SRI VASAVI ENGINEERING COLLEGE

(AUTONOMOUS)

(Sponsored by Sri Vasavi Educational Society)

(Approved by AICTE, New Delhi &Recognized by UGC under section 2(f) & 12(B))

(Permanently affiliated to JNTUK, Kakinada, Accredited by NBA and NAAC with 'A' Grade)

Pedatadepalli, **TADEPALLIGUDEM–534 101.**W.G.Dist**. (A.P)**

V20 REGULATION COURSE OUTCOMES

DEPARTMENT OF BASIC SCIENCES AND HUMANITIES

Course Outcomes of B.Tech(CSE) & B.Tech(CST) -V20 Regulation

Semester	Course Code & Name	Course Outcomes
I Semester	V20MAT01 **Linear Algebra and Differential Equations**	**After Successful completion of the Course, the student will be able to:** 1. Apply matrix technique to solve system of linear equations 2. Find Eigen values and Eigen vectors 3. Solve the ordinary differential equations of first order & first degree 4. Solve the linear differential equations of higher order with constantcoefficients. 5. Find maxima and minima of functions of two variables.
I Semester	V20CHT01 **Engineering Chemistry**	**After Successful completion of the Course, the student will be able to:** 1. Solve boiler troubles originated due to poor water quality and suggest suitable water treatment methods.. 2. Choose plastics and rubbers for engineering applications. 3. Associate concepts of Electro Chemistry in designing electrochemical energy systems. 4. Assess the quality of fuels. 5. Apply corrosion principles for protection of metallic structures.
I Semester	V20ENT01 **English for Professional Enhancement**	**After Successful completion of the Course, the student will be able to:** 1. Identify the central theme of the text, use cohesive items for coherence in a paragraph, recognize nouns and basic sentence structures. 2. Restate the central idea of the letter by using appropriate vocabulary. Gain mastery over articles and prepositions. 3. Find the success formula after reading the text in detail to answer questions. Use appropriate tense and concord, find suitable vocabulary and format to draft letters and e-mails. 4. Employ reading skills to comprehend the given biography. Interpret visual information .Use quantifiers 5. appropriately and get acquainted with formal drafting 6. Appraise the delivered lecture and text, recognize the contextual vocabulary and prepare poster presentations.
I Semester	V20MEL02 **Engineering Workshop**	**After Successful completion of the Course, the student will be able to:** 1. Prepare different models in the carpentry trade and understand basic concepts of carpentry. 2. Develop various basic prototypes in the trade of Tin smithy and understand basic concepts of Tin smithy. 3. Prepare various basic prototypes in the trade of fitting and understand basicconcepts of fitting. 4. Prepare different models in the Black smithy and understand basic concepts of Black smithy 5. Develop various basic House Wiring techniques, Electrical wiring circuits. 6. Develop various basic prototype models in Welding and Foundry shop.

Semester	Course Code & Name	Course Outcomes
I Semester	V20CST01 **Programming in 'C' for problem Solving**	**After Successful completion of the Course, the student will be able to:** 1. Describe various problem solving strategies such as Algorithms and Flowcharts. 2. Develop various programming constructs using Control Structures. 3. Construct Programs using modular programming approach. 4. Illustrate the usage of Arrays, String and pointers. 5. Construct Programs using Structures, Unions and Files.
I Semester	V20ENL01 **Hone your Communication Skills, Lab-I**	**After Successful completion of the Course, the student will be able to:** 1. Identify suitable expressions to greet people, say good bye to them, introduce one another, listen to consonants. 2. Select suitable words to invite someone, accept or decline invitations, listen to…, identify and produce vowel sounds. 3. Choose suitable expressions to seek/refuse permissions, to apologize and listen to word accent. 4. Find apt expressions to give suggestions, express opinions, use appropriate words to give commands and requests. 5. Practise listening to dialogues, role-plays using common vocabulary used in dialogues.
I Semester	V20CHL01 **Engineering Chemistry Lab**	**After Successful completion of the Course, the student will be able to:** 1. Analyse quantitatively a variety of samples using volumetric methods and instrumental methods. 2. Apply volumetric and instrumental methods for the determination of water quality parameters namely Alkalinity, Hardness and pH. 3. Prepare polymeric materials and analyse the given coal samples joint.
I Semester	V20CSL01 **Programming Lab in 'C' for problem Solving**	**After Successful completion of the Course, the student will be able to:** 1. Demonstrate problem solving techniques. 2. Construct Programs using the concepts of Arrays, Strings and Pointers 3. Apply the concepts of Functions, Structures and Unions. 4. Use various file processing operations to develop real-time applications
II Semester	V20MAT02 **Numerical Methods and Vector Calculus**	**After Successful completion of the Course, the student will be able to:** 1. Compute approximate roots of algebraic and transcendental equations and inter polating polynomial for the given data 2. Solve ordinary differential equations with initial conditions using numerical methods 3. Find multiple integrals and improper integrals 4. Calculate gradient of a scalar function, divergence and curl of a vector function 5. Apply the knowledge of vector integral concepts to find characteristics of vector fields
II Semester	V20PHT01 **Engineering Physics**	**After Successful completion of the Course, the student will be able to:** 1. Associate the basic principles of structure of materials, crystallography and X-ray diffraction. 2. Prepare the students to the basic concepts of Lasers and their applications in optical fiber communication link 3. Indicate the applications of sound waves in various fields 4. Interpret wave and particle behavior of matter and relate it to electron theory of metals 5. Examine the advanced concepts of engineering materials like Semiconductors, Superconductors and Dielectrics
II Semester	V20ECT01 **Switching Theory and Logic Design**	**After Successful completion of the Course, the student will be able to:** 1. Explain the different types of number Systems, number conversions, codes and logic Gates. 2. Apply the concepts of Boolean algebra and use the knowledge of K-maps and tabular method for minimization of Boolean expressions.. 3. Construct the higher order modules from their lower order structures of various M combinational logic circuits. 4. Explain the concept of various flip flops. 5. Develop various sequential circuits like registers, counters and various Finite State Machine Models

