



Stanley College of Engineering and Technology for Women

Chapel Road, Abids, Hyderabad – 500 001

Department of Computer Science and Engineering

II YEAR SEM III 2020-21

Name of the Course/Lab	UNIQUE CODE	COURSE OUTCOMES
OPERATION RESEARCH (HS204ME)	HS204ME.1	Prepare the students to have the knowledge of Linear Programming Problem in Operations.
	HS204ME.2	Research at the end students would be able to understand the concepts and develop the models for different applications
	HS204ME.3	Make students understand the concept Replacement models at the end students would able to explain various features and applications of replacement models in real time scenario
	HS204ME.4	Prepare the students to understand theory of Game in operations research at the end students would able to explain application of Game theory in decision making for a conflict.
	HS204ME.5	Prepare the students to have to knowledge of Sequencing model at the end student would able to develop optimum model for job scheduling.
BASIC ELECTRONICS (ES214EC)	ES214EC.1	Study and analyse the rectifiers and regulator circuits
	ES214EC.2	Study and analyse the performance of BJTs, FETs on the basis of their operation and working
	ES214EC.3	Ability to analyse & design oscillator circuits
	ES214EC.4	Ability to analyse different logic gates & multi-vibrator circuits
	ES214EC.5	Ability to analyse different data acquisition systems
DISCRETE STRUCTURES & MATHEMATICAL LOGIC (PC222CS)	PC222CS.1	Be skillful in expressing mathematical properties formally via the formal language of propositional logic and predicate logic and also able to specify and manipulate basic mathematical objects such as sets, functions

	PC222CS.2	Acquire ability to describe computer programs (e.g. recursive functions) in a formal mathematical manner and able to apply basic counting techniques.
	PC222CS.3	Gain experience in using probability concepts, Solving Recurrence Relations, and other advanced counting techniques.
	PC222CS.4	Students completing this course will be able to use tree and graph algorithms to solve problems.
	PC222CS.5	Students completing this course will be able to evaluate Boolean functions and simplify expressions using the properties of Boolean algebra.
DATA STRUCTURES(PC221CS)	PC221CS.1	Understand the asymptotic notations to analyze the consumption of resources (time/space) of an algorithm. Choose the proper applications and different type of linked list.
	PC221CS.2	Effective implementation of stack, queue and list ADT to manage the memory..
	PC221CS.3	Implementation of binary search tree to design applications like expression trees.
	PC221CS.4	Understand the graphs for solving real life problems like shortest pathetic.
	PC221CS.5	Analyze and implement various kinds of searching and sorting algorithms.
LOGIC SWITCHING THEORY (ES216CM)	ES216CM.1	To apply the Axioms Theorems and solve the Boolean Equations and K-map methods.(Application)
	ES216CM.2	To Design and implementing Tabulation Method and NAND/NOR Realization techniques.(Synthesis)
	ES216CM.3	To Design combinational logic circuits, Decoders and Encoders and multiplexers.(Synthesis)
	ES216CM.4	To Understand the programmable logic Devices, FlipFlop Excitation Tables.(Knowledge)
	ES216CM.5	To design and analyse the mela and Moore methods, and State tables and State Diagrams. (Analysis)

PROBABILITY & STATISTICS (BS205MT)	BS205MT.1	
	BS205MT.2	
	BS205MT.3	
	BS205MT.4	
	BS205MT.5	
BASIC ELECTRONICS LAB (ES251EC)	ES251EC.1	To demonstrate the use of various systems as CRO, RPS, Function Generators, LCR meter and Strain Gauge. Using these systems to further investigate the applications of Diodes and Transistors.
	ES251EC.2	To analyze the characteristics of Diodes and Transistors.
	ES251EC.3	To identify the applications of Diodes and Transistors as a switch and an amplifier.
	ES251EC.4	To categorize the Audio and Radio Frequency Oscillators by understanding the characteristics of Transistors and Diodes.
	ES251EC.5	To differentiate the use of Op-Amps using IC741 which acts as an extension to a buffer from the application of Transistors and Diodes.
DATA STRUCTURES LAB (PC252CS)	PC252CS.1	The Students should be Able to understand various data structures such as stacks, queues, trees, graphs to solve various computing problems.
	PC252CS.2	The Students should be able to design the abstract properties of various data structures such as stacks and queues.
	PC252CS.3	The Students should be able to design the abstract properties of various data structures such as stacks and queues using linked list.
	PC252CS.4	The Students should be able to design different Tree structures and graph traversals like BST,DFS,BFS etc.

	PC252CS.5	The Students should be able to examine different sorting algorithms for real time applications.
IT WORKSHOP (ACS) (PC253CS)	PC253CS.1	Understanding the basic concepts of Python
	PC253CS.2	Understanding the concepts of Data types and IO in Python
	PC253CS.3	Apply and Implement the Control flow statements in python
	PC253CS.4	Apply and Implement the Functions concepts in python
	PC253CS.5	Apply and Implement the OOP concepts in python



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BE III YEAR SEM V AY: 2020-21

Name of the Course/Lab	UNIQUE CODE	COURSE OUTCOMES
OPERATING SYSTEMS (PC502CS)	PC502CS.1	Identify System calls and evaluate process scheduling criteria of OS.
	PC502CS.2	Develop procedures for process synchronization of an OS.
	PC502CS.3	Demonstrate the concepts of memory management and of disk management.
	PC502CS.4	Solve issues related to file system interface and implementation of I/O systems.
	PC502CS.5	Describe System model for deadlock, Methods for handling deadlocks.
SOFTWARE ENGINEERING (PC501CS)	PC501CS.1	Student should be able to apply software engineering theory, principles, tools, processes and process models to the development and maintenance of complex, scalable software systems.
	PC501CS.2	Student should be able to elicit, analyze and specify software requirements through a productive working relationship with project stakeholders and should be able to plan and manage the project in real world.
	PC501CS.3	Student should be able to develop analysis and design model
	PC501CS.4	Student should be able to create architectural design, model component-level design and perform user interface design.
	PC501CS.5	Student should be able to describe Testing strategies, apply Testing Tactics and also describe select and use software metrics and debugging.

COMPUTER GRAPHICS (PE534 CS)	PE534 CS.1	Describe the steps in graphics programming pipeline.
	PE534 CS.2	Write interactive graphic application using OpenGL geometric primitives.
	PE534 CS.3	Apply affine transformation for viewing and projection.
	PE534 CS.4	Create realistic images of 3D objects that involve lighting and shading aspects.
	PE534 CS.5	Describe the mathematical principles to represent curves and surfaces.
AUTOMATA THEORY, LANGUAGES & COMPUTATION (PC503 CS)	PC503 CS.1	To define and analyze the Deterministic and Nondeterministic Finite Automata and automata with output for any given language.
	PC503 CS.2	To solve the problems relating context free languages and machines accepted by CFG.
	PC503 CS.3	To identify formal language classes and membership properties of languages.
	PC503 CS.4	To solve the problems related to Turing Machines.
	PC503 CS.5	To acquire a fundamental understanding of core concepts relating to the theory of computation and computational models including (but not limited to) decidability and intractability
WEB & INTERNET TECHNOLOGIES (PE521CS)	PE521CS.1	Understand the concepts of HTML and CSS.
	PE521CS.2	Acquire the knowledge to build AJAX based applications using Javascript.
	PE521CS.3	Understand and apply the concepts of XML
	PE521CS.4	Understand and apply the concepts of servlet framework
	PE521CS.5	Implement JSP to build interactive web applications, Acquire the knowledge of database connectivity in web applications
	PE511CS.1	Able to choose an appropriate problem-solving method.
	PE511CS.2	Able to choose an appropriate knowledge representation technique.

