

Mangalmay Institute Of Engineering & Technology

Program: B. Tech. (Four Years Course)

Programme Educational Objective (PEO)

Programme Outcomes (POs)

Programme Specific Outcomes (PSOs)

Course Outcomes (COs)

and

Lesson Plans



MIET

Plot No-8, Knowledge Park II,

Greater Noida ,Uttar Pradesh

201310

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Mangalmay Institute of Engineering & Technology
Greater Noida (U.P.)-201310
College Code TRR

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Mangalmai Institute of Engineering & Technology
 Greater Noida (U.P.)-201310
 (College Code-786)

Bachelor Of Technology-4 Years Programme

1. Vision

Vision Mission of the Institute


Institute Vision	Mangalmay Institute of Engineering & Technology – Greater Noida, is committed to be the front -runner in the field of Engineering Education and to nurture students to attain the highest degree of professional competence in their respective fields.
Institute Mission	<ul style="list-style-type: none">➤ The mission of the Engineering Programme of the Institute is to nurture students' leadership traits in the field of their domains.➤ To educate students from various dimensions & facets of engineering knowledge to compete with the professional world,➤ To look forward to foreseeing the future needs of the engineering technology and prepare students to take the challenges of respective domains in the most befitting manner.➤ To develop a robust natural knowledge in the field of engineering and technical education.➤ To Create a transformative system capable of accurately predicting market trends by using engineering and technology,



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Vision Mission of the CSE Department

Department Vision	Department of Computer Science and Engineering aspires to become a center of excellence for quality technical education by keeping pace with new technologies to create competent undergraduate Professional.
Department Mission	<ol style="list-style-type: none">1.To develop professionals with analytical and technical competency for productive career in industry, academia and as entrepreneurs.2.To build theoretical and applied skills of faculty and student in computer science and engineering through need-based training, research and development on industrially and socially relevant issues.3.Continuously improve and provide state-of-the-art laboratories to keep up with the new developments in the area of computer science and engineering.4.Create nurturing environment through competitive events, industry interactions, global collaborations and creating concern for lifelong Learning.


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Vision Mission of the Data Science Department


Department Vision	To be a premier Department in the field of Data Science by providing high quality Education, Research, Employability and Ethical Values to enable graduates to be a Data analytic expert, entrepreneurs and expand their capacity to contribute in the field of Data Science.
Department Mission	<ol style="list-style-type: none">1.To develop industry conducive environment by providing state-of-art infrastructure to compete in data-driven world.2.To empower students to provide innovative and cognitive solutions with the help of data analytical skill set and new advancements in high performance computing3.To build data intensive system through socio-economic aspect by promoting cross-disciplinary thinking that expands expertise in cutting edge technologies.4.To inculcate professional behavior, strong ethical values, innovative research capabilities and leadership abilities.



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Vision Mission of the Artificial Intelligence Department

Department Vision	To achieve excellent quality-education by using the latest tools, nurturing collaborative culture and disseminating customer-oriented innovations to relevant areas of academia and industry to impart creative, learning and research skills to students in the domain of artificial intelligence.
Department Mission	<ol style="list-style-type: none">1.To develop professionals who are skilled in the area of Artificial Intelligence and Data Science,2.To impart quality and value based education and contribute towards the innovation of computing, expert system, Data Science to raise satisfaction level of all stakeholders.3.To guide the students in learning and creative for developing intelligent technology-based solutions to societal problems.4.Create nurturing environment through competitive events, industry interactions, global collaborations and creating concern for lifelong learning.


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2. Program Educational Objectives (PEOs)

PEO1	Graduates will have a strong foundation in Mathematical, Scientific and Computer Engineering fundamentals necessary to formulate, solve and analyze Technical problems.
PEO2	Graduates will be equipped with Technical knowledge, Designing, Analysis and Professional attitude to solve Complex problems in Multidisciplinary environment, the solutions of which lead to significant societal benefits.
PEO3	Graduates will develop overall personality and will be competent in Managerial skills and Effective communication skill to be successful Industry-Ready Professionals as well as grow as Life-long Learners and Entrepreneurs



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3. Programme Outcomes (POs)

After completing the program students will be able to

PO1	Engineering knowledge To develop Engineering Knowledge in the field of Computer Science/ Artificial Intelligence/ Data Science.
PO2	Problem analysis To develop Problem Analysis skills, to resolve problem analysis in the field of Computer Science/ Artificial Intelligence/ Data Science.
PO3	Design/development of solutions To develop Skills to Design / Develop the solutions in the field of Computer Science/ Artificial Intelligence/ Data Science.
PO4	Conduct investigations of complex problems To undertake investigation, analysis of experiments to solve complex problems in the field of Computer Science/ Artificial Intelligence/ Data Science.
PO5	Modern tool usage To develop Competency to use Modern Tools.
PO6	The engineer and society To develop sensitivity to serves to the society on completion of the programme.
PO7	Environment and sustainability To develop sensitivity towards Environment and its sustainability.
PO8	Ethics To inculcate and imbibe the sense of Ethics in the usage of Engineering Knowledge
PO9	Individual and team work To develop a commitment to work in a team.
PO10	Communication To develop Engineering Communication Skills.
PO11	Project management and finance To develop prodigies for Project Management and Finance capabilities.
PO12	Life-long learning To acquire Life-Long Learning in the field of Engineering and Finance.



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Programme Specific Outcomes (PSOs):

After completing the program students will be able to:

PSO 1	Demonstrate Understanding as expert in the field of Computer Science/ Artificial Intelligence/ Data Science.
PSO 2	Ability to apply expert knowledge in the specific domain related to Computer Science/ Artificial Intelligence/ Data Science.
PSO 3	Adoption of Best practices and Implementation in the specific domain related to Computer Science/ Artificial Intelligence/ Data Science.