Semester	Course Code & Name	Course Outcomes
II Semester	V20CST02 **Python Programming**	**After Successful completion of the Course, the student will be able to:** 1. Illustrate basic concepts of Python Programming 2. Describe control structures in python. 3. Construct python programs using structured data types. . 4. Demonstrate functions and packages . 5. Develop programs on Files, Exception handling and OOPs Concepts.
II Semester	V20MEL01 **Engineering Graphics**	**After Successful completion of the Course, the student will be able to:** 1. Understand the basic commands in CAD Software and draw the conic sections. 2. Construct different types of scales and special curves. 3. Draw the projections of the points and lines. 4. Develop the projections of planes and surfaces of regular solids. 5. Draw the Isometric projections and conversion of views
II Semester	V18MET01 **Engineering Graphics**	**After Successful completion of the Course, the student will be able to:** 1. Demonstrate the usage of drawing instruments and sketch conic sections 2. Construct different types of scales and special curves 3. Draw the projections of the points, lines and planes with reference to the principal planes. 4. Develop the projections of solids and its surfaces. 5. Draw the Isometric projections of solids. 6. Convert the isometric view to orthographic view and vice versa.
II Semester	V20PHL01 **Engineering Physics Lab**	**After Successful completion of the Course, the student will be able to:** 1. Analyze the physical principle involved in the various instruments; also relate the principle to new application. 2. Demonstrate the various experiments in the areas of optics, mechanics and Electronics in all branches of engineering. 3. Think innovatively and also apply the creative skills that are essential for engineering.
II Semester	V20CSL02 **Python Programming Lab**	**After Successful completion of the Course, the student will be able to:** 1. Demonstrate Basic Python Programs. 2. Construct control structures in python 3. Demonstrate functions and packages. **4.** Construct python programs using structured data types**.** 5. Demonstrate Text Files and exception handling.
II Semester	V20ENL02 **Hone your Communication Skills Lab-II**	**After Successful completion of the Course, the student will be able to:** 1. Collect suitable expressions and vocabulary to participate in JAM. Identify root words. 2. Prepare, face and perform well in interviews with required etiquette. 3. Use appropriate telephone etiquette to succeed in telephonic interviews 4. Show team spirit and communicative skills in group discussion. 5. Arrange ideas and prepare to give presentations in a professional manner. 6. Debate rationally and cogently while putting forth the ideas.
II Semester	V20CHT02 **Environmental Studies**	**After Successful completion of the Course, the student will be able to:** 1. Recognize the importance of environment and eco system services. 2. Identify the characteristic features, uses and impact of overutilization of natural resource 3. Explain biodiversity, biodiversity services and conservation of biodiversity 4. Report the causes and impacts of various pollutions. 5. Illustrate social and global environmental issues; sustainable development practices.