ARTIFICIAL INTELLIGENCE (PE511CS)	PE511CS.3	Able to develop a model for reasoning with uncertainty as well as use of unreliable information.
	PE511CS.4	Able to design and develop AI application in real world scenario.
	PE511CS.5	Able to develop a basic understanding of NLP building blocks.
OPERATING SYSTEMS LAB (PC532CS)	PC532CS.1	Analyze the Concept of Linux Commands
	PC532CS.2	Apply and design the programs using System calls
	PC532CS.3	Implement Deadlock detection and prevention problem using Bankers Algorithm
	PC532CS.4	Design Producer Consumer Problem Using Shared Memory
	PC532CS.5	Solve the Dining Philosopher problem using Semaphore.
SOFTWARE ENGINEERING LAB (PC531CS)	PC531CS.1	To understand analyze, plan, design UML models and create a prototypical model (identifying deliverables) by coding the developed designs
	PC531CS.2	To understand the relationships among various subsystems/classes/components by referring any project repository:GitLab/GitHub, execute the code in order to observe its functionalities/features/requirements
	PC531CS.3	To understand Test Case Hierarchy to monitor or uncover/report errors using manual/automated testing tools



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Department of Computer Science and Engineering

BE IV YEAR SEM VII AY: 2020-21

Name of the Course/Lab	UNIQUE CODE	COURSE OUTCOMES
DISTRIBUTED SYSTEMS (PC702CS)	PC702CS.1	To understand and identify the basics of distributed systems with its architecture and understand the concepts of threads, virtualization, clients, servers, code migration.
	PC702CS.2	To understand and implement how the naming and addressing done, how local clocks are synchronized with global clock and how different processes come to an agreement for decision making, how consistency and replication is managed.
	PC702CS.3	To analyze the fault tolerance and understand the architecture of distributed object-based systems.
	PC702CS.4	To understand and implement distributed file systems and distributed web based systems.
	PC702CS.5	To understand the distributed coordination-based systems and the requirement of map-reduce.
DATA MINING (PC704CS)	PC704CS.1	Understand the different functionality of data mining system and analyze the various data pre-processing techniques to design data mining applications that meet the specified needs of the society with appropriate environmental considerations.
	PC704CS.2	Identify the differences between relational database systems and data warehouses, the need for data warehousing to formulate a decision support system an engineering specialization for data prediction and modeling to complex engineering activities.
	PC704CS.3	Analyse transaction databases for association rules.
	PC704CS.4	Analyze the various classification algorithm functionality and evaluate their merits and demerits to acquire research based knowledge for the synthesis of the information to provide value

		conclusions.
	PC704CS.5	Analyze the various clustering algorithm functionalities and evaluate their merits and demerits to acquire research based knowledge for the synthesis of the information to provide valid conclusions.
COMPILER CONSTRUCTIONS (PC701CS)	PC701CS.1	Students should be able to write lexical rules and grammars for a programming language.
	PC701CS.2	Students should be able to understand the semantics of the parse tree. They should be able to generate scanners and parsers from declarative specifications.
	PC701CS.3	Students should be able to use YACC tools to create a parser and should be able to describe an abstract syntax tree for a small language.
	PC701CS.4	Students should be able to use program analysis techniques for code optimization.
	PC701CS.5	Students should be able to understand the flow graphs and optimization in Basic blocks.
INFORMATION SECURITY (PC703CS)	PC703CS.1	Define the steps in Security Systems development life cycle(SecSDLC). Understand the common threats and attack to information systems.
	PC703CS.2	Understand the legal and ethical issues of information technology Identify security needs using risk management and choose the appropriate risk control strategy based on business needs.
	PC703CS.3	Use the basic knowledge of security frameworks in preparing security blue print for the organization . Usage of reactive solutions, network perimeter solution tools such as firewalls, host solutions such as antivirus software and Intrusion Detection techniques and knowledge of ethical hacking tools.
	PC703CS.4	Understand and apply various cryptographic algorithms and to create their own algorithm. Use ethical hacking tools to study attack patterns and cryptography and secure communication protocols.
	PC703CS.5	Understand the technical and non-technical aspects of security project implementation and accreditation. Design and prepare the industry recognized cyber security certifications and able to maintain the information security.

FUNDAMENTALS OF IOT (OE 773 EC)	OE773EC.1	Understand the various applications of IoT and other enabling technologies
	OE773EC.2	Comprehend various protocols and communication technologies used in IoT
	OE773EC.3	Design simple IoT systems with requisite hardware and C programming software
	OE773EC.4	Understand the relevance of cloud computing and data analytics to IoT
	OE773EC.5	Comprehend the business model of IoT from developing a prototype to launching a product.
ROAD SAFETY ENGINEERING (OE781CE)	OE781CE.1	To understand the concept of causes for accidents ,analysis and doing statistical analytical methods for accident data collection.
	OE781CE.2	To understand the concepts of road safety and its highway operation and counter measures ,safety audit,Driver characteristics influencing road safety
	OE781CE.3	To understand the concepts of sign boards, signals ,Road markings and appurtenances which we are using in our daily life as a road user
	OE781CE.4	To understand the concepts of Integrated safety improvement and Traffic Calming Schemes Speed and load limit, Traffic lights, Safety cameras, Tests on driver and vehicles, pedestrian safety issues, Parking, Parking enforcement and its influence on Accidents
	OE781CE.5	To understand the concepts of Characteristics of Traffic Incidents, Types of Incidents, Impacts,Incident management process, Incident traffic management; Applications of ITS: Motorist information, Equipment used.
	PC752CS.1	To understand and implement how file transfer takes place between client and server
	PC752CS.2	To understand and implement how services are mapped through IP Address

DISTRIBUTED SYSTEMS LAB (PC752CS)	PC752CS.3	To understand and implement how multiple users interact with each other and how processes coordinate themselves while participating in a distributed atomic transactions
	PC752CS.4	To analyze the working of NFS
	PC752CS.5	To understand and implement Bulletin Board
DATA MINING LAB (PC753CS)	PC753CS.1	To examine the types of the data to be mined and able to apply preprocessing statistical methods. (Knowledge & Analysis)
	PC753CS.2	To explore DWH and OLAP, and devise efficient and cost effective methods for maintaining DWHs. (Application and Evaluation).
	PC753CS.3	To discover interesting patterns from large amounts of data to analyze and extract patterns to solve problems, make predictions of outcomes. (Analysis & Synthesis)
	PC753CS.4	To evaluate systematically supervised and unsupervised models and algorithms with respect their accuracy. (Evaluation & Application)
	PC753CS.5	To design and implement of a datamining application using sample, realistic data sets and modern tools. (Application)
COMPILER CONSTRUCTIONS LAB (PC751CS)	PC751CS.1	The Students should be able to design the lexical analyzer with and without using Tool
	PC751CS.2	The Students should be able to design the Top down parser(LL(1))
	PC751CS.3	The Students should be able to design the Bottom up parser with and without using Tool
	PC751CS.4	The Students should be able to implement the Three Address Code by using YACC tool

COURSE OUTCOMES:

SNO	DESCRIPTION
PC202.1 EC	Analyze the basic characteristics of a semiconductor diode and Zener diode. (BLT 4)
PC 202.2 EC	Construct Half wave and Full wave rectifiers with L, C, LC, CLC filters and analyze and obtain the characteristics of these circuits. (BLT 3)
PC202.3 EC	Design a BJT amplifier and differentiate Various amplifier characteristics such as CB,CE,CC amplifiers. (BLT 5)
PC202.4 EC	Develop the h-parameter model and design Biasing techniques for BJT in Amplifier Applications (BLT 5)
PC202.5 EC	Explore V-I characteristics and analyze CS,CD ,CG amplifier circuits using JFETs and MOSFETs,and introduction to IC fabrication Process (BLT 2)