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COURSE OUTCOMES (COs):

Course	Course outcomes: - After completion of these courses' students should be able to
6.1 Semester – I	
BEC101 Fundamental Of Electronic Engineering	<p>CO1: Understand the concept of PN junctions & devices</p> <p>CO2: Understand the concept of BJT ,FET & MOSFET</p> <p>CO3: Understand the concept of Operational amplifier</p> <p>CO4: Understand the concept of number system conversions, binary arithmetic & minimize logic functions.</p> <p>CO5: Understand the fundamentals of communication technologies</p> <p>CO6: Understand the concept of analog and digital circuits.</p>
BAS 103 Engineering Mathematics -1	<p>CO1: Understand the concept of complex matrices, Eigen values, Eigen vectors and apply the concept of rank to evaluate linear simultaneous equations</p> <p>CO2: Remember the concept of differentiation to find successive differentiation, Leibnitz Theorem, and create curve tracing, and find partial and total derivatives</p> <p>CO3: Applying the concept of partial differentiation to evaluate extreme, series expansion, error approximation of functions and Jacobians</p> <p>CO4: Remember the concept of Beta and Gamma function; analyze area and volume and Dirichlet's theorem in multiple integral</p> <p>CO5: Apply the concept of Vector Calculus to analyze and evaluate directional derivative, line, surface and volume integrals.</p> <p>CO6: Applications of differentiation & integration over the complex plane.</p>
BAS 101 Engineering Physics	<p>CO1: To explain the distribution of energy in black body radiation and to understand the difference in particle and wave nature with explanation of Compton effect and Schrodinger wave equation.</p> <p>CO2: To understand the concept of displacement current and consistency of Ampere's law and also the properties of electromagnetic waves in different medium with the use of Maxwell's equations.</p> <p>CO3: To understand the behavior of waves through various examples/applications of interference and diffraction phenomenon and the concept of grating and resolving power</p> <p>CO4: To know the functioning of optical fiber and its properties and applications. To understand the concept, properties and applications of Laser</p> <p>CO5: To know the properties and applications of superconducting materials and nano materials.</p> <p>CO6: To create the formulas of quantum mechanics, optics & materials .</p>

<p>BME101 Fundamentals of Mechanical Engineering</p>	<p>CO1: Apply the concept of force resolution and stress and strain to solve basic problems</p> <p>CO2: Understand the construction details and working of internal combustion engines, electric vehicle and hybrid vehicles.</p> <p>CO3: Explain the construction detail and working of refrigerator, heat pump and air conditioner</p> <p>CO4: Understand fluid properties, conservation laws and hydraulic machinery used in real life.</p> <p>CO5: Understand the working principle of different measuring instrument and mechatronics with their advantages, scope and Industrial application.</p> <p>CO6: Understand the working principle of mechatronics with their advantages, scope & industrial application.</p>
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<p>BAS105 Soft Skills</p>	<p>CO1: Write professionally in simple and correct English.</p> <p>CO2: Demonstrate active listening with comprehension, and the ability to write clear and well-structured emails and proposals.</p> <p>CO3: Learn the use of correct body language and tone of voice to enhance communication.</p> <p>CO4: Acquire the skills necessary to communicate effectively and deliver presentations with clarity and impact</p> <p>CO5: Understand and apply some important aspects of core skills, like Leadership and stress management.</p> <p>CO6: Studying human behavior to analyze different internal professional environmental encounters, grapevines, interjections & argumentations.</p>
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6.2 Mapping: Semester - I

BEC101 Fundamental Of Electronic Eng.	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	3	-	2	-	-	-	-	1	-	1
CO2	3	3	3	-	-	-	-	-	-	-	-	2
CO3	3	2	3	2	1	-	-	-	-	1	-	2
CO4	3	3	3	2	-	-	-	-	-	-	-	-
CO5	3	3	1	-	1	-	-	-	2	2	-	2
CO6	2	2	2	1	-	-	-	-	2	2	-	2

BAS 103 Eng. Mathematics- 1	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	3	2	-	-	-	-	-	-	-	2
CO2	3	2	3	2	-	-	-	-	-	-	-	3
CO3	3	3	3	2	-	-	-	-	-	-	-	3
CO4	3	3	3	2	-	-	-	-	-	-	-	3
CO5	3	3	3	2	-	-	-	-	-	-	-	3
CO6	3	3	3	2	-	-	-	-	-	-	-	3

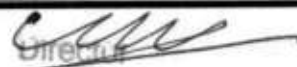
BAS 101 Eng. Physics	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	2	-	-	-	-	-	-	-	-	2
CO2	2	2	2	-	-	-	-	-	-	-	-	2
CO3	3	2	3	-	-	-	-	-	-	-	-	2
CO4	3	3	3	-	-	2	2	-	-	-	-	2
CO5	3	3	3	-	-	2	2	-	-	-	-	2
CO6	3	2	2	-	-	2	2	-	-	-	-	2

BME101 Fundamentals of Mechanical Eng.	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	3	2	-	-	-	-	-	-	-	-
CO2	3	3	2	2	-	-	3	-	-	-	-	-
CO3	3	3	3	2	-	-	-	-	-	-	-	-
CO4	3	3	3	3	-	-	-	-	-	-	-	-
CO5	2	2	2	2	-	-	-	-	-	-	-	-
CO6	2	2	2	2	-	-	-	-	-	-	-	-

BAS105 Soft Skills	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	2	-	-	-	-	-	-	3	-	2
CO2	3	2	2	-	3	-	-	-	-	3	-	2
CO3	2	3	2	-	3	-	-	-	2	2	-	2
CO4	2	2	2	-	2	-	-	2	-	2	2	2
CO5	2	2	3	-	-	-	-	2	2	2	-	2
CO6	1	1	1	-	-	-	-	-	-	-	-	2


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Course	Course outcomes: - After completion of these courses' students should be able to
7.1 Semester – II	
BAS202 Engineering Chemistry	<p>CO1: Get an understanding of the theoretical principles of chemistry of molecular structure, bonding and properties, Chemistry of advanced materials (liquid crystals, Nanomaterials, Graphite & Fullerene) as well as the Principles of Green Chemistry.</p> <p>CO2: Apply the fundamental concepts of determination of structure with various spectral techniques and stereochemistry.</p> <p>CO3: Utilize the theory of construction of electrodes, batteries and fuel cells in redesigning new engineering products and categorize the reasons for corrosion and study methods to control corrosion and develop understanding of Chemistry of Engineering materials (Cement)</p> <p>CO4: Develop understanding of the sources, impurities and hardness of water, apply the concepts of determination of calorific values and analyze the coal.</p> <p>CO5: Develop the understanding of Chemical structure of polymers and its effect on their various properties when used as engineering materials. Understanding the applications of specific polymers and Chemistry applicable in industrial process</p> <p>CO6: Create the applications of specific polymers and chemistry applicable in industrial process.</p>
BAS203 Engineering Mathematics- II	<p>CO1: Remember the concept differentiation to evaluate LDE of nth order with constant coefficient and LDE with variable coefficient of 2nd order</p> <p>CO2: Understand and apply the concept of Laplace Transform to evaluate differential equations</p> <p>CO3: Understand the concept of convergence to analyze the convergence of series and expansion of the function for Fourier series.</p> <p>CO4: Apply the concept of analyticity, Harmonic function and create the image of function applying conformal transformation</p> <p>CO5: Apply the concept of Cauchy Integral theorem, Cauchy Integral formula, singularity and calculus of residue to evaluate integrals</p> <p>CO6: Apply the concept of differentiation and integration of the real and complex function over the engineering problems.</p>
BEE 201 Fundamentals Of Electrical Engineering	<p>CO1: Apply the concepts of KVL/KCL and network theorems in solving DC circuits.</p> <p>CO2: Analyze the steady state behavior of single phase and three phase AC electrical circuits.</p> <p>CO3: Identify the application areas of a single phase two winding transformer as well as an auto transformer and calculate their efficiency. Also identify the connections of a three phase</p>