Course Outcomes of B.Tech(ECE) & B.Tech(ECT) -V20 Regulation

Semester	Course Code & Name	Course Outcomes
I Semester	V20MAT01 **Linear Algebra and Differential Equations**	**After Successful completion of the Course, the student will be able to:** 1.Apply matrix technique to solve system of linear equations 2.Find Eigen values and Eigen vectors 3.Solve the ordinary differential equations of first order & first degree 4.Solve the linear differential equations of higher order with constantcoefficients. 5.Find maxima and minima of functions of two variables.
I Semester	V20PHT01 **Engineerin gPhysics**	**After Successful completion of the Course, the student will be able to:** 1. Associate the basic principles of structure of materials, crystallography and X-ray diffraction. 2.Prepare the students to the basic concepts of Lasers and their applications in opticalfiber communication link 3. Indicate the applications of sound waves in various fields 4. Interpret wave and particle behavior of matter and relate it to electron theory of metals 5Examine the advanced concepts ofengineering materials like Semiconductors, Superconductors and Dielectrics
I Semester	V20ENT01 **English for Professional Enhancement**	**After Successful completion of the Course, the student will be able to:** 1.Identify the central theme of the text, use cohesive items for coherence in a paragraph, recognize nouns and basic sentence structures. 2.Restate the central idea of the letter by using appropriate vocabulary. Gain mastery over articles and prepositions. 3.Find the success formula after reading the text in detail to answer questions. Use appropriate tense and concord, find suitable vocabulary and format to draft letters and e-mails. 4.Employ reading skills to comprehend the given biography. Interpret visual information .Use quantifiers 5.appropriately and get acquainted with formal drafting 6.Appraise the delivered lecture and text, recognize the contextual vocabulary and prepare poster presentations.
I Semester	V20MEL01 **Engineerin g Graphics**	**After Successful completion of the Course, the student will be able to:** 1.Understand the basic commands in CAD Software and draw the conic sections. 2.Construct different types of scales and special curves. 3.Draw the projections of the points and lines. 4.Develop the projections of planes and surfaces of regular solids. 5.Draw the Isometric projections and conversion of views
I Semester	V20ENL01 **Hone your Communicatio nSkills, Lab-I**	**After Successful completion of the Course, the student will be able to:** 1.Identify suitable expressions to greet people, say good bye to them, introduce one another, listen to consonants. 2.Select suitable words to invite someone, accept or decline invitations, listen to…, identify and produce vowel sounds. 3.Choose suitable expressions to seek/refuse permissions, to apologize and listen toword accent. 4.Find apt expressions to give suggestions, express opinions, use appropriate wordsto give commands and requests. 5..Practise listening to dialogues, role-plays using common vocabulary used in dialogues.

I Semester	V20PHL01 **Engineering Physics Lab**	**After Successful completion of the Course, the student will be able to:** 1.Analyze the physical principle involved in the various instruments; also relate the principle to new application. 2. Demonstrate the various experiments in the areas of optics, mechanics and Electronics in all branches of engineering. 3.Think innovatively and also apply the creative skills that are essential for engineering.
I Semester	V20CHT02 **Environmental Studies**	**After Successful completion of the Course, the student will be able to:** 1.Recognize the importance of environment and eco system services. 2.Identify the characteristic features, uses and impact of overutilization of natural resource 3.Explain biodiversity, biodiversity services and conservation of biodiversity 4.Report the causes and impacts of various pollutions. 5.Illustrate social and global environmental issues; sustainable development practices.
IISemester	V20MAT02 **Numerical Methods and Vector Calculus**	**After Successful completion of the Course, the student will be able to:** 1.Compute approximate roots of algebraic and transcendental equations and inter polating polynomial for the given data 2.Solve ordinary differential equations with initial conditions using numericalmethods 3.Find multiple integrals and improper integrals 4.Calculate gradient of a scalar function, divergence and curl of a vector function 5.Apply the knowledge of vector integral concepts to find characteristics of vectorfields
IISemester	V20CHT01 **Engineering Chemistry**	**After Successful completion of the Course, the student will be able to:** 1.Solve boiler troubles originated due to poor water quality and suggest suitable water treatment methods.. 2.Choose plastics and rubbers for engineering applications. 3.Associate concepts of Electro Chemistry in designing electrochemical energy systems. 4.Assess the quality of fuels. 5.Apply corrosion principles for protection of metallic structures.
IISemester	V20CST01 **Programming 'C' for problem Solving**	**After Successful completion of the Course, the student will be able to:** 1.Describe various problem solving strategies such as Algorithms and Flowcharts. 2.Develop various programming constructs using Control Structures. 3.Construct Programs using modular programming approach. 4.Illustrate the usage of Arrays, String and pointers. 5.Construct Programs using Structures, Unions and Files.

