

**I Year / I Semester & II Semester
R-2017**

HS8151 COMMUNICATIVE ENGLISH

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C101.1	Enable the development in sharing information about family and friends.	K3,A2
C101.2	Strengthen general comprehending skills and present lucid skills in free writing.	K2,A2
C101.3	Understand the basic grammar techniques and utilize it in enhancing language development.	K4,A2
C101.4	Foster an environment for reading and develop good language skills.	A2
C101.5	Develop flair for any kind of writing with rich vocabulary and proper syntax.	A2
C101.6	Proficiency in writing technical articles and presenting papers on any topic of any genre.	A3

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
HS8151 COMMUNICATIVE ENGLISH	CO1	-	-	-	-	-	-	-	-	-	2	-	3	-	-	-
	CO2	-	-	-	-	-	-	-	-	2	2	-	3	-	-	-
	CO3	-	-	-	-	-	-	-	-	-	2	-	3	-	-	-
	CO4	-	-	-	-	-	-	-	-	-	2	-	3	-	-	-
	CO5	-	-	-	-	-	-	-	-	-	2	-	3	-	-	-
	CO6	-	-	-	-	-	-	-	-	3	3	-	2	-	-	-
		-	-	-	-	-	-	-	-	-	3	2	-	3	-	-

MA8151 ENGINEERING MATHEMATICS - I

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C102.1	Diagonalize symmetric matrices and similar matrices using Eigen values and Eigen vectors.	K2
C102.2	Explain gradients, potential functions, and directional derivatives of functions of several variables.	K2
C102.3	Compute line, surface and volume integral using Gauss divergence, Green's and stoke's theorem.	K2
C102.4	Discuss analytic functions in heat and fluid flow.	K2
C102.5	Extend the concept of contour integrals in evaluating Real integrals.	K2
C102.6	Discuss Laplace Transform methods to solve initial value problems for constant coefficient linear ODEs.	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
MA8151 ENGINEERING MATHEMATICS - I	CO1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO3	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO4	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO5	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO6	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
		2	1	-	-	-	-	-	-	-	-	-	-	-	-	-

PH8151 ENGINEERING PHYSICS

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C103.1	Discuss the Young's modulus and Rigidity modulus of elasticity of materials and its determination through experimental methods	K2
C103.2	Describe the characteristics of laser light and their application in semiconductor laser .	K2
C103.3	Discuss the principle behind the propagation of light through an optical fibre and its application in sensors.	K2
C103.4	Summarize the different modes of heat transfer.	K2
C103.5	Relate the quantum concepts in electron microscopes.	K2
C103.6	Describe the unit cell characteristics and the growth of crystals.	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3	
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2				
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12				
PH8151 ENGINEERING PHYSICS	CO1	2	1	-	-	-	-	-	-	-	-	2	-	-	-	-	-
	CO2	2	1	-	-	-	-	-	-	-	-	2	-	-	-	-	-
	CO3	2	1	-	-	-	-	-	-	-	-	2	-	-	-	-	-
	CO4	2	1	-	-	-	-	-	-	-	-	2	-	-	-	-	-
	CO5	2	1	-	-	-	-	-	-	-	-	2	-	-	-	-	-
	CO6	2	1	-	-	-	-	-	-	-	-	2	-	-	-	-	-
		2	1	-	-	-	-	-	-	-	-	2	-	-	-	-	-

CY8151 ENGINEERING CHEMISTRY

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C104.1	Summarize the water related problems in boilers and their treatment techniques.	K2
C104.2	Discuss the applications of adsorption in the field of water and air pollution abatement.	K2
C104.3	Discuss the types of catalysis and the mechanism of enzyme catalysis	K2
C104.4	Associate phase rule in the alloying and the behaviour of one component and two component systems using phase diagram	K2
C104.5	Explain various types of fuels, their manufacturing processes and calculation of calorific theoretically	K2
C104.6	Summarize the principles and generation of energy in batteries ,nuclear reactors, solar cells, wind mills and fuel cells	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CY8151 ENGINEERING CHEMISTRY	CO1	2	1	-	-	-	-	-	-	-	2	-	-	-	-	-
	CO2	2	1	-	-	-	-	-	-	-	2	-	-	-	-	-
	CO3	2	-	-	-	-	-	-	-	-	2	-	-	-	-	-
	CO4	2	1	-	-	-	-	-	-	-	2	-	-	-	-	-
	CO5	2	1	-	-	-	-	-	-	-	2	-	-	-	-	-
	CO6	2	-	-	-	-	-	-	-	-	2	-	-	-	-	-
		2	1	-	-	-	-	-	-	-	2	-	-	-	-	-

GE8151 PROBLEM SOLVING AND PYTHON PROGRAMMING

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C105.1	Discuss the logical solutions through Flowcharts, Algorithms and Pseudo code	K2
C105.2	Explain the syntax for python programming constructs.	K2
C105.3	Compute the flow of the program to obtain the programmatic solution.	K2
C105.4	Examine the programs with sub problems using 'Python' language.	K3
C105.5	Compute the compound data using Python lists, tuples, and dictionaries	K2
C105.6	Apply python programs to read and write data from/to files.	K3

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
GE8151 PROBLEM SOLVING AND PYTHON PROGRAMMING	CO1	2	1	1	1	-	-	-	-	-	-	-	-	1	-	1
	CO2	2	1	1	1	2	-	-	-	-	-	-	-	2	2	-
	CO3	2	1	1	1	2	-	-	-	-	-	-	-	1	2	-
	CO4	3	2	2	1	3	-	-	-	-	-	-	-	2	2	-
	CO5	2	1	1	1	2	-	-	-	-	-	-	-	2	2	-
	CO6	3	2	2	1	3	-	-	-	-	-	-	-	1	2	-
		2	1	1	1	2	-	-	-	-	-	-	-	2	2	1

GE8152 ENGINEERING GRAPHICS

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C106.1	Discuss about conics and orthographic views of engineering components	K2
C106.2	Draw the projection of points, lines and planes	K1
C106.3	Classify solids and projection of solids at different positions	K3
C106.4	Show sectioned view of solids and development of surface	K3
C106.5	Draw isometric projection and perspective views of an object/solid	K1
C106.6	Apply the concept of drawing in practical applications.	K3

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
GE8152 ENGINEERING GRAPHICS	CO1	2	-	-	-	-	-	-	-	-	2	-	-	-	-	-
	CO2	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-
	CO3	3	-	-	-	-	-	-	-	-	3	-	-	-	-	-
	CO4	3	-	-	-	-	-	-	-	-	3	-	-	-	-	-
	CO5	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-
	CO6	3	-	2	-	-	-	-	-	-	3	-	-	-	-	-
		2	-	2	-	-	-	-	-	-	2	-	-	-	-	-

GE8161 PROBLEM SOLVING AND PYTHON PROGRAMMING LABORATORY

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C107.1	Write, test, and debug simple Python programs.	K1
C107.2	Apply the concept of conditionals and loops in Python programs.	K3
C107.3	Develop the Python programs step-wise by defining functions and calling them.	K4
C107.4	Use Python lists, tuples, dictionaries for representing compound data.	K3
C107.5	Read and write data from/to files in Python.	K1
C107.6	Apply the concept of Pygame.	K3
C107.7	Exhibit ethical principles in engineering practices	A3
C107.8	Perform task as an individual and / or team member to manage the task in time	A3
C107.9	Express the Engineering activities with effective presentation and report.	A3
C107.10	Interpret the findings with appropriate technological / research citation.	A2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
GE8161 PROBLEM SOLVING AND PYTHON PROGRAMMING LABORATORY	CO1	1	1	1	1	-	-	-	-	-	-	-	-	1	-	-
	CO2	3	2	2	1	3	-	-	-	-	-	-	-	2	1	-
	CO3	3	3	3	2	3	-	-	-	-	-	-	-	1	2	-
	CO4	3	2	2	1	3	-	-	-	-	-	-	-	2	1	-
	CO5	1	1	1	1	1	-	-	-	-	-	-	-	2	1	-
	CO6	3	2	2	1	3	-	-	-	-	-	-	-	1	2	-
	CO7	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
	CO8	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
	CO9	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
	CO10	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
		2	2	2	1	3	-	-	3	3	3	3	3	2	1	-