	<p>transformer.</p> <p>C04: Illustrate the working principles of induction motor, synchronous machine as well as DC machine and employ them in different area of applications</p> <p>C05: Describe the components of low voltage electrical installations and perform elementary calculations for energy consumption</p> <p>C06: Given the knowledge about the machines and different electrical connection to apply the system.</p>
BCS-201 Programming for Problem Solving	<p>C01: To Develop Simple Algorithms for Arithmetic and Logical Problems.</p> <p>C02: To Translate the Algorithms to Programs & Execution (in C Language).</p> <p>C03: To Implement Conditional Branching, Iteration and Recursion.</p> <p>C04: To Decompose a Problem into Functions and Synthesize a Complete Program Using Divide and Conquer Approach.</p> <p>C05: To Use Arrays, Pointers and Structures to Develop Algorithms and Programs.</p> <p>C06: To learn about dynamic memory allocation and file handling techniques.</p>
BAS204 Environment & Ecology	<p>C01: Gain in-depth knowledge on natural processes that sustain life, and govern economy</p> <p>C02: Estimate and Predict the consequences of human actions on the web of life, global economy and quality of human life.</p> <p>C03: Develop critical thinking for shaping strategies (scientific, social, economic and legal) for environmental protection and conservation of biodiversity, social equity and sustainable development.</p> <p>C04: Acquire values and attitudes towards understanding complex environmental economic social challenges, and participate actively in solving current environmental problems and preventing the future ones.</p> <p>C05: Adopt sustainability as a practice in life, society and industry</p> <p>C06: With a focus on environmental justice, students develop critical thinking skills ,analyze real world problems.</p>



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7.2 Mapping: Semester – II

BAS202 Eng. Chemistry	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	2	-	-	-	2	-	-	-	-	2
CO2	2	2	2	-	-	-	2	-	-	-	-	2
CO3	3	2	3	-	-	-	2	-	-	-	-	2
CO4	3	3	3	-	-	-	2	-	-	-	-	2
CO5	3	3	3	-	-	-	2	-	-	-	-	2
CO6	3	2	2	-	-	-	-	-	-	-	-	2

BAS203 Eng. Mathematics-II	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	3	2	-	-	-	-	-	-	-	3
CO2	3	2	3	2	-	-	-	-	-	-	-	3
CO3	3	3	3	2	-	-	-	-	-	-	-	3
CO4	3	3	3	2	-	-	-	-	-	-	-	3
CO5	3	3	3	2	-	-	-	-	-	-	-	3
CO6	3	3	3	2	-	-	-	-	-	-	-	3

BEE 201 Fundamentals Of Electrical Eng.	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	3	-	-	-	-	-	-	-	-	2
CO2	2	3	3	-	-	-	-	-	-	-	-	2
CO3	2	2	3	-	-	-	-	-	-	-	-	2
CO4	3	-	-	-	-	-	-	-	-	-	-	2
CO5	3	-	-	-	-	-	-	-	-	-	-	2
CO6	3	-	-	-	-	-	-	-	-	-	-	2

BCS-201 Programming for Problem Solving	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	2	-	3	-	-	-	-	-	-	3
CO2	3	2	3	-	3	-	-	3	-	-	-	3
CO3	2	3	3	2	2	-	-	2	-	-	-	3
CO4	2	3	3	2	2	-	-	2	-	-	-	3
CO5	2	2	2	2	3	-	-	2	-	-	-	3
CO6	2	2	2	2	2	-	-	1	-	-	-	3

BAS204 Env. & Ecology	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	-	-	-	-	2	3	3	2	2	-	-
CO2	2	-	-	-	-	2	3	3	3	2	2	-
CO3	-	-	2	-	-	-	3	3	2	2	-	2
CO4	-	2	-	-	-	3	3	3	-	2	-	1
CO5	-	-	-	-	-	3	3	2	-	2	-	2
CO6	2	-	3	-	-	-	3	3	2	2	-	-

Course	Course outcomes: - After completion of these courses' students should be able to
8.1 Semester - III	
KNC 301H Computer System Security	<p>CO1: To discover software bugs that pose cyber security threats and to explain how to fix the bugs to mitigate such threats</p> <p>CO2: To discover cyber-attack scenarios to web browsers and web servers and to explain how to mitigate such threats</p> <p>CO3: To discover and explain mobile software bugs posing cyber security threats, explain and recreate exploits, and to explain mitigation techniques.</p> <p>CO4: To articulate the urgent need for cyber security in critical computer systems, networks, and world wide web, and to explain various threat scenarios</p> <p>CO5: To articulate the well-known cyber-attack incidents, explain the attack scenarios, and explain mitigation techniques.</p> <p>CO6: To discover and explain system software bugs posing web security, recreate exploits & to explain routing protocols.</p>
KCS 301 Data Structure	<p>CO1: Describe how arrays, linked lists, stacks, queues, trees, and graphs are represented in memory, used by the algorithms and their common applications.</p> <p>CO2: Discuss the computational efficiency of the sorting and searching algorithms.</p> <p>CO3: Implementation of Trees and Graphs and perform various operations on these data structure</p> <p>CO4: Understanding the concept of recursion, application of recursion and its implementation and removal of recursion</p> <p>CO5: Identify the alternative implementations of data structures with respect to its performance to solve a real world problem.</p> <p>CO6: Describe the hash function & concepts of collisions & its resolution methods.</p>
KCS 302 Computer Organization & Architecture	<p>CO1: Study of the basic structure and operation of a digital computer system.</p> <p>CO2: Analysis of the design of arithmetic & logic unit and understanding of the fixed point and floating point arithmetic operations</p> <p>CO3: Implementation of control unit techniques and the concept of Pipelining</p> <p>CO4: Understanding the hierarchical memory system, cache memories and virtual memory</p> <p>CO5: Understanding the different ways of communicating with I/O devices and standard I/O interface</p> <p>CO6: Analysis the security techniques in data transmission.</p>

