VISION

The vision of the Civil Engineering Department is to become a technical Hub with global standards through continuous and sustainable improvement.

Carving the youth as dynamic, competent, valued and knowledgeable Civil Engineers.

MISSION

- Civil Engineering Department of UCET is committed to providing quality technical education and professional training in civil Engineering to make students employable and to contribute better to the well being of the society.
- Civil Engineering Department posses the state of the art infrastructure facilities, Quality Education by expertised staff fulfilling the dreams of students hailing from both urban and rural areas.

PSO'S (PROGRAMME SPECIFIC OBJECTIVES)

PSO1: Familiarize civil engineering components and systems.

PSO 2: Design and conduct experiments, analyse and interpret data.

PSO 3: Solve problems in the structural, construction management, hydraulics, geotechnical, transportation and environmental disciplines of Civil Engineering.

PSO 4: Function effectively in multi-disciplinary teams.

PEO'S (PROGRAMME EDUCATIONAL OBJECTIVES)

PEO 1: Students work effectively as a civil engineering professional in industry, government or other organizations-designing, improving, leading, and implementing effective civil engineering practice.

PEO 2: Students explore and apply the modern engineering tools for planning, design, execution and maintenance of works that is technically viable economically and socially acceptable.

PEO 3: Acquire a position or degree that values adaptability and innovation in their work.

PEO 4: Pursue lifelong learning, and to be leaders, both in their chosen profession and in other activities.

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY
DOKIPARRU (V), MEDIKONDURU (Mdl.)
GUNTUR (Dist.)

UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY

(Approved by AICTE, New Delhi & Affiliated to JNTUK, Kakinada)

Promoted by: The Diocese of Guntur Society, Guntur

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

VISION

To impart quality education with the sole intention to equip them with a global outlook to take up the challenging positions in the field of electrical and electronics engineering with highest professional standards

MISSION

- To provide strong knowledge in electrical and electronics engineering by enhancing their technical skills
- To collaborate with core industries through research activities and to undertake consultancy projects with them in several cutting edge technologies
- To inculcate the leadership qualities to meet the challenges of future with holistic spirits

PSO'S (PROGRAMME SPECIFIC OBJECTIVES)

PSO1: Students will be able to Design up to date power system components to meet the recognized needs within economical and environmental constraints.

PSO2: Students will be able to Design, simulation, fabrication and testing of power switching devices, electrical drives and their control for industrial and research applications.

PSO3: Students will be able to succeed in executing software applications related to Electrical and Electronics, to serve the industry by taking up and leading the project groups and able to pursue higher studies.

PEO'S (PROGRAMME EDUCATIONAL OBJECTIVES)

PEO1: To prepare students with a strong foundation in basic sciences, mathematics and electrical engineering for productive engineering careers and enable them to pursue higher studies.

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY
DOKIPARRU (V), MEDIKONDURU (Mdl.)
GUNTUR (Dist.)

PEO2: To equip the students with good analytical and design capabilities to solve present day electrical engineering problems and to realize the necessity of life-long learning to excel in their professional careers.

PEO3: To produce the students with strong communication skills and to foster the ability to work in multidisciplinary teams with a sense of environmental awareness, professional and ethical values.

PRINCIPAL
UNIVERSAL COLLEGE OF
ENGINEERING & TECHNOLOGY
NOKIPARRU (V), MEDIKONDURU (Md)
GUNTUR (Dist)

NOKIPARRU (V)
MEDIKONDURU (Md)
GUNTUR (Dist.)

UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY

(Approved by AICTE, New Delhi & Affiliated to JNTUK, Kakinada)

Promoted by: The Diocese of Guntur Society, Guntur

DEPARTMENT OF MECHANICAL ENGINEERING

VISION

To impart futuristic technical education through dedicated staff and set a global standard by making students, technologically superior, disciplined and ethically strong who will improve the life of human being.

MISSION

To educate students from all over India to compete internationally, with creative and practical knowledge for meeting the needs of society in the fields of Mechanical Engineering

PSO'S (PROGRAMME SPECIFIC OBJECTIVES)

PSO1: An ability to work on projects at different places towards mechanical and environmental systems to meet the needs of society that are sustainable.

PSO2: Ability to Develop and implement new ideas on product design and development with the help of modern computer aided tools, while ensuring best manufacturing practices

PSO3: Qualifying the students in national level competitive examinations for successful higher studies and employment..

PEO'S (PROGRAMME EDUCATIONAL OBJECTIVES)

PEO 1:- educate students to meet the needs of society by engaging in professional or civic communities.

PEO 2:- To inculcate values & ethics, leadership and team work skills, bring holistic development of personality and to promote entrepreneurial thinking among students.

PEO 3:- To acquire new knowledge and expertise through professional development opportunities or advanced education.

UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY
DOKIPARRU (V)
MEDIKONDURU (Md)
GUNTUR (Dist.)

UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY
DOKIPARRU (V), MEDIKONDURU (Md)
GUNTUR (Dist.)

UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY

(Approved by AICTE, New Delhi & Affiliated to JNTUK, Kakinada)

Promoted by: The Diocese of Guntur Society, Guntur

DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING

ENGINEERING

VISION

To create globally competent with technical knowledge professional with socio-ethical values in the field of engineering, imparting excellent teaching, research environment, collaborative activities and techno-services for real world applications

MISSION

- To educate and empower the students with latest trends in electronics and communication engineering to meet the growing real world challenges.
- To achieve academic excellence through innovative teaching and learning methodologies
- To inculcate professional ethics and morals in preparing responsible citizens
- To carry out research and development and collaborative activities.

PSO'S (PROGRAMME SPECIFIC OBJECTIVES)

PSO1: The ECE Graduates will be able to apply engineering knowledge for system and architecture level design and implementation of projects pertaining to electronics design, signal processing and Communications.

PSO2: The ECE Graduates will be equipped with knowledge of complete design flow from specification to silicon in areas of both digital and analog VLSI Design and will be able to work in IC Design and verification companies.

PSO3: The ECE Graduates will be equipped with microprocessor and microcontroller based system design skills and can work as design and verification engineers in the area of Embedded Systems Design and Robotics.

PEO'S (PROGRAMME EDUCATIONAL OBJECTIVES)

PEO1: To acquire cognizant fundamental knowledge in the subjects like engineering mathematics, physics & chemistry and basic engineering.

PEO2: To impart technical knowledge using modern tools, new technologies and MOU's with Industries in order to design and develop products for societal needs.

OF ENGINEERING & TECHNOLOGY
DOKIPARRU (V)
MEDIKONDURU (Md)
GUNTUR (Dist.)

PRINCIPAL
UNIVERSAL COLLEGE OF
ENGINEERING & TECHNOLOGY
DOKIPARRU (V), MEDIKONDURU (Md)
GUNTUR (Dist.)

PEO3: To develop leadership qualities and ability to work effectively in teams in diverse professions of varied technical/non technical services.

PEO4: To inculcate research aptitude so as to engage in lifelong learning with ethical and holistic attitude.

PRINCIPAL
UNIVERSAL COLLEGE OF
ENGINEERING & TECHNOLOGY
DOKIPARRU (V), MEDIKONDURU (Mdl.)
GUNTUR (Dist.)

COLLEGE OF ENGINEERING & TECHNOLOGY
DOKIPARRU (V)
MEDIKONDURU (Md)
GUNTUR (Dist.)

VISION

To achieve center of excellence in computer science and engineering and to produce competent professionals with sound technical knowledge, research skills and values to address current and future challenges of the industry.

MISSION

- To providing a strong theoretical and practical background across the computer science discipline with an emphasis on problem solving and programming skills.
- To inculcating discipline, ethical values, innovative research capabilities, teamwork and leadership abilities in young minds to continuous learning to professional growth.
- To expose the students to cutting edge technologies which enhance their employability and knowledge?
- To promote research through state-of-the-art facilities, interaction with the industry and facilitate the faculty to keep track of latest development in their research areas.