IISemester	V20MEL02 **Engineering Workshop**	**After Successful completion of the Course, the student will be able to:** 1.Prepare different models in the carpentry trade and understand basic concepts of carpentry. 2.Develop various basic prototypes in the trade of Tin smithy and understand basic concepts of Tin smithy. 3.Prepare various basic prototypes in the trade of fitting and understand basicconceptsof fitting. 4.Prepare different models in the Black smithy and understand basic concepts of Black smithy 5.Develop various basic House Wiring techniques, Electrical wiring circuits. 6.Develop various basic prototype models in Welding and Foundry shop.
IISemester	V20ECT01 **Switching Theory an dLogic Design**	**After Successful completion of the Course, the student will be able to:** 1.Explain the different types of number Systems, number conversions, codes andlogic Gates. 2.Apply the concepts of Boolean algebra and use the knowledgeofK-mapsand tabular method for minimization of Boolean expressions.. 3.Construct the higher order modules from their lower order structures of various M combination allogic circuits. 4.Explain the concept of various flip flops. 5.Develop various sequential circuits like registers, counters and various Finite State Machine Models
IISemester	V20CSL01 **Programmin gLab in 'C' forproblem Solving**	**After Successful completion of the Course, the student will be able to:** 1.Demonstrate problem solving techniques. 2.Construct Programs using the concepts of Arrays, Strings and Pointers 3.Apply the concepts of Functions, Structures and Unions. 4.Use various file processing operations to develop real-time applications
IISemester	V20CHL01 **Engineering Chemistry Lab**	**After Successful completion of the Course, the student will be able to:** 1.Analyse quantitatively a variety of samples using volumetric methods and instrumental methods. 2.Apply volumetric and instrumental methods for the determination of water quality parameters namely Alkalinity, Hardness and pH. 3.Prepare polymeric materials and analyse the given coal samples joint.
IISemester	V20ENL02 **Hone your Communicatio nSkills Lab-II**	**After Successful completion of the Course, the student will be able to:** 1.Collect suitable expressions and vocabulary to participate in JAM. Identify rootwords. 2.Prepare, face and perform well in interviews with required etiquette. 3.Use appropriate telephone etiquette to succeed in telephonic interviews 4.Show team spirit and communicative skills in group discussion. 5.Arrange ideas and prepare to give presentations in a professional manner. 6.Debate rationally and cogently while putting forth the ideas.

Course Outcomes of B.Tech(EEE)

Semester	Course Code& Name	Course Outcomes
I Semester	V20MAT01 **Linear Algebra and Differential Equations**	**After Successful completion of the Course, the student will be able to:** 1.Apply matrix technique to solve system of linear equations 2.Find Eigen values and Eigen vectors 3.Solve the ordinary differential equations of first order & first degree 4.Solve the linear differential equations of higher order with constantcoefficients. 5.Find maxima and minima of functions of two variables.
I Semester	V20CHT01 **Engineering Chemistry**	**After Successful completion of the Course, the student will be able to:** 1.Solve boiler troubles originated due to poor water quality and suggest suitable watertreatment methods.. 2.Choose plastics and rubbers for engineering applications. 3.Associate concepts of Electro Chemistry in designing electrochemical energysystems. 4.Assess the quality of fuels. 5.Apply corrosion principles for protection of metallic structures.
I Semester	V20ENT01 **English for Professional Enhancement**	**After Successful completion of the Course, the student will be able to:** 1 .Identify the central theme of the text, use cohesive items for coherence in a paragraph, recognize nouns and basic sentence structures. 2. Restate the central idea of the letter by using appropriate vocabulary. Gain mastery overarticles and prepositions. 3. Find the success formula after reading the text in detail to answer questions. Use appropriate tense and concord, find suitable vocabulary and format to draft letters and e-mails. 4. Employ reading skills to comprehend the given biography. Interpret visual information .Use quantifiers 5. appropriately and get acquainted with formal drafting 6. Appraise the delivered lecture and text, recognize the contextual vocabulary and prepareposter presentations.
I Semester	V20MEL02 **Engineering Workshop**	**After Successful completion of the Course, the student will be able to:** 1. Prepare different models in the carpentry trade and understand basic concepts ofcarpentry. 2. Develop various basic prototypes in the trade of Tin smithy and understand basicconcepts of Tin smithy. 3. Prepare various basic prototypes in the trade of fitting and understand basicconceptsof fitting. 4. Prepare different models in the Black smithy and understand basic concepts of Black smithy 5. Develop various basic House Wiring techniques, Electrical wiring circuits. 6. Develop various basic prototype models in Welding and Foundry shop.
I Semester	V20CST01 **Programming in 'C' for problem Solving**	After Successful completion of the Course, the student will be able to: 1.Describe various problem solving strategies such as Algorithms and Flowcharts. 2.Develop various programming constructs using Control Structures. 3. Construct Programs using modular programming approach. 4. Illustrate the usage of Arrays, String and pointers. 5. Construct Programs using Structures, Unions and Files.