<p>KCS 303 Discrete Structure & Theory of Logic</p>	<p>CO1: Write an argument using logical notation and determine if the argument is or is not valid.</p> <p>CO2: Understand the basic principles of sets and operations in sets</p> <p>CO3: Demonstrate an understanding of relations and functions and be able to determine their properties</p> <p>CO4: Demonstrate different traversal methods for trees and graphs</p> <p>CO5: Model problems in Computer Science using graphs and trees.</p> <p>CO6: Analyze binary trees and concepts of graphs, recurrence relation and combinatory problems.</p>
<p>KOE 033- Energy Science & Engineering</p>	<p>CO1: The student will come to know about energy and its usage</p> <p>CO2: The student will come to know about nuclear energy</p> <p>CO3: The student will come to know about solar energy</p> <p>CO4: The student will come to know about conventional & non-conventional energy source.</p> <p>CO5: The student will come to know about system & synthesis.</p> <p>CO6: The student will come to know the types of energy, semiconductor and green building with the non-conventional energy.</p>
<p>KVE 301- Universal Human Values & Professional Ethics</p>	<p>CO1: Understand the significance of value inputs in a classroom, distinguish between values and skills ,understand the need ,basic guidelines ,content and process of value education ,explore the meaning of happiness and prosperity and do a correct appraisal of the current scenario in the society.</p> <p>CO2: Distinguish between the self and the body, understand the meaning of harmony in the self, the coexistence of self and body.</p> <p>CO3: Distinguish between the self and the body, understand the meaning of harmony in the self, the coexistence of self and body</p> <p>CO4: Understand the harmony in nature and existence and work out their mutually fulfilling participation in nature.</p> <p>CO5: Distinguish between ethical and unethical practices and start working out the strategy to actualize a harmonious environment wherever they work.</p> <p>CO6: Understand the significance of lifelong learning with happiness and prosperity for all the level of human being.</p>



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8.2 Mapping: Semester - III

KNC 301H Computer System Security	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	-	-	-	-	-	2	-	2	2	2	-	2
CO2	2	-	-	-	-	-	-	-	2	2	-	1
CO3	-	-	-	-	-	2	-	2	-	1	1	-
CO4	-	-	-	-	-	-	2	-	2	-	2	2
CO5	2	-	-	-	-	1	-	1	3	2	1	-
CO6	1	-	-	-	-	-	1	1	1	1	2	2

KCS 301 Data Structure	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	2	2	-	-	-	-	-	-	-	-
CO2	2	3	2	2	2	-	-	-	-	-	-	-
CO3	3	2	2	-	3	-	-	-	-	-	-	3
CO4	3	2	2	3	-	-	-	-	-	-	-	-
CO5	3	3	3	-	2	-	-	-	2	2	2	2
CO6	2	2	2	-	-	-	-	-	2	2	2	-

KCS 302 Computer Org. & Architecture	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	-	1	2	-	-	-	-	-	-	-	1
CO2	2	2	2	2	-	-	-	1	1	-	-	-
CO3	2	2	2	3	-	1	-	-	-	1	-	2
CO4	2	1	1	-	-	-	-	-	1	1	-	-
CO5	2	2	2	1	-	-	-	1	-	-	-	-
CO6	2	2	2	2	-	-	-	-	-	-	-	1

KCS 303 Discrete Structure & Theory of Logic	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	3	2	-	-	-	-	-	-	-	2
CO2	2	3	3	2	-	-	-	-	-	-	-	-
CO3	3	3	3	2	-	-	-	-	-	-	-	2
CO4	3	3	3	3	-	-	-	-	-	-	-	2
CO5	3	3	3	3	2	-	-	-	3	3	-	2
CO6	3	2	2	2	-	-	-	-	-	-	-	2

KOE 033- Energy Science & Eng.	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	-	3	2	-	-	2	-	3	-	-	2
CO2	3	-	2	3	-	-	3	-	2	-	-	3
CO3	2	-	2	3	-	-	2	-	3	-	-	3
CO4	3	-	2	2	-	-	3	-	2	-	-	2
CO5	3	-	3	2	-	-	2	-	3	-	-	3
CO6	2	-	2	3	-	-	3	-	2	-	-	2


KVE301 UHV & Professional Ethics	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	-	-	-	-	-	2	-	2	-	-	-	3
CO2	-	-	-	-	-	-	-	3	2	-	-	3
CO3	-	-	-	-	-	3	-	2	3	-	-	3
CO4	-	-	-	-	-	-	3	3	-	-	-	3
CO5	-	-	-	-	-	-	-	3	-	2	-	3
CO6	-	-	-	-	-	3	-	2	3	2	-	3

Course	Course outcomes: - After completion of these courses' students should be able to
9.1 Semester – IV	
KAS 402 Maths IV	<p>C01: The students will learn the idea of partial differentiation and types of partial differential equations</p> <p>C02: The students will learn the idea of classification of second partial differential equations, wave , heat equation and transmission lines</p> <p>C03: The students will learn the basic ideas of statistics including measures of central tendency, correlation, regression and their properties.</p> <p>C04: The students will learn the idea s of probability and random variables and various discrete and continuous probability distributions and their properties.</p> <p>C05: The students will learn the statistical methods of studying data samples, hypothesis testing and statistical quality control, control charts and their properties.</p> <p>C06: Applications of ODE & PDE to solve two dimensional heat and wave equations.</p>
KAS 401 Technical Communication	<p>C01: Students will be enabled to understand the nature and objective of Technical Communication relevant for the work place as Engineers.</p> <p>C02: Students will utilize the technical writing for the purposes of Technical Communication and its exposure in various dimensions.</p> <p>C03: Students would imbibe inputs by presentation skills to enhance confidence in face of diverse audience</p> <p>C04: Technical communication skills will create a vast know-how of the application of the learning to promote their technical competence.</p> <p>C05: It would enable them to evaluate their efficacy as fluent & efficient communicators by learning the voice-dynamics.</p> <p>C06 : Students will learn evaluate and implement technical and soft skills which they implement in industries in future.</p>
KCS 401 Operating Systems	<p>C01: Understand the structure and functions of OS</p> <p>C02: Learn about Processes, Threads and Scheduling algorithms.</p> <p>C03: Understand the principles of concurrency and Deadlocks</p> <p>C04: Learn various memory management scheme</p> <p>C05: Study I/O management and File systems.</p> <p>C06 : Student can able to understand the CPU scheduling , concurrent processes.</p>