Stanley College of Engineering & Technology for Women

Department of Electronics & Communication Engineering

COURSE OUTCOMES

AY :2020-21

VII Semester

S. N	COURSE	COURSE CODE	COs	DESCRIPTION
1	Embedded Systems	PC701EC	PC701EC.1	Find about fundamentals of the embedded system design(I)
			PC701EC.2	Demonstrate the Programming model and instruction set of ARM Processor(V)
			PC701EC.3	Acquire knowledge on the serial, parallel and network communication protocols.(I)
			PC701EC.4	Model the embedded system design life cycle and co-design issues.(V)
			PC701EC.5	Illustrate about the various embedded software development tools.(II)
2	VLSI Design	PC 702 EC	PC 702 EC-1	Analyze modes of operation of MOS transistor and its basic electrical properties [BLT 4]
			PC 702 EC-2	Draw stick diagrams and layouts for any MOS transistors and calculate the parasitic R&C [BLT 4]
			PC 702 EC-3	Analyse the operation of various arithmetic circuits. [BLT 4]
			PC 702 EC-4	Design sequential logic circuits using CMOS transistors [BLT 6]
			PC 702 EC-5	Understand the small signal model and characteristics of CMOS amplifiers. [BLT 2]
3	Microwave Techniques	PC703EC	PC703EC.1	Define parameters like waves, wave propagation, wave attenuation and wave impedance[BLT1]
			PC703EC.2	Describing the wave guides, cavity resonators[BLT1]
			PC703EC.3	Illustrate and analyse the MW components-E,H,EH plane tees[BLT2]
			PC703EC.4	Analyse and categorize the microwave tubes.[BLT4]
			PC703EC.5	Summarize the Microwave solid state devices and striplines[BLT2]
4	Industrial Administration & Financial Management	HS 707ME	HS 707ME.1	Students can demonstrate various organization structures and design various plant and product layouts.
			HS 707ME.2	Student will be able to analyze the principles of work study, method study, and importance of performance appraisal in the work place for improving productivity in the firm.
			HS 707ME.3	Students can demonstrate quality of work and quality control systems through SQC tools.
			HS 707ME.4	Students will be able to find the most optimal solutions for the respective systems.
			HS 707ME.5	Student will be able to analyze the cost of a project, break even of a firm, and time value of money.
5	Software Engineering	OE 782 CS	OE 782 CS.1	Acquire knowledge about different software development processes and their usability in different problem
			OE 782 CS.1	Understand the process of requirements collection, analysing, and modelling requirements for effective understanding and communication with stakeholders.
			OE 782 CS.1	Design and develop the architecture of real world problems towards developing a blueprint for implementation.
			OE 782 CS.1	Use the UML language to design various models during software development life cycle.
			OE 782 CS.1	Understand the concepts of software quality, testing and maintenance.
6	Electronic Measurements and Instrumentation	PE 723EC	PE 723EC.1	Describe characteristics of an instrument and state different standards of measurements (BLT2)
			PE 723EC.2	Identify & Explain Different types of Transducers (BLT2)
			PE 723EC.3	Draw & Interpret types of Transducers (BLT4)
			PE 723EC.4	Design & Analyze the digital voltmeters and prioritize the instruments (BLT4,6)
			PE 723EC.5	Identify & classify types of Biomedical Instruments (BLT2)
7	Human values and professional ethics	MC771EG	MC771EG.1	Use authentic texts (from literature) for language learning and gaining proficiency in it. (Knowledge) (Comprehension)
			MC771EG.2	Demonstrate proficiency in using appropriate vocabulary and grammar to improve their command over language (Application)
			MC771EG.3	Improve career oriented written skills through guided writing, writing a paragraph, general report, personal and business letters and Statement of Purpose (Knowledge) (Synthesis)
			MC771EG.4	Analyze and evaluate a text through reading comprehension (Analysis Evaluation)
			MC771EG.5	Use inclusive language and demonstrate empathy and treat all people with respect, urgency, and impartiality. (Synthesis)
8	Microwave Lab	PC751EC	PC751EC.1	Analyse frequency, Wave length, SWR and Impedance for Reflex Klystron Oscillator by using its equation (BLT 4)
			PC751EC.2	Evaluate of mode characteristics of Reflex klystron and V-I Characteristics of Gunn diode (BLT 5)
			PC751EC.3	Analyse of the characteristics of Circulator, Isolator, Directional Coupler, Tees like (Magic tee, E & H plane tees) using the Scattering parameters. (BLT 4)
			PC751EC.4	Generate the Radiation pattern of different antennas like Yagi-Uda and Horn Antenna and measure the gain of the antennas. (BLT 3)
			PC751EC.5	Familiarize with the EM simulation software (BLT 2)
9	Electronic Design and Automation Lab	PC 752 EC	PC752EC.1	Familiarize with the usage of IDE tools and program using various on chip like LCD, Temperature sensor, Buzzer, Stepper Motor by interfacing them to ARM Processor
			PC752EC.2	Design the digital logic circuits in various modeling styles using Verilog HDL
			PC752EC.3	Familiarize with VLSI CAD tools like Mentor Graphics / Cadence
			PC752EC.4	Implement basic gates at transistor level
			PC752EC.5	Implement the digital circuits at transistor level
10	Data Science Using R Programming(OE-II)	OE772 CS	OE 772 CS.1	Understand the real time use of Algebra, Matrices Hyper Planes (knowledge)
			OE 772 CS.2	Apply the knowledge of Statistics and Probability to real time applications (application),
			OE 772 CS.3	To Apply linear, non linear regression models, and classification techniques for data analysis(synthesis)
			OE 772 CS.4	To learn basics of R Programming environment : R language, R – studio, and R - packages (knowledge)
			OE 772 CS.5	Define and apply clustering methods, Decision tree methods and analyse using performance measures(evaluation)

		and www(Remember)
	PC 504 IT.5	Implement client-server socket-based networked applications(Apply)
SOFTWARE ENGINEERING	PC 505 IT.1	Define different software development processes and their usability in different problem domains.(REMEMBER)
	PC 505 IT.2	Explain the process of requirements collection, analyzing, and modeling requirements for effective understanding and communication with stakeholders.(UNDERSTAND)
	PC 505 IT.3	Design and Develop the architecture of real world problems towards developing a blueprint for implementation.(CREATE)
	PC 505 IT.4	To understand the importance of testing in software development and study various testing strategies and software quality metrics. (UNDERSTAND)
	PC 505 IT.5	Discuss the concepts related to Risk management and Software project Estimation(UNDERSTAND)
ARTIFICIAL INTELLIGENCE	PE 511 IT.1	Identify problems that are amenable to solution using State space search algorithms(Understand)
	PE511IT.2	Understand and analyze working of an AI technique using Heuristic search(Analyze)
	PE 511IT.3	Understand and design the Bayesian Networks(Create)
	PE 511IT.4	Understand and apply the concepts of Markov Decision process.(Apply)
	PE 511IT.5	Apply the program and apply Reinforcement Learning(Apply)
COMPUTER NETWORKS LAB	PC531 IT.1	Understand the usage of basic commands ipconfig, ifconfig, netstat, ping, arp, telnet, ftp, finger, traceroute, whois of LINUX platform.[UNDERSTAND]
	PC531 IT.2	Develop and Implement Client-Server Socket based programs using TCP and UDP sockets .[APPLY]
	PC 531IT.3	Develop and Implement Distance Vector Routing Algorithm .[APPLY]
	PC 531IT.4	Develop and Implement RSA Public Key algorithm [REMEMBER]
	PC531IT.5	Construct simple network by using any modern Open Source Network Simulation Tool [CREATE]
OPERATING SYSTEMS LAB	PC532IT.1	Explore the LINUX low level I/O and Construct applications using process management and file management System calls.[REMEMBER]
	PC532IT.2	Demonstrate how threads can be created and simultaneously handled in LINUX environment [APPLY]
	PC532IT.3	Understand possible Inter-Process Communication implementations using LINUX IPC Constructs [UNDERSTAND]

STANLEY COLLEGE OF ENGINEERING AND TECHNOLOGY FOR WOMEN

Department of Information Technology
Course Outcomes (I Semester) Academic Year : 2020-21