BS8161 PHYSICS AND CHEMISTRY LABORATORY

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C108.1	Determine the Modulus of elasticity of materials and Coefficient of Viscosity of liquids	K2
C108.2	Determine the Thermal Conductivity of bad conductor using Lee's disc method	K2
C108.3	Calculate the Compressibility of liquids and velocity of ultrasonic waves in liquids	K2
C108.4	Measure the wavelength of prominent spectral lines of Mercury Spectrum and particle size of powder using diffraction phenomenon and thickness of thin materials using interference phenomenon,	K2
C108.5	Determine the band gap energy of a semiconductor	K2
C108.6	Calculate water quality parameters such as hardness, alkalinity of the given water sample.	K2
C108.7	Estimate the amount of the given acids using conductometric titrations.	K2
C108.8	Estimate the amount of the given acids using pH titrations	K2
C108.9	Determine the amount of iron content in the given substance using potentiometric titration	K2
C108.10	Determine the amount of chloride content in the given water sample.	K2
C108.11	Exhibit ethical principles in engineering practices	A3
C108.12	Perform task as an individual and / or team member to manage the task in time	A3
C108.13	Express the Engineering activities with effective presentation and report.	A3
C108.14	Interpret the findings with appropriate technological / research citation.	A2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3	
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2				
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12				
BS8161 PHYSICS AND CHEMISTRY LABORATORY	CO1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO3	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO4	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO5	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO6	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO7	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO8	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO9	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO10	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO11	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
	CO12	-	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
	CO13	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
	CO14	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
		2	1	-	-	-			3	3	3	3	3	-	-	-	

HS8251 TECHNICAL ENGLISH

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C109.1	Breakdown the ideas in to its elementary constituents, analyze and act after a meaning full thought process.	K2,A2
C109.2	Analyze the phrase and passage and explicitly pass on the ideas meaning fully.	K3,A2
C109.3	Manage to interpret the given phrase or the graphical rendering and review the contents well individually or as a group.	K3,A2
C109.4	Concentrate on the communication aspect of complicated ideas and respond positively.	A2
C109.5	Debate the issues and find the rudiments of the problem individually and as a group.	A3
C109.6	Respond intelligently and seek clarification and understand completely.	A2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
HS8251 TECHNICAL ENGLISH	CO1	-	-	-	-	-	-	-	-	-	2	-	3	-	-	-
	CO2	-	-	-	-	-	-	-	-	2	2	-	3	-	-	-
	CO3	-	-	-	-	-	-	-	-	-	2	-	3	-	-	-
	CO4	-	-	-	-	-	-	-	-	-	2	-	3	-	-	-
	CO5	-	-	-	-	-	-	-	-	3	3	-	2	-	-	-
	CO6	-	-	-	-	-	-	-	-	-	2	-	3	-	-	-
		-	-	-	-	-	-	-	-	3	2	-	3	-	-	-

MA8251 ENGINEERING MATHEMATICS II

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C110.1	Compute Eigen values and Eigen vectors of a matrix, diagonalize symmetric matrices and similar matrices	K2
C110.2	Explain gradients, potential functions, and directional derivatives of functions of several variables.	K2
C110.3	Compute line, surface and volume integral using Gauss divergence, Green's and stoke's theorem.	K2
C110.4	Discuss analytic functions in heat and fluid flow.	K2
C110.5	Extend the concept of contour integrals in evaluating Real integrals.	K2
C110.6	Discuss Laplace Transform methods to solve initial value problems for constant coefficient linear ODEs.	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
MA8251 ENGINEERING MATHEMATICS II	CO1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO3	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO4	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO5	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO6	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
		2	1	-	-	-	-	-	-	-	-	-	-	-	-	-

PH8252 PHYSICS FOR INFORMATION SCIENCE

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C111.1	Discuss about Wiedemann Franz law and the conduction in solids.	K2
C111.2	Associate the concept of quantum electron theories with energy band structures.	K2
C111.3	Discuss the carrier concentration in semiconducting materials.	K2
C111.4	Explain the origin of magnetism and the properties of magnetic materials.	K2
C111.5	Discuss the working of Opto-electronic devices.	K2
C111.6	Summarize the basics of quantum structures and their applications in nano devices.	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
PH8252 PHYSICS FOR INFORMATION SCIENCE	CO1	2	1	-	-	-	-	-	-	-	2	-	-	-	-	-
	CO2	2	1	-	-	-	-	-	-	-	2	-	-	-	-	-
	CO3	2	1	-	-	-	-	-	-	-	2	-	-	-	-	-
	CO4	2	1	-	-	-	-	-	-	-	2	-	-	-	-	-
	CO5	2	1	-	-	-	-	-	-	-	2	-	-	-	-	-
	CO6	2	1	-	-	-	-	-	-	-	2	-	-	-	-	-
		2	1	-	-	-	-	-	-	-	2	-	-	-	-	-

BE8255 BASIC ELECTRICAL, ELECTRONICS AND MEASUREMENT ENGINEERING

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C112.1	Illustrate the behavior of electric circuits using fundamental laws and techniques.	K2
C112.2	Explain the operation of DC, AC and Special machines	K2
C112.3	Summarize different energy sources, protective devices and its applications	K2
C112.4	Outline the characteristics and applications of semiconductor diodes.	K2
C112.5	Summarize the characteristics and errors of the instruments	K2
C112.6	Explain the working of different types of Analog Instruments and transducers	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
BE8255 BASIC ELECTRICAL, ELECTRONICS AND MEASUREMENT ENGINEERING	CO1	2	1	-	-	-	-	-	-	-	1	-	-	2	-	-
	CO2	2	1	-	-	-	-	-	-	-	1	-	-	2	-	-
	CO3	2	1	-	-	-	2	-	-	-	1	-	-	2	-	-
	CO4	2	1	-	-	-	-	-	-	-	1	-	-	2	-	-
	CO5	2	1	-	-	-	-	-	-	-	1	-	-	2	-	-
	CO6	2	1	-	-	-	-	-	-	-	1	-	-	2	-	-
		2	1	-	-	-	2	-	-	-	1	-	-	2	-	-

GE8291 ENVIRONMENTAL SCIENCE AND ENGINEERING

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C113.1	Summarize the values, threats, conservation of biodiversity and ecosystems	K2
C113.2	Discuss the sources, effects, control measures of different types of pollution, and solid waste management	K2
C113.3	Associate the effects of exploitation of Natural resources on environment	K2
C113.4	Summarize the water conservation methods and various environmental acts for environmental sustainability	K2
C113.5	Explain the effect of Human population and role of IT in environment and human health	K2
C113.6	Discuss scientific, technological, economic and social solutions to environmental problems	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO 1	PSO 2	PSO 3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
GE8291 ENVIRONMENTAL SCIENCE AND ENGINEERING	CO1	-	-	-	-	-	2	3	-	-	2	-	-	-	-	-
	CO2	2	-	-	-	-	2	3	-	-	2	-	-	-	-	-
	CO3	2	-	-	-	-	2	3	-	-	2	-	-	-	-	-
	CO4	-	-	-	-	-	2	3	-	-	2	-	-	-	-	-
	CO5	-	-	-	-	-	-	3	-	-	2	-	-	-	-	-
	CO6	2	1	-	-	-	2	3	-	-	2	-	-	-	-	-
		2	1	-	-	-	2	3	-	-	2	-	-	-	-	-

CS8251 PROGRAMMING IN C

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C114.1	Explain the syntax for C programming	K2
C114.2	Associate the programs in 'C' for real world situation	K2
C114.3	Apply the concepts of Arrays, Strings in 'C' language for user defined problems.	K3
C114.4	Apply the concept of functions and pointers.	K3
C114.5	Associate the programs with structure using 'C' language.	K2
C114.6	Discuss to read and write data from/to files in 'C' Programs.	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8251 PROGRAMMING IN C	CO1	2	1	1	1	-	-	-	-	-	-	-	-	1	-	-
	CO2	2	1	1	1	2	-	-	-	-	-	-	-	2	3	1
	CO3	3	2	2	1	3	-	-	-	-	-	-	-	1	2	-
	CO4	3	2	2	1	3	-	-	-	-	-	-	-	2	2	-
	CO5	2	1	1	1	2	-	-	-	-	-	-	-	2	3	-
	CO6	2	1	1	1	2	-	-	-	-	-	-	-	1	2	-
		2	1	1	1	2	-	-	-	-	-	-	-	2	2	1

GE8261 ENGINEERING PRACTICES LABORATORY

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C115.1	Identify Tools and Techniques used for Sheet Metal Fabrication.	K1
C115.2	Use welding equipment to join the structures.	K3
C115.3	Demonstrate Plumbing requirements of domestic buildings.	K3
C115.4	Apply the skills of basic electrical engineering for house wiring practice	K3
C115.5	Measure various electrical quantities	K3
C115.6	Explain the working of electronic components and its utilization	K2
C115.7	Apply electronic principles to develop circuits for primitive application	
C115.8	Exhibit ethical principles in engineering practices	A3
C115.9	Perform task as an individual and / or team member to manage the task in time	A3
C115.10	Express the Engineering activities with effective presentation and report.	A3
C115.11	Interpret the findings with appropriate technological / research citation.	A2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
GE8261 ENGINEERING PRACTICES LABORATORY	CO1	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-
	CO2	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO3	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO4	3	2	2	1	3	-	-	-	-	-	-	-	-	-	-
	CO5	3	2	2	1	3	-	-	-	-	-	-	-	-	-	-
	CO6	2	1	-	1	2	-	-	-	2	2	2	-	-	-	-
	CO7															
	CO8	3	2	2	1	3	-	-	-	3	3	3	-	-	-	-
	CO9															
	CO10	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
	CO11	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
		-	-	-	-	-	-	-	-	3	-	-	-	-	-	