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KCS 402 Theory Of Automata & Formal Languages	<p>C01: Analyze and design finite automata, pushdown automata, Turing machines, formal languages, and grammars</p> <p>C02: Analyze and design, Turing machines, formal languages, and grammars</p> <p>C03: Demonstrate the understanding of key notions, such as algorithm, computability, decidability, and complexity through problem solving</p> <p>C04: Prove the basic results of the Theory of Computation.</p> <p>C05: State and explain the relevance of the Church-Turing thesis.</p> <p>C06 : Analyze the role of regular expression in Lexical analysis phase of compiler.</p>
KCS 403 Microprocessor	<p>C01: Apply a basic concept of digital fundamentals to Microprocessor based personal computer system</p> <p>C02: Analyze a detailed s/w & h/w structure of the Microprocessor.</p> <p>C03: Illustrate how the different peripherals (8085/8086) are interfaced with Microprocessor</p> <p>C04: Analyze the properties of Microprocessors (8085/8086)</p> <p>C05: Evaluate the data transfer information through serial & parallel ports</p> <p>C06 : Understand the concept of different peripherals ICs.</p>
KNC 402 Python Programming	<p>C01: To read and write simple Python programs.</p> <p>C02: To develop Python programs with conditionals and loops</p> <p>C03: To define Python functions and to use Python data structures -- lists, tuples, dictionaries</p> <p>C04: To do input/output with files in Python</p> <p>C05: To do searching ,sorting and merging in Python</p> <p>C06: To connect python with database.</p>


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9.2 Mapping: Semester - IV

KAS 402 Maths IV	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	2	-	-	-	-	-	-	-	-	2
CO2	3	3	2	-	-	-	-	-	-	-	-	2
CO3	3	3	2	3	-	-	-	-	-	-	-	2
CO4	3	3	1	1	-	-	-	-	-	-	-	1
CO5	3	3	2	3	-	-	-	-	-	-	-	2
CO6	3	2	2	-	-	-	-	-	-	-	-	1

KAS 401 Technical Communication	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	2	-	-	-	-	-	2	2	-	2
CO2	2	2	3	-	-	-	-	-	2	2	-	2
CO3	2	2	2	-	-	-	-	-	2	2	-	2
CO4	2	2	3	-	-	-	-	2	2	2	3	2
CO5	2	2	2	-	1	-	-	-	2	2	-	2
CO6	2	2	2	-	1	-	-	3	2	2	-	2

KCS 401 Operating Systems	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	2	3	-	1	-	-	-	-	-	1
CO2	2	2	2	2	-	1	-	-	-	-	-	-
CO3	2	2	2	2	-	-	-	1	2	-	-	-
CO4	2	2	2	-	-	-	-	-	-	2	-	1
CO5	2	2	2	-	-	-	-	-	1	-	-	1
CO6	2	2	2	-	1	-	-	-	-	2	-	-


KCS 402 Theory Of Automata & Formal Languages	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	2	3	-	1	-	-	-	-	-	1
CO2	2	2	2	2	-	1	-	-	-	-	-	-
CO3	2	2	2	2	-	-	-	1	2	-	-	-
CO4	2	2	2	-	-	-	-	-	-	2	-	1
CO5	2	2	2	-	-	-	-	-	1	-	-	1
CO6	2	2	2	-	1	-	-	-	-	2	-	-

KCS 403 Microprocessor	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	1	1	-	-	1	-	-	-	-	-	1
CO2	3	2	1	-	-	2	-	-	-	-	-	2
CO3	2	3	2	-	-	-	-	-	-	-	-	2
CO4	3	3	3	-	-	-	-	-	2	2	-	1
CO5	3	3	2	2	-	-	-	-	2	2	-	2
CO6	3	3	2	2	-	-	-	-	2	2	-	2

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KNC 402 Python Programming	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	1	-	-	-	-	-	1	1	-	2
CO2	2	2	2	-	-	-	-	-	-	-	-	2
CO3	2	2	2	-	-	-	-	-	-	-	-	2
CO4	2	2	2	-	-	-	-	-	2	2	-	2
CO5	2	2	2	2	-	-	-	-	1	1	-	2
CO6	2	2	2	2	-	-	-	-	1	2	-	2


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Course	Course outcomes: - After completion of these courses' students should be able to
10.1 Semester – V	
KCS-503 Design & Analysis of Algorithm	<p>CO1: Design new algorithms, prove them correct, and analyze their asymptotic and absolute runtime and memory demands</p> <p>CO2: Find an algorithm to solve the problem (create) and prove that the algorithm solves the problem correctly (validate)</p> <p>CO3: Understand the mathematical criterion for deciding whether an algorithm is efficient, and know many practically important problems that do not admit any efficient algorithms.</p> <p>CO4: Apply classical sorting, searching, optimization and graph algorithms.</p> <p>CO5: Understand basic techniques for designing algorithms, including the techniques of recursion, divide-and-conquer, and greedy.</p> <p>CO6: Create for deciding whether an algorithm is efficient and know many practically important problems that don't admit any effective algorithms.</p>
KCS-056 Application of Soft computing (ASC)	<p>CO1: Recognize the feasibility of applying a soft computing methodology for a particular problem</p> <p>CO2: Understand the concepts and techniques of soft computing and foster their abilities in designing and implementing soft computing based solutions for real-world and engineering problems.</p> <p>CO3: Apply neural networks to pattern classification and regression problems and compare solutions by various soft computing approaches for a given problem.</p> <p>CO4: Apply fuzzy logic and reasoning to handle uncertainty and solve engineering problems</p> <p>CO5: Apply genetic algorithms to combinatorial optimization problems.</p> <p>CO6 : Understand the basic concepts of genetic algorithm & it's working principle.</p>
KCS-501 Database Management System	<p>CO1: Apply knowledge of database for real life applications.</p> <p>CO2: Apply query processing techniques to automate the real time problems of databases.</p> <p>CO3: Identify and solve the redundancy problem in database tables using normalization.</p> <p>CO4: Understand the concepts of transactions, their processing so they will familiar with broad range of database management issues including data integrity, security and recovery.</p> <p>CO5: Design, develop and implement a small database project using database tools.</p> <p>CO6: Understand the concept of Indexing in database.</p>