Name of the Course/Lab	COURSE CODE	COURSE OUTCOMES
Mathematics I	BS102MT.1	Evaluate the Infinite series. (Evaluate)
	BS102MT.2	Analyze the consequences of the mean value Theorem for differentiable functions and Evaluate the Curvature.
	BS102MT.3	To explore the idea for finding the extreme values of Multi variable functions.
	BS102MT.4	Evaluate the Multiple Integrals.
	BS102MT.5	Understanding the concepts of vector and scalar fields and applying the concepts to solve the problems on Green's, Gauss and Stokes's. (Understand)
Physics	BS104PH.1	Analyze the concepts of crystal structure, Inter planar distance, X-Ray Diffraction methods to know the defects in crystals. (Analytic)
	BS104PH.2	Classify the solids into different types based on formation of energy bands. (Analytic)
	BS104PH.3	Apply fundamental principles of Schrodinger wave equation and solve various physical problems like 1 D potential box. (Application)
	BS104PH.4	Distinguish between the properties of materials and acquire information to design various applications. (Comprehension)
	BS104PH.5	Relate the concepts of lasers and optical fibres and investigate the fields of their application. (Evaluation)
Basic Electric Engineering	ES106EE.1	To analyze Electrical circuits to compute and measure the parameters of Electrical Energy
	ES106EE.2	To analyze and understand the performance of single phase and three phase ac circuits.
	ES106EE.3	To Comprehend the Working principles of Electrical AC Machines
	ES106EE.4	To Comprehend the Working principles of Electrical DC Machines
	ES106EE.5	To Identify and test various Electrical switch gear, Protection and elementary calculation of Energy consumption
Basic Electric Engineering Lab	ES154EE.1	Get an exposure to common electrical components, Connection by wires and their appropriate ratings.
	ES154EE.2	Analyze DC Circuits and AC Circuits
	ES154EE.3	Understand the Basic Characteristics of Transformer
	ES154EE.4	Exposure to power measurements in 3 phase Balanced circuits
	ES154EE.5	Analyse the performance of DC and AC Machines.
Physics Lab	BS152PH.1	Experiment on solar cell interpret its parameters, fill factor compute and compare the experimental results and draw relevant conclusions (Application)

	BS152PH.2	Ability to understand the characteristics of p-n junction diode and take measurements independently. (Comprehension)
	BS152PH.3	Investigate the energy band gap of a semiconductor by plotting graphs and doing calculations. (Analysis)
	BS152PH.4	Draw the hysteresis curve of ferromagnetic material and use the graphical representation of data and know the slope from graph. (Knowledge)
	BS152PH.5	Confirm the wavelength of laser light and illustrate the light propagation through an optical fiber. (Comprehension)
Engineering Graphics and Design	ES352CE.1	To Comprehend basics of Engineering graphics and to obtain practice of various engineering curves.
	ES352CE.2	To reduce or enlarge objects by using various engineering scales
	ES352CE.3	To understand & analyze projections of points, lines, planes and solids in various views and angles.
	ES352CE.4	To acquire knowledge on sectional views of solids, intersection of surfaces and development of surfaces.
	ES352CE.5	To practice orthographic and isometric views of various solids and to design floor plan.
Indian Constitution	MC111PO.1	Know the background of the present constitution of India.
	MC111PO.2	Understand the working of the union, state and local government.
	MC111PO.3	Gain consciousness on the fundamental rights and duties.
	MC111PO.4	Be able to understand the functioning and distribution of financial resources between the centre and states.
	MC111PO.5	Be exposed to the reality of hierarchical Indian social structure and the ways the grievances of the deprived sections can be addressed to raise human dignity in a democratic way.

STANLEY COLLEGE OF ENGINEERING AND TECHNOLOGY FOR WOMEN		
Department of Information Technology		
Course Outcomes (II Semester) Academic Year : 2020-21		
Name of the Course/Lab	COURSE CODE	COURSE OUTCOMES
Mathematics-2	ES203MT.1	To solve system of linear equations and Eigen value problems. (Evaluation)
	ES203MT.2	Identify different first order differential equations and solve them using suitable methods and its applications to engineering problems. (Knowledge)
	ES203MT.3	To solve higher order linear differential equations using different methods and its applications to engineering problems. (Evaluation)
	ES203MT.4	To solve basic problems of Beta Gamma and Legendre's function. (Evaluation)
	ES203MT.5	Apply Laplace transform to solve differential equations with boundary conditions. (Application)
Engg Chemistry	ES204CH.1	To understand the laws of electrochemistry and batteries. (Application)
	ES204CH.2	To determine the Hardness of water and corrosion phenomenon. (Application)
	ES204CH.3	To understand the preparation of polymers. (Understanding)
	ES204CH.4	To Analyze the Calorific value of different fuels. (Analysis)
	ES204CH.5	To understand the synthesis of composites and Green chemistry principles. (Understanding)
Programming for problem solving	ES302CS.1	To introduce the concepts of Computing environment, number systems, flowcharts and algorithms
	ES302CS.2	To familiarize the basic constructs of C language - data types, operators and expressions
	ES302CS.3	To understand modular and structured programming constructs in C
	ES302CS.4	To learn the usage of structured data types and memory management using pointers
	ES302CS.5	To learn the concepts of data handling using pointers
English	HS101ES.1	Learn to communicate clearly and accurately. Apply the formation of words by adding affixes. (Applying)

	HS101ES.2	Learn the art of living. Learn the formation of blending words and write paragraphs by using right connectives. (Analyzing)
	HS101ES.3	Learn the value of life. Improve their vocabulary, etc./learn to write letters to improve their correspondence skills. (Creating)
	HS101ES.4	Learn to make a right decision, learn to write reports effectively. (Remembering)
	HS101ES.5	Learn human values and professional ethics. Understand euphemisms and inclusive language. Learn to write statement of purpose. (Understanding)
Environmental Science	MC802CE.1	Adopt environmental ethics to attain sustainable development
	MC802CE.2	Develop an attitude of concern for the environment.
	MC802CE.3	Conservation of natural resources and biological diversity.
	MC802CE.4	Creating awareness of Green technologies for nation's security.
	MC802CE.5	Imparts awareness for environmental laws and regulations.
Essence of Indian Traditional Knowledge	MC805PY.1	Acquire Knowledge of Indian Philosophy
	MC805PY.2	Comprehend the Importance of Language in the development of Society
	MC805PY.3	Ability to distinguish the Philosophical Contributions of various Religions
	MC805PY.4	Understand / Comprehend the Scientific Progress in ancient/modern /Modern India.
	MC805PY.5	Applied the acquired Knowledge in new situations or in his own Life.
Programming for problem solving lab	ES551CS.1	To familiarise the basic constructs of C language – data types, operators and expressions
	ES551CS.2	To develop programs using the basic elements like control statements, Arrays and Strings
	ES551CS.3	To enable effective usage of functions, structures, and pointers.
	ES551CS.4	To search and organize data using various data structures algorithms
	ES551CS.5	To implement the concepts of file handling.
Engg Chemistry lab	ES252CH.1	Estimation of iron useful for finding out its purity (Analysis)
	ES252CH.2	Importance of primary standard solution in estimation of iron (Understanding)

	ES252CH.3	Importance of indicators and their role in the analysis of materials (Analysis)
	ES252CH.4	water analysis for estimating properties of hardness alkalinity and their application in industries (Application)
	ES252CH.5	Importance of substances such as EDTA and acids in water analysis (Analysis)
Workshop Lab	ES552ME.1	To understand the basics of computer aided drawing ways of representing various sections in drawing
	ES552ME.2	To reduce or enlarge an engineering object by using various engineering scales
	ES552ME.3	To understand and analyse straight lines in various views and angles with projected lines
	ES552ME.4	To project an plane in various direction and obtain the traces
	ES552ME.5	To know a solid object in various views and angles
English Lab	HS151ES.1	Improve their comprehension by listening. (Analyzing)
	HS151ES.2	Improve pronunciation skills by learning the phonemic system, word stress, rhythm and intonation of English phonetics. (Applying)
	HS151ES.3	Enhance their conversation skills (Creating)
	HS151ES.4	Participate in various speaking activities like Group discussion, JAM, Role-play and Debate. (Creating)
	HS151ES.5	Acquire the skills of facing an interview and making an effective presentation. (Understanding)