CS8261 C PROGRAMMING LABORATORY

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C116.1	Develop C programs for simple applications making use of basic constructs	K4
C116.2	Apply the concept of conditionals and loops in C programs.	K3
C116.3	Develop the C programs with arrays and strings.	K4
C116.4	Apply the concept of functions, recursion in C programs	K3
C116.5	Analyze the concept of pointers, and structures in C	K4
C116.6	Examine the use of sequential and random access file processing.	K3
C116.7	Exhibit ethical principles in engineering practices	A3
C116.8	Perform task as an individual and / or team member to manage the task in time	A3
C116.9	Express the Engineering activities with effective presentation and report.	A3
C116.10	Interpret the findings with appropriate technological / research citation.	A2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8261 C PROGRAMMING LABORATORY	CO1	3	3	3	2	-	-	-	-	-	-	-	-	1	-	-
	CO2	3	2	2	1	3	-	-	-	-	-	-	-	2	1	-
	CO3	3	3	3	2	3	-	-	-	-	-	-	-	1	2	-
	CO4	3	2	2	1	3	-	-	-	-	-	-	-	2	1	-
	CO5	3	3	3	2	3	-	-	-	-	-	-	-	2	1	-
	CO6	3	2	2	1	3	-	-	-	-	-	-	-	1	2	-
	CO7	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
	CO8	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
	CO9	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
	CO10	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
		3	3	3	2	3	-	-	3	3	3	3	3	2	1	-

**II Year / III Semester & IV Semester
R-2017**

MA8351 DISCRETE MATHEMATICS

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C201.1	Summarize the concept of elementary mathematical logical arguments.	K2
C201.2	Apply basic counting techniques to solve combinatorial problems.	K2
C201.3	Associate the applications of Graph theory models and data structures.	K3
C201.4	Describe the concepts and properties of algebraic structures such as groups, rings and fields.	K3
C201.5	Extend the concepts of Boolean algebra in the area of lattices.	K3
C201.6	Apply the knowledge of argumental discrete mathematical problems.	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
MA8351 DISCRETE MATHEMATICS	CO1	2	-	1	-	-	-	-	-	-	-	-	-	2	-	-
	CO2	2	1	1	-	-	-	-	-	-	-	-	-	2	-	-
	CO3	3	2	-	-	-	-	-	-	-	-	-	-	2	-	-
	CO4	3	-	-	-	-	-	-	-	-	-	-	-	2	-	-
	CO5	3	-	2	-	-	-	-	-	-	-	-	-	2	-	-
	CO6	2	-	2	-	-	-	-	-	-	-	-	-	2	-	-
		3	2	2	-	-	-	-	-	-	-	-	-	2	-	-

CS8351 DIGITAL PRINCIPLES AND SYSTEM DESIGN

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C202.1	Apply the Boolean functions using K-Map	K3
C202.2	Interpret Combinational circuits for a given functions using logic gates.	K3
C202.3	Recognise Synchronous Sequential circuits for the given condition.	K3
C202.4	Recognise Asynchronous Sequential circuits for the given condition.	K3
C202.5	Apply Programmable Logic towards memory management	K3
C202.6	Solve verilog codes for the design of digital circuits.	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO 1	PSO 2	PSO 3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2			
CS8351 DIGITAL PRINCIPLES AND SYSTEM DESIGN	C01	3	2	2	-	-	-	-	-	-	-	-	-	2	-	-
	C02	3	2	2	-	-	-	-	-	-	-	-	-	2	-	-
	C03	3	2	2	-	-	-	-	-	-	-	-	-	1	-	-
	C04	3	2	2	-	-	-	-	-	-	-	-	-	1	-	-
	C05	3	2	2	-	-	-	-	-	-	-	-	-	2	-	-
	C06	2	1	1	-	-	-	-	-	-	-	-	-	2	-	-
		3	2	2	-	-	-	-	-	-	-	-	-	2	-	-

CS8391 DATA STRUCTURES

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C203.1	Describe linear data structures using array and linked list.	K2
C203.2	Apply data structures like stacks, queues in linear data structure.	K3
C203.3	Discuss non-linear data structures tree and its application.	K2
C203.4	Apply various algorithms in graph.	K3
C203.5	Solve searching, sorting and hashing techniques in data structures.	K3
C203.6	Interpret sorting algorithms for a give problem.	K3

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8391 DATA STRUCTURES	CO1	2	2	1	-	-	-	-	-	-	-	-	-	2	2	1
	CO2	2	2	1	-	-	-	-	-	-	-	-	-	2	2	1
	CO3	2	2	1	-	-	-	-	-	-	-	-	-	2	2	1
	CO4	3	2	2	1	-	-	-	-	-	-	-	-	2	2	1
	CO5	3	2	2	1	-	-	-	-	-	-	-	-	2	2	1
	CO6	3	2	2	1	-	-	-	-	-	-	-	-	2	2	1
		3	2	2	1	-	-	-	-	-	-	-	-	2	2	1

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C204.1	Interpret Java programs using Object Oriented Programming principles	K2
C204.2	Explain Java programs with the concepts inheritance and interfaces	K2
C204.3	Contrast Java applications using exceptions and I/O streams	K2
C204.4	Relate Java applications with threads and generics classes	K2
C204.5	Develop interactive Java programs using swings	K2
C204.6	Demonstrate simple Graphical User Interfaces	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8392 OBJECT ORIENTED PROGRAMMING	CO1	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO2	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO3	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO4	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO5	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO6	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
		2	1	1	-	-	-	-	-	-	-	-	-	2	2	-

EC8395 COMMUNICATION ENGINEERING

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C205.1	Describe the concepts of analog modulation systems.	K2
C205.2	Illustrate pulse communication techniques	K2
C205.3	Summarize the concepts of digital modulation systems.	K2
C205.4	Implement the source coding techniques.	K2
C205.5	Explain the basic principles in the generation of spread spectrum signals.	K2
C205.6	Explain the methods of multiple access in communication systems.	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
EC8395 COMMUNICATION ENGINEERING	CO1	2	1	1	-	-	-	-	-	-	1	-	-	2	-	-
	CO2	2	1	1	-	-	-	-	-	-	1	-	-	2	-	-
	CO3	2	-	-	-	-	-	-	-	-	1	-	-	2	-	-
	CO4	2	2	2	-	-	-	-	-	-	1	-	-	2	-	-
	CO5	2	1	1	-	-	-	-	-	-	-	-	-	2	-	-
	CO6	2	1	1	-	-	-	-	-	-	-	-	-	2	-	-
		2	1	1	-	-	-	-	-	-	1	-	-	2	-	-

CS8381 DATA STRUCTURES LAB

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C206.1	Enumerate functions to implement linear and non-linear data structure operations	K2
C206.2	Perform practical applications of data structures	K3
C206.3	Design and develop appropriate linear / non-linear data structure operations for solving a given problem	K3
C206.4	Design new solutions for programming problems or improve existing code using learned algorithms and data structures	K3
C206.5	Apply the linear / non-linear data structure operations for a given problem based on the user needs	K3
C206.6	Apply appropriate hash functions that result in a collision free scenario for data storage and retrieval	K3
C206.7	Exhibit ethical principles in engineering practices	A3
C206.8	Perform task as an individual and / or team member to manage the task in time	A3
C206.9	Express the Engineering activities with effective presentation and report.	A3
C206.10	Interpret the findings with appropriate technological / research citation.	A2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8381 DATA STRUCTURES LAB	CO1	2	2	2	-	-	2	1	1	-	-	-	-	2	1	1
	CO2	2	2	2	1	-	1	1	1	-	-	-	-	2	1	1
	CO3	1	3	2	-	-	2	1	1	-	-	-	-	2	1	1
	CO4	2	2	2	2	-	2	2	1	-	-	-	-	2	1	1
	CO5	3	2	1	1	-	2	1	1	-	-	-	-	2	1	1
	CO6	2	1	1	1	-	1	2	1	-	-	-	-	2	1	1
	CO7	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
	CO8	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
	CO9	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
	CO10												3			
		2	2	2	2	-	2	2	1	3	3	3	3	2	1	1

CS8383 OBJECT ORIENTED PROGRAMMING LAB

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C207.1	Develop and implement Java programs for simple applications that make use of classes	K3
C207.2	Develop and implement Java programs with arraylist	K3
C207.3	Design applications using file processing	K3
C207.4	Build software development skills using java programming for real-world applications	K3
C207.5	Apply the concepts of classes, packages, interfaces, exception handling	K3
C207.6	Develop applications using generic programming and event handling	K3
C207.7	Exhibit ethical principles in engineering practices	A3
C207.8	Perform task as an individual and / or team member to manage the task in time	A3
C207.9	Express the Engineering activities with effective presentation and report.	A3
C207.10	Interpret the findings with appropriate technological / research citation.	A2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8383 OBJECT ORIENTED PROGRAMMING LAB	CO1	3	2	2	1	-	-	-	-	-	-	-	-	2	2	-
	CO2	3	2	2	1	-	-	-	-	-	-	-	-	2	2	-
	CO3	3	2	2	1	-	-	-	-	-	-	-	-	2	2	-
	CO4	3	2	2	1	-	-	-	-	-	-	-	-	3	2	-
	CO5	3	2	2	1	-	-	-	-	-	-	-	-	2	2	-
	CO6	3	2	2	1	-	-	-	-	-	-	-	-	2	2	-
	CO7	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
	CO8	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
	CO9	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
	CO10	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
		3	2	2	1	-	-	-	3	3	3	3	3	2	2	-