PSO'S (PROGRAMME SPECIFIC OBJECTIVES)

PSO1: An ability to apply design and development principles in the construction of software and hardware systems of varying complexity (software hardware interface).

PSO2: An ability to recognize the importance of professional development by pursuing postgraduate studies or face competitive examinations that offer challenging and rewarding careers in computing **(successful career and immediate employment).**

PEO'S (PROGRAMME EDUCATIONAL OBJECTIVES)

PEO1: Achieve the understanding of the basics and emerging techniques of a broad range of computer science and engineering concepts.

PEO2: Gain the knowledge to analyze and solve computer science and engineering problems through application of fundamental knowledge of mathematics, science, and engineering.

UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY DORIPARRU (V) MEDIKONDURU (Md) GUNTUR (Dist.)

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY
DORIPARRU (V), MEDIKONDURU (Md)
GUNTUR (Dist.)

PEO3: Learn to apply modern skills, techniques, and engineering tools to create computational systems.

PEO4: To be able to adapt to the evolving technical challenges and changing career opportunities.

PEO5: Learn to effectively communicate ideas in oral, written, or graphical form and to promote collaboration with other members of engineering teams.

PEO6: Acquire background in humanities and social sciences required to be effective engineers, leaders, and
citizens.

PRINCIPAL
UNIVERSAL COLLEGE OF
ENGINEERING & TECHNOLOGY
DOKIPARRU (V), MEDIKONDURU (Md)
GUNTUR (Dist.)

COLLEGE OF ENGINEERING & TECHNOLOGY
DOKIPARRU (V)
MEDIKONDURU (Md)
GUNTUR (Dist.)

VISION

To achieve center of excellence in computer science and engineering and to produce competent professionals with sound technical knowledge, research skills and values to address current and future challenges of the industry.

MISSION

- To providing a strong theoretical and practical background across the computer science discipline with an emphasis on problem solving and programming skills.
- To inculcating discipline, ethical values, innovative research capabilities, teamwork and leadership abilities in young minds to continuous learning to professional growth.
- To expose the students to cutting edge technologies which enhance their employability and knowledge?
- To promote research through state-of-the-art facilities, interaction with the industry and facilitate the faculty to keep track of latest development in their research areas.

PSO'S (PROGRAMME SPECIFIC OBJECTIVES)

PSO1: An ability to apply design and development principles in the construction of software and hardware systems of varying complexity (software hardware interface).

PSO2: An ability to recognize the importance of professional development by pursuing postgraduate studies or face competitive examinations that offer challenging and rewarding careers in computing (successful career and immediate employment).

PSO3: An ability to enhance technical knowledge in various domain to identify research gaps and hence to provide solution to new ideas and innovation in the field of real time software sector (IT).

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY
DOKIPARRU (V), MEDIKONDURU (Md),
GUNTUR (Dist.)

PEO'S (PROGRAMME EDUCATIONAL OBJECTIVES)

PEO1: Achieve the understanding of the basics and emerging techniques of a broad range of computer science and engineering concepts.

PEO2: Gain the knowledge to analyze and solve computer science and engineering problems through application of fundamental knowledge of mathematics, science, and engineering.

PEO3: Learn to apply modern skills, techniques, and engineering tools to create computational systems.

PEO4: To be able to adapt to the evolving technical challenges and changing career opportunities.

PEO5: Learn to effectively communicate ideas in oral, written, or graphical form and to promote collaboration with other members of engineering teams.

PEO6: Acquire background in humanities and social sciences required to be effective engineers, leaders, and citizens.

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY
DOKIPARRU (V), MEDIKONDURU (Mdl.)
GUNTUR (Dist.)

UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY

(Approved by AICTE, New Delhi & Affiliated to JNTUK, Kakinada)

Promoted by: The Diocese of Guntur Society, Guntur

DEPARTMENT OF MASTER OF BUSINESS ADMINISTRATION

VISION

To be a Valued and Preferred Choice for pursuing Business Management Studies and Generate Competent Management Professionals to become part of the Industry at National and International level.

MISSION

- Foster excellence by providing the Quality education in Business Management.
- Cultivating the principles of Social Responsibility, Ethics and Spiritual Values among budding managers.
- Developing capable Business and Community leaders.
- To promote self employment through Entrepreneurship.
- To sensitize the students towards work ethics and social responsibility.

PSO'S (PROGRAMME SPECIFIC OBJECTIVES)

PSO 1: To guide and channelize the transformation process of every management graduate by providing in-depth knowledge of business management and entrepreneurship embedded with ethics and a sense of social commitment and to make them to strive towards personal victory and value creation to society.

PSO 2: To ignite a passion for multidisciplinary approach for problem solving, critical analysis and decision making.

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY
DOKIPARRU (V), MEDIKONDURU (Mdl.)
GUNTUR (Dist.)

PSO 3: Develop the students into effective leaders and administrators ready to face the challenges of corporate world.

PEO'S (PROGRAMME EDUCATIONAL OBJECTIVES)

PEO1: To equip students with excellent academic environment to demonstrate high levels of communication skills, creativity, critical thinking, responsibility, teamwork and leadership in their career.

PEO2: To enable students to apply management principles and practices for a successful career in the corporate world.

PEO3: To solve complex business problems and to develop leadership skills to handle business uncertainties and crisis with a rational approach.

PEO4: To create managers to understand national as well as international business environment and to assimilate updated information.

PEO5: To engage in citizen social responsibility, to value social commitments and to engage in lifelong learning.

PRINCIPAL
UNIVERSAL COLLEGE OF
ENGINEERING & TECHNOLOGY

SEMESTER-I

COURSE OUTCOMES

	Name of the Subject: ENGLISH-1
COI	The learner will understand how Gandhi grew in introspection and maturity.
CO2	The learners will achieve a higher quality of life, strength and sovereignty of a developed nation.
CO3	This develops in the student the scientific attitude to solve many problems which we find difficult to tackle
CO4	The learner will be able to think clearly and logically and write clearly and logically
CO5	The learner will understand that all men can come together and avert the peril
CO6	This provides the students to think about the scientific phenomena from a different angle and also exposes the readers to poetic expressions

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI										3		3
CO2										3		3
CO3										3		3
CO4										3		3
CO5										3		3
CO6										3		3

COURSE OUTCOMES

	Name of the Subject: MATHEMATICS-1
CO1	Student's gain knowledge on solving differential equations and its applications in Engineering and other real world phenomena.
CO2	The Laplace Transforms play an important role in solving many problems in Engineering and other real world phenomena.
CO3	Student's gain knowledge on Laplace Transforms for solving initial value problems.
CO4	Students gain the knowledge on Taylor's series problems and applications on maxima minima. Identify, formulate & solving engineering problems.
CO5	Help student's to apply this knowledge to solve partial differential equations.
CO6	Students gain the knowledge on solving Higher order partial differential equations in engineering. And its applications in Engineering.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	3	2	2									
CO2	2	3	3									
CO3	3	3	3									
CO4	2	2	3									
CO5	2	2	3									
CO6	3	2	3									

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY
POKURU (V), MEDIKONDURU (MD)
GUNTUR (Dist.)

