



MEENAKSHI SUNDARARAJAN ENGINEERING COLLEGE

363, Arcot Road, Kodambakkam, Chennai – 24

Approved by AICTE & Affiliated to Anna University

email Id: principal@msec.edu.in

Website : www.msec.edu.in

DEPARTMENT OF HUMANITIES AND SCIENCE (B.E. CIVIL ENGINEERING)

REGULATION – 2017 COURSE OUTCOMES (CO)

HS8151- Communicative English [C101]

C101.1	Ability to speak/write clearly, confidently, comprehensively and communicate with one or many using appropriate.
C101.2	Ability to read and write cohesively and coherently avoiding grammatical errors ,using a wide range of vocabulary and organizing the ideas logically on a given topic.
C101.3	Interpret different genres of texts adopting various reading strategies and to write comprehensively
C101.4	Ability to listen/view and comprehend different spoken discourses/excerpts different accents and to write clearly in simple language.
C101.5	Ability to speak/write elaborately on the ideas and opinions relevant in different situations

MA8151- Engineering Mathematics – I [C102]

C102.1	Acquire the knowledge of Limit definition and differentiation rules to differentiate the functions.
C102.2	Examine the concepts of functions of several variables and to find extremum value of a given function
C102.3	Evaluate the integrals by using Riemann sum and Fundamental theorem of Calculus.
C102.4	Develop an ability to trace the curve and find area , volume using multiple integrals.
C102.5	Apply various techniques in solving differential equations.

PH8151-Engineering Physics [C103]

C103.1	Acquire knowledge on the basics of properties of matter and its applications,
C103.2	Develop knowledge on the concepts of laser and their applications in fibre optics communication.
C103.3	Analyse the concepts of thermal properties of materials and apply them accordingly
C103.4	Incorporate the advanced physics concepts of quantum theory and their applications
C103.5	Summarize the basics of crystals, their structures and different crystal growth techniques

CY8151 -Engineering Chemistry (C104)

C104.1	Water treatment techniques will facilitate better understanding of engineering processes and applications for further learning.
C104.2	The basics of properties of matter and its applications will gain knowledge on better understanding of Engineering Process.
C104.3	The concepts of alloys and phase rule and their applications in compound formation will facilitate better applications for further learning.
C104.4	The knowledge gained on engineering materials, fuels, energy sources will facilitate future learning.
C104.5	The concepts of nuclear energy, batteries will recognize different forms energy resources for suitable applications in energy sectors..

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DEPARTMENT OF HUMANITIES AND SCIENCE (B.E. CIVIL ENGINEERING)

GE8151- Problem Solving And Python Programming -[C105]

C105.1	Develop algorithmic solutions to simple computational problems.
C105.2	Demonstrate programs using simple Python statements and expressions.
C105.3	Implement control flow and functions concept in Python for solving problems.
C105.4	Use Python data structures – lists, tuples & dictionaries for representing compound data.
C105.5	Use files, exception, modules and packages in Python for solving problems.

GE8152- Engineering Graphics [C106]

C106.1	Familiarize with the fundamentals and standards of Engineering drawings and Perform freehand sketching of basic geometrical constructions and multiple views of objects.
C106.2	Draw orthographic projections of lines and plane surfaces.
C106.3	Draw projections of solids.
C106.4	Draw projection of sectioned solids and development of surfaces.
C106.5	Visualize and project isometric and perspective sections of simple solids.

GE8161 – Problem Solving And Python Programming Laboratory – (C107)

C107.1	Write, test, and debug simple Python programs.
C107.2	Implement Python programs with conditionals and loops.
C107.3	Develop Python programs step-wise by defining functions and calling them.

BS8161– Physics And Chemistry Laboratory – (C108)

C108.1	The hands on exercises undergone by the students will help them to apply physics principles of optics. Outfitted with hands-on knowledge about pH and conductometric titration
C108.2	Acquire knowledge about the modulus of elasticity and able to apply them in the field The basic concepts on argentometric titration helps in Chloride estimation
C108.3	Assess the behaviour of columns, beams and failures of materials. The basic idea on Potentiometric titration will help to get the adequate knowledge on Emf measurements

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**DEPARTMENT OF HUMANITIES AND SCIENCE
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C109.5	Ability to speak/write elaborately on the ideas and opinions relevant in different situations.