CS8382 DIGITAL SYSTEMS LAB

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C208.1	Interpret Combinational circuits Using Logic gates.	K3
C208.2	Illustrate Combinational circuits Using MSI Devices.	K3
C208.3	Practice various counters using Flip-flops.	K3
C208.4	Practice shift registers using Flip-flops	K3
C208.5	Solve verilog codes for the design of digital circuits.	K3
C208.6	Demonstrate simple digital system	K3
C208.7	Exhibit ethical principles in engineering practices	A3
C208.8	Perform task as an individual and / or team member to manage the task in time	A3
C208.9	Express the Engineering activities with effective presentation and report.	A3
C208.10	Interpret the findings with appropriate technological / research citation.	A2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3	
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2				
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12				
CS8382 DIGITAL SYSTEMS LAB	CO1	3	2	2	-	-	-	-	-	-	-	-	-	1	-	-	
	CO2	3	2	2	-	-	-	-	-	-	-	-	-	1	-	-	
	CO3	3	2	2	-	-	-	-	-	-	-	-	-	1	-	-	
	CO4	3	2	2	-	-	-	-	-	-	-	-	-	1	-	-	
	CO5	3	2	2	-	-	-	-	-	-	-	-	-	1	-	-	
	CO6	3	2	2	-	-	-	-	-	-	-	-	-	1	-	-	
	CO7	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
	CO8	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-	-
	CO9	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-
	CO10	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-
		3	2	2	-	-	-	-	3	3	3	3	3	1	-	-	

HS8381 INTERPERSONAL SKILLS / LISTENING AND SPEAKING

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C209.1	Listen and react by giving verbal and non verbal feedback.	A2
C209.2	To make effective contribution in Group Discussions.	K2,A3
C209.3	Compare and Contrast the ideas from multiple choices and summarize.	K2
C209.4	Respond confidently in both Formal and Informal conversations.	A2
C209.5	To Greet and to respond to Greetings.	A2
C209.6	Apply stress and intonation while speaking to make the presentation effective.	K3
C209.7	Exhibit ethical principles in engineering practices	A3
C209.8	Perform task as an individual and / or team member to manage the task in time	A3
C209.9	Express the Engineering activities with effective presentation and report.	A3
C209.10	Interpret the findings with appropriate technological / research citation.	A2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3, K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
HS8381 INTERPERSONAL SKILLS / LISTENING AND SPEAKING	CO1	-	-	-	-	-	-	-	-	2	3	-	3	-	-	-
	CO2	-	-	-	-	-	-	-	-	3	2	-	3	-	-	-
	CO3	-	-	-	-	-	-	-	-	2	2	-	3	-	-	-
	CO4	-	-	-	-	-	-	-	-	2	2	-	3	-	-	-
	CO5	-	-	-	-	-	-	-	-	3	2	-	3	-	-	-
	CO6	-	-	-	-	-	-	-	-	2	3	-	2	-	-	-
	CO7	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
	CO8	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
	CO9	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
	CO10	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
		-	-	-	-	-	-	-	3	2	2	3	3	-	-	-

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C210.1	Discuss the concepts of the fundamental Probability Theory, Baye's theorem	K2
C210.2	Associate the concepts of Standard distributions with real life phenomena.	K2
C210.3	Summarize the concepts of covariance, correlation and regression . central limit theorem	K2
C210.4	Explain the concept of Markov chain in terms of a transition probability matrix and transition diagram..	K2
C210.5	Extend birth and death processes which evolve with respect to time in a probabilistic manner	K2
C210.6	Interpret the Queuing models.	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
MA8402 PROBABILITY AND QUEUEING THEORY	CO1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO3	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO4	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO5	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO6	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
		2	1	-	-	-	-	-	-	-	-	-	-	-	-	-

CS8491 COMPUTER ARCHITECTURE

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C211.1	Describe the basic structures of a computer system.	K2
C211.2	Explain the various arithmetic operations for computers.	K2
C211.3	Analyze pipelined control units and the different types of hazards in the instructions.	K3
C211.4	Interpret the concepts of parallel processing architecture	K2
C211.5	Summarize the fundamentals of memory system.	K2
C211.6	Describe the concepts of I/O system	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8491 COMPUTER ARCHITECTURE	CO1	2	1	1	-	-	-	-	-	-	-	-	-	2	-	-
	CO2	2	1	1	-	-	-	-	-	-	-	-	-	2	-	-
	CO3	3	2	2	-	-	-	-	-	-	-	-	-	2	2	-
	CO4	2	1	1	-	-	-	-	-	-	-	-	-	2	-	-
	CO5	2	1	1	-	-	-	-	-	-	-	-	-	2	-	-
	CO6	2	1	1	-	-	-	-	-	-	-	-	-	2	-	-
		2	1	1	-	-	-	-	-	-	-	-	-	2	2	-

CS8492 DATABASE MANAGEMENT SYSTEMS

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C212.1	Discuss the fundamental concepts of relational database and SQL	K2
C212.2	Use ER model for Relational model mapping to perform database design effectively	K3
C212.3	Summarize the properties of transactions and concurrency control mechanisms	K2
C212.4	Outline the various storage and optimization techniques	K2
C212.5	Compare and contrast various indexing strategies in different database systems	K2
C212.6	Explain the different advanced databases	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8492 DATABASE MANAGEMENT SYSTEMS	CO1	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO2	3	2	2	-	-	-	-	-	-	-	-	-	2	3	-
	CO3	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO4	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO5	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO6	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
		2	1	1	-	-	-	-	-	-	-	-	-	2	2	-

CS8451 DESIGN AND ANALYSIS OF ALGORITHMS

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C213.1	Discuss the fundamental concepts problem solving algorithm, its types and the parameters to analyze those algorithms	K2
C213.2	Explain the Brute Force method and Divide and Conquer method to solve computing problems.	K2
C213.3	Explain the dynamic programming and greedy techniques to solve computing problems.	K2
C213.4	Describe how scientific problems can be solved using iterative method and how to cope with limitations of algorithm power.	K2
C213.5	Critically analyze the different algorithm design techniques for a given problem based on its time and space complexity.	K3
C213.6	Modify existing algorithms to improve efficiency	K3

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8451 DESIGN AND ANALYSIS OF ALGORITHMS	CO1	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO2	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO3	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO4	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO5	3	2	2	-	-	-	-	-	-	-	-	-	2	2	-
	CO6	3	2	2	-	-	-	-	-	-	-	-	-	2	2	-
		2	1	1	-	-	-	-	-	-	-	-	-	2	2	-

CS8493 OPERATING SYSTEMS

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C214.1	Explain the overall view of the computer system and operating system	K2
C214.2	Identify various scheduling algorithm and deadlock prevention and avoidance algorithm	K2
C214.3	Compare and contrast various memory management schemes and file system functionalities	K2
C214.4	Discuss the performance of the various page replacement algorithms and interpret the file system implementation, sharing and protection mechanisms.	K2
C214.5	Demonstrate administrative tasks on Linux servers and to be familiar with the basics of Mobile OS.	K3
C214.6	Make use of various algorithms to solve computing problems	K3

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8493 OPERATING SYSTEMS	CO1	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO2	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO3	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO4	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO5	3	2	2	-	-	-	-	-	-	-	-	-	2	2	-
	CO6	3	2	2	-	-	-	-	-	-	-	-	-	2	3	-
		2	1	1	-	-	-	-	-	-	-	-	-	2	2	-

CS8494 SOFTWARE ENGINEERING

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C215.1	Identify the key activities in managing a software project and recognize different process model	K2
C215.2	Explain the concepts of requirements engineering and Analysis Modeling.	K2
C215.3	Outline the systematic procedures for software design and deployment.	K2
C215.4	Compare various testing and maintenance methods	K2
C215.5	Interpret the project schedule, estimate project cost and effort required.	K2
C215.6	Develop a software using the software engineering principles	K3

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8494 SOFTWARE ENGINEERING	CO1	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO2	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO3	3	2	2	-	-	-	-	-	-	-	-	-	2	2	-
	CO4	3	2	2	-	-	-	-	-	-	-	-	-	2	2	-
	CO5	3	2	2	-	-	-	-	-	-	-	-	-	2	2	-
	CO6	3	2	2	-	-	-	-	-	-	-	-	-	2	3	-
		3	2	2	-	-	-	-	-	-	-	-	-	2	2	-

