences – emotional intelligence – spiritual quotient (ethics) – intercultural communication – creative and critical.

Total: 30 Hours

References:

1. Raman, Meenakshi and Sangeetha Sharma, “Technical Communication: Principles and Practice”, Oxford University Press, New Delhi, 2011.
 2. Sudha Rani, D , “Advanced Communication Skills Laboratory Manual” , Pearson Education 2011.
 3. Paul V. Anderson ,“Technical Communication”,. Cengage Learning pvt. Ltd. New Delhi, 2007.
 4. “English Vocabulary in Use series”, Cambridge University Press 2008.
 5. “Management Shapers Series” ,Universities Press (India) Pvt Ltd., Himayatnagar, Hyderabad 2008.
 6. Rizvi and Ashraf M., “Effective Technical Communication”, Tata McGrawHill, New Delhi, 2005.
- Jones, D, “The Pronunciation of English”, CUP, . Cambridge,2002.

1901GE252

ENGINEERING INTELLIGENCE II

L T P C
0 0 2 1

Prerequisite: Engineering Intelligence - I

MODULE I VOCABULARY BUILDING

6 Hours

Parts of Grammar- SVA- Art of Writing- word building activities

MODULE II COMMUNICATION WORKSHOP

6 Hours

Story Telling- Newspaper Reading-Extempore.

MODULE III INTERPERSONAL SKILLS

6 Hours

Personality Development - Creativity and innovation –Critical Thinking and Problem Solving – Work Ethics-Technical Skill Vs Interpersonal Skills

MODULE IV LEADERSHIP & EMPLOYABILITY SKILLS

6 Hours

Levels of Leadership-Making of leader-Types of leadership-Transactions Vs Transformational Leadership – Exercises - Industry Expectations & Career Opportunities- Recruitment patterns.

MODULE V RESUME BUILDING

6 Hours

Importance of Resume- Resume Preparation - introducing oneself

TOTAL: 30 HOURS

Course Outcomes:

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

CO1: Understand various vocabulary building activities

CO2: Use various communication skill workshop for reading and writing.

CO3: Apply interpersonal skill to motivate creating and innovating skills

CO4: Apply various leadership and employability skill to get career opportunities

CO5: Prepare resume with necessary components

REFERENCES:

1. Barun K. Mitra; (2011), “Personality Development & Soft Skills”, First Edition; Oxfor Publishers.
2. Raymond Murphy, Essential English Grammar in Use, Cambridge University press, New Delhi, Third Edition , 2007.
3. Arun Sharma and Meenakshi Upadhyav, How to Prepare for Verbal Ability and Reading Comprehension for CAT, McGrawHill Publication, Seventh Edition 2017.