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COURSE OUTCOMES

ACADEMIC YEAR: 2020-21

YEAR/SEM: III SEM

Name of the Course/Lab	UNIQUE CODE	COURSE OUTCOMES
Effective Technical Communication in English	HS201EG.1	Comprehend the difference between technical and general writing (Remember & Understand)
	HS201EG.2	Improve career oriented written skills and write and email (COM) Business letters and Business proposals.(Create)
	HS201EG.3	Understand the techniques of report writing and write feasibility, Project and evaluation reports.(Remember & Create)
	HS201EG.4	Learn the basics of Manual writing and draft a User manual, Product manual and operations manual.(Remember & Create)
	HS201EG.5	Understand the important aspects of data transfer and presentations (Remember & Create)
Finance and Accounting	HS202CM.1	Evaluate the financial performance of the business unit. (Evaluate)
	HS202CM.2	Take decisions on selection of projects. (Analyse)
	HS202CM.3	Take decisions on procurement of finances (Analyse)
	HS202CM.4	Analyse the liquidity, solvency and profitability of the business unit. (Analyse)
	HS202CM.5	Evaluate the overall financial functioning of an enterprise (Evaluate)
Mathematics-III	BS207MT.1	Apply probability theory to solve practical problems.(Apply)
	BS207MT.2	Apply various probability distributions to solve practical problems, to estimate unknown parameters and apply the tests of hypothesis.(Apply)
	BS207MT.3	Apply continuous probability distributions like normal to solve the practical problems (Apply)
	BS207MT.4	Perform a regression analysis and to compute and interpret the coefficient of correlation.(Evaluate)
	BS207MT.5	Apply Chi-square test for goodness of fit and independence of attributes.(Evaluate)
Basic Electronics	ES214EC.1	Study and analyse the rectifiers and regulator circuits.(Analyse)
	ES214EC.2	Study and analyse the performance of BJTs, FETs on the basis of their operation and working.(Analyse)
	ES214EC.3	Ability to analyse & design oscillator circuits.(Create)
	ES214EC.4	Ability to analyse different logic gates & multi-vibrator circuits.(Analyse)
	ES214EC.5	Ability to analyse different data acquisition systems.(Analyse)
Digital Electronics	ES216EC.1	Understand the design process of digital hardware, use Boolean algebra to minimize the logical expressions and optimize the implementation of logical functions.(Apply)
	ES216EC.2	Understand the number representation and design the combinational circuits like adders, Mux etc.(Create)
	ES216EC.3	Design combinational circuits using PLD'S and write VHDL code for basic gates and combinational circuits.(Create)

	ES116EC.4	Analyze sequential circuits using Flip-Flops and design Registers and Counters.(Analyze)
	ES116EC.5	Represent a Synchronous sequential circuit using Finite State Machine and apply state minimization techniques to design a FSM.(Create)
Data Structures	PC 221 IT.1	To Able to write and analyze the performance of algorithms and writing algorithms to complex problems using C++.(Analyze)
	PC 221 IT.2	Define ADT necessary for solving problems based on Stacks and Queues.(Remember)
	PC 221 IT.3	To discuss the linear and non-linear data structures and their applications.(Apply)
	PC 221 IT.4	Develop solutions using binary trees, advanced search trees, trees and graphs.(create)
	PC 221 IT.5	Understand various kinds of sorting techniques and apply appropriate techniques for solving a given problem.(understand)
MATHEMATICAL FOUNDATIONS OF INFORMATION TECHNOLOGY	PC222IT.1	Illustrate by examples the basic terminology of functions, relations, and sets and demonstrate knowledge of their associated operations. [REMEMBER]
	PC222IT.2	Understand basics of counting, apply permutations and combinations to handle different types of objects. [UNDERSTAND]
	PC222IT.3	Describe and use recursively-defined relationships to solve problems using generating functions. [APPLY]
	PC222IT.4	Analyze semi group, group and Abelian group with suitable examples and appreciate group theory applications in computer arithmetic. [ANALYZE]
	PC222IT.5	Demonstrate in practical applications the use of basic counting principles of permutations, combinations, inclusion-exclusion principle and the pigeonhole methodology. [EVALUATE]
	PC222IT.6	Represent and Apply Graph theory in solving computer science problems [APPLY]
BASIC ELECTRONICS LAB	ES251EC.1	Ability to design diode circuits & understand the application of Zener diode.(CREATE)
	ES251EC.2	Ability to analyze characteristics of BJTs and FETs.(ANALYSE)
	ES251EC.3	Ability to understand different oscillator circuits.(UNDERSTAND)
	ES251EC.4	Ability to understand operation of HWR & FWR circuits with and without filters.(UNDERSTAND)
	ES251EC.5	Ability to design Analog to Digital converters & digital to Analog Converters.(CREATE)
DATA STRUCTURES LAB	PC 252 IT. 1	Implement various data structures using arrays, linked lists.(Apply)
	PC 252 IT. 2	Develop ADT necessary for solving problems based on Stacks and Queues.(Create)
	PC 252 IT.3	Implement binary trees, general tree structures, advanced search trees, heaps, graphs.(Apply)

	PC 252 IT.4	Implement hash functions and handle collisions.(Apply)
	PC 252 IT.5	Implement various kinds of sorting techniques and apply appropriate techniques for solving a given problem.(Apply)
IT Workshop Lab	PC 253IT.1	Learn Programming of Python with a focus of basic structure. [Understand]
	PC 253IT.2	Gain Programming skills of python using function and OOP Concept[Understand]
	PC 253IT.3	Implement basic syntax in python.[Apply]
	PC 253IT.4	Analyse and implement different kinds of OOP concept in real world problems. [Apply]
	PC 253IT.5	Implement MATLAB operations and graphic functions.[Apply]

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COURSE OUTCOMES

ACADEMIC YEAR: 2020-21

YEAR/SEM: IV SEM



Name of the Course/Lab	UNIQUE CODE	COURSE OUTCOMES
Operations Research	HS204ME.1	Able to Prepare the students to have the knowledge of Linear Programming Problem in Operations [REMEMBER]
	HS204ME.2	Able to understand the concept and develop the models for different applications scenario [Apply]
	HS204ME.3	Able to Make students understand the concept Replacement models at the end students would able to explain various features and applications of replacement models in real time scenario [Apply]
	HS204ME.4	Able to Prepare the students to understand theory of Game in operations research at the end students would able to explain application of Game theory in decision making for a conflict [Apply]
	HS204ME.5	Able to Prepare the students to have the knowledge of Sequencing model at the end student would able to develop optimum model for job scheduling and to understand Queuing theory concepts and various optimization techniques at the end students would able to develop models for waiting line cases [Apply]
Biology for Engineers	BS206BZ.1	Able to Apply biological engineering principles, procedures needed to solve real-world problems. [APPLY]
	BS206BZ.2	Able to Understand the fundamentals of living things, their classification, cell structure and biochemical constituents. [UNDERSTAND]
	BS206BZ.3	Able to Apply the concept of plant, animal and microbial systems and growth in real life situations. [APPLY]
	BS206BZ.4	Able to Comprehend genetics and the immune system. [ANALYSE]
	BS206BZ.5	Able to Know the cause, symptoms, diagnosis and treatment of common diseases. [ANALYSE]
	BS206BZ.6	Able to Apply basic knowledge of the applications of biological systems in relevant industries [APPLY]
Signals and Systems	ES215EC.1	Define and differentiate types of signals and systems in continuous and discrete time [REMEMBER.]