CS8481 DATABASE MANAGEMENT SYSTEMS LABORATORY

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C216.1	Use typical data definitions and manipulation commands.	K3
C216.2	Design applications to test Nested and Join Queries	K3
C216.3	Implement simple applications that use Views	K3
C216.4	Make use of ER modeling and normalization to design and implement database	K3
C216.5	Implement applications that require a Front-end Tool	K3
C216.6	Critically analyze the use of Tables, Views, Functions and Procedures	K4
C216.7	Exhibit ethical principles in engineering practices	A3
C216.8	Perform task as an individual and / or team member to manage the task in time	A3
C216.9	Express the Engineering activities with effective presentation and report.	A3
C216.10	Interpret the findings with appropriate technological / research citation.	A2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8481 DATABASE MANAGEMENT SYSTEMS LABORATORY	CO1	3	2	2	-	-	-	-	-	-	-	-	-	2	2	-
	CO2	3	2	2	-	-	-	-	-	-	-	-	-	2	2	-
	CO3	3	2	2	-	-	-	-	-	-	-	-	-	2	2	-
	CO4	3	2	2	-	-	-	-	-	-	-	-	-	3	2	-
	CO5	3	2	2	-	-	-	-	-	-	-	-	-	2	2	-
	CO6	3	3	3	-	-	-	-	-	-	-	-	-	2	3	-
	CO7	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
	CO8	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
	CO9	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
	CO10	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
		3	2	2	-	-	-	3	3	3	3	3	3	2	2	-

CS8461 OPERATING SYSTEMS LABORATORY

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C217.1	Illustrate the various CPU scheduling algorithms.	K3
C217.2	Implement deadlock avoidance and detection algorithms.	K3
C217.3	Implement semaphore concepts.	K3
C217.4	Create processes and implement IPC.	K3
C217.5	Analyze the performance of the various page replacement algorithms.	K3
C217.6	Implement file organization and file allocation strategies.	K3
C217.7	Exhibit ethical principles in engineering practices	A3
C217.8	Perform task as an individual and / or team member to manage the task in time	A3
C217.9	Express the Engineering activities with effective presentation and report.	A3
C217.10	Interpret the findings with appropriate technological / research citation.	A2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8461 OPERATING SYSTEMS LABORATORY	CO1	3	2	2	-	-	-	-	-	-	-	-	-	3	2	1
	CO2	3	2	2	-	-	-	-	-	-	-	-	-	3	2	1
	CO3	3	2	2	-	-	-	-	-	-	-	-	-	3	2	1
	CO4	3	2	2	-	-	-	-	-	-	-	-	-	3	2	1
	CO5	3	2	2	-	-	-	-	-	-	-	-	-	3	2	1
	CO6	3	2	2	-	-	-	-	-	-	-	-	-	3	2	1
	CO7	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
	CO8	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
	CO9	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
	CO10	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
		3	2	2	-	-	-	-	3	3	3	3	3	3	2	1

HS8461

ADVANCED READING AND WRITING

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C218.1	Read and evaluate the text intelligently.	A1
C218.2	Understand parts of speech and use appropriate connectives in writing a paragraph.	K2, A2
C218.3	To write effective job application letter.	A2
C218.4	Implement speed reading techniques.	K3
C218.5	Perform critical thinking in various professional contexts.	A2
C218.6	To prepare descriptive and narrative writing.	K3
C218.7	Exhibit ethical principles in engineering practices	A3
C218.8	Perform task as an individual and / or team member to manage the task in time	A3
C218.9	Express the Engineering activities with effective presentation and report.	A3
C218.10	Interpret the findings with appropriate technological / research citation.	A2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
HS8461 ADVANCED READING AND WRITING	CO1	-	-	-	-	-	-	-	-	2	3	-	3	-	-	-
	CO2	-	-	-	-	-	-	-	-	2	2	-	2	-	-	-
	CO3	-	-	-	-	-	-	-	-	2	3	-	3	-	-	-
	CO4	-	-	-	-	-	-	-	-	2	2	-	3	-	-	-
	CO5	-	-	-	-	-	-	-	-	3	2	-	3	-	-	-
	CO6	-	-	-	-	-	-	-	-	2	2	-	2	-	-	-
	CO7	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
	CO8	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
	CO9	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
	CO10	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
		-	-	-	-	-	-	-	3	2	2	3	3	-	-	-

**III Year / V Semester & VI Semester
R-2017**

MA8551 ALGEBRA AND NUMBER THEORY

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C301.1	Summarize the notations and properties of algebraic structures such as groups, rings and fields.	K2
C301.2	Explain the concepts of finite fields and polynomials to solve problems in advanced algebra.	K2
C301.3	Associate the applications of divisibility theory and canonical decompositions.	K2
C301.4	Describe the concept of Diophantine equations and congruences and exhibit the efficient use of advanced algebraic techniques in number theory.	K2
C301.5	Extend the concepts of multiplicative functions and classical theorems.	K2
C301.6	Associate the knowledge of integrated approach to Number theory and abstract algebra.	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
MA8551 ALGEBRA AND NUMBER THEORY	CO1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO3	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO4	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO5	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO6	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
		2	1	-	-	-	-	-	-	-	-	-	-	-	-	-

CS8591 **COMPUTER NETWORKS**

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C302.1	Identify various layers of network and discuss the functions of physical layer	K2
C302.2	Discuss how data flows from one node to another node with regard to data link layer	K2
C302.3	Explain the different services of network layer	K2
C302.4	Compare the different transport layer protocols and their applicability based on user requirements	K3
C302.5	Describe the working of various application layer protocols	K2
C302.6	Evaluate the performance of network and analyze routing algorithms	K3

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8591 COMPUTER NETWORKS	CO1	2	1	1	-	-	-	-	-	-	-	-	-	1	-	-
	CO2	2	1	1	-	-	-	-	-	-	-	-	-	1	-	-
	CO3	2	1	1	-	-	-	-	-	-	-	-	-	1	-	-
	CO4	3	2	2	-	-	-	-	-	-	-	-	-	2	2	-
	CO5	2	1	1	-	-	-	-	-	-	-	-	-	1	-	-
	CO6	3	2	2	-	-	-	-	-	-	-	-	-	2	-	-
		2	1	1	-	-	-	-	-	-	-	-	-	1	2	-

EC8691 MICROPROCESSORS AND MICROCONTROLLERS

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C303.1	Explain the architecture and instruction set of Microprocessor	K2
C303.2	Discuss about System Bus Structure for Multiprocessor Configuration	K2
C303.3	Infer the functions of various interfacing integrated chips	K2
C303.4	Explain the architectures and instruction set of Microcontroller	K2
C303.5	Illustrate the functions of various interfacing devices with Microcontroller	K2
C303.6	Build an assembly language program for interfacing	K3

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
EC8691 MICRO PROCESSORS AND MICRO CONTROLLERS	CO1	2	1	-	-	-	-	-	-	-	-	-	-	2	-	-
	CO2	2	1	-	-	-	-	-	-	-	-	-	-	2	-	-
	CO3	2	1	-	-	-	-	-	-	-	-	-	-	2	-	-
	CO4	2	1	-	-	-	-	-	-	-	-	-	-	2	-	-
	CO5	2	1	-	-	-	-	-	-	-	-	-	-	2	-	-
	CO6	3	2	1	-	-	-	-	-	-	-	-	-	2	-	-
		2	1	1	-	-	-	-	-	-	-	-	-	2	-	-

CS8501 THEORY OF COMPUTATION

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C304.1	Design automata for any given pattern	K2
C304.2	Specify regular expression of string pattern	K2
C304.3	Write context free grammar for any language	K3
C304.4	Apply Turing machine to propose computation solutions	K3
C304.5	Interpret whether a problem is decidable or not	K3
C304.6	Interpret NP class problems	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8501 THEORY OF COMPUTATION	CO1	2	1	1	-	-	-	-	-	-	-	-	-	2	-	-
	CO2	2	1	1	-	-	-	-	-	-	-	-	-	2	-	-
	CO3	3	2	2	-	-	-	-	-	-	-	-	-	2	-	-
	CO4	3	2	2	-	-	-	-	-	-	-	-	-	2	-	-
	CO5	3	2	2	-	-	-	-	-	-	-	-	-	2	-	-
	CO6	2	1	1	-	-	-	-	-	-	-	-	-	2	-	-
		3	2	2	-	-	-	-	-	-	-	-	-	2	-	-

CS8592 OBJECT ORIENTED ANALYSIS AND DESIGN

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C305.1	Express the software design concepts with UML diagram.	K2
C305.2	Construct the domain model and design model to various use case scenarios.	K3
C305.3	Design software applications using object oriented concepts.	K3
C305.4	Identify various scenarios based on software requirements.	K2
C305.5	Transform UML based software design into pattern based design using design patterns.	K3
C305.6	Explain the various testing methodologies for object oriented software.	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8592 OBJECT ORIENTED ANALYSIS AND DESIGN	CO1	2	1	1	-	-	-	-	-	-	-	-	-	1	1	-
	CO2	3	2	2	-	-	-	-	-	-	-	-	-	1	1	-
	CO3	3	2	2	-	-	-	-	-	-	-	-	-	3	3	-
	CO4	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO5	3	2	2	-	-	-	-	-	-	-	-	-	2	2	-
	CO6	2	1	1	-	-	-	-	-	-	-	-	-	3	3	-
		3	2	2	-	-	-	-	-	-	-	-	-	2	2	-

