

# JEPPIAAR INSTITUTE OF TECHNOLOGY

"Self Belief | Self Discipline | Self Respect"



# **REGULATION - 2017**

# DEPARTMENT OF INFORMATION TECHNOLOGY

# I - VIII SEMESTERS CURRICULUM & SYLLABUS

		SEMESTER 1				
S.NO	COURSE CODE	COURSE TITLE	L	Т	P	C
		THEORY				
1	<u>HS8151</u>	communicative english	4	0	0	4
2	<u>MA8151</u>	Engineering Mathematics – I	4	0	0	4
3	<u>PH8151</u>	Engineering Physics	3	0	0	3
4	<u>CY8151</u>	Engineering Chemistry	3	0	0	3
5	<u>GE8151</u>	problem solving and python programming	3	0	0	3
6	<u>GE8152</u>	Engineering Graphics	6	0	4	4
		PRACTICALS				
7	<u>GE8161</u>	Problem solving and python programming laboratory	0	0	4	2
8	<u>BS8161</u>	Physics and chemistry laboratory	0	0	4	2
		SEMESTER 2		,	,	
S.NO	COURSE CODE	COURSE TITLE	L	Т	P	C
		THEORY				
1	<u>HS8251</u>	Technical English	4	0	0	4
2	MA8251	Engineering Mathematics – II	3	0	0	3
3	<u>PH8252</u>	Physics for Information Science	3	0	0	3
4	<u>BE8254</u>	Basic Electrical, Electronics and Measurement Engineering	3	0	0	3
5	<u>IT8201</u>	Information Technology Essentials	3	0	0	3
6	<u>CS8251</u>	Programming in C	3	0	0	3
		PRACTICALS				
7	<u>GE8261</u>	Engineering Practices laboratory	0	0	4	2
8	<u>CS8261</u>	C Programming Laboratory	0	0	4	2

9	<u>IT8211</u>	Information Technology Essentials	0	0	4	1
		SEMESTER 3				
S.NO	COURSE CODE	COURSE TITLE	L	Т	P	С
		THEORY	•			
1	MA8351	<u>Discrete Mathematics</u>	4	0	0	4
2	<u>CS8351</u>	Digital Principle and system design	4	0	0	4
3	<u>CS8391</u>	<u>Data Structures</u>	3	0	0	3
4	<u>CS8392</u>	Object Oriented Programming	3	0	0	3
5	EC8394	Analog and Digital Communication	3	0	0	3
		PRACTICALS				
6	<u>CS8381</u>	<u>Data structures Laboratory</u>	0	0	4	2
7	<u>CS8383</u>	Object Oriented Programming	0	0	4	2
8	<u>CS8382</u>	<u>Digital Systems Laboratory</u>	0	0	2	1
9	HS8381	Interpersonal Skills/listening and speaking	0	0	2	1
		SEMESTER 4				
S.NO	COURSE CODE	COURSE TITLE	L	Т	P	C
		THEORY		,	<b>,</b>	
1	MA8391	Probability and Statistics	4	0	0	4
2	<u>CS8491</u>	Computer Architecture	3	0	0	3
3	<u>CS8492</u>	<u>Database Management System</u>	3	0	0	3
4	<u>CS8451</u>	Design and Analysis of Algorithms	3	0	0	3
5	<u>CS8493</u>	Operating System	3	0	0	3
6	<u>GE8291</u>	Environmental science and engineering	3	0	0	3
		PRACTICALS				
7	<u>CS8481</u>	Database Management System Laboratory	0	0	4	2
8	<u>CS8461</u>	Operating Systems Laboratory	0	0	4	2
9	<u>HS8461</u>	Advanced Reading and Writing Laboratory	0	0	2	1
		SEMESTER 5				
S.NO	COURSE CODE	COURSE TITLE	L	Т	P	C