		Apply the properties of Fourier transform for continuous time signals [APPLY]
	ES215EC.3	Use Laplace transforms to solve differential equations and to determine the response of the Continuous Time Linear Time Invariant Systems to known inputs [EVALUATE]
	ES215EC.4	Apply Z-transforms for discrete time signals to solve Difference equations [APPLY]
	ES215EC.5	Obtain Linear Convolution and Correlation of discrete time signals with graphical representation [EVALUATE]
JAVA Programming	PC2311T.1	Achieve proficiency in object-oriented concepts and also learn to incorporate the same into the Java programming language [UNDERSTAND]
	PC2311T.2	Create Java application programs using sound OOP practices, packages, interfaces and proper program structuring by using packages, access control [CREATE]
	PC2311T.3	Understand and implement the concepts of Exception Handling [APPLY]
	PC2311T.4	Develop the ability to solve real-world problems through software development in high-level programming language using Large APIs of Java as well as the Java standard class library [APPLY]
	PC2311T.5	Understand File, Streams, Input and Output Handling in java [UNDERSTAND]
	PC2311T.6	Create graphical user interface and Applets in java as well as apply the knowledge of Event Handling. [CREATE]
Database Systems	PC2321T.1	Develop the knowledge of fundamental concepts of database management and Designing a database using ER approach. [UNDERSTAND]
	PC2321T.2	Implement storage of data, indexing, and hashing. [APPLY]
	PC2321T.3	Apply the knowledge about transaction management, concurrency control and recovery of database systems. [APPLY]
	PC2321T.4	Ability to design entity relationship model and convert entity relationship diagrams into RDBMS and formulate SQL queries on the data. [CREATE]
	PC2321T.5	Apply normalization for the development of application software. [APPLY]
Computer Organization and Microprocessor	PC2331T.1	Student should be able to understand the architecture of modern computer, Bus structures [UNDERSTAND]
	PC2331T.2	Student should be able to discuss the different memories and evaluate the mapping techniques. [ANALYSE]
	PC2331T.3	Student should be able to discuss the architecture, the instruction set and addressing modes of 8085 [REMEMBER]
	PC2331T.4	Student should be able to discuss the structure, instructions of 8085, different PPI techniques, the uses of interfaces 8255, RS 232C, USART (8251), and DMA controller [ANALYSE]
	PC2331T.5	Student should be able to design the applications of interfacing circuits 8254/8253 timer, A/D and D/A converter,

		Keyboard/Display controller [CREATE]
Data Communication	PC2341T.1	ABLE to Demonstrate systematic understanding of Data Communication Techniques. [UNDERSTAND]
	PC2341T.2	ABLE to Apply various encoding schemes. [APPLY]
	PC2341T.3	ABLE to Understand multiplexing techniques. [UNDERSTAND]
	PC2341T.4	ABLE to Get acquainted with the concepts of virtual circuit networks. [REMEMBER]
	PC2341T.5	ABLE to Understand various types of switching techniques. [ANALYZE]
	PC2341T.6	ABLE to Understand concepts of wireless LANs. [UNDERSTAND]
Microprocessor Lab	PC2611T.1	ABLE to Interpret the principles of Assembly Language Programming, instruction set in developing microprocessor based applications. [ANALYZE]
	PC2611T.2	ABLE to Develop Applications such as 8-bit Addition, Multiplication, Division, array operations, swapping, negative and positive numbers. [CREATE]
	PC2611T.3	ABLE to design the interfaces like serial ports, digital-to-analog Converters and analog-to-digital converters etc. [ANALYZE]
	PC2611T.4	ABLE to Build interfaces of input-output and other units like stepper motor with 8085 [CREATE]
	PC2611T.5	ABLE to design the function of traffic light controller. [ANALYZE]
JAVA Programming Lab	PC2621T.1	Develop Java applications using the concepts of inheritance, interfaces, packages, access control [CREATE]
	PC2621T.2	Implement the concepts of Exception Handling in java Applications [APPLY]
	PC2621T.3	Read and write data using different Java I/O streams [ANALYZE]
	PC2621T.4	Create graphical user interfaces and Applets by applying the knowledge of Event Handling [CREATE]
	PC2621T.5	Create real time applications using Java standard class libraries and retrieve data from a database with JDBC [CREATE]
	PC2621T.6	Ability to solve real-world problems by designing user friendly GUI with backend through the APIs of Java. [APPLY]
Database Systems Lab	PC2631T.1	ABLE to Design and implement a database schema for a given problem [CREATE]
	PC2631T.2	ABLE to Develop the query statements with the help of structured query language [APPLY]
	PC2631T.3	ABLE to Formulate and query a database using SQL and PL/SQL [APPLY]
	PC2631T.4	ABLE to Develop multi-user database applications [CREATE]
	PC2631T.5	ABLE to Design GUI using forms and database connectivity. [CREATE]

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COURSE OUTCOMES

ACADEMIC YEAR: 2020-21

YEAR/SEM: V SEM

Name of the Course/Lab	UNIQUE CODE	COURSE OUTCOMES
WEB APPLICATION DEVELOPMENT	PC501IT.1	Design and develop dynamic web sites using Html 5.0,CSS, JQuery(Create)
	PC501IT.2	Understand and interpret the concepts of XML and the document structure(Understand)
	PC501IT.3	Develop web content publishing applications that accesses data in XML or JSON format(Create)
	PC501IT.4	Develop single page web applications using Angular JS(Create)
	PC501IT.5	Design and develop big data applications using Mean stack and SMACK stack Frameworks.(Create)
OPERATING SYSTEMS	PC 502IT.1	Explain the fundamental concepts and functions of operating system.(REMEMBER)
	PC 502IT.2	Understand process scheduling in a multi-programming environment and implementing process scheduling algorithms[UNDERSTAND]
	PC 502IT.3	Write application and system calls related programs for managing processes, memory, I/O and inter-process Communication related system calls.(CREATE)
	PC 502IT.4	Understand memory management, disk management techniques, including virtual memory and file system structure.(UNDERSTAND)
	PC 502IT.5	Explain protection and security related issues of the computer system. .[UNDERSTAND]
AUTOMATA THEORY	PC 503IT.1	Design and use deterministic, nondeterministic, and epsilon transition finite state automata and illustrate state transition on symbols of input words and establish the corresponding language of automata. (CREATE)
	PC 503IT.2	Analyze Regular Expressions and use Laws and establish the corresponding Regular Language. Prove a given language is regular or otherwise. Use Closure and Decision Properties of Regular Language. [ANALYSE]
	PC 503IT.3	Analyze ambiguity. Develop Context Free Grammars, Parse Trees and establish Context Free Language. Use Closure and Decision Properties of Regular Language. . [ANALYSE]
	PC 503IT.4	Design Pushdown Automata and illustrate the working. Develop deterministic Pushdown Automata and establish equivalence of language PDA and CFG(CREATE)
	PC 503IT.5	Design Turing Machine and illustrate its working, implement programming techniques for Turing machines, analyze extended and restricted Turing Machines for computational abilities, and establish the Recursively Enumerable language of Turing Machine and analyze the Undecidable problems.(CREATE)
COMPUTER NETWORKS	PC 504 IT.1	Student can able to explain the function of each layer of OSI and trace the flow of information from one(Analyze)
	PC 504 IT.2	Analyze node to another node in the network s(Analyze)
	PC 504 IT.3	Understand the principles of IP addressing and internet routing(Understand)
	PC 504 IT.4	Describe the working of various networked applications such as DNS, mail, file transfer

		and www(Remember)
	PC 504 IT.5	Implement client-server socket-based networked applications(Apply)
SOFTWARE ENGINEERING	PC 505 IT.1	Define different software development processes and their usability in different problem domains.(REMEMBER)
	PC 505 IT.2	Explain the process of requirements collection, analyzing, and modeling requirements for effective understanding and communication with stakeholders.(UNDERSTAND)
	PC 505 IT.3	Design and Develop the architecture of real world problems towards developing a blueprint for implementation.(CREATE)
	PC 505 IT.4	To understand the importance of testing in software development and study various testing strategies and software quality metrics. (UNDERSTAND)
	PC 505 IT.5	Discuss the concepts related to Risk management and Software project Estimation(UNDERSTAND)
ARTIFICIAL INTELLIGENCE	PE 511 IT.1	Identify problems that are amenable to solution using State space search algorithms(Understand)
	PE511IT.2	Understand and analyze working of an AI technique using Heuristic search(Analyse)
	PE 511IT.3	Understand and design the Bayesian Networks(Create)
	PE 511IT.4	Understand and apply the concepts of Markov Decision process.(Apply)
	PE 511IT.5	Apply the program and apply Reinforcement Learning(Apply)
COMPUTER NETWORKS LAB	PC531 IT.1	Understand the usage of basic commands ipconfig, ifconfig, netstat, ping, arp, telnet, ftp, finger, traceroute, whois of LINUX platform.[UNDERSTAND]
	PC531 IT.2	Develop and Implement Client-Server Socket based programs using TCP and UDP sockets .[APPLY]
	PC 531IT.3	Develop and Implement Distance Vector Routing Algorithm .[APPLY]
	PC 531IT.4	Develop and Implement RSA Public Key algorithm [REMEMBER]
	PC531IT.5	Construct simple network by using any modern Open Source Network Simulation Tool [CREATE]
OPERATING SYSTEMS LAB	PC532IT.1	Explore the LINUX low level I/O and Construct applications using process management and file management System calls.[REMEMBER]
	PC532IT.2	Demonstrate how threads can be created and simultaneously handled in LINUX environment [APPLY]
	PC532IT.3	Understand possible Inter-Process Communication implementations using LINUX IPC Constructs [UNDERSTAND]