EC8681 MICROPROCESSORS AND MICROCONTROLLERS LABORATORY

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C307.1	Interpret the architecture and operation of microprocessor (8086).	K2
C307.2	Implement simple assembly language programs using instruction sets of microprocessor and microcontroller.	K3
C307.3	Compare instruction sets of 8086 microprocessor and 8051 microcontroller.	K3
C307.4	Implement assembly language programs using instruction sets of microcontroller.	K3
C307.5	Develop applications using instructions of microprocessors and microcontroller.	K3
C307.6	Interpret the architecture and operation of microcontroller(8051)	K2
C307.7	Exhibit ethical principles in engineering practices	A3
C307.8	Perform task as an individual and / or team member to manage the task in time	A3
C307.9	Express the Engineering activities with effective presentation and report.	A3
C307.10	Interpret the findings with appropriate technological / research citation.	A2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
EC8681 MICRO PROCESSORS AND MICRO CONTROLLERS LABORATORY	CO1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
	CO2	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
	CO3	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
	CO4	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
	CO5	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
	CO6	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
	CO7	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
	CO8	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
	CO9	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
	CO10	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
		2	1	1	-	-	-	-	3	3	3	3	3	2	2	-

CS8581 NETWORKS LABORATORY

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C309.1	Implement various protocols using TCP and UDP	K3
C309.2	Compare the performance of different transport layer protocols	K3
C309.3	Use simulation tools to analyze the performance of various network protocols	K3
C309.4	Analyze various routing algorithms	K3
C309.5	Implement error correction codes	K3
C309.6	Explain Network simulator (NS) and Simulate Congestion Control Algorithms using NS	K3
C309.7	Exhibit ethical principles in engineering practices	A3
C309.8	Perform task as an individual and / or team member to manage the task in time	A3
C309.9	Express the Engineering activities with effective presentation and report.	A3
C309.10	Interpret the findings with appropriate technological / research citation.	A2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8581 NETWORKS LABORATORY	CO1	3	2	2	-	2	-	-	-	-	-	-	-	2	1	1
	CO2	2	1	1	-	1	-	-	-	-	-	-	-	2	1	1
	CO3	3	2	2	-	3	-	-	-	-	-	-	-	2	1	1
	CO4	3	2	2	-	2	-	-	-	-	-	-	-	2	1	1
	CO5	3	2	2	-	1	-	-	-	-	-	-	-	2	1	1
	CO6	3	2	2	-	3	-	-	-	-	-	-	-	2	1	1
	CO7	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
	CO8	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
	CO9	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
	CO10	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
		3	2	2	-	2	3		3	3	3	3	3	2	1	1

CS8582 OBJECT ORIENTED ANALYSIS AND DESIGN LABORATORY

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C308.1	Make use of object oriented and design concepts to solve a given problem specifications	K3
C308.2	Identify and map basic software requirements in UML mapping.	K2
C308.3	Apply design patterns to improve the software quality	K3
C308.4	Test the compliance of the software with SRS	K3
C308.5	Map the object oriented design to the developed code	K3
C308.6	Apply object oriented design to develop a software	K3
C308.7	Exhibit ethical principles in engineering practices	A3
C308.8	Perform task as an individual and / or team member to manage the task in time	A3
C308.9	Express the Engineering activities with effective presentation and report.	A3
C308.10	Interpret the findings with appropriate technological / research citation.	A2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8582 OBJECT ORIENTED ANALYSIS AND DESIGN LABORATORY	CO1	3	2	2	-	-	-	-	-	-	-	-	-	1	3	-
	CO2	2	1	1	-	-	-	-	-	-	-	-	-	3	2	-
	CO3	3	2	2	-	-	-	-	-	-	-	-	-	2	2	-
	CO4	3	2	2	-	-	-	-	-	-	-	-	-	1	1	-
	CO5	3	2	2	-	-	-	-	-	-	-	-	-	1	2	-
	CO6	3	2	2	-	-	-	-	-	-	-	-	-	3	3	-
	CO7	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
	CO8	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
	CO9	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
	CO10	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
		3	2	2	-	-	-		3	3	3	3	3	2	2	-

CS8651 INTERNET PROGRAMMING

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C310.1	Demonstrate simple website using HTML and CSS.	K2
C310.2	Build dynamic web pages with validation using Java Script objects and apply different event handling mechanisms.	K3
C310.3	Illustrate server side programs using Servlet and JSP.	K2
C310.4	Demonstrate simple web pages in PHP and to represent data in XML format.	K2
C310.5	Illustrate AJAX and web services to develop interactive web applications.	K2
C310.6	Develop interactive web applications for real world problems.	K3

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8651 INTERNET PROGRAMMING	CO1	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO2	3	2	2	1	-	-	-	-	-	-	-	-	2	2	-
	CO3	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO4	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO5	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO6	3	2	2	1	-	-	-	-	-	-	-	-	2	2	-
		2	1	1	1	-	-	-	-	-	-	-	-	2	2	-

CS8691 ARTIFICIAL INTELLIGENCE

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C311.1	List the characteristics and types of intelligent agents	K2
C311.2	Interpret search algorithms for any AI problem	K2
C311.3	Illustrate a problem using first order and predicate logic	K2
C311.4	Explain the appropriate agent strategy to solve a given problem	K2
C311.5	Develop software agents to solve a problem	K2
C311.6	Demonstrate applications for NLP that use Artificial Intelligence	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8691 ARTIFICIAL INTELLIGENCE	CO1	2	1	1	-	-	-	-	-	-	-	-	-	2	-	-
	CO2	2	1	1	-	-	-	-	-	-	-	-	-	2	-	-
	CO3	2	1	1	-	-	-	-	-	-	-	-	-	2	-	-
	CO4	2	1	1	-	-	-	-	-	-	-	-	-	2	-	-
	CO5	2	1	1	-	-	-	-	-	-	-	-	-	2	-	-
	CO6	2	1	1	-	-	-	-	-	-	-	-	-	2	-	-
		2	1	1	-	-	-	-	-	-	-	-	-	2	-	-

CS8601 **MOBILE COMPUTING**

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C312.1	Understand the basic concepts of mobile computing	K2
C312.2	Explain the basics of mobile telecommunication systems	K2
C312.3	Illustrate the generations of telecommunication systems in wireless networks	K2
C312.4	Demonstrate the functionality of MAC, network layer and Identify a routing protocol for a given Ad hoc network	K2
C312.5	Explain the functionality of Transport and Application layers	K2
C312.6	Develop a mobile application using android/blackberry/ios/Windows SDK	K3

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8601 MOBILE COMPUTING	CO1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
	CO2	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
	CO3	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
	CO4	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
	CO5	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
	CO6	3	2	2	-	-	-	-	-	-	-	-	-	-	-	-
		3	1	1	-	-	-	-	-	-	-	-	-	-	-	-

CS8602 **COMPILER DESIGN**

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C313.1	Illustrate a lexical analyzer for a sample language.	K2
C313.2	Explain different parsing algorithms to develop the parsers for a given grammar.	K2
C313.3	Understand syntax-directed translation and run-time environment.	K2
C313.4	Understand intermediate code generation and run-time environment	K2
C313.5	Apply code optimization techniques for programming construct	K3
C313.6	Develop a scanner and a parser using LEX and YACC tools.	K3

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8602 COMPILER DESIGN	CO1	2	1	1	-	-	-	-	-	-	-	-	-	2	-	-
	CO2	2	1	1	-	-	-	-	-	-	-	-	-	2	-	-
	CO3	2	1	1	-	-	-	-	-	-	-	-	-	2	-	-
	CO4	2	1	1	-	-	-	-	-	-	-	-	-	2	-	-
	CO5	3	2	2	-	-	-	-	-	-	-	-	-	2	-	-
	CO6	3	2	2	-	-	-	-	-	-	-	-	-	2	-	-
		2	1	1	-	-	-	-	-	-	-	-	-	2	-	-

CS8603 DISTRIBUTED SYSTEMS

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C314.1	Elucidate the foundations and issues of distributed systems	K2
C314.2	Understand the various synchronization issues and global state for distributed systems.	K2
C314.3	Comprehend the Mutual Exclusion and Deadlock detection algorithms in distributed systems	K2
C314.4	Show the use of agreement protocols and fault tolerance mechanisms in distributed systems.	K2
C314.5	Relate the features of peer-to-peer and distributed shared memory systems	K2
C314.6	Interpret the real-time distributed system applications	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8603 DISTRIBUTED SYSTEM	CO1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
	CO2	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
	CO3	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
	CO4	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
	CO5	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
	CO6	2	1	2	-	-	-	-	-	-	-	-	-	-	-	-
		2	1	1	-	-	-	-	-	-	-	-	-	-	-	-