COURSE OUTCOMES	
	Name of the Subject: ENGINEERING CHEMISTRY
CO1	Students will come to know about various methods for softening of hard water.
CO2	Students gain knowledge on construction and working of electrochemical cells, fuel cells and their applications.
CO3	Students will come to know about control measures of different types of corrosion.
CO4	Students will come to know about manufacturing process of plastics and rubbers and their properties and environmental problems associated.
CO5	Students will come to know about quality of fuels, synthesis and their uses in internal combustion engines.
CO6	Good knowledge on materials like cements, nano materials, solar cells, liquid crystals, conducting polymers, advanced technologies and their applications in different fields.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	3	3	3					2			3	
CO2	3	3	2	2				3			2	
CO3	3	3	2	2				3			3	
CO4	3	3	3	3				3				
CO5	3	3	3	3							2	
CO6	3	2	2	3							3	

COURSE OUTCOMES

	Name of the Subject: COMPUTER PROGRAMMING
CO1	Understand the basic terminology used in computer programming
CO2	Write, compile and debug programs in C language.
CO3	Use different data types in a computer program.
CO4	Design programs involving decision structures, loops and functions.
CO5	Explain the difference between call by value and call by reference.
CO6	Understand the dynamics of memory by the use of pointers and use different data structures and create/update basic data files

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1		3	2			2				3		
CO2		3	2			2				3		
CO3		3	2			2				3		
CO4		3	2			2				3		
CO5		3	2			2				3		
CO6												

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY
POKPARRU (V), MEDIKONDURU (MD)
GUNTUR (DIST.)

COURSE OUTCOMES

	Name of the Subject: Environmental Studies
CO1	Student's gain the knowledge of natural resources.
CO2	Student's gain knowledge on ecosystem and its diversity
CO3	Student's gain the knowledge on various environmental challenges induced due to unplanned anthropogenic activities
CO4	Apply the knowledge to evaluate different types of pollution and control methods
CO5	Able to know the environmental impact of developmental activities.
CO6	Student's get awareness on social issues, environmental legislation

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1		3	3									
CO2		3	2									
CO3		3	2									
CO4		3	3									
CO5		3	3									
CO6		2	2									

COURSE OUTCOMES

	Name of the Subject: Engineering Machines
CO1	The student able to understand different types of forces acting in plane and space and their resultant, also the importance of friction and it's applications.
CO2	The student able to know the concept of equilibrium in both plane& space by analytical, graphical methods and also able to understand the applications of free body diagrams.
CO3	The student able to understand the Centroid & C.O.G of simple & composite geometrical shapes.
CO4	The student able to understand the concept of area, mass moment of inertia, product of inertia of various simple & composite geometrical shapes.
CO5	The student able to know the velocity & acceleration of particle in both rectilinear & curvilinear motion, and also motion of rigid body by using the principles of kinematics and kinetics.
CO6	The student able to know the work-energy principle, its applications and also impulse-momentum principle.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	3	3	2	1								
CO2	3	3	2	1								
CO3	3	3	2	1								
CO4	3	3	2	1								
CO5	3	3	2	1								
CO6	3	3	2	1								

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY

COURSE OUTCOMES

	Name of the Subject: English LAB
CO1	The student will learn how to use expressions for Greeting introducing and taking leave, Identify vowel sounds
CO2	The student will learn how to use expressions for Asking and giving information, Identify Diphthongs
CO3	The student will learn how to use expressions for Inviting ,accepting and declining invitations, Identify Consonant sounds
CO4	The student will learn how to use expressions for giving instructions, commands and requests, use Accent and speak rhythmically
CO5	The student will learn how to use expressions for Giving Suggestions and expressing Opinions, Use different tones in connected speech.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1								3		3	3	3
CO2								3		3	3	2
CO3								3		3	3	3
CO4								3	3	3	3	2
CO5								3		3	3	3

COURSE OUTCOMES

	Name of the Subject: Engineering Chemistry Lab
CO1	Student's will come to know about determination of hardness of water by volumetric analysis.
CO2	Good knowledge on determination of metal ions concentration in various samples using volumetric analysis.
CO3	Students will come to know about determination of the concentration of ascorbic acid in eatables.
CO4	Student's will come to know about how to determine the PH of various samples.
CO5	Students will come to know about how to determine the strength of acids and bases by instrumentation.
CO6	Students gain knowledge on working of electrochemical cells, and their usage for estimation of acid and bases strength.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	3	3	3	3	3	3		3	3		3	
CO2	3	3	2	2	3			2			2	
CO3	3	3	2									
CO4	3	3	3		2	2					2	
CO5	3	3	3	2	2						2	
CO6	3	2	2	2	2						2	

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY

COURSE OUTCOMES

SEM-1	Name of the Subject: Computer Programming Lab
CO1	Apply and practice logical ability to solve the problems.
CO2	Understand C programming development environment, compiling, debugging, and linking and executing a program using the development environment
CO3	Analyzing the complexity of problems, Modularize the problems into small modules and then convert them into programs
CO4	Understand and apply the in-built functions and customized functions for solving the problems.
CO5	Understand and apply the pointers, memory allocation techniques and use of files for dealing with variety of problems.
CO6	Document and present the algorithms, flowcharts and programs in form of user-manuals. Identification of various computer components, Installation of software

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1		3	2			2				3		3
CO2		3	2			2				3		3
CO3		3	2			2				3		3
CO4		3	2			2				3		3
CO5		3	2			2				3		3
CO6		3	2			2				3		3

PRINCIPAL
UNIVERSAL COLLEGE OF
ENGINEERING & TECHNOLOGY
DOKIPARRU

UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY
DOKIPARRU (V)
KEDIMONDURU (MD)
GUNTUR (Dist.)

SEMESTER-II

COURSE OUTCOMES

	Name of the Subject: ENGLISH-II
CO1	The learner utilises the knowledge instead of making him the servant of machines. The learner will appraise bose achievements so that he may start his original work.
CO2	The learner will suumerise that climate must be preserved .The learner will examine babs achievements so as to make his own experiments.
CO3	The learner will execure and illustrate the applications of modern technologies such as nanotechnologies.
CO4	The learner will paraphrase that water is the elixis of life. The learner will defend that development is impossible without scientific reason.
CO5	The learner will recognize to work incessantly .The learner will critically appreciate tart of righting the short story and try his hand at it.
CO6	The learner will categories the advantages of work they will cary out their personal problems and address themselves to national and other problems.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI										3		3
CO2										3		3
CO3										3		3
CO4										3		3
CO5										3		3
CO6										3		3

COURSE OUTCOMES

SEM 2	Name of the Subject: Mathematics-3
CO1	Students can demonstrate matrix methods to solve linear system of equations
CO2	Students can solve engineering problems with the knowledge of eigen values and eigen vectors
CO3	Students can analise and formulate technique to trace the curve.
CO4	Students can select suitable special functions to evaluate improper integrals
CO5	Students can gain knowledge to differentiate vector functions by distinguished methods
CO6	Students can recall and recognize integral theoremsin solving engineering problems in easy way.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	3	2	1									
CO2	2	3	3									
CO3	3	2	3									
CO4	3	3	1									
CO5	2	3	2									
CO6	3	3	1									

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY

COURSE OUTCOMES

SEM 2	Name of the Subject: Engineering Physics
CO1	Designing an instrument and enhancing the resolution for its operation would be effect as achieved through study of applicational aspects of physical Optics"
CO2	While lasers are trusted Non-linear coherent sources establishing for the fitness of instrumentation, establishing a structure property relationship for materials requires allotment of an equivalent footing in convening the physics knowledge base.
CO3	The Electrical or Electronic gadgets are designed basing on the response of naturally abundant and artificially made materials, while their response to E- or H- fields controls their performance.
CO4	The utility and nuances of ever pervading SHM and its consequences would be the first hand-on to as it clearly conveyed through the detailed studies of Acoustics of Buildings, while vectorial concepts of EM fields paves the student to gear – up for a deeper understanding.
CO5	The discrepancy between classical estimates and laboratory observations of physical properties exhibited by materials would be lifted out through the understanding quantum picture of sub-atomic world dominated by electron and its presence.
CO6	In the wake of ever increasing demand for the space and power the watch word "small is beautiful", understanding the physics of electronic transport as underlying mechanism for appliances would provide a knowledge base.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	2	1	3									
CO2	3	3	3									
CO3	2	3	3									
CO4	3	1	2									
CO5	3	2	3									
CO6	3	1	3									

COURSE OUTCOMES

SEM 2	Name of the Subject: Mathematics-2
CO1	Student gain knowledge on solving Algebraic and Transcendental equations and its applications in Engineering and other real world phenomena.
CO2	Student gain knowledge in interpolations which play an important role in Engineering problems other real world phenomena.
CO3	Students are able to solve the differential equations numerically in engineering problems involving differential equations.
CO4	Student gain knowledge on Function of complex variable and can identify Cauchy Riemann Eequations formulae & harmonic; solve engineering problems.
CO5	Help students to apply this knowledge in Cauchy Integral Formulae, Taylors and Laurent's series .
CO6	Students gain the knowledge on solving Cauchy residue theorem in engineering. And its applications in Engineering problems unit circle, semi circle.