MA8251 Engineering Mathematics – II [C110]

C110.1	To find eigenvalues,eigenvectors,canonical form and inverse of a matrix.
C110.2	Estimate vector identities and interpret some integral theorems in a vector field.
C110.3	Identify and construct analytic function and application of conformal mapping.
C110.4	Apply complex integration to evaluate contour integrals.
C110.5	Examine the concepts of Laplace transformation and solve differential equations with given boundary conditions..

PH8201 Physics For Civil Engineering - [C111]

C111.1	Express knowledge on the thermal performance of buildings.
C111.2	Knowledge on the acoustic properties of buildings.
C111.3	Intreprets on various lighting designs for buildings.
C111.4	Properties and performance of engineering materials.
C111.5	Understand the Earthquake effect and other hazards of buildings.

BE8251 – Basic Electrical And Electronics Engineering – [C112]

C112.1	Explain the basic theorems used in Electrical circuits
C112.2	Understand the different components and function of electrical machines.
C112.3	Explain the fundamentals of semiconductor and applications.
C112.4	Explain the principles of digital electronics
C112.5	Impart knowledge of communication.

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GE8291-Environmental Science And Engineering – [C113]

C113.1	Gain knowledge on flora and fauna in our environment helps to know about social environment
C113.2	Gain knowledge on the offensive effects of pollution in the day-to-day life.
C113.3	Acquire knowledge on the natural resources available and their conservation.
C113.4	Have adequate knowledge on the concepts of adverse effects of social issues like acid rain and global warming
C113.5	Get knowledge about the Over Population, causes and Effects and the Solutions to overcome the problems due to Population.

GE8292 - Engineering Mechanics - [C114]

C114.1	Illustrate the vectorial and scalar representation of forces and to solve problems with the basic concepts of particle mechanics.
C114.2	Analyse the rigid body under static equilibrium
C114.3	Evaluate the properties of surfaces and solids such as centroid, moment of inertia, centre of gravity and mass moment of inertia
C114.4	Analyse the rigid body under dynamic equilibrium
C114.5	Solve problems involving kinetics of rigid bodies with and without friction

GE8261- Engineering Practices Laboratory – (C115)

C115.1	Study and practice on machine tools and their operations.
C115.2	Practice on carpentry tools, components and pipe connections including plumbing work.
C115.3	Demonstrate wiring for a simple residential house, identify the ratings of various appliances like Fluorescent tube, incandescent lamp, etc.
C115.4	Calculate the different Electrical quantities, measure the energy consumption using single phase energy meter, measure the resistance to earth of an electrical equipment.
C115.5	Analyze the characteristics of basic electronic devices.
C115.6	Elaborate on the components, gates, soldering practices

CE8211 – Computer Aided Building Drawing-[C116]

C116.1	Sketch simple figures with title block using AutoCAD software command
C116.2	Sketch curves like parabola, spiral and involute of square & circle and draw the orthographic projection of simple solids.
C116.3	Prepare orthographic projection of simple machine parts and draw a plan of residential building.
C116.4	Sketch simple steel truss and sectional views of simple solids.
C116.5	Prepare 2D multi view drawing from 3D model.