CS8077 GRAPH THEORY AND APPLICATIONS

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C315.1	Explain fundamentals of graph theory	K2
C315.2	Interpret the basic concepts of graphs, and different types of graphs	K2
C315.3	Elucidate proof techniques related to various concepts in graphs	K2
C315.4	Relate the properties and theorems to prove theorems.	K2
C315.5	Apply suitable graph model and algorithm for solving applications.	K3
C315.6	Demonstrate the modern applications of graph theory	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
GE8071 PROFESSIONAL ETHICS IN ENGINEERING	CO1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
	CO2	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
	CO3	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
	CO4	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
	CO5	3	2	2	1	-	-	-	-	-	-	-	-	-	-	-
	CO6	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
		2	1	1	1	-	-	-	-	-	-	-	-	-	-	-

CS8661 INTERNET PROGRAMMING LAB

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
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C316.1	Construct web pages using HTML/XML and style sheets.	K3
C316.2	Build dynamic web pages with validation using javascript objects and apply different event handling mechanisms.	K3
C316.3	Develop dynamic web pages using server side scripting.	K3
C316.4	Use PHP programming to develop web applications.	K3
C316.5	Construct web applications using AJAX and web services.	K3
C316.6	Develop interactive web applications for real world problems.	K3
C316.7	Exhibit ethical principles in engineering practices	A3
C316.8	Perform task as an individual and / or team member to manage the task in time	A3
C316.9	Express the Engineering activities with effective presentation and report.	A3
C316.10	Interpret the findings with appropriate technological / research citation.	A2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8661 INTERNET PROGRAMMING LAB	CO1	3	2	2	1	-	-	-	-	-	-	-	-	2	2	-
	CO2	3	2	2	1	-	-	-	-	-	-	-	-	2	2	-
	CO3	3	2	2	1	-	-	-	-	-	-	-	-	2	2	-
	CO4	3	2	2	1	-	-	-	-	-	-	-	-	2	3	-
	CO5	3	2	2	1	-	-	-	-	-	-	-	-	2	2	-
	CO6	3	2	2	1	-	-	-	-	-	-	-	-	2	3	-
	CO7	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
	CO8	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
	CO9	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
	CO10	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
		3	2	2	1	-	-	-	3	3	3	3	3	2	2	-

CS8662 MOBILE APPLICATION DEVELOPMENT LAB

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy

C317.1	Illustrate mobile applications using GUI and Layouts.	K3
C317.2	Demonstrate mobile applications using Event Listener.	K3
C317.3	Experiment with mobile applications using Databases.	K3
C317.4	Make use of mobile applications using RSS Feed, Internal/External Storage, SMS, Multithreading and GPS.	K3
C317.5	Build own mobile app for simple needs.	K3
C317.6	Model various mobile applications using different application development frameworks.	K3
C317.7	Exhibit ethical principles in engineering practices	A3
C317.8	Perform task as an individual and / or team member to manage the task in time	A3
C317.9	Express the Engineering activities with effective presentation and report.	A3
C317.10	Interpret the findings with appropriate technological / research citation.	A2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8662 MOBILE APPLICATION DEVELOPMENT LAB	CO1	3	2	-	-	-	-	-	-	-	-	-	-	3	2	-
	CO2	3	2	-	-	-	-	-	-	-	-	-	-	2	2	-
	CO3	3	2	-	-	-	-	-	-	-	-	-	-	2	2	-
	CO4	3	2	-	-	-	-	-	-	-	-	-	-	2	2	-
	CO5	3	2	-	-	-	-	-	-	-	-	-	-	2	3	-
	CO6	3	2	-	-	-	-	-	-	-	-	-	-	2	3	-
	CO7	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
	CO8	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
	CO9	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
	CO10	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
		3	2	-	-	-	-	-	3	3	3	3	3	2	2	-

CS8661 MINI PROJECT

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C318.1	Choose problems with technical importance and societal contribution	K3
C318.2	Identify and survey the relevant literature for getting exposed to related solutions	K3
C318.3	Build project plans with feasible requirements	K3
C318.4	Analyse, design and develop adaptable and reusable solutions	K4
C318.5	Implement and test solutions to trace against the user requirements	K4
C318.6	Deploy the solutions for better manageability and provide scope for improvability	K4

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8661 MINI PROJECT	CO1	3	2	2	1	-	-	-	-	-	-	-	-	-	-	-
	CO2	3	2	2	1	-	-	-	-	-	-	-	-	-	-	-
	CO3	3	2	2	1	-	-	-	-	-	-	-	-	-	-	-
	CO4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		3	2	2	1	-	-	-	-	-	-	-	-	-	-	-

HS8581 PROFESSIONAL COMMUNICATION

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C319.1	To classify the content material and make effective presentations.	K2

C319.2	Employ adequate soft skills to successfully execute the job on hand.	A3
C319.3	To respond favorably to the values of others opinion and manage difficult situations in group discussions wisely.	K3,A2
C319.4	To execute various skills in grooming for any profession.	A3
C319.5	To display the body language in a very pleasant manner and react to even tough situations with ease.	A2
C319.6	To perform intelligently during job interviews and be successful.	K3,A2
C319.7	Exhibit ethical principles in engineering practices	A3
C319.8	Perform task as an individual and / or team member to manage the task in time	A3
C319.9	Express the Engineering activities with effective presentation and report.	A3
C319.10	Interpret the findings with appropriate technological / research citation.	A2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
HS8581 PROFESSIONAL COMMUNICATION	CO1	-	-	-	-	-	-	-	-	2	2	-	2	-	-	-
	CO2	-	-	-	-	-	-	-	-	3	2	-	3	-	-	-
	CO3	-	-	-	-	-	-	-	-	2	3	-	3	-	-	-
	CO4	-	-	-	-	-	-	-	-	3	2	-	3	-	-	-
	CO5	-	-	-	-	-	-	-	-	2	2	-	3	-	-	-
	CO6	-	-	-	-	-	-	-	-	2	3	-	2	-	-	-
	CO7	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
	CO8	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
	CO9	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
	CO10	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
		-	-	-	-	-	-	-	3	2	2	3	3	-	-	-

**IV Year / VII Semester & VIII Semester
R-2017**

MG8591 PRINCIPLES OF MANAGEMENT

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C401.1	Discuss the evolution of management thoughts and the challenges of managerial activities in a global business environment.	K2
C401.2	Explain the types of Planning and Decision making methodologies in Organizations..	K2
C401.3	Summarize various types of Organization structure and associated Human Resources activities for man-power utilization.	K2
C401.4	Explain about motivation theories, behavior, leadership theories and communication for effective directing.	K2
C401.5	Explain various Controlling techniques to maintain standards in Organizations.	K2
C401.6	Associate managerial functions and knowledge on international aspect for Organizational growth	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
MG8591 PRINCIPLES OF MANAGEMENT	CO1	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-
	CO2	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-
	CO3	-	-	-	-	-	-	-	2	2	-	2	-	-	-	-
	CO4	-	-	-	-	-	-	-	2	2	2	-	3	-	-	-
	CO5	-	-	-	-	-	-	-	-	2	2	2	-	-	-	-
	CO6	-	-	-	-	-	2	-	2	2	2	-	3	-	-	-
		-	-	-	-	-	2	-	2	2	2	2	3	-	-	-

CS8792 CRYPTOGRAPHY AND NETWORK SECURITY

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C402.1	Describe the fundamentals of networks security, security architecture, threats and vulnerabilities	K2
C402.2	Discuss the mathematical support for both symmetric and asymmetric key cryptography	K2
C402.3	Make use of symmetric key cryptographic algorithms to perform cryptographic operations	K3
C402.4	Solve cryptographic operations using public key cryptographic algorithms	K3
C402.5	Apply the various Authentication schemes to simulate different applications.	K3
C402.6	Explain various Security practices and System security standards	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8792 CRYPTOGRAPHY AND NETWORK SECURITY	CO1	2	1	1	-	-	-	-	-	-	-	-	-	3	2	-
	CO2	2	1	1	-	-	-	-	-	-	-	-	-	3	2	-
	CO3	3	2	2	1	-	-	-	-	-	-	-	-	2	3	-
	CO4	3	2	2	1	-	-	-	-	-	-	-	-	2	3	-
	CO5	3	2	2	1	-	-	-	-	-	-	-	-	2	3	-
	CO6	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
		3	2	2	1	-	-	-	-	-	-	-	-	2	2	-

CS8791 CLOUD COMPUTING

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C403.1	Articulate the main concepts, key technologies, strengths and limitations of cloud computing.	K2
C403.2	Explain the key and enabling technologies that help in the development of cloud.	K2
C403.3	Make use of NIST cloud computing architecture to solve architecture design challenges	K3
C403.4	Explain the core issues of cloud computing such as resource management and security.	K2
C403.5	Install and use current cloud technologies.	K3
C403.6	Illustrate and choose the appropriate technologies, algorithms and approaches for implementation and use of cloud.	K3