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	3	2	2									
CO2	3	3	3									
CO3	3	3	3									
CO4	2	2	2									
CO5	3	2	2									
CO6	3	2	2									

COURSE OUTCOMES

	Name of the Subject: Professional ethics and values
CO1	To help the students to discriminate between valuable and superficial in the life. To help develop the critical ability to distinguish between essence and form, or between what is of value and what is superficial, in life – this ability is to be developed not for a narrow area or field of study, but for everyday situations in life, covering the widest possible canvas.
CO2	students will be able to locate, describe, and apply the content of at least one example of a law (state, national, or international) dealing with engineering ethics.
CO3	The students are able to grasp the right utilization of their knowledge in their streams of Technology/engineering/Management to ensure mutually enriching and recyclable productions systems.
CO4	This course is designed to introduce students to the principles of health and safety engineering, with an emphasis on the application to the occupational setting. Both quantitative and qualitative tools are discussed.
CO5	Outline the basic detail of legislation relating to employment law, Outline the key aims of employment legislation in protecting the rights of employees at work. Describe the main aims of legislation providing protection against discrimination at work.
CO6	To appreciates the importance of science in their lives and the role of scientific inquiry in increasing understanding of the world around them

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1												3
CO2								3				
CO3											3	
CO4								3				
CO5			3									
CO6			3									

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY

COURSE OUTCOMES

	Name of the Subject: Engineering Drawing
CO1	student's gain the knowledge About how to draw polygons, curves like ellipse by using oblong method and arcs of circle method, scales - diagonal, vernier scale
CO2	Student's gain knowledge orthographic projection- first angle projection, third angle projections- points , Straight line parallel to both the planes, perpendicular to one plane and parallel to another plane, inclined one plane parallel to another.
CO3	Student's gain the knowledge to draw the projections of straight line when it is inclined to both the planes, angle of inclination and traces.
CO4	Student's gain the knowledge to draw about planes (polygons) parallel to one plane, perpendicular to one plane and parallel to another plane and inclined to one and both the planes
CO5	Student's gain the knowledge about the solids like prismspyramids, cone and cylinder inclined to one plane and parallel to another plane.
CO6	Student's gain the knowledge about how to convert 2D to 3D and 3D to 2D

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	3	2	2							3		2
CO2	3	2								3		3
CO3	3	2								3		2
CO4	3	2								2		2
CO5	3	3								2		2
CO6	3	3	3							3		3

COURSE OUTCOMES

	Name of the Subject: Engineering Physics Lab
CO1	Understanding of physical optics and its application in devices will be able to demonstrate and solve problems based on interference and Diffraction
CO2	Basic understanding of principle of working of Laser and its basic industrial and scientific applications. Basic understanding of the structure of optical fiber, propagation mechanism of waves and its loss through the fiber. Industrial application of optical fiber. Identify crystal lattices and their structures
CO3	Be able to describe the phenomenon of superconductivity along with their applications; understand the phenomenon of superconductivity : key experiments, some attempts to explain superconductivity, the BCS model ; be able to describe dielectric materials and mark out different magnetic materials effectively; understand the source of a materials magnetic behavior and able to distinguish types of magnetism.
CO4	Understanding of basic vector calculus, formation and conduction of wave in different medium with application of Maxwell's equation. Be able to solve problems on vector calculus, formal methods in electromagnetism, basic law of electromagnetism, Maxwell's equations and their applications.
CO5	Be able to describe wave-particle duality, uncertainty principle, Schrodinger wave equation and solve simple problems and be able to describe information storage and quantum computing; apply quantum mechanical principles to problems in electron transport.
CO6	e able to apply the knowledge of semiconductor in basic electronic circuits and in different types of memories used in the hardware computers;

PRINCIPAL

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	1	2		3								
CO2	1	2		3								
CO3	1	2		3								
CO4	1	2			3							
CO5	1	2		3								
CO6	1	2		3								

COURSE OUTCOMES

	Name of the Subject: Engineering Workshop IT LAB
CO1	Understanding of physical optics and its application in devices will be able to demonstrate and solve problems based on interference and Diffraction
CO2	Basic understanding of principle of working of Laser and its basic industrial and scientific applications. Basic understanding of the structure of optical fiber, propagation mechanism of waves and its loss through the fiber. Industrial application of optical fiber. Identify crystal lattices and their structures
CO3	Be able to describe the phenomenon of superconductivity along with their applications; understand the phenomenon of superconductivity : key experiments, some attempts to explain superconductivity, the BCS model ; be able to describe dielectric materials and mark out different magnetic materials effectively; understand the source of a materials magnetic behavior and able to distinguish types of magnetism.
CO4	Understanding of basic vector calculus, formation and conduction of wave in different medium with application of Maxwell's equation. Be able to solve problems on vector calculus, formal methods in electromagnetism, basic law of electromagnetism, Maxwell's equations and their applications.
CO5	Be able to describe wave-particle duality, uncertainty principle, Schrodinger wave equation and solve simple problems and be able to describe information storage and quantum computing; apply quantum mechanical principles to problems in electron transport.
CO6	e able to apply the knowledge of semiconductor in basic electronic circuits and in different types of memories used in the hardware computers;

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	1	2		3								
CO2	1	2		3								
CO3	1	2		3								
CO4	1	2			3							
CO5	1	2		3								
CO6	1	2		3								

SEMESTER-III

COURSE OUTCOMES

	Name of the Subject: Metallurgy& Materials Science
CO1	The basic concepts of bonds in metals and alloys, basic requirements for the formation of solid solutions and other compounds are studied.
CO2	The regions of stability of the phases that can occur in an alloy system in order to solve the problems in practical metallurgy are known.
CO3	The basic differences between cast irons and Steels, their properties and practical applications are studied.
CO4	The affect of various alloying elements on Iron-iron carbide system, and various heat treatment and strengthening processes used in practical applications are studied.
CO5	The properties and applications of widely used non-ferrous metals and alloys and suitable material for practical applications are known.
CO6	The properties and applications of ceramic, composite and other advanced materials so as to use the suitable material for practical applications are studied.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	2		2	2	2		1			1		1
CO2	2		2	2	2		1			1		1
CO3	2		2	2	2		1			1		1
CO4	2		2	2	2		1			1		1
CO5	2		2	2	2		1			1		1
CO6	2		2	2	2		1			1		1

COURSE OUTCOMES

	Name of the Subject: Mechanics of Solids
CO1	Student will know basic terms like stress, strain and their relations and stresses in different types of composite bars, thermal stresses in those members, strain energy, different loading, and also problem solving techniques
CO2	Student will be able to draw the shear force and bending moment diagrams for different types beams subjected to different loads.
CO3	Student will be able to know bending stress and bending equations, different derivations for stress distribution across various beams like rectangle, circle,I and T sections etc.
CO4	Student will know how to finding the deflection and slopes for different beams by double integration, Macaulay's method and Mohr theorems and problems solving techniques
CO5	Student will know stresses induced in thick and thin cylinders
CO6	Student will know shear stress induced in circular shafts, torsion in circular shafts which are in series and parallel, buckling and stability of columns.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	3	2	2	2								
CO2	3	3	2	2								2
CO3	3	3	3	2								2
CO4	3	3	3	3								2
CO5	3	3	3	3								2
CO6	3	3	3	3								2