I Semester	**V20ENL01** **Hone your Communication Skills, Lab-I**	After Successful completion of the Course, the student will be able to: 1. Identify suitable expressions to greet people, say good bye to them, introduce one another, listen to consonants. 2. Select suitable words to invite someone, accept or decline invitations, listen to…, identify and produce vowel sounds. 3. Choose suitable expressions to seek/refuse permissions, to apologize and listen to word accent. 4. Find apt expressions to give suggestions, express opinions, use appropriate words to give commands and requests. 5. Practise listening to dialogues, role-plays using common vocabulary used in dialogues.
I Semester	**V20CHL01** **Engineering Chemistry Lab**	After Successful completion of the Course, the student will be able to: 1. Analyse quantitatively a variety of samples using volumetric methods and instrumental methods. 2. Apply volumetric and instrumental methods for the determination of water quality parameters namely Alkalinity, Hardness and pH. 3. Prepare polymeric materials and analyse the given coal samples joint.
I Semester	**V20CSL01** **Programming Lab in 'C' for problem Solving**	After Successful completion of the Course, the student will be able to: 1. Demonstrate problem solving techniques. 2. Construct Programs using the concepts of Arrays, Strings and Pointers 3. Apply the concepts of Functions, Structures and Unions. 4. Use various file processing operations to develop real-time applications
II Semester	**V20MAT02** **Numerical Methods and Vector Calculus**	After Successful completion of the Course, the student will be able to: 1. Compute approximate roots of algebraic and transcendental equations and inter polating polynomial for the given data 2.Solve ordinary differential equations with initial conditions using numerical methods 3. Find multiple integrals and improper integrals 4. Calculate gradient of a scalar function, divergence and curl of a vector function 5. Apply the knowledge of vector integral concepts to find characteristics of vector fields
II Semester	**V20PHT01** **Engineering Physics**	After Successful completion of the Course, the student will be able to: 1. Associate the basic principles of structure of materials, crystallography and X-ray diffraction. 2.Prepare the students to the basic concepts of Lasers and their applications in optical fiber communication link 3. Indicate the applications of sound waves in various fields 4. Interpret wave and particle behavior of matter and relate it to electron theory of metals 5.Examine the advanced concepts ofengineering materials like Semiconductors, Superconductors and Dielectrics

II Semester	**V20ECT01** **Switching Theory and Logic Design**	After Successful completion of the Course, the student will be able to: 1. Explain the different types of number Systems, number conversions, codes and logic Gates. 2. Apply the concepts of Boolean algebra and use the knowledge of K-maps and tabular method for minimization of Boolean expressions.. 3. Construct the higher order modules from their lower order structures of various M combinational logic circuits. 4.Explain the concept of various flip flops. 5. Develop various sequential circuits like registers, counters and various Finite State Machine Models
II SEMESTER	**V20EET03** **Electrical Circuit Analysis-I**	**After Successful completion of the Course, the student will be able to:** 1. Apply various network reduction techniques for solving electricalDC circuits. 2. Calculate different parameters of single phase alternatingquantities 3. Understand the concepts of different powers and apply networkreduction techniques for solving electrical AC circuits. 4. Determine various parameters in series and parallel resonantcircuits. 5. Apply the network theorems for solving electrical DC and ACcircuits
II SEMESTER	**V20MEL01** **Engineering Graphics**	**After Successful completion of the Course, the student will be able to:** 1.Understand the basic commands in CAD Software and draw the conic sections. 2.Construct different types of scales and special curves. 3.Draw the projections of the points and lines. 4.Develop the projections of planes and surfaces of regular solids. 5.Draw the Isometric projections and conversion of views
II SEMESTER	**V20EEL03** **Electrical Engineering Workshop**	**After Successful completion of the Course, the student will be able to:** 1. Design different wiring circuits 2. Use electrical parameter measuring instruments 3. Construct the circuits on PCB board 4. Test the domestic appliances 5. Identify the parts of the Machine
II SEMESTER	**V20PHL01** **Engineering Physics Lab**	**After Successful completion of the Course, the student will be able to:** 1.Analyze the physical principle involved in the various instruments; also relate the principle to new application. 2. Demonstrate the various experiments in the areas of optics, mechanics andElectronics in all branches of engineering. 3.Think innovatively and also apply the creative skills that are essential for engineering.

II SEMESTER	**V20ENL02** **Hone your Communication Skills Lab-II**	**After Successful completion of the Course, the student will be able to:** 1.Collect suitable expressions and vocabulary to participate in JAM. Identify root words. 2.Prepare, face and perform well in interviews with required etiquette. 3.Use appropriate telephone etiquette to succeed in telephonic interviews 4.Show team spirit and communicative skills in group discussion. 5.Arrange ideas and prepare to give presentations in a professional manner. 6.Debate rationally and cogently while putting forth the ideas.
II SEMESTER	**V20CHT02** **Environmental Studies**	**After Successful completion of the Course, the student will be able to:** 1.Recognize the importance of environment and eco system services. 2.Identify the characteristic features, uses and impact of overutilization of natural resource 3.Explain biodiversity, biodiversity services and conservation of biodiversity 4.Report the causes and impacts of various pollutions. 5.Illustrate social and global environmental issues; sustainable development practices.