KCS 501, Compiler Design	<p>C01: Acquire knowledge of different phases and passes of the compiler and also able to use the compiler tools like LEX, YACC, etc. Students will also be able to design different types of compiler tools to meet the requirements of the realistic constraints of compilers.</p> <p>C02: Understand the parser and its types i.e. Top-Down and Bottom-up parsers and construction of LL, SLR, CLR, and LALR parsing table.</p> <p>C03: Implement the compiler using syntax-directed translation method and get knowledge about the synthesized and inherited attributes.</p> <p>C04: Acquire knowledge about run time data structure like symbol table organization and different techniques used in that.</p> <p>C05: Understand the target machine's run time environment, its instruction set for code generation and techniques used for code optimization.</p> <p>C06: Apply code generation and DAG representation of basic books.</p>
KCS-454 Object Oriented System Design (OOSD)	<p>C01: Understand the application development and analyze the insights of object oriented programming to implement application</p> <p>C02: Understand, analyze and apply the role of overall modeling concepts (i.e. System, structural)</p> <p>C03: Understand, analyze and apply oops concepts (i.e. abstraction, inheritance)</p> <p>C04: Understand the basic concepts of C++ to implement the object oriented concepts</p> <p>C05: To understand the object oriented approach to implement real world problem.</p> <p>C06: To understand the concept of AI in real world problems.</p>
KNC-501 Constitution Of Indian Law	<p>C01: Identify and explore the basic features and modalities about Indian constitution</p> <p>C02: Differentiate and relate the functioning of Indian parliamentary system at the center and state level.</p> <p>C03: Differentiate different aspects of Indian Legal System and its related bodies.</p> <p>C04: Discover and apply different laws and regulations related to engineering practices</p> <p>C05: Correlate role of engineers with different organizations and governance models.</p> <p>C06: Student able to understand basic information about legal system, intellectual property laws.</p>


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10.2 Mapping: Semester - V

KCS-503 Design & Analysis of Algorithm	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	-	3	-	2	-	-	-	1	-	2	2	3
CO2	-	3	-	3	2	-	-	-	-	-	-	2
CO3	3	1	3	-	2	-	-	-	1	1	2	2
CO4	2	-	-	-	-	-	-	-	1	-	1	1
CO5	-	-	-	1	2	-	-	-	-	-	-	1
CO6	3	2	1	-	2	1	1	1	-	-	2	-


KCS-056 (ASC)	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	2	3	-	-	-	-	-	-	2	2
CO2	2	3	2	2	3	-	-	-	-	-	-	2
CO3	3	3	2	-	2	-	-	-	-	-	-	2
CO4	2	2	2	3	-	-	-	-	-	1	-	3
CO5	3	2	3	2	2	-	-	-	-	-	-	2
CO6	2	3	3	2	2	3	-	-	-	-	-	3

KCS-501 DBMS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	2	-	-	1	-	-	1	2	-	1
CO2	2	1	2	2	-	2	-	-	-	-	-	2
CO3	2	2	2	3	-	1	-	-	-	-	-	-
CO4	2	2	2	2	-	-	-	-	-	-	-	1
CO5	2	2	2	2	1	1	-	-	-	1	-	1
CO6	2	1	2	-	-	-	-	-	-	1	-	-


KCS 501, Compiler Design	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	2		3	-	-	2	2	3	-	3
CO2	2	2	3		2	-	-				-	
CO3	2	2	2	3		-	-	3	2	2	-	
CO4	2	2	2	3	2	-	-			3	-	3
CO5	2	3	3	3	2	-	-			3	-	3
CO6	2	2	2			-	-		2	2	-	2

KCS-454 (OOSD)	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	-	-	-	3	-	-	-	-	-	-	2
CO2	-	3	3	3	-	-	-	-	-	-	-	-
CO3	-	3	3	3	2	-	-	-	-	-	-	-
CO4	2	2	2	2	-	-	-	-	-	-	-	-
CO5	3	2	2	2	-	-	-	-	-	-	-	-
CO6	-	-	-	-	-	2	-	2	2	-	-	-

KNC-501 Constitution Of Indian Law	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C01	-	-	-	-	-	-	-	1	2	-	1	-
C02	-	-	-	-	-	-	-	1	1	-	1	-
C03	-	-	-	-	-	-	-	2	2	-	1	-
C04	-	-	-	-	-	-	-	1	1	-	1	-
C05	-	-	-	-	-	-	-	1	1	-	1	-
C06	-	-	-	-	-	-	-	1	1	-	1	-


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Course	Course outcomes: - After completion of these courses' students should be able to understand
11.1 Sem VI	
KAI 601 Machine Learning Techniques	<p>CO1: To understand the need for machine learning for various problem solving</p> <p>CO2: To understand a wide variety of learning algorithms and how to evaluate models generated from data</p> <p>CO3: To understand the latest trends in machine learning</p> <p>CO4: To design appropriate machine learning algorithms and apply the algorithms to a realworld problems</p> <p>CO5: To optimize the models learned and report on the expected accuracy that can be achieved by applying the models.</p> <p>CO6: Student will be able to understand artificial neural network, reinforcement learning.</p>
KOE-068 Software Project Management	<p>CO1: Identify project planning objectives, along with various cost/effort estimation models.</p> <p>CO2: Organize & schedule project activities to compute critical path for risk analysis.</p> <p>CO3: Monitor and control project activities.</p> <p>CO4: Formulate testing objectives and test plan to ensure good software quality under SEI-CMM</p> <p>CO5: Configure changes and manage risks using project management tools.</p> <p>CO6: Student will be able to understand project life cycle and effort estimation, project management and control.</p>
KCS-603 Computer Networks	<p>CO1: Explain basic concepts, OSI reference model, services and role of each layer of OSI model and TCP/IP, networks devices and transmission media, Analog and digital data transmission</p> <p>CO2: Apply channel allocation, framing, error and flow control techniques</p> <p>CO3: Describe the functions of Network Layer i.e. Logical addressing, subnetting & Routing Mechanism.</p> <p>CO4: Explain the different Transport Layer function i.e. Port addressing, Connection Management, Error control and Flow control mechanism</p> <p>CO5: Explain the functions offered by session and presentation layer and their Implementation.</p> <p>CO6: Explain the different protocols used at application layer i.e. HTTP, SNMP, SMTP, FTP, TELNET and VPN.</p>