COURSE OUTCOMES

	Name of the Subject: Thermodynamics
CO1	Impart the basic concepts of thermodynamics.
CO2	By studying thermodynamics, students will be able to solve different thermal problems.
CO3	Understand and analyze the thermal and mechanical behavior of the materials and systems.
CO4	can prepare energy audit of any mechanical system that exchange heat and work
CO5	can apply principles to various engineering mechanisms also can calculate efficiency and performance parameters

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	3						3					3
CO2		3	3	2								
CO3			2	2	2							
CO4					3							
CO5		2	3	3								
CO6												

COURSE OUTCOMES

	Name of the Subject: Managerial economics &financial analysis
CO1	Student's gain knowledge how to know the customer needs taste and preference and determine the demand.
CO2	Student's gain knowledge how the changes in demand occur and how to satisfy them by using statistical methods for demand forecasting.
CO3	Student's gain knowledge of combination of factors of production for maximum level of output.
CO4	Student's gains knowledge in types of markets and how the pricing is link with the nature of market.
CO5	Student's gain knowledge about how to start & select the nature of their business, & gain knowledge of how to accept the project proposals.
CO6	Students gain the knowledge of how to make profit analysis with the help of financial statements and make decisions based on liquidity positions.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	1	1				1	1	3	2	2	3	3
CO2	1	1				1	1	3	2	2	3	3
CO3	1	1				1	1	3	2	2	3	3
CO4	1	1				1	1	3	2	2	3	3
CO5	1	1				1	1	3	2	2	3	3
CO6	1	1				1	1	3	2	2	3	3

COURSE OUTCOMES

	Name of the Subject: Computer aided Engineering Drawing Practice
CO1	Able to gain the knowledge of projections is essential in 3d modelling and animations, projection of solids
CO2	able to gain the knowledge of development of surfaces & Intersection of solids which is required in designing and manufacturing of the objects
CO3	learn the methods of isometric and perspective views
CO4	To introduce various commands in AutoCAD& to draw geometric entities to create 2d and 3d wireframe models.
CO5	Able to understand viewpoints & view ports
CO6	To create geometric model of simple solids and machine parts & display the same as an isometric, orthographic projections

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	3											
CO2	3											
CO3	3											
CO4	3				3							
CO5	3				3							
CO6	3				3							

COURSE OUTCOMES

	Name of the Subject: Basic Electrical & Electronics Engg. Lab
CO1	Ability to understand concept of speed control of DC Motor
CO2	Ability to calculate performance of DC machine under different loads
CO3	Ability to perform a test on DC motor under different loads
CO4	Ability to perform a test on and calculation on transformer under different loads
CO5	Ability to perform a test on Induction motor under different loads

PRINCIPAL
UNIVERSAL COLLEGE OF

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	2				2				1		3	
CO2	2	2			3				1		3	
CO3	2	3			3				1		3	
CO4	2	3			3				2		3	
CO5	2	3			3				2		3	
CO6												

COURSE OUTCOMES

	Name of the Subject: Mechanics of Solids & Metallurgy lab
CO1	To gain practical Exposure on direct tensile & Compression test
CO2	To gain Practical Exposure on bending test on SS & Cantilever test
CO3	To gain Practical exposure on brinells, Rockwell hardness test and impact tests.
CO4	Impart practical exposure on the microstructures of various materials like Fe, Cu,Al and their hardness evaluation
CO5	Impart practical exposure on the microstructures of various materials like cast iron, non ferrous alloys and their hardness evaluation
CO6	Impart practical exposure on Hardenability of steels by jominy end quench test.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	3	3	1									
CO2	3	3	1									
CO3	3	3	1									
CO4	3	3	1									
CO5	3	3	1									
CO6	3	3	1									

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY
DONKARAYI (V), MEDIKONDURU (M), GUNTUR (DIST.)

SEMESTER-IV

COURSE OUTCOMES

	Name of the Subject: Kinematics of Machinery
CO1	The student able to understand diff types of mechanisms and to study the relative motion of parts in a machine without taking into consideration of forces.
CO2	The student able to know an exact and approximate straight line mechanisms and their applications including steering gear mechanism, hookes joint
CO3	The student able to understand the velocity and acceleration of a mechanism using graphical and instantaneous centre method
CO4	The student able to understand the application of cam and follower and also the cam profiles by different types of follower motions.
CO5	The student able to know the rigid power transmission element like gears, and their terminology concept of interference
CO6	The student able to know the flexible power transmission element like belt, rope, chain drives and know the merits and demerits of each drive and also different types of gear drives.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	3											
CO2	3	3	1	1								
CO3	3	3	3	1								
CO4	3	3	3	2								
CO5	3	3	3	1								
CO6	3	3	3									

COURSE OUTCOMES

	Name of the Subject: Thermal Engineering -I
CO1	Impart the basic concepts of IC engines
CO2	To study different parts of an engine and process
CO3	Understand and analyze the engine parameters.
CO4	Can understand the reasons and losses that occurs in engine operations and working of various engine systems
CO5	Can calculate performance parameters
CO6	Can calculate mechanical details, power and efficiency of compressors

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	3	3	3	2			2			2	2	3
CO2	3	3	3	2			2			2	2	3
CO3	3	3	3	2			2			2	2	3
CO4	3	3	3	2			2			2	2	3
CO5	3	3	3	2			2			2	2	3
CO6	3	3	3	2			2			2	2	3

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY

COURSE OUTCOMES

	Name of the Subject: Production Technology
CO1	The fundamentals of casting are studied.
CO2	Sand casting and other casting processes are studied.
CO3	The fundamentals of gas welding and arc welding are studied.
CO4	The principles of advanced welding processes and their applications are studied
CO5	Knowledge on bulk forming processes was gained.
CO6	Various sheet metal forming and processing of plastics are studied.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI												2
CO2												2
CO3												2
CO4	3	1	1	1		1						2
CO5	3		1			1	1					2
CO6	3	1	1			1	1					2

COURSE OUTCOMES

	Name of the Subject: Fluid Mechanics & Hydraulic machinery
CO1	Be able to convert units of any parameter between three systems of units, understand the physical properties and characteristic behavior of fluids, and the basic principles offluid mechanics.
CO2	Be able to describe and interpret the behavior and performance of fluid at rest.
CO3	Be able to describe and interpret the behavior and performance of fluid in motion.
CO4	Be able to describe the behavior and performance of fluid when the fluid is flowing through the pipe.
CO5	Be able to derive the dimensions of different fluid parameters.
CO6	Be able to apply similitude and modelling principles and techniques to solve problems in hydraulics

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	3	3	1	2	1	1	2					2
CO2	3	2	1	3	1							2
CO3	3	2	1	3	1							2
CO4	3	2	1	3	1							2
CO5	3	2	1	3	1							2
CO6	3	2	1	3	3							3

COURSE OUTCOMES

	Name of the Subject: Machine Drawing
CO1	Represent different kinds of materials and Mechanical components conventionally.
CO2	Understand the shape and structure of different types of screws, keys and Couplings.
CO3	Produce the assembly drawing using part drawings

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI												
CO2	3				2							3
CO3	3				2							3

COURSE OUTCOMES

	Name of the Subject: Fluid mechanics & Hydraulic machinery Lab
CO1	Be able to convert units of any parameter between three systems of units, understand the physical properties and characteristic behavior of fluids, and the basic principles of fluid mechanics.
CO2	Be able to describe and interpret the behavior and performance of fluid at rest.
CO3	Be able to describe and interpret the behavior and performance of fluid in motion.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI												
CO2	3	3	3	3					3			3
CO3	3	3	3	3					3			3

COURSE OUTCOMES

	Name of the Subject: Thermal Engineering Lab
CO1	Impart the basic concepts of IC engines
CO2	To study different parts of an engine and process
CO3	Understand and analyze the engine parameters.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI												
CO2	3	2			1	3						
CO3	1		3			1	1					

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY
DOKIPARRU (V), MEDIKONDURU (Mdl.)