		THEORY				
1	MA8551	Algebra and Number Theory	4	0	0	4
2	CS8591	Computer Networks	3	0	0	3
3	EC8691	Microprocessor and Microcontroller	3	0	0	3
4	<u>IT8501</u>	Web Technology	3	0	0	3
5	<u>CS8494</u>	Software Engineering	3	0	0	3
6	OMD551	Basics of biomedical instrumentation	3	0	0	3
		PRACTICALS				
7	EC8681	Microprocessor and Microcontroller Laboratory	0	0	4	2
8	<u>CS8581</u>	Networks Laboratory	0	0	4	2
9	<u>IT8511</u>	Web Technology Laboratory	0	0	4	2
		SEMESTER 6	ı	ı	ı	
S.NO	COURSE CODE	COURSE TITLE	L	Т	P	C
		THEORY	T	T	T	
1	<u>IT8601</u>	Computational Intelligence	3	0	0	3
2	<u>CS8592</u>	Object Oriented Analysis and Design	3	0	0	3
3	<u>IT8602</u>	Mobile communication	3	0	0	3
4	<u>CS8091</u>	Bigdata Analytics	3	0	0	3
5	<u>CS8092</u>	Computer Graphics and Multimedia	3	0	0	3
6	<u>IT6004</u>	Software Testing	3	0	0	3
		PRACTICALS	T	T	Ī	
7	<u>CS8662</u>	Mobile Application Development Laboratory	0	0	4	2
8	<u>CS8582</u>	Object oriented Analysis and Design Laboratory	0	0	4	2
9	<u>IT8611</u>	Mini Project	0	0	2	1
		SEMESTER 7	ı	I		
S.NO	COURSE CODE	COURSE TITLE	L	Т	P	C
		THEORY	<u> </u>	I		
1	MG8591	<u>Principles of Management</u>	3	0	0	3

2	<u>CS8792</u>	Cryptography and Network Security	3	0	0	3
3	<u>CS8791</u>	Cloud Computing	3	0	0	3
4		Open Elective -II	3	0	0	3
5		Professional elective-II	3	0	0	3
6		Professional elective-III	3	0	0	3
		PRACTICALS				
7	<u>IT8711</u>	FOSS and Cloud ComputingLaboratory	0	0	4	2
8	<u>IT8761</u>	Security laboratory	0	0	4	2
		SEMESTER 8				
S.NO	COURSE CODE	COURSE TITLE	L	Т	P	C
		THEORY				
1	<u>GE8076</u>	Professional elective-IV Professional Ethics in Engineer	3	0	0	3
2	<u>IT8005</u>	Professional Elective-V Electronic Commerce	3	0	0	3
		PRACTICALS				
5	<u>IT8811</u>	Project Work	0	0	20	10

CO101

Subject Code & Name : HS8151 -Communicative English Department: IT

Year/Sem: I/I

#### After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO101.1	Enable the development in sharing information about family and friends.	K3
CO101.2	Strengthen general comprehending skills and present lucid skills in free writing.	K2
CO101.3	Gain the basic grammar techniques and utilize it in enhancing language development.	К3
CO101.4	Foster an environment for reading and develop good language skills	K2
CO101.5	Develop flair for any kind of writing with rich vocabulary and proper syntax.	K2
CO101.6	Proficiency in writing technical articles and presenting papers on any topic of any genre.	K3

#### CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program Specific Outcomes			
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3	
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12				
C101.1	K3	3	2	2	2		-	-	-	-	-	-		1	-	-	
C101.2	K2	2	2	2	1		-	-	-	-	-	-		-	1		
C101.3	K3	3	2	2	2	-	-	-	-	-	-	-	-	-	-	-	
C101.4	K2	2	2	2	1	-	-	-	-	-	-	-	-	-	-	-	
C101.5	K2	2	2	2	1	-	-	-	-	-	-	-	-	1	-	-	
C101.6	K3	3	2	2	2	-		-	-	-	-	-	-	=	-	-	

#### CO102

Subject Code & Name : MA8151 - Engineering Mathematics – I

Department: IT

Year/Sem: I/I

#### After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO102.1	Diagonalize symmetric matrices and similar matrices using Eigen values and Eigen vectors.	K2
CO102.2	Explain gradients, potential functions, and directional derivatives of functions of several variables	K2
CO102.3	Compute line, surface and volume integral using Gauss divergence, Green's and stoke's theorem.	K2
CO102.4	Discuss analytic functions in heat and fluid flow.	K2
CO102.5	Extend the concept of contour integrals in evaluating Real integra	K2
CO102.6	Discuss Laplace Transform methods to solve initial value problems for constant coefficient linear ODEs.	K2

#### CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program	Specific Outcome	es
Course No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	130-1	130-2	130-3
C102.6	K2	2	1	-										1	-	-
C102.6	K2	2	1											-	1	
C102.6	K2	2	1											-	-	-
C102.6	K2	2	1											=	-	-
C102.6	K2	2	1											1	-	-
C102.6	K2	2	1											÷	=	-

#### CO103

Subject Code & Name :PH8151 - Engineering Physics

Department: IT

Year/Sem: I/I

## After successful completion of the course, the students should be able to $% \left\{ \left( 1\right) \right\} =\left\{ \left( 1\right$

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO103.1	Explain the basics of properties of matter and its applications.	K2
CO103.2	Identify the concepts of waves and optical devices and their applications in fibre optics	K2
CO103.3	Demonstrate the concepts of thermal properties of materials and their applications in expansion joints and heat exchangers	К3
CO103.4	Describe advanced physics concepts of quantum theory and its applications in tunneling microscopes	K2
CO103.5	Summarize the basics of crystals and their structures and different crystal growth techniques	K2

#### CO & PO and PSO Mapping

						P	rogram	n Outcomes					Program	Specific Outcom	Specific Outcomes	
Course No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	130-1	130-2	130-3
CO103.1	K2	2	2	-	-	-	-	2	-	-	-	-	-	1	-	-
CO103.2	K2	2	3	-	-	-	-	3	-	-	-	-	-	÷	1	
CO103.3	К3	3	2	2	-	-	-	2	-	-	-	-	-	-	-	-
CO103.4	K2	2	2	2	-	-	1	2		1	-	1	-	÷	-	-
CO103.5	K2	2	1	1	-	-		1			-	1	-	1	-	-

#### CO104

Subject Code & Name :CY8151-Engineering Chemistry

Department: IT

Year/Sem: I/

#### After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO104.1	Predict the type of troubles present in boilers and the methods used to treat hard water.	K2
CO104.2	Identify the factors affecting the rate of adsorption and catalytic activity.	K3
CO104.3	Interpret the Concept of phase rule, its various phase diagrams and predict the low melting alloys	K2

CO104.4	Enumerate various solid, liquid and gaseous fuels, manufacturing methods and basic reactions involved in combustion reactions	K2
CO104.5	Classify the types of batteries, their reactions and the significance of storage renewable energy resources.	KI

	Program Outcomes												Program Specific Outcomes			
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	130-1	130-2	130-3
CO104.1	K2	2	2	-	-	-	-	2	-	-	-	-	-	1	-	-
CO104.2	K3	3	3	-	-	-	-	3	-	-	-	-	-	-	1	
CO104.3	K2	2	2	2	-	-	-	2	-	-	-	-		-	-	-
CO104.4	K2	2	2	2	-	-	-	2	-	-	-	-	-	-	-	-
CO104.5	Kl	1	1	1	-	-	-	1	-	-	-	-	-	1	-	-

CO105

Subject Code & Name : GE8151-problem solving and python programming

Department: IT Year/Sem: I/I

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO105.1	Discuss the logical solutions through Flowcharts, Algorithms and Pseudo code.	K2
CO105.2	Explain the syntax for python programming constructs.	K2
CO105.3	Compute the flow of the program to obtain the programmatic solution.	K2
CO105.4	Examine the programs with sub problems using 'Python' language	K3
CO105.5	Compute the compound data using Python lists, tuples, and dictionaries	K2
CO105.6	Apply python programs to read and write data from/to files	K3

#### CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program Specific Outcomes			
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3	
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	130-1	150-2	130-3	
CO105.1	K2	2	1	1	1	-	-	-	-	-	-	-		2	-	-	
CO105.2	K2	2	1	1	1	2	-	-	-	-	-	-	-	2	-	-	
CO105.3	K2	2	1	1	1	2	-	-	-	-	-	-	-	2	-	-	
CO105.4	K3	3	2	2	1	3	-	-	-	-	-	-	-	2	-	-	
CO105.5	K2	2	1	1	1	2	-	-	-	-	-	-	-	2	-	-	
CO105.6	K3	3	2	2	1	3	-	-		-	-	-	-	2	1	-	

