

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
	V20MAT01	After Successful completion of the Course, the student will be able to:1. Apply matrix technique to solve system of linear equations2. Find Eigen values and Eigen vectors
I Semester	Linear Algebra and Differential Equations	 Find Eigen values and Eigen vectors Solve the ordinary differential equations of first order & first degree Solve the linear differential equations of higher order with constantcoefficients. 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: Solve boiler troubles originated due to poor water quality and suggest suitable water treatment methods Choose plastics and rubbers for engineering applications. Associate concepts of Electro Chemistry in designing electrochemical energy systems. Assess the quality of fuels. Apply corrosion principles for protection of metallic structures.
		After Successful completion of the Course, the student will be able to:
I Semester	V20ENT01 English for Professional Enhancement	 Identify the central theme of the text, use cohesive items for coherence in a paragraph, recognize nouns and basic sentence structures. Restate the central idea of the letter by using appropriate vocabulary. Gain mastery over articles and prepositions. 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 emails. Employ reading skills to comprehend the given biography. Interpret visual information .Use quantifiers appropriately and get acquainted with formal drafting 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: Prepare different models in the carpentry trade and understand basic concepts of carpentry. Develop various basic prototypes in the trade of Tin smithy and understand basic concepts of Tin smithy. Prepare various basic prototypes in the trade of fitting and understand basicconcepts of fitting. Prepare different models in the Black smithy and understand basic concepts of Black smithy Develop various basic House Wiring techniques, Electrical wiring circuits. Develop various basic prototype models in Welding and Foundry shop.

Semester	Course Code & Name	Course Outcomes
	V20CST01	After Successful completion of the Course, the student will be able to:
		1. Describe various problem solving strategies such as Algorithms and Flowcharts.
	Programming	2. Develop various programming constructs using Control Structures.
I Semester	in 'C' for	3. Construct Programs using modular programming approach.
	problem	4. Illustrate the usage of Arrays, String and pointers.
	Solving	5. Construct Programs using Structures, Unions and Files.
	V20ENL01	After Successful completion of the Course, the student will be able to:
	Hone your	1. Identify suitable expressions to greet people, say good by to them, introduce one another, listen to consonants.
I Comostor	Communication	 Select suitable words to invite someone, accept or decline invitations, listen to, identify and produce vowel sounds. Characteristical descent and the source of the sour
I Semester	Skills, Lab-I	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.
	V20CHL01	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.
I Semester	Engineering	2. Apply volumetric and instrumental methods for the determination of water quality
I Semester	Chemistry Lab	parameters namely Alkalinity, Hardness and pH.
		3. Prepare polymeric materials and analyse the given coal samples joint.
	V20CSL01	After Successful completion of the Course, the student will be able to:
	Programming	1. Demonstrate problem solving techniques.
TC 4	Lab in 'C' for	2. Construct Programs using the concepts of Arrays, Strings and Pointers
I Semester	problem	3. Apply the concepts of Functions, Structures and Unions.
	Solving	4. Use various file processing operations to develop real-time applications
	V20MAT02	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
	Numerical	 Solve ordinary differential equations with initial conditions using numerical
II	Methods and	methods
Semester	Vector Calculus	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
		After Successful completion of the Course, the student will be able to:
	V20PHT01	1. Associate the basic principles of structure of materials, crystallography and X-ray diffraction.
	T	2. Prepare the students to the basic concepts of Lasers and their applications in optical
II	Engineering	fiber communication link3. Indicate the applications of sound waves in various fields
Semester	Physics	 Indicate the applications of sound waves in various fields 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 After Successful completion of the Course, the student will be able to:
	V20ECT01	 Explain the different types of number Systems, number conversions, codes and logic Gates.
II		2. Apply the concepts of Boolean algebra and use the knowledge of K-maps and tabular method for minimization of Boolean expressions
Semester	Switching Theory and	3. Construct the higher order modules from their lower order structures of various M combinational logic circuits.
	Logic Design	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 Programming2.Describe control structures in python.3.Construct python programs using structured data types.4.Demonstrate functions and packages5.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: Demonstrate the usage of drawing instruments and sketch conic sections Construct different types of scales and special curves Draw the projections of the points, lines and planes with reference to the principal planes. Develop the projections of solids and its surfaces. Draw the Isometric projections of solids. 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: Analyze the physical principle involved in the various instruments; also relate the principle to new application. Demonstrate the various experiments in the areas of optics, mechanics and Electronics in all branches of engineering. 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: Collect suitable expressions and vocabulary to participate in JAM. Identify root words. Prepare, face and perform well in interviews with required etiquette. Use appropriate telephone etiquette to succeed in telephonic interviews Show team spirit and communicative skills in group discussion. Arrange ideas and prepare to give presentations in a professional manner. 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: Recognize the importance of environment and eco system services. Identify the characteristic features, uses and impact of overutilization of natural resource Explain biodiversity, biodiversity services and conservation of biodiversity Report the causes and impacts of various pollutions. 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
	V20MAT01	After Successful completion of the Course, the student will be able to: 1.Apply matrix technique to solve system of linear equations
I Semester	Linear Algebra and Differential 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.
		After Successful completion of the Course, the student will be able to:
	V20PHT01	1. Associate the basic principles of structure of materials, crystallography and X-ray diffraction.
	Engineerin	2.Prepare the students to the basic concepts of Lasers and their applications in optical fiber communication link
I Semester	gPhysics	3. Indicate the applications of sound waves in various fields
i Semester	SI HYSICS	4. Interpret wave and particle behavior of matter and relate it to electron theory of metals
		5Examine the advanced concepts of engineering materials like Semiconductors,
		Superconductors and Dielectrics
		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
	V20ENT01	articles and prepositions.
	V20L1(101	3.Find the success formula after reading the text in detail to answer questions. Use
	English for	appropriate tense and concord, find suitable vocabulary and format to draft letters and e-
	Professional	mails.
I Semester	Enhancement	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. After Successful completion of the Course, the student will be able to:
	V20MEL01	1.Understand the basic commands in CAD Software and draw the conic sections.
		2.Construct different types of scales and special curves.
	Engineerin	3.Draw the projections of the points and lines.
	g	4.Develop the projections of planes and surfaces of regular solids.
I Semester	Graphics	5.Draw the Isometric projections and conversion of views
I Semester	V20ENL01	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
	Hone your Communicatio	another, listen to consonants. 2.Select suitable words to invite someone, accept or decline invitations, listen to,
	nSkills, Lab-I	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 words to give commands and requests.
		5Practise listening to dialogues, role-plays using common vocabulary used in dialogues.

