

MRK Institute of Technology

An ISO 9001: 2008 Certified Institution





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

2017 REGULATION-COURSE OUTCOMES

SEMESTER	COURSE	COURSE NAME	COURSE	
	CODE		ID	COUKSE OUTCOME
	HS8151	COMMUNICATIVE ENGLISH	CO 1	At the end of the course, learners will be able to:
				Read articles of a general kind in magazines and newspapers.
т			CO 2	Participate effectively in informal conversations; introduce themselves and their
				friends and express opinions in English.
			CO 3	Comprehend conversations and short talks delivered in English
			CO 4	Write short essays of a general kind and personal letters and emails in English.
	MA8151	ENGINEERING MATHEMATICS – I	CO 1	Use both the limit definition and rules of differentiation to differentiate functions.
			CO 2	Apply differentiation to solve maxima and minima problems.
			CO 3	Evaluate integrals both by using Riemann sums and by using the Fundamental
				Theorem of Calculus.
			CO 4	Apply integration to compute multiple integrals, area, volume, integrals in polar
Ι				coordinates, in addition to change of order and change of variables.
			CO 5	Evaluate integrals using techniques of integration, such as substitution, partial
				fractions and integration by parts.
			CO 6	Determine convergence/divergence of improper integrals and evaluate convergent
				improper integrals.
			CO 7	Apply various techniques in solving differential equations.
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				Upon completion of this course,			
			CO 1	the students will gain knowledge on the basics of properties of matter and its			
				applications,			
		ENGINEERING PHYSICS	CO 2	the students will acquire knowledge on the concepts of waves and optical devices			
				and their applications in fibre optics,			
			CO 3	the students will have adequate knowledge on the concepts of thermal properties			
Т	PH8151			of materials and their applications in expansion joints and heat exchangers,			
1			CO 4	the students will get knowledge on advanced physics concepts of quantum theory			
				and its applications in tunneling microscopes, and			
			CO 5	the students will understand the basics of crystals, their structures and different			
				crystal growth techniques.			
	CY8151	ENGINEERING CHEMISTRY	CO 1	The knowledge gained on engineering materials, fuels, energy sources and water			
Ι				treatment techniques will facilitate better understanding of engineering processes			
				and applications for further learning.			
	GE8151	PROBLEM SOLVING AND PYTHON PROGRAMMING	CO 1	On successful completion of this course, the student will be able to			
				Upon completion of the course, students will be able to			
				Develop algorithmic solutions to simple computational problems			
Ι			CO 2	Read, write, execute by hand simple Python programs.			
			CO 3	Structure simple Python programs for solving problems.			
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			CO 4	Decompose a Python program into functions.
			CO 5	Represent compound data using Python lists, tuples, dictionaries.
			CO 6	Read and write data from/to files in Python Programs.
		ENGINEERING GRAPHICS	CO 1	Upon completion of the course, students will be able to
				familiarize with the fundamentals and standards of Engineering graphics
			CO 2	perform freehand sketching of basic geometrical constructions and multiple views
Т	GE8152			of objects.
1			CO 3	project orthographic projections of lines and plane surfaces.
			CO 4	draw projections and solids and development of surfaces.
			CO 5	visualize and to project isometric and perspective sections of simple solids.
		CO 1	Upon completion of the course, students will be able to	
		PROBLEM SOLVING AND PYTHON PROGRAMMING LABORATORY		Write, test, and debug simple Python programs.
	GE8161		CO 2	Implement Python programs with conditionals and loops.
T			CO 3	Develop Python programs step-wise by defining functions and calling them.
1			CO 4	Use Python lists, tuples, dictionaries for representing compound data.
			CO 5	Read and write data from/to files in Python.
Ι	BS8161	PHYSICS AND CHEMISTRY LABORATORY	CO 1	Upon completion of the course, the students will be able to,
				apply principles of elasticity, optics and thermal properties for engineering
				applications
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		2017 R	of POs and EGULATIC	DN-COURSE OUTCOMES
		2017 1	CO 2	The students will be outfitted with hands-on knowledge in the quantitative chemical analysis of water quality related parameters.
	HS8251	TECHNICAL ENGLISH	CO 1	At the end of the course learners will be able to: Read technical texts and write area- specific texts effortlessly.
п			CO 2	Listen and comprehend lectures and talks in their area of specialisation successfully.
			CO 3	Speak appropriately and effectively in varied formal and informal contexts.
			CO 4	Write reports and winning job applications
	MA8251	ENGINEERING MATHEMATICS – II	CO 1	After successfully completing the course, the student will have a goodunderstanding of the following topics and their applications:Eigenvalues and eigenvectors, diagonalization of a matrix, Symmetric matrices,Positive definite matrices and similar matrices.
			CO 2	Gradient, divergence and curl of a vector point function and related identities.
Π			CO 3	Evaluation of line, surface and volume integrals using Gauss, Stokes and Green's theorems and their verification.
			CO 4	Analytic functions, conformal mapping and complex integration.
			CO 5	Laplace transform and inverse transform of simple functions, properties, various related theorems and application to differential equations with constant coefficients.
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	Γ	2017 RI	of POs and EGULATIO	d COs are evaluated ON-COURSE OUTCOMES
	PH8201	PHYSICS FOR CIVIL ENGINEERING	CO 1	Upon completion of this course, the students will have knowledge on the thermal performance of buildings,
			CO 2	the students will acquire knowledge on the acoustic properties of buildings,
II			CO 3	the students will get knowledge on various lighting designs for buildings,
			CO 4	the students will gain knowledge on the properties and performance of engineer materials, and
			CO 5	the students will understand the hazards of buildings.
П	BE8251	BASIC ELECTRICAL AND ELECTRONICS	CO 1	ability to identify the electrical components and explain the characteristics electrical machines.
		ENGINEERING	CO 2	ability to identify electronics components and understand the characteristics
Π	GE8291	ENVIRONMENTAL SCIENCE AND ENGINEERING	CO 1	Environmental Pollution or problems cannot be solved by mere laws. Pul participation is an important aspect which serves the environmental Protecti One will obtain knowledge on the following after completing the course.
			CO 2	Public awareness of environmental is at infant stage.
			CO 3	Ignorance and incomplete knowledge has lead to misconceptions
			CO 4	Development and improvement in std. of living has lead to serious environmend disasters







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		2017 RF	GULATIC	ON-COURSE OUTCOMES
		ENGINEERING MECHANICS	CO 1	On successful completion of this course, the student will be able to
	GE8292			illustrate the vectorial and scalar representation of forces and moments
П			CO 2	analyse the rigid body in equilibrium
11			CO 3	evaluate the properties of surfaces and solids
			CO 4	calculate dynamic forces exerted in rigid body
			CO 5	determine the friction and the effects by the laws of friction
	GE8261	ENGINEERING PRACTICES LABORATORY	CO 1	On successful completion of this course, the student will be able to
				fabricate carpentry components and pipe connections including plumbing works.
			CO 2	use welding equipment's to join the structures.
			CO 3	Carry out the basic machining operations
П			CO 4	Make the models using sheet metal works
11			CO 5	Illustrate on centrifugal pump, Air conditioner, operations of smithy, foundary and
				fittings
			CO 6	Carry out basic home electrical works and appliances
			CO 7	Measure the electrical quantities
			CO 8	Elaborate on the components, gates, soldering practices.
	CE8211	COMPUTER AIDED BUILDING DRAWING	CO 1	The students will be able to draft the plan, elevation and sectional views of the
II				buildings, industrial structures, and framed buildings using computer software's.







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