CO106

Subject Code & Name : GE8152 - Engineering Graphics

Department: IT

Year/Sem: I/I

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO106.1	Discuss about conics and orthographic views of engineering components.	K2
CO106.2	Draw the projection of points, lines and planes.	KI
CO106.3	Classify solids and projection of solids at different positions.	К3
CO106.4	Show sectioned view of solids and development of surface.	К3
CO106.5	Draw isometric projection and perspective views of an object/solid.	KI
CO106.6	Apply the concept of drawing in practical applications.	К3

# CO & PO and PSO Mapping

			Program Outcomes												Program Specific Outcomes			
Course No.	se No. Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3		
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	130-1	130-2	130-3		
CO106.1	K2	2	-	-	-	-	-	-	-	-	2	-	-	1	-	-		
CO106.2	K1	1	-	-	-	-		-	-	-	1	-	-	-	1			
CO106.3	K3	3	-	-	-	-	,	-	-	-	3	-		-	-	-		
CO106.4	K3	3	-	-	-	-	,	-	-	-	3	-		-	-	-		
CO106.5	K1	1	-	-	-	-	,	-	-	-	1	-		1	-	-		
CO106.6	K3	3	-	2	-	-	,	-	-	-	3	-		-	-	-		

CO107

Subject Code & Name : GE8161- Problem solving and python programming labora Department: IT

Year/Sem: I/I

#### After successful completion of the course, the students should be able t

After successful completion of the course, the students should be able to									
Course Outcome No.	Course Outcome	Highest Cognitive Level							
CO107.1	Write, test, and debug simple Python programs.	KI							
CO107.2	Apply the concept of conditionals and loops in Python programs.	К3							
CO107.3	Develop the Python programs step-wise by defining functions and calling them.	К3							
CO107.4	Use Python lists, tuples, dictionaries for representing compound data.	К3							
CO107.5	Read and write data from/to files in Python.	KI							
CO107.6	Apply the concept of Pygame.	К3							
CO107.7	Exhibit ethical principles in engineering practices.	К3							
CO107.8	Perform task as an individual and / or team member to manage the task in time.	К3							
CO107.9	Express the Engineering activities with effective presentation and report.	К3							
CO107.10	Interpret the findings with appropriate technological / research citation.	K1							
CO107.11	Exhibit ethical principles in engineering practices.	A3							
CO107.12	Perform task as an individual and / or team member to manage the task in time.	A3							

CO107.13	Express the Engineering activities with effective presentation and report.	A3
CO107.14	Interpret the findings with appropriate technological / research citation.	A2

						P	rogram	Outcom	es					Program Specific Outcomes			
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3	
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	130-1	130-2	130-3	
C107.1	Kl	1	1	1	1	-	-	-	-	-	-	-	-	2	-	-	
C107.2	K3	3	2	2	1	3	-	-	-	-	-	-	-	2	-	-	
C107.3	K3	3	3	3	2	3	-	-	-	-	-	-	-	2	-	-	
C107.4	K3	3	2	2	1	3	-	-	-	-	-	-		2	-	-	
C107.5	Kl	1	1	1	1	1	-	-	-	-	-	-		2	-	-	
C107.6	K3	3	2	2	1	3	-	-	-	-	-	-	-	2	-	-	
C107.7	К3	-	-	-	-	-	-	-	3	-	-	-	-	=-	-	-	
C107.8	К3	-	-	-	-	-	-	-	-	3	-	3	-	=-	-	-	
C107.9	К3	-	-	-	-	-	-	-	-	-	3	-		=-	-	-	
C107.10	Kl	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	
C107.11	A3	-	-	-	-	-	-	3	-	-	-	-	-	-	-		
C107.12	A3		-	-	-	-	-	-	3	1	-	1	-	-	-		
C107.13	A3		-	-	-	-	-	-	-	3	-	3	-	-	-		
C107.14	A2	-	-	-	-	-	-	-	-	-	3	-	-	-	-		