I Semester	V20PHL01 Engineerin gPhysics 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 Environment alStudies	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 Programmin gin '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		After Successful completion of the Course, the student will be able to:
115emester		1.Prepare different models in the carpentry trade and understand basic concepts of
		carpentry.
	V20MEL02	2.Develop various basic prototypes in the trade of Tin smithy and understand basic
	V 201VILL02	concepts of Tin smithy.
	Engineering	3.Prepare various basic prototypes in the trade of fitting and understand basicconcepts of
	Workshop	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		After Successful completion of the Course, the student will be able to:
	V20ECT01	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.
	Switching	3.Construct the higher order modules from their lower order structures of various M
	Theory	combination allogic circuits.
	an	4.Explain the concept of various flip flops.
	dLogic Design	5.Develop various sequential circuits like registers, counters and various Finite State
		Machine Models
10 4	V20CSL01	After Europeophyl completion of the Course the standard will be able to
ISemester	V20CSL01	After Successful completion of the Course, the student will be able to: 1.Demonstrate problem solving techniques.
	Programmin	
	gLab in 'C'	2.Construct Programs using the concepts of Arrays, Strings and Pointers
	forproblem	3.Apply the concepts of Functions, Structures and Unions.4.Use various file processing operations to develop real-time applications
	Solving	4. Use various the processing operations to develop real-time applications
IISemester	V20CHL01	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.
	Engineering	2.Apply volumetric and instrumental methods for the determination of water quality
	Chemistry Lab	parameters namely Alkalinity, Hardness and pH.
	č	3.Prepare polymeric materials and analyse the given coal samples joint.
IISemester	V20ENL02	After Successful completion of the Course, the student will be able to:
~		1.Collect suitable expressions and vocabulary to participate in JAM. Identify rootwords.
	Hone vour	2. Prepare, face and perform well in interviews with required etiquette.
	Hone your Communicatio	3. Use appropriate telephone etiquette to succeed in telephonic interviews
	nSkills Lab-II	4. Show team spirit and communicative skills in group discussion.
	IIJKIIIS LAD-II	5.Arrange ideas and prepare to give presentations in a professional manner.6.Debate rationally and cogently while putting forth the ideas.
		on becaue rationally and cogenity while patients for the facus.

