

MRK Institute of Technology (Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai) An ISO 9001: 2008 Certified Institution

MRK Institute of Technology Nattarmangalam Villags, Kattumannarkoil – 608 301. Cuddalore Dt, Tamilnadu. Ph: 04144 - 260270, 262728 Fax: 04144 - 262728 1 : +91 - 9487691969



DEPARTMENT OF SCIENCE & HUMANITIES

2.6.1. Programme Outcomes (POs) and Course Outcomes (COs) for all Programmes offered by the institution are stated and displayed on website and attainment of POs and COs are evaluated

SEMESTED	COURSE	COUDSE NAME	COURSE	COURSE OUTCOME
SENIESTER	CODE	COURSE NAME	ID	
		PROFESSIONAL ENGLISH I	CO 1	At the end of the course, learners will be able
				To use appropriate words in a professional context
Ι	HS3151		CO 2	To gain understanding of basic grammatic structures and use them in right context.
			CO 3	To read and infer the denotative and connotative meanings of technical texts
			CO 4	To write definitions, descriptions, narrations and essays on various topics
		MATRICES AND CALCULUS	CO 1	At the end of the course the students will be able to
	MA3151			Use the matrix algebra methods for solving practical problems
			CO 2	Apply differential calculus tools in solving various application problems.
Ι			CO 3	Able to use differential calculus ideas on several variable functions.
			CO 4	Apply different methods of integration in solving practical problems.
			CO 5	Apply multiple integral ideas in solving areas, volumes and other practical
				problems.
	PH3151	ENGINEERING PHYSICS	CO 1	After completion of this course, the students should be able to
Ι				Understand the importance of mechanics.
			CO 2	Express their knowledge in electromagnetic waves.
			CO 3	Demonstrate a strong foundational knowledge in oscillations, optics and lasers.
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	CO 5 CO 1	Comprehend and apply quantum mechanical principles towards the formation of energy bands.At the end of the course, the students will be able:To infer the quality of water from quality parameter data and propose suitable
	CO 1	At the end of the course, the students will be able: To infer the quality of water from quality parameter data and propose suitable
		treatment methodologies to treat water.
ENGINEERING CHEMISTRY	CO 2	To identify and apply basic concepts of nanoscience and nanotechnology in designing the synthesis of nanomaterials for engineering and technology applications.
	CO 3	To apply the knowledge of phase rule and composites for material selection requirements.
	CO 4	To recommend suitable fuels for engineering processes and applications.
	CO 5	To recognize different forms of energy resources and apply them for suitable applications in energy sectors
51 PROBLEM SOLVING AND PYTHON PROGRAMMING	CO 1	On completion of the course, students will be able to Develop algorithmic solutions to simple computational problems
	CO 2	Develop and execute simple Python programs.
_	ENGINEERING CHEMISTRY PROBLEM SOLVING AND PYTHON PROGRAMMING	ENGINEERING CHEMISTRY CO 3 CO 4 CO 4 CO 5 PROBLEM SOLVING AND PYTHON PROGRAMMING CO 2