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8791 CLOUD COMPUTING	CO1	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO2	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO3	3	2	2	1	-	-	-	-	-	-	-	-	2	3	-
	CO4	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO5	3	2	2	1	-	-	-	-	-	-	-	-	2	3	-
	CO6	3	2	2	1	-	-	-	-	-	-	-	-	2	3	-
		3	2	2	1	-	-	-	-	-	-	-	-	2	3	-

IT8073 SERVICE ORIENTED ARCHITECTURE

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C405.1	Express the fundamental concepts of XML technologies	K2
C405.2	Identify the characteristics and benefits of SOA	K2
C405.3	Discuss the service descriptions of web service and its standards	K2
C405.4	Make use of web service extensions to develop solutions	K3
C405.5	Explain the SOA delivery strategies with regard to service oriented analysis and design	K2
C405.6	Case study	K3

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
IT8073 SERVICE ORIENTED ARCHITECTURE	CO1	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO2	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO3	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO4	3	2	2	-	-	-	-	-	-	-	-	-	2	3	-
	CO5	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO6	3	2	2	-	-	-	-	-	-	-	-	-	2	3	-
		2	1	2	-	-	-	-	-	-	-	-	-	2	2	-

CS8083 MULTICORE ARCHITECTURES AND PROGRAMMING

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C406.1	Describe multicore architectures and identify their characteristics and challenges.	K2
C406.2	Identify the issues in programming Parallel Processors.	K2
C406.3	Write programs using OpenMP and MPI.	K2
C406.4	Design parallel programming solutions to common problems.	K3
C406.5	Compare and contrast programming for serial processors and programming for parallel processors.	K2
C406.6	Develop multi-core programs and design parallel solutions.	K

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8077 MULTICORE ARCHITECTURES AND PROGRAMMING	CO1	2	1	1	-	2	-	-	-	-	-	-	-	1	2	1
	CO2	2	1	1	-	2	-	-	-	-	-	-	-	2	1	2
	CO3	2	1	1	-	2	-	-	-	-	-	-	-	3	2	2
	CO4	3	2	2	1	3	-	-	-	-	-	-	-	3	3	2
	CO5	2	1	1	-	2	-	-	-	-	-	-	-	2	1	1
	CO6	3	2	2	1	3	-	-	-	-	-	-	-	3	3	3
		2	1	1	1	2	-	-	-	-	-	-	-	3	2	2

CS8711 CLOUD COMPUTING LABORATORY
Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C407.1	Configure various virtualization tools such as Virtual Box, VMware workstation.	K2
C407.2	Design and deploy a web application in a PaaS environment link layer	K2
C407.3	Learn how to simulate a cloud environment to implement new schedulers	K2
C407.4	Demonstrate generic cloud environment that can be used as a private cloud	K3
C407.5	Manipulate large data sets in a parallel environment.	K2
C407.6	Apply Hadoop single node cluster and run simple applications	K3
C407.7	Exhibit ethical principles in engineering practices	A3
C407.8	Perform task as an individual and / or team member to manage the task in time	A3
C407.9	Express the Engineering activities with effective presentation and report.	A3
C407.10	Interpret the findings with appropriate technological / research citation.	A2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8711 CLOUD COMPUTING LABORATORY	CO1	2	1	1	1	1	-	-	-	-	-	-	-	2	2	2
	CO2	2	1	1	1	1	-	-	-	-	-	-	-	2	2	2
	CO3	2	1	1	1	1	-	-	-	-	-	-	-	2	2	2
	CO4	3	2	2	1	2	-	-	-	-	-	-	-	2	3	2
	CO5	2	1	1	1	1	-	-	-	-	-	-	-	2	2	2
	CO6	3	2	2	1	2	-	-	-	-	-	-	-	2	3	2
	CO7	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
	CO8	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
	CO9	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
	CO10	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
		2	1	1	1	1	-	-	-	-	-	-	2	2	2	

IT8761 SECURITY LABORATORY

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C408.1	Develop code for classical Encryption Techniques to solve the problems.	K3
C408.2	Build cryptosystems by applying symmetric and public key encryption algorithms.	K3
C408.3	Construct code for authentication algorithms.	K3
C408.4	Develop a signature scheme using Digital signature standard.	K3
C408.5	Demonstrate the network security system using open source tools	K2
C408.6	Develop code for classical Encryption Techniques to solve the problems.	K3
C408.7	Exhibit ethical principles in engineering practices	A3
C408.8	Perform task as an individual and / or team member to manage the task in time	A3
C408.9	Express the Engineering activities with effective presentation and report.	A3
C408.10	Interpret the findings with appropriate technological / research citation.	A2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
IT8761 SECURITY LABORATORY	CO1	3	2	2	-	-	-	-	-	-	-	-	-	2	3	-
	CO2	3	2	2	-	-	-	-	-	-	-	-	-	2	3	-
	CO3	3	2	2	-	-	-	-	-	-	-	-	-	2	3	-
	CO4	3	2	2	-	-	-	-	-	-	-	-	-	2	3	-
	CO5	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO6	3	2	2	-	-	-	-	-	-	-	-	-	2	3	-
	CO7	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
	CO8	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
	CO9	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
	CO10	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
		3	2	2	-	-	-	-	3	3	3	3	3	2	3	-

GE8076 PROFESSIONAL ETHICS IN ENGINEERING

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C409.1	Describe the human values with regard to the individual life style for the society	K2
C409.2	Explain the role of ethics to the engineering field	K2
C409.3	Describe how engineering is applied in association with ethics based on engineering experimentation	K2
C409.4	Explain the engineering ethics based safety, responsibilities and rights	K2
C409.5	Discuss the global issues of professional ethics in engineering	K2
C409.6	Experiment the professional ethics in engineering based product development	K3

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
GE8071 PROFESSIONAL ETHICS IN ENGINEERING	CO1	-	-	-	-	-	1	-	3	3	-	-	3		-	-
	CO2	-	-	-	-	-	-	2	3	2	1	-	1		-	-
	CO3	-	-	-	-	-	-	-	3	-	-	-	-		-	-
	CO4	-	-	-	-	-	3	1	3	2	1	-	3		-	-
	CO5	-	-	-	-	-	2	2	3	1	2	-	2		-	-
	CO6	-	-	-	-	-	2	2	3	3	3	-	2		-	-
		-	-	-	-	-	2	2	3	3	2	-	3		-	-

CS8080

INFORMATION RETRIEVAL TECHNIQUES

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C410.1	Interpret open source search engine framework and explore its capabilities	K2
C410.2	Apply appropriate method of classification or clustering.	K3
C410.3	Design and implement innovative features in a search engine.	K3
C410.4	Design and implement a recommender system.	K3
C410.5	Demonstrate an open source search engine framework and explore its capabilities	K2
C410.6	Demonstrate the entire process flow of a search engine	K2

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
CS8080 INFORMATION RETRIEVAL TECHNIQUES	CO1	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO2	3	2	2	1	-	-	-	-	-	-	-	-	2	3	-
	CO3	3	2	2	1	-	-	-	-	-	-	-	-	2	3	-
	CO4	3	2	2	1	-	-	-	-	-	-	-	-	2	3	-
	CO5	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
	CO6	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
		3	2	2	1	-	-	-	-	-	-	-	-	2	3	-

CS8811 PROJECT WORK

Upon Completion of the course, the students will be able to

Course Outcomes	Description	Level in Bloom's Taxonomy
C411.1	Identify technically and economically feasible problems of social relevance	K3
C411.2	Plan and build the project team with assigned responsibilities	K5
C411.3	Identify and survey the relevant literature for getting exposed to related solutions	K4
C411.4	Analyse, design and develop adaptable and reusable solutions of minimal complexity by using modern tools	K6
C411.5	Implement and test solutions to trace against the user requirements	K4
C411.6	Deploy and support the solutions for better manageability of the solutions and provide scope for improvability	K5

Correlation between Outcomes (COs) and Program Outcomes (POs)

Subject Code & Subject Name	Course Outcomes	Programme Outcome (POs)												PSO1	PSO2	PSO3	
		K3	K4	K4	K5	K3,K4, K5	A3	A2	A3	A3	A3	A3	A2				
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12				
CS8811 PROJECT WORK	CO1	3	2	2	1	-	2	2	2	2	2	2	2	1	1	1	1
	CO2	3	3	3	3	2	2	2	2	2	2	2	2	1	2	2	2
	CO3	3	3	3	2	2	2	2	2	2	2	2	2	1	2	2	2
	CO4	3	3	3	3	2	2	2	2	2	2	2	2	1	2	2	2
	CO5	3	3	3	2	2	2	2	2	2	2	2	2	1	2	2	2
	CO6	3	3	3	3	2	2	2	2	2	2	2	2	1	2	2	2
		3	3	3	3	2	2	2	2	2	2	2	2	1	2	2	2