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C107.2	Implement Python programs with conditionals and loops.
C107.3	Develop Python programs step-wise by defining functions and calling them.
C107.4	Use Python lists, tuples, dictionaries for representing compound data.
C107.5	Read and write data from/to files in Python

BS 8161- Physics & Chemistry Laboratory [C108]

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C108.2	Acquire knowledge about the modulus of elasticity and able to apply them in the field The basic concepts on argentometric titration helps in fluoride estimation.
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C110.5	Examine the concepts of Laplace transformation and solve differential equations with given boundary conditions.
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PH8252-Physics for Information Science[C111]

C111.1	Gain knowledge on classical and quantum electron theories, and energy band structures
C111.2	Acquire knowledge on basics of semiconductor physics and its applications in various devices
C111.3	Get knowledge on magnetic properties of materials and their applications in data storage
C111.4	Have the necessary understanding on the functioning of optical materials for optoelectronics
C111.5	Understand the basics of quantum structures and their applications in carbon electronics

BE8255-Basic Electrical, Electronics and Measurement Engineering[C112]

C112.1	To discuss the essentials of electric circuits and analysis.
C112.2	To discuss the basic operation of electric machines and transformers.
C112.3	To analyse the introduction of renewable sources and domestic loads
C112.4	To understand the fundamentals of electronic circuit constructions.
C112.5	To give the introduction to measurement and metering for electric circuits

GE 8291-Environmental Science & Engineering [C113]

C113.1	Gain knowledge on flora and fauna in our environment helps to know about social environment
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CS8251-Programming in C[C114]

C114.1	Simple applications in C using basic constructs
C114.2	Have a strategy to design and implement applications using arrays and strings
C114.3	Understand and implement applications in C using functions and pointers
C114.4	Knowing Applications in C using structures.
C114.5	Design applications using sequential and random access file processing.

GE8261-Engineering Practices Laboratory [C115]

C115.1	Study and practice on machine tools and their operations
C115.2	Ability to fabricate carpentry components and pipe connections including plumbing work
C115.3	Demonstrate wiring for a simple residential house, identify the ratings of various appliances like Fluorescent tube, incandescent lamp, etc.
C115.4	Calculate the different Electrical quantities, measure the energy consumption using single phase energy meter, measure the resistance to earth of an electrical equipment.
C115.5	Analyze the characteristics of basic electronic devices.

CS8261-C Programming Labarotory[C116]

C116.1	Develop C programs for simple applications making use of basic constructs, arrays and strings.
C116.2	Develop C programs involving functions, recursion, pointers, and structures.
C116.3	Design applications using sequential and random access file processing

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PH8253 – Physics for Electronics Engineering - [C111]

C111.1	Express their knowledge about the conducting materials and their properties.
C111.2	Interpret the fundamental knowledge about the semiconductors and able to differentiate different types of semiconductors.
C111.3	Understand the magnetic and dielectric properties of materials.
C111.4	Acquire knowledge on properties of optical materials and the functioning of optical materials for optoelectronic devices.
C111.5	Understand about the basics of quantum structures and their applications and also acquire the knowledge about the nano-electronic materials and devices for various applications.

BE8254 - Basic Electrical & Instrumentation Engineering [C112]

C112.1	The students will be able to illustrate the concept of three phase power circuits and power system
C112.2	The students will be able to illustrate the concepts in circuit model of transformers
C112.3	The students will be able to illustrate the concept in DC machines and its applications
C112.4	The students will be able to illustrate the concept in AC machines and its applications
C112.5	The students will be able to outline appropriate measuring instruments for given application

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DEPARTMENT OF HUMANITIES AND SCIENCE BE (ELECTRONICS AND COMMUNICATION ENGINEERING) EE8251 – Circuit Analysis [C113]

C113.1	Apply basic circuit laws to analyse AC and DC circuits and understand the network topologies in graph theory.
C113.2	Apply various network theorems to solve the electrical parameters for a given circuit.
C113.3	Understand the concept of resonance, inductance and coupled circuits.
C113.4	Analyse the time response of circuits with passive components using laplace transformation.
C113.5	Derive the various two port network parameters for a given circuit.

EC8252 – Electronic Devices [C114]

C114.1	To get familiar with the theory, operations of PN Junction Diode.
C114.1	To explain the construction, operations of Bipolar Junction Transistor
C114.1	To explain the constructions, operations of Field Effect Transistor.
C114.1	To illustrate the concept and operations of Special Semiconductor Diode.
C114.1	To explain the theory, operations of photo devices and power devices

EC8261 – Circuits and Devices Laboratory [C115]

C115.1	Analyze the characteristics of basic electronic devices
C115.2	Design RL and RC circuits
C115.3	Verify Thevenin & Norton theorem KVL & KCL, and Super Position Theorems
C115.4	Verify Kirchoff's law.