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KCS-602 Web Technology	<p>CO1: Explain web development Strategies and Protocols governing Web.</p> <p>CO2: Develop Java programs for window/web-based applications.</p> <p>CO3: Design web pages using HTML, XML, CSS and JavaScript</p> <p>CO4: Creation of client-server environment using socket programming</p> <p>CO5: Building enterprise level applications and manipulate web databases using JDBC</p> <p>CO6: Design interactive web applications using Servlets and JSP</p>
KCS061-Big Data	<p>CO1: Demonstrate knowledge of Big Data Analytics concepts and its applications in business</p> <p>CO2: Demonstrate functions and components of Map Reduce Framework and HDFS.</p> <p>CO3: Discuss Data Management concepts in NoSQL environment.</p> <p>CO4: Explain process of developing Map Reduce based distributed processing applications.</p> <p>CO5: Explain process of developing applications using HBASE, Hive, Pig etc.</p> <p>CO6: Apply estimation techniques, schedule project activities and computer pricing.</p>
KNC-601 Indian Tradition Culture	<p>CO1: The course aims at imparting basic principles of thought process, reasoning and inference to identify the roots and details of some of the contemporary issues faced by our nation and try to locate possible solutions to these challenges by digging deep into our past.</p> <p>CO2: To enable the students to understand the importance of our surroundings and encourage the students to contribute towards sustainable development.</p> <p>CO3: To sensitize students towards issues related to 'Indian' culture, tradition and its composite character.</p> <p>CO4: To make students aware of holistic life styles of Yogic-science and wisdom capsules in Sanskrit literature that are important in modern society with rapid technological advancements and societal disruptions.</p> <p>CO5: To acquaint students with Indian Knowledge System, Indian perspective of modern scientific world-view and basic principles of Yoga and holistic health care system.</p> <p>CO6: Ability to create, connect up and explain basics of Indian traditional knowledge modern scientific perspective.</p>



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11.2 Mapping: Semester - VI

KAI 601 Machine Learning Techniques	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	2	2	-	-	-	-	3	2	-	2
CO2	2	2	2	2	-	-	-	-	2	2	-	2
CO3	2	2	2	-	-	-	-	-	-	-	-	3
CO4	2	2	2	2	-	-	-	-	-	2	-	3
CO5	2	3	2	2	-	-	-	-	2	-	-	3
CO6	2	2	2	2	-	-	-	-	-	-	-	3


KOE-068 Software Project Management	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	2	2	-	-	-	-	3	2	-	2
CO2	2	2	2	2	-	-	-	-	2	2	-	2
CO3	2	2	2	-	-	-	-	-	-	-	-	3
CO4	2	2	2	2	-	-	-	-	-	2	-	3
CO5	2	3	2	2	-	-	-	-	2	-	-	3
CO6	2	2	2	2	-	-	-	-	-	-	-	3

KCS-603 Computer Networks	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	2	2	-	-	-	-	3	2	-	2
CO2	2	2	2	2	-	-	-	-	2	2	-	2
CO3	2	2	2	-	-	-	-	-	-	-	-	3
CO4	2	2	2	2	-	-	-	-	-	2	-	3
CO5	2	3	2	2	-	-	-	-	2	-	-	3
CO6	2	2	2	2	-	-	-	-	-	-	-	3


KCS-602 Web Technology	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	2	-	-	-	-	-	-	-	-	2
CO2	3	2	3	2	-	-	-	2	-	-	-	2
CO3	2	3	2	-	-	-	-	-	2	-	3	2
CO4	1	2	3	3	-	-	-	-	-	-	-	2
CO5	1	-	3	2	-	-	-	-	3	3	-	2
CO6	2	2	3	-	-	-	-	-	-	-	3	2

KCS061-Big Data and analytics	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	2	-	-	-	-	-	-	-	-	2
CO2	3	2	3	2	-	-	-	2	-	-	-	2
CO3	2	3	2	-	-	-	-	-	2	-	3	2
CO4	1	2	3	3	-	-	-	-	-	-	-	2
CO5	1	-	3	2	-	-	-	-	3	3	-	2
CO6	2	2	3	-	-	-	-	-	-	-	3	2

KNC-601 Indian Tradition Culture	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	2	-	-	-	-	-	2	2	-	2
CO2	2	2	2	-	-	-	-	-	-	2	-	2
CO3	2	2	2	-	-	-	-	-	-	3	2	2
CO4	2	2	3	-	-	-	-	-	-	2	-	2
CO5	2	2	2	-	-	-	-	-	2	3	-	2
CO6	2	2	2	-	-	-	-	-	2	2	2	2


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Course	Course outcomes: - After completion of these courses' students should be able to
12.1 Semester VII	
KCS-713 Cloud Computing	<p>CO1: Describe architecture and underlying principles of cloud computing.</p> <p>CO2: Explain need, types and tools of Virtualization for cloud.</p> <p>CO3: Describe Services Oriented Architecture and various types of cloud services</p> <p>CO4: Explain Inter cloud resources management cloud storage services and their providers Assess security services and standards for cloud computing.</p> <p>CO5: Analyze advanced cloud technologies.</p> <p>CO6: Create a website for storage data on cloud.</p>
KHR 701 Rural Development Administration & Planning	<p>CO1: Students can understand the definitions, concepts and components of Rural Development</p> <p>CO2: Students will know the importance, structure, significance, resources of Indian rural economy.</p> <p>CO3: Students will have a clear idea about the area development programmes and its impact.</p> <p>CO4: Students will be able to acquire knowledge about rural entrepreneurship.</p> <p>CO5: Students will be able to understand about the using of different methods for human resource planning.</p> <p>CO6: Students will be able to acquire knowledge about rural industry & entrepreneurship skills apply in industry.</p>
KCS-071 Artificial Intelligence	<p>CO1: Understand the basics of the theory and practice of Artificial Intelligence as a discipline and about intelligent agents</p> <p>CO2: Understand search techniques and gaming theory</p> <p>CO3: The student will learn to apply knowledge representation techniques and problem solving strategies to common AI applications.</p> <p>CO4: Student should be aware of techniques used for classification and clustering.</p> <p>CO5: Student should aware of basics of pattern recognition and steps required for it.</p> <p>CO6: To understand the design principles of pattern recognition with estimation and apply classification technique and to analyze real world AI applications.</p>


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KCS-752 Mini Project	<p>C01: Developing a technical artifact requiring new technical skills and effectively utilizing a new software tool to complete a task</p> <p>C02: Writing requirements documentation, Selecting appropriate technologies, identifying and creating appropriate test cases for systems.</p> <p>C03: Demonstrating understanding of professional customs & practices and working with professional standards</p> <p>C04: Improving problem-solving, critical thinking skills and report writing.</p> <p>C05: Learning professional skills like exercising leadership, behaving professionally, behaving ethically, listening effectively, participating as a member of a team, developing appropriate workplace attitudes.</p> <p>C06: Understanding the basic concept behind the syllabus and practical work.</p>
KOE-074 Renewable Energy Resources	<p>C01: Student can able to understand various non-conventional energy resources.</p> <p>C02: Student can able to understand about solar thermal energy</p> <p>C03: Student can able to understand about resources of geothermal energy</p> <p>C04: Student can able to understand about thermo-electrical and thermionic Conversions</p> <p>C05: Student can able to understand about availability of bio-mass</p> <p>C06: Understand the applications of different renewable energy sources like ocean ,thermal, hydro, geothermal energy etc.</p>
RCS-754 Project	<p>C01: Analyze and understand the real life problem and apply their knowledge to get programming solution.</p> <p>C02: Engage in the creative design process through the integration and application of diverse technical knowledge and expertise to meet customer needs and address social issues.</p> <p>C03: Use the various tools and techniques, coding practices for developing real life solution to the problem</p> <p>C04: Find out the errors in software solutions and establishing the process to design maintainable software applications</p> <p>C05: Write the report about what they are doing in project and learning the team working skills</p> <p>C06: Understanding the basic concept behind the syllabus and practical work.</p>