SEMESTER-V

COURSE OUTCOMES

	Name of the Subject: Dynamics of Machinery
CO1	Analyze stabilization of aero planes, ships, four wheelers and two wheelers.
CO2	Compute friction losses, torque transmissions through clutches to gain knowledge on brakes and dynamo meters
CO3	Understand turning moment diagrams and to analyze dynamic force analysis, design of flywheel.
CO4	Understand the concepts of governors and its types
CO5	Understand balancing of reciprocating and rotary masses and to gain knowledge in analytical and graphical methods for calculating the balancing problems.
CO6	Understand concepts of vibrations and also how to determine natural frequencies for different types of vibrations

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI		1	3	3								
CO2		1	3	3								
CO3		1	3	3								
CO4		1	3	3								
CO5		1	3	3								
CO6		1	3	3								

COURSE OUTCOMES

	Name of the Subject: METAL CUTTING AND MACHINE TOOLS
CO1	Apply cutting mechanics to metal machining based on cutting force and power consumption.
CO2	Operate lathe, milling machines, drill press, grinding machines, etc.
CO3	Select cutting tool materials and tool geometries for different metals.
CO4	Select appropriate machining processes and conditions for different metals.
CO5	Learn machine tool structures and machining economics.
CO6	Write simple CNC programs and conduct CNC machining.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	2	2	1	1		2	2		1			1
CO2	2	2	1	1		2	2		1			1
CO3	2	2	1	1		2	2		1			1
CO4	2	2	1	1		2	2		1			1
CO5	2	2	1	1		2	2		1			1
CO6	2	2	1	1		2	2		1			1

COURSE OUTCOMES

	Name of the Subject: Design of Machine Members–I
CO1	Apply the design procedure to Engg problems including consideration of technical & manufacturing constraints.
CO2	Select suitable material & significant tolerances, fits in critical design applications.
CO3	Utilize design data handbook and design the element for strength, stiffness & fatigue
CO4	Identify the load machine members subjected to static & dynamic stresses to ensure safe design.
CO5	Identify the load machine members subjected to diff elements

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	3	3	3	2	1							2
CO2	3	3	3	2	1							2
CO3	3	3	3	2	1							2
CO4	3	3	3	2	1							2
CO5	3	3	3	2	1							2

COURSE OUTCOMES

	Name of the Subject: Instrumentation & Control Systems
CO1	Knowledge of working principles of various sensors.
CO2	How to measure the important physical variables of various mechatronic systems like measurement of displacement, temperature,
CO3	How to measure the important physical variables of various mechatronic systems like measurement of pressure, liquid level,
CO4	How to measure the important physical variables of various mechatronic systems like measurement of flow,speed,vibration, acceleration
CO5	How to measure the important physical variables of various mechatronic systems like measurement of strain, torque, power.
CO6	Can understand the basic principles of control systems & feedback mechanism

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	3	2	2	2			1				1	2
CO2	3	2	2	2			1				1	2
CO3	3	2	2	2			1				1	2
CO4	3	2	2	2			1				1	2
CO5	3	2	2	2			1				1	2
CO6	3	2	2	2			1				1	2

COURSE OUTCOMES

	Name of the Subject: Thermal Engineering -II
CO1	Can analyze energy transfers and transformations
CO2	Can get basic knowledge of components of steam and gas power cycles
CO3	Can understand the basic principles of jet propulsions and rocket engineering

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	3	3	3	2	2	3	3					2
CO2	3	3	3	2	2	3	3					2
CO3	3	3	3	2	2	3	3					2

COURSE OUTCOMES

	Name of the Subject: Metrology
CO1	Student will be able to design tolerances and fits for selected design
CO2	Students understand the principles of measuring instruments and gauges and their uses
CO3	Students understand the principles of measuring instruments and gauges and their uses by using light
CO4	They can understand the evaluation of surface finish and measure the surface roughness of the parts with various comparators.
CO5	A student can understand the terminology of gears and screw threads and can choose appropriate method and instruments for inspection of various gear elements and thread elements
CO6	Student understand machine tool testing to evaluate machine tool quality

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	2				2	3						2
CO2	2				2	3						2
CO3	2				2	3						2
CO4	2				2	3						2
CO5	2				2	3						2
CO6	2				2	3						2

COURSE OUTCOMES

	Name of the Subject: IPR&PATENTS
CO1	Students will be able to understand the importance and necessity of IPR
CO2	To impart the basic concepts of copy rights and various process to apply
CO3	To create an awareness among the students about the importance of patents
CO4	What is a trade mark and the process associated with it and ownership claims
CO5	The students will be able to know the importance of trade secrets and various laws associated withImportance of IT sector and Privacy.

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	1	1				1	1	3	2	2	3	3
CO2	1	1				1	1	3	2	2	3	3
CO3	1	1				1	1	3	2	2	3	3
CO4	1	1				1	1	3	2	2	3	3
CO5	1	1				1	1	3	2	2	3	3

COURSE OUTCOMES

	Name of the Subject: Machine Tools Lab
CO1	To gain practical Exposure on diff taper turning operations
CO2	Able to understand diff drilling operations
CO3	To gain practical Exposure on diff milling operations
CO4	Able to understand diff shaping operations
CO5	To gain practical Exposure on turning operations
CO6	Able to understand diff slotting operations

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	2	2	1		2	2	2		2		2	2
CO2	2	2	1		2	2	2		2		2	2
CO3	2	2	1		2	2	2		2		2	2
CO4	2	2	1		2	2	2		2		2	2
CO5	2	2	1		2	2	2		2		2	2
CO6	2	2	1		2	2	2		2		2	2

COURSE OUTCOMES

	Name of the Subject: Metrology & Instrumentation Lab
CO1	Measuring and gauging instruments for inspection of precision linear, geometric forms, angular and surface finish measurements.
CO2	Measurements and calibration of instruments measuringpressure, temperature, displacement, speed, vibration etc.
CO3	They will also understand the machine tool alignment tests.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	3	3	2	2			1		1		1	
CO2	3	3	2	2			1		1		1	
CO3	3	3	2	2			1		1		1	

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY
DOKIPARRU (V), MEDIKONDURU (Md)

SEMESTER-VI

COURSE OUTCOMES

	Name of the Subject: Operations Research
CO1	Able to formulate a Linear programming problem and the procedure to solve it.
CO2	Able to formulate transportation and assignment problems Also he will be able to solve sequencing problems
CO3	Able to determine optimal Replacement period of machines counting and without counting time value of money and also able to judge better optimal between individual replacement with group replacement
CO4	Solve games and find the optimal strategies for different players. Also able to solve simple problems on waiting line methods
CO5	Able to determine EOQ for deterministics models and for simple stochastic models with price breaks
CO6	Understand the concept of dynamic programming and apply for problems on capital budgeting, shortest path and linear programming

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	3	3	2	1								1
CO2	3	3	2	1								1
CO3	3	3	2	1								1
CO4	3	3	2	1								1
CO5	3	3	2	1								1
CO6	3	3	2	1								1

COURSE OUTCOMES

	Name of the Subject: Interactive Computer Graphics
CO1	Understand the fundamental concepts and theory of computer graphics.
CO2	Understand modeling, and interactive control of 3D computer graphics applications.
CO3	The underlying parametric surface concepts are understood.
CO4	Learn multimedia authoring tools.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	3	3	2	1	3							3
CO2	3	3	2	1	3							3
CO3	3	3	2	1	3							3
CO4	3	3	2	1	3							3