Course Outcomes of B.Tech(EEE)

Semester	Course Code& Name	Course
		Outcomes
	V20MAT01	After Successful completion of the Course, the student will be able to: 1. Apply matrix technique to solve system of linear equations 2. Find Finan values and Finan variants
I Semester	Linear Algebra and Differential 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.
		After Successful completion of the Course, the student will be able to:
	V20CHT01	 1.Solve boiler troubles originated due to poor water quality and suggest suitable watertreatment methods 2.Choose plastics and rubbers for engineering applications.
I Semester	Engineering Chemistry	 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.
		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.
	V20ENT01	 Restate the central idea of the letter by using appropriate vocabulary. Gain mastery overarticles and prepositions. Find the success formula after reading the text in detail to answer questions. Use
	English for Professional Enhancement	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
I Semester		.Use quantifiers 5. appropriately and get acquainted with formal drafting 6. Appraise the delivered lecture and text, recognize the contextual vocabulary and
		prepareposter presentations. After Successful completion of the Course, the student will be able to: 1. Prepare different models in the carpentry trade and understand basic concepts
	V20MEL02	ofcarpentry. 2. Develop various basic prototypes in the trade of Tin smithy and understand basicconcepts of Tin smithy.
I Semester	Engineering Workshop	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.
	V20CST01	After Successful completion of the Course, the student will be able to:
		1.Describe various problem solving strategies such as Algorithms and Flowcharts.
I Semester	Programming in 'C' for problem Solving	2.Develop various programming constructs using Control Structures.3. Construct Programs using modular programming approach.
	r	4. Illustrate the usage of Arrays, String and pointers.5. Construct Programs using Structures, Unions and Files.

I Semester I Semester	V20ENL01 Hone your Communication Skills, Lab-I V20CHL01 Engineering Chemistry Lab	 After Successful completion of the Course, the student will be able to: Identify suitable expressions to greet people, say good bye to them, introduce one another, listen to consonants. Select suitable words to invite someone, accept or decline invitations, listen to, identify and produce vowel sounds. Choose suitable expressions to seek/refuse permissions, to apologize and listen to word accent. Find apt expressions to give suggestions, express opinions, use appropriate words to give commands and requests. Practise listening to dialogues, role-plays using common vocabulary used in dialogues. After Successful completion of the Course, the student will be able to: Analyse quantitatively a variety of samples using volumetric methods and instrumental methods. Apply volumetric and instrumental methods for the determination of water quality parameters namely Alkalinity, Hardness and pH. 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
II SEMESTER	V20EET03 Electrical Circuit Analysis-I	 After Successful completion of the Course, the student will be able to: Apply various network reduction techniques for solving electricalDC circuits. Calculate different parameters of single phase alternatingquantities Understand the concepts of different powers and apply networkreduction techniques for solving electrical AC circuits. Determine various parameters in series and parallel resonantcircuits. 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: Analyze the physical principle involved in the various instruments; also relate the principle to new application. Demonstrate the various experiments in the areas of optics, mechanics and Electronics in all branches of engineering. 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
	V20MAT01	After Successful completion of the Course, the student will be able to:
	01.111 01	1Apply matrix technique to solve system of linear equations
	Linear Algebra	2Find Eigen values and Eigen vectors
I Semester	and Differential	3.Solve the ordinary differential equations of first order & first degree4.Solve the linear differential equations of higher order with constantcoefficients.
	Equations	5. Find maxima and minima of functions of two variables.
		After Successful completion of the Course, the student will be able to:
	V20PHT01	1.Associate the basic principles of structure of materials, crystallography and X-ray
	V 20111101	diffraction.
		2Prepare the students to the basic concepts of Lasers and their applications in optical fiber
	Engineerin	communication link
I Semester	gPhysics	3Indicate the applications of sound waves in various fields
		4Interpret wave and particle behavior of matter and relate it to electron theory of metals
		5Examine the advanced concepts of engineering materials like Semiconductors,
		Superconductors and Dielectrics
		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
	V20ENT01	articles and prepositions.
		3.Find the success formula after reading the text in detail to answer questions. Use
	English for	appropriate tense and concord, find suitable vocabulary and format to draft letters and e-
	Professional	mails.
I Semester	Enhancement	4.Employ reading skills to comprehend the given biography. Interpret visual information
1 Semester		.Use quantifiers
		5.appropriately and get acquainted with formal drafting
		6.Appraise the delivered lecture and text, recognize the contextual vocabulary and prepare
	V20MEL01	poster presentations. After Successful completion of the Course, the student will be able to:
	V ZUIVIELUI	1.Understand the basic commands in CAD Software and draw the conic sections.
		2.Construct different types of scales and special curves.
	Engineerin	3.Draw the projections of the points and lines.
	g	4.Develop the projections of planes and surfaces of regular solids.
I Semester	Graphics	5.Draw the Isometric projections and conversion of views
	_	
I Semester	V20ENL01	After Successful completion of the Course, the student will be able to:
		1.Identify suitable expressions to greet people, say good by to them, introduce one another, listen to consonants.
	Hone your Communicatio	2.Select suitable words to invite someone, accept or decline invitations, listen to, identify and produce vowel sounds.
	nSkills, Lab-I	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 words of give commands and requests.
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I Semester	V20PHL01 Engineerin gPhysics 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 Environment alStudies	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 Programmin gin '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 an dVector 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.