	PC532IT.4	Assess the working behaviour of various synchronization approaches used in Deadlock management [EVALUATE]
	PC532IT.5	Analyze the performance of process scheduling algorithms, page replacement Algorithms, and Disk scheduling Algorithms. [ANALYZE]
WEB APPLICATION DEVELOPMENT LAB	PC 533.1	Design Web pages and perform form validation using HTML 5.0 inbuilt [CREATE]
	PC 533.2	Apply Styles to the web content using CSS[APPLYING]
	PC 533.3	Create and process web publishing content using XML and JSON.[CREATE]
	PC 533.4	Use JQuery to perform client side Dynamics.[APPLYING]
	PC 533.5	Create single page applications (Front End) using Angular JS. [CREATE]
	PC 533.6	Design Big data applications using Mean stack or SMACK stack Frameworks[CREATE]

STANLEY COLLEGE OF ENGINEERING & TECHNOLOGY FOR WOMEN

Department of Information Technology

COURSE OUTCOMES

ACADEMIC YEAR: 2020-21

YEAR/SEM: VI SEM

Name of the Course/Lab	Name of the Faculty	UNIQUE CODE	COURSE OUTCOMES
EMBEDDED SYSTEMS	Mr. Akhbar Fatima Mohamed	PC 601 11 .1	Able to study and analysis of embedded systems.(601111)
		PC 601 11 .2	Able to Design and develop embedded systems(601111),(601111) and Firmware.(Create)
		PC 601 11 .3	Able to 601111 real time systems using RTOS and develop applications.(601111)
		PC 601 11 .4	Able to Apply knowledge to interface various sensors and its applications in Embedded systems.(Apply)
		PC 601 11 .5	Able to Understand principles of SOC design.(Understand)
DESIGN AND ANALYSIS OF ALGORITHMS	Mr. T.C. Suresh Kumar	PC 602 11 .1	Able to Compute and analyze complexity of algorithms using asymptotic notations. [ANALYZE]
		PC 602 11 .2	Able to Write algorithms to solve various computing problems and analyze their time and space complexity. [CREATE]
		PC 602 11 .3	Able to Understand and apply different algorithm design techniques to solve real world problems and analyze their complexities. [UNDERSTAND]
		PC 60211 .4	Able to 602111 algorithmic complexities of various well known computing problems. [EVALUATE]
		PC 602 11 .5	Able to learn algorithm design strategies such as Divide-and-Conquer, greedy method, dynamic programming, back tracking and branch & bound technique And the concepts of NP-hard and NP-complete. [APPLY]
DATA MINING	Mr. K. Nagarani	PE 611 11 .1	Classify types of data, perform preprocessing of data and appropriate applications of data mining. [Understand]
		PE 611 11 .2	Analyze data for mining frequent patterns, Associations and Correlations.(ANALYZE)
		PE 611 11 .3	Perform the classification by using decision tree induction, 611111 classification methods etc and evaluate the classification.(ANALYZE)
		PE 611 11 .4	Select and perform clustering, outlier analysis detection methods, [APPLY] communication interface, Timer and RS 232.
		PE 611 11 .5	Perform Text mining, Spatial Mining, Web mining and Multimedia mining. [UNDERSTAND]
DATA SCIENCE USING R PROGRAMMING	Mr. A. Suresh Kumar	PC 626 11 .1	Able to learn basics of R Programming environment, R language (Remember)
		PC 626 11 .2	Able to Use various data structures and packages in R for data visualization and summarization (Analyze)

		<p>PC 626 11.3 Able to learn various statistical concepts like linear and logistic regression classification techniques for data analysis (Understand)</p> <p>PC 626 11.4 Able to learn Decision tree induction (Remember)</p> <p>PC 626 11.5 Able to Use clustering methods including K-means and CURE algorithm (Apply)</p>
INFORMATION STORAGE AND MANAGEMENT	Dr. J. Kamesh Krishna	<p>PC 630 11.1 Able to Evaluate storage architecture; understand logical and physical components of a storage infrastructure including storage subsystems</p> <p>PC 630 11.2 Able to Describe storage networking technologies such as FC-SAN, NAS, IP-SAN and data archival solution – CAS.</p> <p>PC 630 11.3 Able to Identify different storage virtualization technologies and their benefits.</p> <p>PC 630 11.4 Able to Understand and articulate business continuity solutions including backup and recovery technologies, and local and remote replication solutions.</p> <p>PC 630 11.5 Able to Identify parameters of managing and monitoring storage in infrastructure and describe common storage management activities and solutions</p>
DISASTER MANAGEMENT	Dr. J. Kamesh Krishna	<p>OE 601CE1 Able to Understand impact on Natural and manmade disasters. (Understand)</p> <p>OE 601CE2 Able to Classify disasters and destructions due to cyclones (Remember)</p> <p>OE 601CE3 Able to gain a preliminary understanding of approaches of Disaster Risk Reduction (DRR) (Analyse)</p> <p>OE 601CE4 Able to Illustrating Inter-Relationship between DRR and Development (Analyse)</p> <p>OE 601CE5 Able to Understand disaster management applied in India (Understand)</p>
EMBEDDED SYSTEMS LAB	Mr. A. Vivek Kumar Mohammed	<p>PC63111.1 Able to Apply the basic concepts to develop an interface for GUI (Apply)</p> <p>PC63111.2 Able to Apply the basic concepts to develop an interface for AGNI Processor (Apply)</p> <p>PC63111.3 Able to Design embedded application using Xilinx Programming tool and simulate the result (Create)</p> <p>PC63111.4 Able to Demonstrate RTOS concepts by designing Real-Time Applications (Apply)</p> <p>PC63111.5 Able to Design real time embedded system using the concept of RTOS (Create)</p>
DESIGN AND ANALYSIS OF ALGORITHMS LAB	Mr. J. C. Suresh Kumar	<p>PC63211.1 Able to Develop and implement various searching and sorting techniques and estimate the complexities of searching and sorting algorithms. [APPLY]</p> <p>PC63211.2 Able to Solve knapsack problem using greedy method and dynamic programming. [EVALUATE]</p> <p>PC63211.3 Able to Develop and implement shortest path algorithms using Traveling salesman problem and All pair shortest path problem [UNDERSTAND]</p> <p>PC63211.4 Able to Apply backtracking technique to solve N-queens problem [APPLY]</p> <p>PC63211.5 Able to Construct graph traversals using breadth first search and depth first search. [CREATE]</p>
MINI PROJECT-I	Dr. J. Kamesh Krishna	<p>PW63311.1 Able to Identify and finalize problem statement by surveying variety of domains and technologies (Analyze)</p> <p>PW63311.2 Able to Acquire practical knowledge within the chosen area of technology for project development (Understand)</p>
		<p>PW63311.3 Able to Perform requirement analysis and identify design methodologies (Analyze)</p> <p>PW63311.4 Able to Implement the system using SQL, data structures, C++, JAVA, Python and different software engineering models and present technical report by applying different visualization tools (Apply)</p> <p>PW63311.5 Able to Contribute as an individual or in a team as a member in project development (Evaluate)</p>