PRINCIPAL
UNIVERSAL COLLEGE OF

COURSE OUTCOMES

	Name of the Subject: Design of Machine Members– II
CO1	The student will able to select the suitable bearing based on the
CO2	Application of the loads and predict the life of the bearing.
CO3	The student able to know design procedure of connecting rod and crankshaft
CO4	The student able to know design procedure of piston and cylinder
CO5	The student able to know selection of geometrical section for the curved beams
CO6	The student has to know design of power transmission elements such as gears, belts, chains, pulleys, ropes, levers and power screws.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	3	3	3	3	1							3
CO2	3	3	3	3	1							3
CO3	3	3	3	3	1							3
CO4	3	3	3	3	1							3
CO5	3	3	3	3	1							3
CO6	3	3	3	3	1							3

COURSE OUTCOMES

	Name of the Subject: Robotics
CO1	The student able to practice in applying their knowledge of Mathematics, Sciences, Engineering and to expand their knowledge into the vast area of robotics.
CO2	The student able to identify various robot configurations and components.
CO3	The student able to apply the knowledge of homogeneous transformation, manipulator Kinematics (both Forward & inverse Kinematics) for the analysis of manuplator
CO4	The student able to design a solution (in the form of robot) for industrial environments.
CO5	The student able to program by analyze and synthesize the required trajectory planning for a manipulator by avoiding obstacles.
CO6	The student able to understand the functioning of sensors and actuators.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	3	3	3	1	2	2		1	1			1
CO2	3	3	3	1	2	2		1	1			1
CO3	3	3	3	1	2	2		1	1			1
CO4	3	3	3	1	2	2		1	1			1
CO5		3	3	1	2	2		1	1			1
CO6	3	3	3	1	2	2		1	1			1

COURSE OUTCOMES

	Name of the Subject: Heat Transfer
CO1	Understand the basic principles of heat transfer and solve simple one dimensional problems.
CO2	Analyze and solve conduction problems in case of fins and undestand usage of heislar charts.
CO3	Understand the need for dimensional analysis and apply buckingham pi theorem
CO4	Analyze and solve convecttion problems
CO5	Ability to determine heat transfer in condensers and heat exchangers
CO6	Analyse and Solve heat transfer by radiation

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	3	3	1	1								2
CO2	3	3	1	1								2
CO3	3	3	1	1								2
CO4	3	3	1	1								2
CO5	3	3	1	1								2
CO6	3	3	1	1								2

COURSE OUTCOMES

	Name of the Subject: Industrial Engineering Management
CO1	Students understand productivity and its measurement, concepts and importance of management to improve productivity and principles of scientific management.
CO2	Students understand the factor that should be considered when setting a new plant, and layout importance and methods to optimize the layout design and plant maintenance.
CO3	Students understand the scientific techniques to improve operations efficiency using various industrial engineering techniques.
CO4	Students understand the importance of quality control, inspection by sampling, controlling the production by control charts and also the total quality management concepts.
CO5	Students understand the concept of HRM and techniques necessary for it like job evaluation, merit rating and wage incentive plans.
CO6	Students understand the concepts of value engineering and project management techniques like PERT and CPM.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	3											
CO2	3		3			2						
CO3	3	3	3									
CO4	3	3	3									
CO5	3		3									
CO6	3	3	3	3							3	

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY

COURSE OUTCOMES

	Name of the Subject: Refrigeration & air conditioning
CO1	Imparts the basic concepts of Refrigeration and Air conditioning in students.
CO2	Gives the ability to design refrigeration or air-conditioning equipment that meets the required specification
CO3	Helps to solves simple problems related to refrigeration.
CO4	Gives an awareness of basic principles and thermodynamics of refrigeration.
CO5	Helps to understand various refrigeration components.
CO6	Helps to design the various components associated with a refrigeration system.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	3	3	2			2	3					
CO2	2	2	3			1	2					
CO3	3	2									2	1
CO4	3	2										
CO5												
CO6												

COURSE OUTCOMES

	Name of the Subject: Heat Transfer Lab
CO1	Students will be able to get a useful foundation and basic knowledge of heat transfer.
CO2	Knowledge of the subject required for innovative work and advanced studies.
CO3	Students will get an idea about the subject and well informed about the practical application of different formulae from an engineering point of view.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	3	2	1									1
CO2	2											
CO3	2											1

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY

SEMESTER-VII

COURSE OUTCOMES

	Name of the Subject: Automobile Engineering
CO1	Students can understand various types of strategies of automation and the general components/systems used for automation.
CO2	Students can understand and analyze various part transportation methods and the effect of buffer storage.
CO3	Students can understand and design assembly process/systems and line balancing methods.
CO4	Students can understand various systems used in material handling, automated storage and retrieval systems and interfacing handling and storage with manufacturing.
CO5	Students can understand the concepts of adaptive control systems and it's types.
CO6	Students can understand the concepts of automated inspection and various systems used to achieve automation in inspection.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	3	1	3		2							
CO2	3	2	2									
CO3	3	2	2									
CO4			1			1						3
CO5	3	1	3	2			3					
CO6	3	1	2	1								

COURSE OUTCOMES

	Name of the Subject: Automation in manufacturing
CO1	Students can understand various types of strategies of automation and the general components/systems used for automation.
CO2	Students can understand and analyze various part transportation methods and the effect of buffer storage.
CO3	Students can understand and design assembly process/systems and line balancing methods.
CO4	Students can understand various systems used in material handling, automated storage and retrieval systems and interfacing handling and storage with manufacturing.
CO5	Students can understand the concepts of adaptive control systems and it's types.
CO6	Students can understand the concepts of automated inspection and various systems used to achieve automation in inspection.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	3	2	1		1							
CO2	3	2	1		1							
CO3	3	2	1		1							

PRINCIPAL
COLLEGE OF
TECHNOLOGY

CO4	3	2	1		1							
CO5	3	2	1		1							
CO6	3	2	1		1							

COURSE OUTCOMES

	Name of the Subject: CAD/CAM
CO1	The student able to understand the basic fundamentals of CAD and manufacturing and learn 2D & 3D transformations of basic entities.
CO2	The student able to understand the different geometric modeling techniques like solid modeling, surface modeling, feature based modeling etc., and to visualize how the components look like before its manufacturing or fabrication.
CO3	The student able to understand the NC modes, elements and learn how to develop the part programming.
CO4	The student able to understand the importance of group technology and computer aided process planning.
CO5	The student able to understand terminology used in Quality control and importance of computer aided quality control.
CO6	The student able to identify the various elements and their activities in the computer integrated Manufacturing Systems.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	3				3					2		
CO2	3				3					2		
CO3	3		3		3					3		
CO4	3		2		1					3		
CO5	3		1		2					1		
CO6	3		1		2							

COURSE OUTCOMES

	Name of the Subject: Industrial Hydraulics& Pneumatics
CO1	To understand the underlying principles of industrial hydraulics & pneumatic system.
CO2	To analyze circuits and enumerate the functions & characteristics of circuit elements.
CO3	Attend to troubleshooting in fluid power systems.
CO4	To identify and describe the basic operation of hydraulic/pneumatic systems, the various equipment used in other operation.
CO5	To understand the underlying principles in servo systems and PLC.
CO6	To analyze circuits and enumerate the functions & characteristics of circuit elements.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	3	3	3	2	1							2
CO2	3	3	3	2	1							2
CO3	3	3	3	2	1							2

CO4	3	3	3	2	1							2
CO5	3	3	3	2	1							2
CO6	3	3	3	2	1							2

COURSE OUTCOMES

	Name of the Subject: Micro electro mechanical systems
CO1	Familiarization with various micro manufacturing techniques
CO2	Understanding the principles of mechanical and thermal sensors and actuators
CO3	Understand the principles of devices used in MEMS
CO4	Understanding the principles of magnetic sensors and actuators
CO5	Understanding the principles of micro-fluid actuation methods
CO6	Understanding the principles of elements used in R.F communication systems. Understanding the principles of micro devices used in chemical and bio-medical systems