GE8261 – Engineering Practices Laboratory[C116]

C116.1	Study and practice on machine tools and their operations
C116.2	Ability to fabricate carpentry components and pipe connections including plumbing work. Ability to use welding equipment to join the structures.
C116.3	Understand basic house electrical wirings.
C116.4	Measure various electrical quantities like voltage, current, power, power factor, energy etc.
C116.5	Analyze the characteristics of basic electronic devices
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C101.1	Ability to speak/write clearly, confidently, comprehensively and communicate with one or many using appropriate.
C101.2	Ability to read and write cohesively and coherently avoiding grammatical errors ,using a wide range of vocabulary and organizing the ideas logically on a given topic.
C101.3	Interpret different genres of texts adopting various reading strategies and to write comprehensively
C101.4	Ability to listen/view and comprehend different spoken discourses/excerpts different accents and to write clearly in simple language.
C101.5	Ability to speak/write elaborately on the ideas and opinions relevant in different situations

MA8151- Engineering Mathematics – I [C102]

C102.1	Acquire the knowledge of Limit definition and differentiation rules to differentiate the functions.
C102.2	Examine the concepts of functions of several variables and to find extremum value of a given function
C102.3	Evaluate the integrals by using Riemann sum and Fundamental theorem of Calculus.
C102.4	Develop an ability to trace the curve and find area , volume using multiple integrals.
C102.5	Apply various techniques in solving differential equations.

PH8151-Engineering Physics [C103]

C103.1	Acquire knowledge on the basics of properties of matter and its applications,
C103.2	Develop knowledge on the concepts of laser and their applications in fibre optics communication.
C103.3	Analyse the concepts of thermal properties of materials and apply them accordingly
C103.4	Incorporate the advanced physics concepts of quantum theory and their applications
C103.5	Summarize the basics of crystals, their structures and different crystal growth techniques.

CY8151 -Engineering Chemistry (C104)

C104.1	Water treatment techniques will facilitate better understanding of engineering processes and applications for further learning.
C104.2	The basics of properties of matter and its applications will gain knowledge on better understanding of Engineering Process.
C104.3	The concepts of alloys and phase rule and their applications in compound formation will facilitate better applications for further learning.
C104.4	The knowledge gained on engineering materials, fuels, energy sources will facilitate future learning.
C104.5	The concepts of nuclear energy, batteries will recognize different forms energy resources for suitable applications in energy sectors..

HoD

Principal

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DEPARTMENT OF HUMANITIES AND SCIENCE (B.E. ELECTRICAL AND ELECTRONICS ENGINEERING)

GE8151- Problem Solving And Python Programming -[C105]

C105.1	Develop algorithmic solutions to simple computational problems.
C105.2	Demonstrate programs using simple Python statements and expressions.
C105.3	Implement control flow and functions concept in Python for solving problems.
C105.4	Use Python data structures – lists, tuples & dictionaries for representing compound data.
C105.5	Use files, exception, modules and packages in Python for solving problems.

GE8152- Engineering Graphics [C106]

C106.1	Familiarize with the fundamentals and standards of Engineering drawings and Perform freehand sketching of basic geometrical constructions and multiple views of objects.
C106.2	Draw orthographic projections of lines and plane surfaces.
C106.3	Draw projections of solids.
C106.4	Draw projection of sectioned solids and development of surfaces.
C106.5	Visualize and project isometric and perspective sections of simple solids.

GE8161 – Problem Solving And Python Programming Laboratory – (C107)

C107.1	Write, test, and debug simple Python programs.
C107.2	Implement Python programs with conditionals and loops.
C107.3	Develop Python programs step-wise by defining functions and calling them.