12.2 Mapping: Semester – VII

KCS-713 Cloud Computing	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	2	-	-	-	-	-	-	-	-	2
CO2	2	3	-	-	3	-	-	-	-	-	-	2
CO3	2	3	2	-	2	-	-	-	-	-	-	2
CO4	2	3	3	3	3	-	-	-	3	-	3	2
CO5	2	3	3	3	-	-	-	-	3	-	2	2
CO6	2	3	3	2	3	-	-	-	3	-	3	3


KHR 701 Rural Development Administration & Planning	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	2	-	2	-		3		2	2	
CO2	2	3	3	2	3	2					3	
CO3	2	3	2	2	3	3	2		2		2	
CO4	2	3	3	3	-		3	2			3	
CO5	2	3	2	-	-			3		3	2	2
CO6	2	3	3	2	2	2	2	2	3	2		

KCS-071 Artificial Intelligence	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	2	3	2	3				2		
CO2	2	3	2	3	2	2	3	3	3	2	2	
CO3	3	2	3	2			3	3	2	3		2
CO4	2	3	2	3		3	3	3		2		2
CO5	2	3	2	3		3	3	2		3		2
CO6	2	3	2	3			3	3	2	2		


KCS-752 Mini Project	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	2	3	2	3				2		
CO2	2	3	2	3	2	2	3	3	3	2	2	
CO3	3	2	3	2			3	3	2	3		2
CO4	2	3	2	3		3	3	3		2		2
CO5	2	3	2	3		3	3	2		3		2
CO6	2	3	2	3			3	3	2	2		

KOE-074 Renewable Energy Resources	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	3	2	-	3	3	3	-	-	-	3
CO2	2	3	3	3	2	-	-	-	-	-	-	2
CO3	2	3	3	-	-	3	3	2	3	-	-	2
CO4	2	3	3	-	-	2	3	3	-	-	-	3
CO5	2	3	3	-	-	3	2	3	-	-	-	3
CO6	3	3	3		-	3	2	3	-	-	-	3

RCS-754 Project	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C01	2	3	2	3	2	3				2		
C02	2	3	2	3	2	2	3	3	3	2	2	
C03	3	2	3	2			3	3	2	3		2
C04	2	3	2	3		3	3	3		2		2
C05	2	3	2	3		3	3	2		3		2
C06	2	3	2	3			3	3	2	2		


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Course	Course outcomes: - After completion of these courses' students should be able to
13.1 Semester VIII	
KOE-083 Entrepreneurship Development	<p>CO1: Student can able to understand about definition of entrepreneurship</p> <p>CO2: Student can able to understand about project identification</p> <p>CO3: Student can able to understand about accountancy</p> <p>CO4: Student can able to understand about project planning & control</p> <p>CO5: Student can able to understand about laws concerning entrepreneur</p> <p>CO6: Design a report on given projects.</p>
Khu-802 Project management & Entrepreneurship	<p>CO1: Student can able to understand about entrepreneurship</p> <p>CO2: Student can able to understand about Entrepreneurial Idea and Innovation</p> <p>CO3: Student can able to understand about project management</p> <p>CO4: Student can able to understand about project financing</p> <p>CO5: Student can able to understand about social entrepreneurship</p> <p>CO6 : Student can able to understand about the new innovative way of business</p>
KOE-093 Data warehousing & data mining	<p>CO1: Student can able to understand about data warehousing</p> <p>CO2: Student can able to understand about data warehouse process & technology</p> <p>CO3: Student can able to understand about data mining</p> <p>CO4: Student can able to understand about classification of data mining</p> <p>CO5: Student can able to understand about data visualization & overall perspective.</p> <p>CO6: Student can able to understand clustering, regression, computer and human inspection.</p>
KCS-851 Project	<p>CO1: Analyze and understand the real life problem and apply their knowledge to get programming solution.</p> <p>CO2: Engage in the creative design process through the integration and application of diverse technical knowledge and expertise to meet customer needs and address social issues.</p> <p>CO3: Use the various tools and techniques, coding practices for developing real life solution to the problem.</p> <p>CO4: Find out the errors in software solutions and establishing the process to design maintainable software applications</p> <p>CO5: Write the report about what they are doing in project and learning the team working skills</p> <p>CO6: Understanding the basic concept behind the practical and syllabus.</p>


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13.2 Mapping: Semester – VII

KOE-083 Entrepreneurship Development	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	2	-	-	-	-	-	-	-	-	2
CO2	2	3	2	-	-	-	-	-	-	-	2	1
CO3	2	3	2	-	-	-	-	-	-	-	2	1
CO4	2	3	3	-	-	-	-	-	-	-	2	1
CO5	2	3	3	3	-	-	-	-	-	-	2	1
CO6	2	3	3	3	-	-	-	-	2	2	2	3

Khu-802 Project management & Entrepreneurship	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	2	-	-	-	-	-	-	-	-	2
CO2	2	3	2	-	-	-	-	-	-	-	2	1
CO3	2	3	2	-	-	-	-	-	-	-	2	1
CO4	2	3	3	-	-	-	-	-	-	-	2	1
CO5	2	3	3	3	-	-	-	-	-	-	2	1
CO6	2	3	3	3	-	-	-	-	2	2	2	3

KOE-093 Data warehousing & data mining	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	2	-	-	-	-	-	-	-	-	2
CO2	2	3	2	-	-	-	-	-	-	-	2	1
CO3	2	3	2	-	-	-	-	-	-	-	2	1
CO4	2	3	3	-	-	-	-	-	-	-	2	1
CO5	2	3	3	3	-	-	-	-	-	-	2	1
CO6	2	3	3	3	-	-	-	-	2	2	2	3

KCS-851 Project	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	2	-	-	-	-	-	-	-	-	2
CO2	2	3	2	-	-	-	-	-	-	-	2	1
CO3	2	3	2	-	-	-	-	-	-	-	2	1
CO4	2	3	3	-	-	-	-	-	-	-	2	1
CO5	2	3	3	3	-	-	-	-	-	-	2	1
CO6	2	3	3	3	-	-	-	-	2	2	2	3