V20EET02	1. Understand and compute electrical quantities in DC excited Circuits.
Basic Electrical &Electronics Engineering	 Understand and compute electrical quantities in AC Excited circuits. Studythe working principles of DCmachines. Study the working principles of transformers. Understand construction details and explain the working Principles of AC machines.
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 basic concepts 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.
V20EEL02 Basic Electrical &Electronics Engineering lab	1.Determinetheloadcurrentsbyapplyingvariouslawsand theorems 2.Analyzethesteadystateperformanceofseriescircuits 3.Plot thespeedcontrolcharacteristicsofDCshunt motor 4.Findthelossesandefficiencyofatransformer 5.CalculatetheenergybillforDomesticloads
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.
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 interviews4.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.
	Basic Electrical &Electronics EngineeringV20MEL02 Fngineering WorkshopV20EEL02V20EEL02Basic Electrical &Electronics Engineering labV20CHL01V20CHL01V20CHL01V20CHL01V20CHL01V20CHL01V20CHL01V20CHL01V20CHL01Fngineering labV20CHL01Fngineering labV20CHL01Fngineering Chemistry LabV20ENL02Hone your Communicatio

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: Apply matrix technique to solve system of linear equations Find Eigen values and Eigenvectors Solve the ordinary differential equations of first order & first degree Solve the linear differential equations of higher order with constant coefficients. Find maxima and minima of functions of two variables. After Successful completion of the Course, the student will be able to:
I Semester	V20MAT09 Descriptive Statistics	 Discuss about statistical methods Find measures of central tendency and dispersion for real data sets. Find the correlation and regression Apply method of least square to find a best fit curve to an experimental data 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: Identify the central theme of the text, use cohesive items for coherence in a paragraph, recognize nouns and basic sentence structures. Restate the central idea of the letter by using appropriate vocabulary. Gain masteryoverarticlesand prepositions. 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. Employ reading skills to comprehend the given biography. Interpret visual information .Use quantifiers Appropriately and get acquainted with formal drafting Appraise the delivered lecture and text, recognize the contextual vocabulary and prepare posterpresentations.
I Semester	V20AIL01 ComputerEnginee ringWorkshop	 After Successful completion of the Course, the student will be able to: Identify, assemble and update the components of a computer. Practiced is assembling and assembling components and execution of computer applications, services and systems. Make use of tools for converting pdf to word and vice versa. Develop presentation, documents and small applications using productivity tools such as word processor, presentation tools, spreadsheet, HTML, Latex.

	V20CST01	After Successful completion of the Course, the student will be able to:
		1. Describe various problem solving strategies such as Algorithms and Flow
	Programming	charts.
I Semester	in 'C' for	2. Develop various programming constructs using Control Structures.
i Semester	problem	3. Construct Programs using modular programming approach.
	Solving	4. Illustrate the usage of Arrays, String and pointers.
		5. Construct Programs using Structures, Unions and Files.
		After Successful completion of the Course, the student will be able to:
		1. Identify suitable expressions to greet people, say good bye to them,
	V20ENL01	introduce one another, listen to consonants.
		2. Select suitable words to invite someone, acceptor decline invitations,
		listen to, identify and produce vowel sounds.
I Semester	Hone your	3. Choose suitable expressions to seek/refuse permissions, to apologize
	Communication	and listen to word accent.
	Skills, Lab-I	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.
		After Successful completion of the Course, the student will be able to:
	V20AIL02	1. Enclose moth and simulation in D
		1. Employ math and simulation in R.
I Semester	Statistical	2. Demonstrate various types of data structures in R.
	Visualization	3. Apply appropriate control structures to solve a particular
	using RLab	Programming problem. 4. Use R to graphically visualize data and results of statistical
		calculations.
	V20CSL01	After Successful completion of the Course, the student will be able to:
		1. Demonstrate problem solving techniques.
I Semester	Programming	 Demonstrate problem solving techniques. Construct Programs using the concepts of Arrays, Strings and Pointers
I Semester	Lab in 'C' for	 Apply the concepts of Functions, Structures and Unions.
	problem Solving	 4. Use various file processing operations to develop real-time applications
		After Successful completion of the Course, the student will be able to:
	V20MAT10	1. Find the Fourier series of periodic signals
		 Find the Fourier transforms of given function
II Semester	Integral	3. Find multiple integrals and improper integrals
ii Semester	Transformations	 Calculate gradient of a scalar function, divergence and curl of a vector
	and Vector	function
	Calculus	5. Apply the knowledge of vector integral concepts to find
		characteristics of vector fields
		After Successful completion of the Course, the student will be able to:
	V20CST02	
	, 2000102	1. Illustrate basic concepts of Python Programming
II Semester	Python	2. Describe control structures in python.
	Programming	3. Construct python programs using structure data types.
	1 ver anning	4. Demonstrate functions and packages .
		5. Develop programs on Files, Exception handling and OOPs Concepts.

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

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