BS8161– Physics And Chemistry Laboratory — (C108)

C108.1	The hands on exercises undergone by the students will help them to apply physics principles of optics. Outfitted with hands-on knowledge about pH and conductometric titration
C108.2	Acquire knowledge about the modulus of elasticity and able to apply them in the field The basic concepts on argentometric titration helps in Chloride estimation
C108.3	Assess the behaviour of columns, beams and failures of materials. The basic idea on Potentiometric titration will help to get the adequate knowledge on Emf measurements

HS8251 - Technical English (C109)

C109.1	Speak convincingly, express their opinions clearly, initiate a discussion, negotiate, argue using appropriate communicative.
C109.2	Write effectively and persuasively and produce different types of writing such as narration, description, exposition and argument as well as creative, critical, analytical and evaluative writing.
C109.3	Read different genres of texts, infer implied meanings and critically analyse and evaluate them for ideas as well as for method of presentation.
C109.4	Listen/view and comprehend different spoken excerpts critically and infer unspoken and implied meanings
C109.5	Ability to speak/write elaborately on the ideas and opinions relevant in different situations.

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DEPARTMENT OF HUMANITIES AND SCIENCE (B.E. ELECTRICAL AND ELECTRONICS ENGINEERING)

MA8251 Engineering Mathematics – II [C110]

C110.1	To find eigenvalues,eigenvectors,canonical form and inverse of a matrix.
C110.2	Estimate vector identities and interpret some integral theorems in a vector field.
C110.3	Identify and construct analytic function and application of conformal mapping.
C110.4	Apply complex integration to evaluate contour integrals.
C110.5	Examine the concepts of Laplace transformation and solve differential equations with given boundary conditions..

PH8253 Physics for Electronics Engineering - [C111]

C111.1	Express their knowledge about the conducting materials and their properties.
C111.2	Interpret the fundamental knowledge about the semiconductors and able to differentiate different types of semiconductors
C111.3	Understand the magnetic and dielectric properties of materials
C111.4	Acquire knowledge on properties of optical materials and the functioning of optical materials for optoelectronic devices.
C111.5	Understand about the basics of quantum structures and their applications and also acquire the knowledge about the nano-electronic materials and devices for various applications.

BE8252 – Basic civil and Mechanical Engineering– [C112]

C112.1	Appreciate the Civil and Mechanical Engineering components of Projects
C112.2	Explain the usage of construction material and proper selection of construction materials
C112.3	Measure distances and area by surveying.
C112.4	Identify the components used in power plant cycle. Demonstrate working principles of petrol and diesel engine.
C112.5	Elaborate the components of refrigeration and Air conditioning cycle..

EE8251 - Circuit Theory – [C113]

C113.1	Able to understand fundamental laws and analyse electrical circuits with different techniques
C113.2	Able to gain conceptual knowledge in solving circuits by applying network reduction techniques and network theorems
C113.3	Able to analyse and estimate the transient response using Laplace transform.
C113.4	Able to develop understanding of three phase circuits ,balanced and unbalanced conditions
C113.5	Able to interpret the concept of resonance and coupled circuits.

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DEPARTMENT OF HUMANITIES AND SCIENCE (B.E. ELECTRICAL AND ELECTRONICS ENGINEERING)

GE8291-Environmental Science And Engineering - [C114]

C114.1	Gain knowledge on flora and fauna in our environment helps to know about social environment.
C114.2	Gain knowledge on the offensive effects of pollution in the day-to-day life.
C114.3	Acquire knowledge on the natural resources available and their conservation
C114.4	Have adequate knowledge on the concepts of adverse effects of social issues like acid rain and global warming
C114.5	Get knowledge about the Over Population, causes and Effects and the Solutions to overcome the problems due to Population

GE8261- Engineering Practices Laboratory – (C115)

C115.1	Study and practice on machine tools and their operations.
C115.2	Practice on carpentry tools, components and pipe connections including plumbing work.
C115.3	Demonstrate wiring for a simple residential house, identify the ratings of various appliances like Fluorescent tube, incandescent lamp, etc.
C115.4	Calculate the different Electrical quantities, measure the energy consumption using single phase energy meter, measure the resistance to earth of an electrical equipment.
C115.5	Analyze the characteristics of basic electronic devices.
C115.6	Elaborate on the components, gates, soldering practices