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			CO 2	Write simple Python programs using conditionals and looping for solving
			03	problems.
			CO 4	Represent compound data using Python lists, tuples, dictionaries etc.
			CO 5	Represent compound data using Python lists, tuples, dictionaries etc.
			CO 6	Read and write data from/to files in Python programs.
			CO 1	Upon completion of the course, students will be able to
			001	Develop algorithmic solutions to simple computational problems
		PROBLEM SOLVING AND	CO 2	Develop and execute simple Python programs.
		PYTHON PROGRAMMING	CO 3	Implement programs in Python using conditionals and loops for solving problems.
Ι	GE3171	LABORATORY	CO 4	Deploy functions to decompose a Python program.
			CO 5	Process compound data using Python data structures.
			CO 6	Utilize Python packages in developing software applications.
			CO 1	Upon completion of the course, the students should be able to
			01	Understand the functioning of various physics laboratory equipment.
		PHYSICS AND CHEMISTRY	CO 2	Use graphical models to analyse laboratory data.
Ι	BS3171	LABORATORY	CO 3	Use mathematical models as a medium for quantitative reasoning and describing
				physicalreality.
			CO 4	Access, process and analyse scientific information.
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			CO 5	Solve problems individually and collaboratively.
Ι	CY 3151	CHEMISTRY LABORATORY	CO 1	Upon completion of the course, the students should be able to To analyse the quality of water samples with respect to their acidity, alkalinity, hardness andDO.
			CO 2	To determine the amount of metal ions through volumetric and spectroscopic techniques
			CO 3	To analyse and determine the composition of alloys.
			CO 4	To learn simple method of synthesis of nanoparticles
			CO 5	To quantitatively analyse the impurities in solution by electroanalytical techniques
	GE3172	ENGLISH LABORATORY	CO 1	At the end of the course, learners will be able
				To listen and comprehend complex academic texts
Ι			CO 2	To speak fluently and accurately in formal and informal communicative contexts
			CO 3	To express their opinions effectively in both oral and written medium of communication
П	HS3251	PROFESSIONAL ENGLISH II	CO 1	At the end of the course, learners will be able To compare and contrast products and ideas in technical texts.
			CO 2	To identify cause and effects in events, industrial processes through technical texts
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			CO 3	To analyse problems in order to arrive at feasible solutions and communicate them orally and in the written format.
			CO 4	To report events and the processes of technical and industrial nature.
			CO 5	To present their opinions in a planned and logical manner, and draft effective resumes in contextof job search.
			CO 1	Upon successful completion of the course, students will be able to: Apply the concept of testing of hypothesis for small and large samples in real life problems.
	MA3251	STATISTICS AND NUMERICAL METHODS	CO 2	Apply the basic concepts of classifications of design of experiments in the field of agriculture.
II			CO 3	Appreciate the numerical techniques of interpolation in various intervals and apply the numerical techniques of differentiation and integration for engineering problems.
			CO 4	Understand the knowledge of various techniques and methods for solving first and second orderordinary differential equations.
			CO 5	Solve the partial and ordinary differential equations with initial and boundary conditions.







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		PHYSICS FOR CIVIL ENGINEERING	CO 1	After completion of the course, the students should be able to acquire knowledge about heat transfer through different materials, thermal performance of building and thermal insulation.
II	PH3201		CO 2	gain knowledge on the ventilation and air conditioning of buildings
			CO 3	understand the concepts of sound absorption, noise insulation and lighting designs
			CO 4	know about the processing and applications of composites, metallic glasses, shape memoryalloys and ceramics
		BASIC ELECTRICAL,	CO 1	After completing this course, the students will be able to Compute the electric circuit parameters for simple problems
п	BE3252	ELECTRONICS AND	CO 2	Explain the concepts of domestics wiring and protective devices
		INSTRUMENTATION	CO 3	Explain the working principle and applications of electrical machines
		ENGINEERING	CO 4	Analyze the characteristics of analog electronic devices
			CO 5	Explain the types and operating principles of sensors and transducers
			CO 1	On successful completion of this course, the student will be able to Use BIS conventions and specifications for engineering drawing.
II	GE3251	ENGINEERING GRAPHICS	CO 2	Construct the conic curves, involutes and cycloid.
			CO 3	Solve practical problems involving projection of lines.
			CO 4	Draw the orthographic, isometric and perspective projections of simple solids.





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			CO 5	Draw the development of simple solids.
		ENGINEERING PRACTICES LABORATORY	CO 1	Upon completion of this course, the students will be able to Draw pipe line plan; lay and connect various pipe fittings used in common household plumbing work; Saw; plan; make joints in wood materials used in common household wood work.
			CO 2	Wire various electrical joints in common household electrical wire work.
Π	GE3271		CO 3	Weld various joints in steel plates using arc welding work; Machine various simple processes like turning, drilling, tapping in parts; Assemble simple mechanical assemblyof common household equipment's; Make a tray out of metal sheet using sheet metal work.
			CO 4	Solder and test simple electronic circuits; Assemble and test simple electronic components on PCB.
		BASIC ELECTRICAL, ELECTRONICS AND	CO 1	Use experimental methods to verify the Ohm's law and Kirchhoff's Law and to measurethree phase power
ΙΙ	BE3272	INSTRUMENTATION	CO 2	Analyze experimentally the load characteristics of electrical machines
		ENGINEERING	CO 3	Analyze the characteristics of basic electronic devices
		LABORATORY	CO 4	Use LVDT to measure displacement.
			CO 1	Speak effectively in group discussions held in a formal/semi-formal contexts.