STANLEY COLLEGE OF ENGINEERING & TECHNOLOGY FOR WOMEN

Department of Information Technology

COURSE OUTCOMES

ACADEMIC YEAR: 2020-21

YEAR/SEM: VII SEM

Name of the Course/Lab	UNIQUE CODE	COURSE OUTCOMES
VLSI DESIGN	PC 701 IT.1	Explain VLSI Design hierarchy and analyse logic gates using CMOS & transmission gate structures. (BLT 2)
	PC 701 IT.2	Identify the layers in the physical structure of ICs and draw the layouts of CMOS logic gates (BLT 2,4)
	PC 701 IT.3	Summarize the fabrication process of CMOS ICs and analyse the DC, switching characteristics of CMOS inverter. (BLT 2,4)
	PC 701 IT.4	Analyse dynamic CMOS & pseudo nMOS structures of logic gates, SRAM & DRAM cells (BLT 4)
	PC 701 IT.5	Develop Verilog code for logic gates, examine the effects of interconnect elements in logic cascades and Explain the floor-planning, routing techniques of VLSI circuits(BLT 6)
BIG DATA ANALYTICS	PC 702 IT.1	Demonstrate big data and use cases from selected business domains.(Apply)
	PC 702 IT.2	Apply the knowledge of NoSQL, big data management and experiment with Install, configure, and run Hadoop and HDFS.(Apply)
	PC 702 IT.3	Analyze map-reduce analytics using Hadoop.(Analyse)
	PC 702 IT.4	Adapt Hadoop related tools such as HBase, Cassandra, Pig, and Hive for big data Analytics.(Apply)
	PC 702 IT.5	Develop applications in Hive and Pig(Create)
WIRELESS MOBILE COMMUNICATIONS	PC 703IT.1	Describe the fundamental concepts of cellular systems and summarize the different generations of wireless networks.(Remember)
	PC 703IT.2	Understand and compare the basic Modulation Techniques(Analysis)
	PC 703IT.3	Study the 802.11 Protocol and its Architecture and services and features of GSM (Understand)
	PC 703IT.4	Identify the goals and requirements of Mobile IP and interpret the concepts of Mobile Transport Layer.(Analysis)

NETWORK SECURITY & CRYPTOGRAPHY	PC 703IT.5	Discuss the Protocols for MANETs and WAP (Understand).
	PC 704 IT.1	Understand the most common type of information and network threat resources [Understand]
	PC 704 IT.2	Be able to determine appropriate mechanisms for protecting the network [Evaluate]
	PC 704 IT.3	Design a security solution for a given application system with respect to security of the system [Create]
	PC 704 IT.1.4	Understand the information and network security issues and apply related concepts for protection and communication privacy [Apply]
	PC 704 IT.5	Comprehend various network security threats and cryptographic algorithms [Analyze]
FUNDAMENTALS OF IoT	OE 773 EC.1	Understand the various applications of IoT and other enabling technologies. (Understand)
	OE 773 EC.2	Comprehend various protocols and communication technologies used in IoT (Analyze)
	OE 773 EC.3	Design simple IoT systems with requisite hardware and C programming software (Create)
	OE 773 EC.4	Understand the relevance of cloud computing and data analytics to IoT (Understand)
	OE 773 EC.5	Comprehend the business model of IoT from developing a prototype to launching a product (Analyze)
ROAD SAFETY ENGINEERING	OE 781 CE.1	Prepare accident investigation reports and database [CREATE]
	OE 781 CE.2	Apply design principles for roadway geometrics improvement with various types of traffic safety appurtenances/tools [APPLY]
	OE 781 CE.3	Understanding Road Signs and Traffic signals [UNDERSTAND]
	OE 781 CE.4	Manage traffic including incident management [APPLY]
	OE 781 CE.5	Illustrate the applications of ITS [ANALYSE]
VLSI DESIGN LAB	PC 751IT.1	Demonstrate Xilinx ISE suite to write Verilog code for logic gates, combinational circuits and sequential circuits. (BLT 3)
	PC 751IT.2	Write Verilog code for basic logic gates, complex logic gates, combinational circuits, and sequential circuits using switch level, gate level, data flow and behavioural modelling (BLT 6)
	PC 751IT.3	Develop test bench code using Verilog and verify the simulation results. (BLT 6)
	PC 751IT.4	Demonstrate the FPGA implementation of digital circuits and generate the synthesis report (BLT 3)
	PC 751IT.5	Draw the layouts of basic logic gates using Microwind (BLT 4)
BIG DATA ANALYTICS LAB	PC 752IT.1	Understand Hadoop working environment (Understand)
	PC 752IT.2	Work with big data applications in multi node clusters (Apply)
	PC 752IT.3	Write scripts using Pig to solve real world problems (Apply)
	PC 752IT.4	Write queries using Hive to analyse the datasets (Analyze)

Project Work – I	PC 752IT.5	Model and build a recommendation system using Mahout Hadoop (Create)
	PC 752IT.6	Apply big data and echo system techniques for real world problems (Apply)
	PW 761 IT.1	Demonstrate the ability to synthesize and apply the knowledge and skills acquired in the academic program to the real-world problems. (Apply)
	PW 761 IT.2	Evaluate different solutions based on economic and technical feasibility (Evaluate)
	PW 761 IT.3	Effectively plan a project and confidently perform all aspects of project management (Apply)
	PW 761 IT.4	Demonstrate effective written and oral communication skills (Apply)
SUMMER INTERNSHIP	PW 761 IT.5	Contribute as an individual or in a team as a member in project development (Create)
	SI762IT.1	Get Practical experience of software design and development, within Industrial and R&D Environments (ANALYSE)
	SI762IT.2	Gain working practices within Industrial R&D Environments (UNDERSTAND)
	SI762IT.3	Gain training in soft skills and get trained in presenting seminars (APPLY)
	SI762IT.4	Contribute as a team to discuss results (EVALUATE)
	SI762IT.5	Prepare reports and other relevant information (CREATE)

STANLEY COLLEGE OF ENGINEERING & TECHNOLOGY FOR WOMEN

Department of Information Technology

COURSE OUTCOMES

ACADEMIC YEAR: 2020-21

YEAR/SEM: VIII SEM

Name of the Course/Lab	UNIQUE CODE	COURSE OUTCOMES
Machine Learning	PES33CS. 1	Able to learn the concepts of probabilistic inference, graphical models and evolutionary learning [UNDERSTAND]
	PES33CS. 2	Able to understand the concepts of ensemble learning, dimensionality reduction and clustering [UNDERSTAND]
	PES33CS. 3	Able to explain the strengths and weaknesses of many popular machine learning approaches[REMEMBER]
	PES33CS. 4	Able to recognize and implement various ways of selecting suitable model parameters for different machine learning techniques.[APPLY]
	PES33CS. 5	Able to design and implement various machine learning algorithms in a range of real-world applications.[CREATE]
Natural Language Processing	PES34CS. 1	Able to use statistical and finite state methods for modeling and classification for representation and analysis of natural languages, and use grammars for natural language processing[ANLAYSE]
	PES34CS. 2	Able to apply knowledge representation and semantics to machine translation and database semantic interpretation [APPLY]
	PES34CS. 3	Able to perform top-down and bottom-up parsing, and parsing with features [APPLY]
	PES34CS. 4	Able to estimate lexical probabilities, resolve ambiguity, and use probabilistic context-free grammar [EVALUATE]
	PES34CS. 5	Able to encode ambiguity in logical form language and deal with word-sense and ambiguity and to link syntax to semantics.[APPLY]
Cloud Computing	PES42IT. 1	Understand the architecture and concept of different cloud models: IaaS, PaaS, SaaS[Memorize]
	PES42IT. 2	Applying the common standards in the cloud computing with a comparative study (Apply)
	PES42IT. 3	Identify security and compliance issues in clouds [Memorize]

	PES42IT. 4	Create virtual machine images and deploy them on cloud [Create]
	PES42IT. 5	Evaluate types of web services and the service oriented architecture [Evaluate]
Project Work-II	PW961IT. 1	Demonstrate the ability to synthesize and apply the knowledge and skills acquired in the academic program to the real-world problems. [APPLY]
	PW961IT. 2	Evaluate different solutions based on economic and technical feasibility [EVALUATE]
	PW961IT. 3	Effectively plan a project and confidently perform all aspects of project management [APPLY]
	PW961IT. 4	Demonstrate effective written and oral communication skills [APPLY]
	PW961IT. 5	Contribute as an individual or in a team as a member in project development[CREATE]