EE8261 – Electric circuits Laboratory -[C116]

C116.1	Able to simulate electrical circuits and to experimentally verify various theorems for circuit designing
C116.2	To gain practical knowledge regarding the frequency response and transients in passive elements.
C116.3	To be able to simulate the resonance circuits for several applications such as designing of tuning circuit, signal processing and voltage magnification.
C116.4	Perform the simulation of three phase circuits using suitable simulation for both balanced and unbalanced condition.

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DEPARTMENT OF HUMANITIES AND SCIENCE

(B.TECH. INFORMATION TECHNOLOGY)

REGULATION – 2017

COURSE OUTCOMES(CO)

HS8151-Communicative English[C101]

C101.1	Ability to speak/write clearly, confidently, comprehensively and communicate with one or many using appropriate.
C101.2	Ability to read and write cohesively and coherently avoiding grammatical errors ,using a wide range of vocabulary and organizing the ideas logically on a given topic.
C101.3	Interpret different genres of texts adopting various reading strategies and to write comprehensively.
C101.4	Ability to listen/view and comprehend different spoken discourses/excerpts different accents and to write clearly in simple language.
C101.5	Ability to speak/write elaborately on the ideas and opinions relevant in different situations.

MA8151-Engineering Mathematics-1[C102]

C102.1	Acquire the knowledge of Limit definition and differentiation rules to differentiate the functions.
C102.2	Examine the concepts of functions of several variables and to find extremum value of a given function.
C102.3	Evaluate the integrals by using Riemann sum and Fundamental theorem of Calculus.
C102.4	Develop an ability to trace the curve and find area , volume using multiple integrals.
C102.5	Apply various techniques in solving differential equations.

PH8151-Engineering Physics[C103]

C103.1	Acquire knowledge on the basics of properties of matter and its applications,
C103.2	Develop knowledge on the concepts of laser and their applications in fibre optics communication.
C103.3	Analyse the concepts of thermal properties of materials and apply them accordingly
C103.4	Incorporate the advanced physics concepts of quantum theory and their applications
C103.5	Summarize the basics of crystals, their structures and different crystal growth techniques.

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DEPARTMENT OF HUMANITIES AND SCIENCE

(B.TECH. INFORMATION TECHNOLOGY)

CY8151-Engineering Chemistry[C104]

C104.1	Water treatment techniques will facilitate better understanding of engineering processes and applications for further learning.
C104.2	Gain knowledge on the basics of properties of matter and its applications.
C104.3	Acquire knowledge on the concepts of alloys and phase rule and their applications in compound formation.
C104.4	Gain Knowledge on engineering materials, fuels, energy sources will facilitate future learning.
C104.5	Have adequate knowledge on the concepts of nuclear energy, batteries and their application in energy.

GE8151-Problem Solving and Python Programming[C105]

C105.1	Develop algorithmic solutions to simple computational problems.
C105.2	Demonstrate programs using simple Python statements and expressions.
C105.3	Implement control flow and functions concept in Python for solving problems.
C105.4	Use Python data structures – lists, tuples & dictionaries for representing compound data.
C105.5	Use files, exception, modules and packages in Python for solving problems.

GE8152-Engineering Graphics[C106]

C106.1	Familiarize with the fundamentals and standards of Engineering drawings and Perform freehand sketching of basic geometrical constructions and multiple views of objects.
C106.2	Draw orthographic projections of lines and plane surfaces.
C106.3	Draw projections of solids
C106.4	Draw projection of sectioned solids and development of surfaces.
C106.5	Visualize and project isometric and perspective sections of simple solids.

GE8161-Problem Solving And Python Programming Laboratory[C107]

C107.1	Write, test, and debug simple Python programs
C107.2	Implement Python programs with conditionals and loops.
C107.3	Develop Python programs step-wise by defining functions and calling them.