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	1	1	2	2								1
CO2	1	1	2	2								1
CO3	1	1	2	2								1
CO4	1	1	2	2								1
CO5	1	1	2	2								1
CO6	1	1	2	2								1

COURSE OUTCOMES

	Name of the Subject: NANO TECHNOLOGY
CO1	The student will be able to understand the basics of Quantum mechanics, Solid state physics.
CO2	The student will be able to understand the applications of SiC, Alumina and Zirconia nano materials preparation.
CO3	The student will be able to understand mechanical, electrical, optical properties of nano materials.
CO4	The student will be able to know the different processes of synthesis of nano powders.
CO5	The student will be able to know how to utilize electron microscope, and optical microscope, and X-Ray diffraction.
CO6	The student will be able to understand about nano biology and nano medicines.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	1	1	2	2								1
CO2	1	1	2	2								1
CO3	1	1	2	2								1
CO4	1	1	2	2								1
CO5	1	1	2	2								1
CO6	1	1	2	2								1

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY
DOKIPARRU (V), MEDIKONDURU (M)
SPSR NELLORE (Dist.)

COURSE OUTCOMES

	Name of the Subject: Unconventional Machining Processes
CO1	The student shall understand Introduction of Non-Traditional Machining
CO2	The student shall understand the principle of working mechanism of metal removal Ultra sonic machining, Abrasive Jet machining and Abrasive water jet machining
CO3	Select appropriate machining mechanism of metal removal in the various Electro-Chemical machining process,
CO4	Select appropriate machining mechanism of metal removal in the various Thermo electric machining process
CO5	Select appropriate machining mechanism of metal removal in the various Electron Beam machining LBM process
CO6	Select appropriate machining mechanism of metal removal in the various Plasma Arc machining process

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	2			2	3	2						1
CO2	2			2	3	2						1
CO3	2			2	3	2						1
CO4	2			2	3	2						1
CO5	2			2	3	2						1
CO6	2			2	3	2						1

COURSE OUTCOMES

	Name of the Subject: FINITE ELEMENT METHODS
CO1	Understand the concepts of equlibrium,stress-strain relations and solve simple problems using variational methods and weight residual methods
CO2	Apply finite element metod to bars using linear shape function
CO3	Apply finite element method to plane trusses and simple beams.
CO4	Able to apply finite element method using triangular element and axisymmetric elements
CO5	Able to develop finite element equations for quadrilateral and higher order elements and solve simple problems using numerical integration
CO6	Able to identify how fem used for problems involving heat transfer and eigen value problems

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	3	3	1	1								1
CO2	3	3	1	1	1							1
CO3	3	3	1	1	1							1
CO4	3	3	1	1	1							1
CO5	3	3	1	1	1							1
CO6	3	3	1	1	1							1

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY

COURSE OUTCOMES

	Name of the Subject: SIM LAB
CO1	Can apply math, science, computing and engineering knowledge to Information Technology engineering problems.
CO2	Will be able to set up and conduct engineering experiments.
CO3	Will possess strong fundamental concepts on database technologies, operating system, complier designs, advanced programming, software engineering.
CO4	Will be able to demonstrate the team work with an ability to design, develop, test and debug the project by developing professional interaction with each other that can lead to successful completion of project.
CO5	Will be able to communicate effectively with a range of audiences.
CO6	Able to use various tools to solve engineering problems and to evaluate solutions.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
COI	3	3	3	1				1				3
CO2	3	3	3	1				1				3
CO3	3	3	3	1				1				3
CO4	3	3	3	1				1				3
CO5	3	3	3	1				1				3
CO6	3	3	3	1				1				3

PRINCIPAL
UNIVERSAL COLLEGE OF
ENGINEERING & TECHNOLOGY

SEMESTER-VIII

COURSE OUTCOMES

	Name of the Subject: Power plant engineering
CO1	Know the various types of power plants.
CO2	Knowledge of the various types of conventional and non-conventional power plants.
CO3	Knowledge of the operation, construction and design of various components of power plants.
CO4	Calculate the performance parameters of various power plants.
CO5	Define and calculate the various factors of plant load and economy.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	2	1	2		1	1		1		1	1	2
CO2	2	1	2		1	1		1		1	1	2
CO3	2	1	2		1	1		1		1	1	2
CO4	2	1	2		1	1		1		1	1	2
CO5	2	1	2		1	1		1		1	1	2

COURSE OUTCOMES

	Name of the Subject: GREEN ENGINEERING SYSTEMS
CO1	Establish a base of knowledge about renewable energy; an overview of the use of different types of non-renewable and renewable sources of energy.
CO2	A brief review of the history and basic principles of solar thermal and photovoltaic energy conversion.
CO3	Various ways of reducing the currently high cost of energy are included in this section.
CO4	Examination of recent commercial developments in wind energy and its future potential.
CO5	The features of bio-energy and other aspects such as the sustainability concern, economics and potential future for this renewable resource.
CO6	An overview of geothermal energy including sources of heat and its historical perspective.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	3	3		2	1	1	2		1		1	2
CO2	3	3		2	1	1	2		1		1	2
CO3	3	3		2	1	1	2		1		1	2
CO4	3	3		2	1	1	2		1		1	2
CO5	3	3		2	1	1	2		1		1	2
CO6	3	3		2	1	1	2		1		1	2

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY
DOKIPARRU (V), TEKKONDURU (Mdl.)
GUNTUR (Dist.)

COURSE OUTCOMES

	Name of the Subject: ADVANCED MATERIALS
CO1	Properties of constituents, classification of composites and their suitability for the structural applications
CO2	Manufacturing processes.
CO3	Smart materials and their applications.
CO4	Nano materials in comparison with bulk materials

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	2				2							
CO2	2				2							
CO3	2				2							
CO4	2				2							

COURSE OUTCOMES

	Name of the Subject: Production Planning and Control
CO1	Apply the systems concept for the design of production and servicesystems.
CO2	Make forecasts in the manufacturing and service sectors usingselected quantitative and qualitative techniques.
CO3	Apply the principles and techniques for planning and control of theproduction and service systems to optimize/make best use ofresources.
CO4	Understand the importance and function of inventory and to be able toapply selected techniques for its control and management underdependent and independent demand circumstances.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	2	2	1	1		2	2	3	3		3	2
CO2	2	2	1	1		2	2	3	3		3	2
CO3	2	2	1	1		2	2	3	3		3	2
CO4	2	2	1	1		2	2	3	3		3	2

CO-COURSE OUT COME

PO-PROGRAMME OUTCOME

1--------SLIGHT (LOW MAPPING)

2--------MODERATE (MEDIUM MAPPING)

3--------SUBSTANTIAL (HIGH MAPPING)

PRINCIPAL
UNIVERSAL COLLEGE OF ENGINEERING & TECHNOLOGY

Program Outcomes as defined by NBA (PO)

PO.NO	Program Outcome	Description
PO1	1. Engineering knowledge	Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2	2. Problem analysis	Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	3. Design/development of solutions	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO4	4. Conduct investigations of complex problems	Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5	5. Modern tool usage	Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations
PO6	6. The engineer and society	Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice
PO7	7. Environment and sustainability	Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	8. Ethics	Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
P9	9. Individual and team work	Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings

PRINCIPAL
COLLEGE OF
ENGINEERING & TECH

P10	10. Communication	Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions
P11	11. Project management and finance	Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
P12	12. Life-long learning	Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PRINCIPAL
UNIVERSAL COLLEGE OF
ENGINEERING & TECHNOL
ARRU (V), MEDIKONDURU (Mdl.)
GUNTUR (Dist.)