Course Outcomes of B.Tech(CE&ME)

Semester	Course Code & Name	Course Outcomes
I Semester	V20MAT01 **Linear Algebra and Differential Equations**	**After Successful completion of the Course, the student will be able to:** 1Apply matrix technique to solve system of linear equations 2Find Eigen values and Eigen vectors 3.Solve the ordinary differential equations of first order & first degree 4.Solve the linear differential equations of higher order with constantcoefficients. 5.Find maxima and minima of functions of two variables.
I Semester	V20PHT01 **Engineerin gPhysics**	**After Successful completion of the Course, the student will be able to:** 1.Associate the basic principles of structure of materials, crystallography and X-ray diffraction. 2Prepare the students to the basic concepts of Lasers and their applications in opticalfiber communication link 3Indicate the applications of sound waves in various fields 4Interpret wave and particle behavior of matter and relate it to electron theory ofmetals 5Examine the advanced concepts ofengineering materials like Semiconductors, Superconductors and Dielectrics
I Semester	V20ENT01 **English for Professional Enhancement**	**After Successful completion of the Course, the student will be able to:** 1.Identify the central theme of the text, use cohesive items for coherence in a paragraph, recognize nouns and basic sentence structures. 2.Restate the central idea of the letter by using appropriate vocabulary. Gain mastery over articles and prepositions. 3.Find the success formula after reading the text in detail to answer questions. Use appropriate tense and concord, find suitable vocabulary and format to draft letters and e-mails. 4.Employ reading skills to comprehend the given biography. Interpret visual information .Use quantifiers 5.appropriately and get acquainted with formal drafting 6.Appraise the delivered lecture and text, recognize the contextual vocabulary and prepare poster presentations.
I Semester	V20MEL01 **Engineerin g Graphics**	**After Successful completion of the Course, the student will be able to:** 1.Understand the basic commands in CAD Software and draw the conic sections. 2.Construct different types of scales and special curves. 3.Draw the projections of the points and lines. 4.Develop the projections of planes and surfaces of regular solids. 5.Draw the Isometric projections and conversion of views
I Semester	V20ENL01 **Hone your Communicatio nSkills, Lab-I**	**After Successful completion of the Course, the student will be able to:** 1.Identify suitable expressions to greet people, say good bye to them, introduce one another, listen to consonants. 2.Select suitable words to invite someone, accept or decline invitations, listen to…, identify and produce vowel sounds. 3.Choose suitable expressions to seek/refuse permissions, to apologize and listen toword accent. 4.Find apt expressions to give suggestions, express opinions, use appropriate wordsto give commands and requests. 5..Practise listening to dialogues, role-plays using common vocabulary used in dialogues.

I Semester	V20PHL01 **Engineering Physics Lab**	**After Successful completion of the Course, the student will be able to:** 1.Analyze the physical principle involved in the various instruments; also relate the principle to new application. 2. Demonstrate the various experiments in the areas of optics, mechanics and Electronics in all branches of engineering. 3.Think innovatively and also apply the creative skills that are essential for engineering.
I Semester	V20CHT02 **Environmental Studies**	**After Successful completion of the Course, the student will be able to:** 1.Recognize the importance of environment and eco system services. 2.Identify the characteristic features, uses and impact of overutilization of natural resource 3.Explain biodiversity, biodiversity services and conservation of biodiversity 4.Report the causes and impacts of various pollutions. 5.Illustrate social and global environmental issues; sustainable development practices.
I Semester	V20CST01 **Programming in 'C' for problem Solving**	**After Successful completion of the Course, the student will be able to:** 1.Describe various problem solving strategies such as Algorithms and Flowcharts. 2.Develop various programming constructs using Control Structures. 3.Construct Programs using modular programming approach. 4.Illustrate the usage of Arrays, String and pointers. 5.Construct Programs using Structures, Unions and Files.
IISemester	V20MAT02 **Numerical Methods and Vector Calculus**	**After Successful completion of the Course, the student will be able to:** 1.Compute approximate roots of algebraic and transcendental equations and inter polating polynomial for the given data 2.Solve ordinary differential equations with initial conditions using numericalmethods 3.Find multiple integrals and improper integrals 4.Calculate gradient of a scalar function, divergence and curl of a vector function 5.Apply the knowledge of vector integral concepts to find characteristics of vectorfields
ISemester	V20CHT01 **Engineering Chemistry**	**After Successful completion of the Course, the student will be able to:** 1.Solve boiler troubles originated due to poor water quality and suggest suitable water treatment methods.. 2.Choose plastics and rubbers for engineering applications. 3.Associate concepts of Electro Chemistry in designing electrochemical energy systems. 4.Assess the quality of fuels. 5.Apply corrosion principles for protection of metallic structures.