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DEPARTMENT OF HUMANITIES AND SCIENCE

(B.TECH. INFORMATION TECHNOLOGY)

BS8161-Physics & Chemistry laboratory [C108]

C108.1	The hands on exercises undergone by the students will help them to apply physics principles of optics.
C108.2	Students will acquire knowledge about the modulus of elasticity and able to apply them in the field.
C108.3	Students will in a position to assess the behaviour of columns, beams and failures of materials

HS8251-Technical English[C109]

C109.1	Speak convincingly, express their opinions clearly, initiate a discussion, negotiate, argue using appropriate communicative.
C109.2	Write effectively and persuasively and produce different types of writing such as narration, description, exposition and argument as well as creative, critical, analytical and evaluative writing.
C109.3	Read different genres of texts, infer implied meanings and critically analyse and evaluate them for ideas as well as for method of presentation.
C109.4	Listen/view and comprehend different spoken excerpts critically and infer unspoken and implied meanings.
C109.5	Ability to speak/write elaborately on the ideas and opinions relevant in different situations.

MA8251-Engineering Mathematics-II[C110]

C110.1	To find eigen values, eigen vectors, canonical form and inverse of a matrix.
C110.2	Estimate vector identities and interpret some integral theorems in a vector field.
C110.3	Estimate vector identities and interpret some integral theorems in a vector field.
C110.4	Apply complex integration to evaluate contour integrals.
C110.5	Examine the concepts of Laplace transformation and solve differential equations with given boundary conditions..

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DEPARTMENT OF HUMANITIES AND SCIENCE
(B.TECH. INFORMATION TECHNOLOGY)

PH8252-Physics for Information Science[C111]

C111.1	Gain knowledge on classical and quantum electron theories, and energy band structures
C111.2	Acquire knowledge on basics of semiconductor physics and its applications in various devices
C111.3	Get knowledge on magnetic properties of materials and their applications in data storage
C111.4	Have the necessary understanding on the functioning of optical materials for optoelectronics
C111.5	Understand the basics of quantum structures and their applications in carbon electronics

BE8255-Basic Electrical, Electronics and Measurement Engineering[C112]

C112.1	To discuss the essentials of electric circuits and analysis.
C112.2	To discuss the basic operation of electric machines and transformers.
C112.3	To analyse the introduction of renewable sources and domestic loads.
C112.4	To understand the fundamentals of electronic circuit constructions.
C112.5	To give the introduction to measurement and metering for electric circuits

IT8201-Information Technology Essentials[C113]

C113.1	Design and deploy web-sites.
C113.2	Design and deploy simple web-applications.
C113.3	Create simple database applications.
C113.4	Develop information system.
C113.5	Describe the basics of networking and mobile communications.

CS8251-Programming in C[C114]

C114.1	Simple applications in C using basic constructs
C114.2	Have a strategy to design and implement applications using arrays and strings
C114.3	Understand and implement applications in C using functions and pointers
C114.4	Knowing Applications in C using structures.
C114.5	Design applications using sequential and random access file processing.

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Dated: 10/01/2024

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(B.TECH. INFORMATION TECHNOLOGY)

GE8261-Engineering Practices Laboratory[C115]

C115.1	Study and practice on machine tools and their operations
C115.2	Practice on carpentry tools, components and pipe connections including plumbing work
C115.3	Demonstrate wiring for a simple residential house, identify the ratings of various appliances like Fluorescent tube, incandescent lamp, etc.
C115.4	Calculate the different Electrical quantities, measure the energy consumption using single phase energy meter, measure the resistance to earth of an electrical equipment.
C115..5	Analyse the characteristics of basic electronic devices
C115.6	Elaborate on the components, gates, soldering practices.

CS8261-Programming in C Lab[C116]

C116.1	Develop C programs for simple applications making use of basic constructs, arrays and strings.
C116.2	Develop C programs involving functions, recursion, pointers, and structures.
C116.3	Design applications using sequential and random access file processing
C116.4	Develop applications using pointers and function.
C116.5	Develop C programs involving unions.