IISemester	V20EET02 **Basic Electrical &Electronics Engineering**	1. Understand and compute electrical quantities in DC excited Circuits. 2. Understand and compute electrical quantities in AC Excited circuits. 3.Studythe working principles of DCmachines. 4. Study the working principles of transformers. 5. Understand construction details and explain the working Principles of AC machines.
IISemester	V20MEL02 **Engineering Workshop**	**After Successful completion of the Course, the student will be able to:** 1.Prepare different models in the carpentry trade and understand basic concepts of carpentry. 2.Develop various basic prototypes in the trade of Tin smithy and understand basic concepts of Tin smithy. 3.Prepare various basic prototypes in the trade of fitting and understand basicconceptsof fitting. 4.Prepare different models in the Black smithy and understand basic concepts of Black smithy 5.Develop various basic House Wiring techniques, Electrical wiring circuits. 6.Develop various basic prototype models in Welding and Foundry shop.
IISemester	V20EEL02 **Basic Electrical &Electronics Engineering lab**	1.Determinetheloadcurrentsbyapplyingvariouslawsand theorems 2.Analyzethesteadystateperformanceofseriescircuits 3.Plot thespeedcontrolcharacteristicsofDCshunt motor 4.Findthelossesandefficiencyofatransformer 5.CalculatetheenergybillforDomesticloads
IISemester	V20CHL01 **Engineering Chemistry Lab**	**After Successful completion of the Course, the student will be able to:** 1.Analyse quantitatively a variety of samples using volumetric methods and instrumental methods. 2.Apply volumetric and instrumental methods for the determination of water quality parameters namely Alkalinity, Hardness and pH. 3.Prepare polymeric materials and analyse the given coal samples joint.
IISemester	V20ENL02 **Hone your Communicatio nSkills Lab-II**	**After Successful completion of the Course, the student will be able to:** 1.Collect suitable expressions and vocabulary to participate in JAM. Identify rootwords. 2.Prepare, face and perform well in interviews with required etiquette. 3.Use appropriate telephone etiquette to succeed in telephonic interviews 4.Show team spirit and communicative skills in group discussion. 5.Arrange ideas and prepare to give presentations in a professional manner. 6.Debate rationally and cogently while putting forth the ideas.

Course Outcomes of B.Tech(CAI&AIML)

Semester	Course Code & Name	Course Outcomes
I Semester	V20MAT01 **Linear Algebra and Differential Equations**	**After Successful completion of the Course, the student will be able to:** 1. Apply matrix technique to solve system of linear equations 2. Find Eigen values and Eigenvectors 3. Solve the ordinary differential equations of first order & first degree 4. Solve the linear differential equations of higher order with constant coefficients. 5. Find maxima and minima of functions of two variables.
I Semester	V20MAT09 **Descriptive Statistics**	**After Successful completion of the Course, the student will be able to:** 1. Discuss about statistical methods 2. Find measures of central tendency and dispersion for real data sets. 3. Find the correlation and regression 4. Apply method of least square to find a best fit curve to an experimental data 5. Find the probability using various rules(K3)
I Semester	V20ENT01 **English for Professional Enhancement**	**After Successful completion of the Course, the student will be able to:** 1. Identify the central theme of the text, use cohesive items for coherence in a paragraph, recognize nouns and basic sentence structures. 2. Restate the central idea of the letter by using appropriate vocabulary. Gain masteryoverarticlesand prepositions. 3. Find the success formula after reading the text in detail to answer questions. Useappropriate tense and concord, find suitable vocabulary and format to draft lettersande-mails. 4. Employ reading skills to comprehend the given biography. Interpret visual information .Use quantifiers 5. Appropriately and get acquainted with formal drafting 6. Appraise the delivered lecture and text, recognize the contextual vocabulary and prepare posterpresentations.
I Semester	V20AIL01 **ComputerEngineeringWorkshop**	**After Successful completion of the Course, the student will be able to:** **1.** Identify, assemble and update the components of a computer. **2.** Practiced is assembling and assembling components and execution of computer applications, services and systems. **3.** Make use of tools for converting pdf to word and vice versa. **4.** Develop presentation, documents and small applications using productivity tools such as word processor, presentation tools, spreadsheet, HTML, Latex**.**

I Semester	V20CST01 **Programming in 'C' for problem Solving**	**After Successful completion of the Course, the student will be able to:** 1. Describe various problem solving strategies such as Algorithms and Flow charts. 2. Develop various programming constructs using Control Structures. 3. Construct Programs using modular programming approach. 4. Illustrate the usage of Arrays, String and pointers. 5. Construct Programs using Structures, Unions and Files.
I Semester	V20ENL01 **Hone your Communication Skills, Lab-I**	**After Successful completion of the Course, the student will be able to:** 1. Identify suitable expressions to greet people, say good bye to them, introduce one another, listen to consonants. 2. Select suitable words to invite someone, acceptor decline invitations, listen to…,identify and produce vowel sounds. 3. Choose suitable expressions to seek/refuse permissions, to apologize and listen to word accent. 4. Find apt expressions to give suggestions, express opinions, use appropriate words to give commands and requests. 5. Practice listening to dialogues, role-plays using common vocabulary used in dialogues.
I Semester	V20AIL02 **Statistical Visualization using RLab**	**After Successful completion of the Course, the student will be able to:** 1. Employ math and simulation in R. 2. Demonstrate various types of data structures in R. 3. Apply appropriate control structures to solve a particular Programming problem. 4. Use R to graphically visualize data and results of statistical calculations.
I Semester	V20CSL01 **Programming Lab in 'C' for problem Solving**	**After Successful completion of the Course, the student will be able to:** 1. Demonstrate problem solving techniques. 2. Construct Programs using the concepts of Arrays, Strings and Pointers 3. Apply the concepts of Functions, Structures and Unions. 4. Use various file processing operations to develop real-time applications
II Semester	V20MAT10 **Integral Transformations and Vector Calculus**	**After Successful completion of the Course, the student will be able to:** 1. Find the Fourier series of periodic signals 2. Find the Fourier transforms of given function 3. Find multiple integrals and improper integrals 4. Calculate gradient of a scalar function, divergence and curl of a vector function 5. Apply the knowledge of vector integral concepts to find characteristics of vector fields
II Semester	V20CST02 **Python Programming**	**After Successful completion of the Course, the student will be able to:** 1. Illustrate basic concepts of Python Programming 2. Describe control structures in python. 3. Construct python programs using structure data types. . 4. Demonstrate functions and packages . 5. Develop programs on Files, Exception handling and OOPs Concepts.

II Semester	V20ECT01 **Switching Theory and Logic Design**	**After Successful completion of the Course, the student will be able to:** 1. Explain the different types of number Systems, number conversions, codes and logic Gates. 2. Apply the concepts of Boolean algebra and use the knowledge of K-maps and tabular method for minimization of Boolean expressions.. 3. Construct the higher order modules from their lower order structures of various M combinational logic circuits. 4. Explain the concept of various flip flops. 5. Develop various sequential circuits like registers, counters and various Finite State Machine Models
II Semester	V20CST04 **Data Structures**	**After Successful completion of the Course, the student will be able to:** 1. Illustrate the time and space complexities for searching and sorting algorithms. 2. Demonstrate linked lists and their applications. 3. Demonstrate linear data structure. . 4. Illustrate basic operations on binary trees. 5. Demonstrate Graphs and their applications.
II Semester	V20AIT01 **Introduction to Artificial Intelligence**	**After Successful completion of the Course, the student will be able to:** 1. Discuss the concepts of AI Foundation. 2. Illustrate the basics of Machine Learning. 3. Explain various Classification Techniques. 4. Illustrate the working of Recommendation System. 5. Describe the applications of AI and ML.
IISemester	V20CSL02 **Python Programming Lab**	**After Successful completion of the Course, the student will be able to:** 1. Demonstrate Basic Python Programs. 2. Construct control structures in python 3. Demonstrate functions and packages. **4.** Construct python programs using structured data types**.** 5. Demonstrate Text Files and exception handling.
IISemester	V20CSL04 **Data Structures Lab**	**After Successful completion of the Course, the student will be able to:** 1. Construct Programs on Sorting and Searching Techniques. 2. Illustrate various operations on Linked Lists. 3. Develop Programs on Stacks, Queues and their Applications. 4. Develop various operations on Trees and Graphs
IISemester	V20ENL02 **Hone your Communication Skills Lab-II**	**After Successful completion of the Course, the student will be able to:** 1. Collect suitable expressions and vocabulary to participate in JAM. Identify root words. 2. Prepare, face and perform well in interviews with required etiquette. 3. Use appropriate telephone etiquette to succeed in telephonic interviews 4. Show team spirit and communicative skills in group discussion. 5. Arrange ideas and prepare to give presentations in a professional manner. 6. Debate rationally and cogently while putting forth the ideas.

IISemester	V20CHT02 **Environmental Studies**	**After Successful completion of the Course, the student will be able to:** 1. Recognize the importance of environment and eco system services. 2. Identify the characteristic features, uses and impact of over utilization of natural resource 3. Explain biodiversity, biodiversity services and conservation of biodiversity 4. Report the causes and impacts of various pollutions. 5. Illustrate social and global environmental issues; sustainable development practices.