IT8211-Information Technology Essentials Laboratory[C117]

C117.1	Design interactive websites using basic HTML tags, different styles, links and with all Basic control elements.
C117.2	Create client side and server side programs using scripts using PHP.
C117.3	Design dynamic web sites and handle multimedia components

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DEPARTMENT OF HUMANITIES AND SCIENCE (BE MECHANICAL ENGINEERING)

REGULATION – 2017

COURSE OUTCOMES

HS8151- Communicative English [C101]

C101.1	Ability to speak/write clearly, confidently, comprehensively and communicate with one or many using appropriate.
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C101.4	Ability to listen/view and comprehend different spoken discourses/excerpts different accents and to write clearly in simple language.
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DEPARTMENT OF HUMANITIES AND SCIENCE (BE MECHANICAL ENGINEERING)

GE8161- Problem Solving and Python Programming Laboratory [C107]

C107.1	Write, test, and debug simple Python programs.
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Dr. J. Shanmugam
Hod

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DEPARTMENT OF HUMANITIES AND SCIENCE (BE MECHANICAL ENGINEERING)

PH8251-Materials Science [C111]

C111.1	Acquire knowledge about various phase diagrams and their applications
C111.2	Understand about Fe-Fe3C phase diagram, various microstructures of the materials and alloys.
C111.3	Acquire knowledge on the mechanical properties of materials and the various testing methods .
C111.4	Gain knowledge on magnetic, dielectric and superconducting properties of materials and their applications in various fields.
C111.5	Get an insight into the basics of ceramics, composites and nanomaterials and their diverse applications.

BE8253- Basic Electrical, Electronics and Instrumentation Engineering[C112]

C112.1	Ability to understand the basic theorems used in Electrical circuits.
C112.2	To impart knowledge on Single and three phase circuits and wiring.
C112.3	Ability to Understand working principles of electrical machines.
C112.4	To Understand the concepts of various electronic devices
C112.5	Ability to Choose appropriate instruments for electrical measurement for a specific application.

GE 8291-Environmental Science & Engineering [C113]

C113.1	Gain knowledge on flora and fauna in our environment helps to know about social environment
C113.2	Gain knowledge on the offensive effects of pollution in the day-to-day life.
C113.3	Acquire knowledge on the natural resources available and their conservation.
C113.4	Have adequate knowledge on the concepts of adverse effects of social issues like acid rain and global warming
C113.5	Get knowledge about the Over Population, causes and Effects and the Solutions to overcome the problems due to Population.

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DEPARTMENT OF HUMANITIES AND SCIENCE (BE MECHANICAL ENGINEERING)

GE8292-Engineering Mechanics[C114]

C114.1	Illustrate the vectorial and scalar representation of forces and to solve problems with the basic concepts of particle mechanics.
C114.2	Analyse the rigid body under static equilibrium
C114.3	Evaluate the properties of surfaces and solids such as centroid, moment of inertia, centre of gravity and mass moment of inertia
C114.4	Analyse the rigid body under dynamic equilibrium
C114.5	Solve problems involving kinetics of rigid bodies with and without friction

GE8261-Engineering Practices Laboratory [C115]

C115.1	Study and practice on machine tools and their operations
C115.2	Ability to fabricate carpentry components and pipe connections including plumbing work
C115.3	Demonstrate wiring for a simple residential house, identify the ratings of various appliances like Fluorescent tube, incandescent lamp, etc.
C115.4	Calculate the different Electrical quantities, measure the energy consumption using single phase energy meter, measure the resistance to earth of an electrical equipment.
C115.5	Analyze the characteristics of basic electronic devices.
C115.6	Elaborate on the components, gates, soldering practices.

BE8261-Basic Electrical, Electronics & Instrumentation Engineering Laboratory[C116]

C116.1	To determine the speed characteristic of different electrical machines
C116.2	To design simple circuits involving diodes and transistors
C116.3	To use operational amplifiers

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