#### CO108

Subject Code & Name :BS8161 -Physics and chemistry laboratory

Department: IT

Year/Sem: I/I

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Leve
CO108.1	Determine the Modulus of elasticity of materials and Coefficient of Viscosity of liquids.	K2
CO108.2	Determine the Thermal Conductivity of bad conductor using Lee's disc method	K2
CO108.3	Calculate the Compressibility of liquids and velocity of ultrasonic waves in liquids.	K2
CO108.4	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
CO108.5	Determine the band gap energy of a semiconductor.	K2
CO108.6	Calculate water quality parameters such as hardness, alkalinity of the given water sample.	K2
CO108.7	Estimate the amount of the given acids using conductometric titrations.	K2
CO108.8	Estimate the amount of the given acids using pH titrations.	K2
CO108.9	Determine the amount of iron content in the given substance using potentiometric titration.	K2
CO108.10	Determine the amount of chloride content in the given water sample.	K2
CO108.11	Exhibit ethical principles in engineering practices.	K3
CO108.12	Perform task as an individual and / or team member to manage the task in time.	K3
CO108.13	Express the Engineering activities with effective presentation and report.	K3
CO108.14	Interpret the findings with appropriate technological / research citation.	К2
CO108.15	Exhibit ethical principles in engineering practices.	A3
CO108.16	Perform task as an individual and / or team member to manage the task in time.	А3
CO108.17	Express the Engineering activities with effective presentation and report.	А3
CO108.18	Interpret the findings with appropriate technological / research citation.	A2

	Program Outcomes									Program Specific Outcomes						
	Level of		1	1		K3,K5,								Frogram	Specific Outcom	ies
Course No.	со	К3	K4	K4	K5	K6,K5,	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12			
CO108.1	K2	2	1	-	-	-	-	-	-	-	-	-	-	2	-	-
CO108.2	K2	2	1	-	-	-	-	-	-	-	-	-	-	2	-	-
CO108.3	K2	2	1	-	-	-	-	-	-	-	-	-	-	2	-	-
CO108.4	K2	2	1	-	-	-	-	-	-	-	-	-		2	-	-
CO108.5	K2	2	1	-	-	-	-	-	-	-	-	-		2	-	-
CO108.6	K2	2	1	-	-	-	-	-	-	-	-	-		2	-	-
CO108.7	K2	2	1	-	-	-	-	-	-	-	-	-		=	-	-
CO108.8	K2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
CO108.9	K2	2	1	-		-	-	-	-	-	-	-		-		-
CO108.10	K2	2	1	-		-	,	-	-	,	1	-	-	=	-	-
CO108.11	K3	-	-	-	-	-	-	-	3	-	-	-		=	-	-
CO108.12	K3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
CO108.13	К3	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
CO108.14	K2	-	-	-	1	-	- 1	-	-	- 1	- 1	- 1	3	=	1	-
CO108.15	A3	-	-	-	-	-	-	3	-	-	-	-	-	-		-
CO108.16	А3	-	-	-		-	-	-	3	-	-	-	-	-	-	-
CO108.17	А3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
CO108.18	A2	-	-	-	-	-	-	-	-	-	3		-	=		-

CO109

Subject Code & Name : HS8251 -Technical English Department: IT

Year/Sem: I/III

After encoccful c	ompletion of the c	ource the students s	hould be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO109.1	Breakdown the ideas in to its elementary constituents, analyze and act after a meaning full thought process.	K2
CO109.2	Analyze the phrase and passage and explicitly pass on the ideas meaning fully.	K3
CO109.3	Manage to interpret the given phrase or the graphical rendering and review the contents well individually or as a group	K3
CO109.4	Concentrate on the communication aspect of complicated ideas and respond positively.	K2
CO109.5	Debate the issues and find the rudiments of the problem individually and as a group.	K3
CO109.6	Respond intelligently and seek clarification and Gain completely.	K2

# CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program	Specific Outcom	nes
Course No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	1001	1002	1500
C109.1	K2	-	-	-	-	-	-	-	-	-	2	-	3	1	-	-
C109.2	K3	-	-	-	-	-	-	-	-	2	2	-	3	-		1
C109.3	K3	-	-	-	-	-	-	-	-	-	2	-	3	-	2	-
C109.4	K2	-	-	-	-	-	-	-	-	-	2	-	3	-	-	-
C109.5	K3	-	-	-	-	-	-	-	-	3	3	-	2	-	-	2
C109.6	K2	-	-	-	-	-		-	-		2	-	3	-	-	-

#### <u>C0110</u>

 $Subject\ Code\ \&\ Name: MA8251- \qquad Engineering\ Mathematics-II$ 

Department: IT Year/Sem: I/III

# After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO110.1	Compute Eigen values and Eigen vectors of a matrix, diagonalize symmetric matrices and similar matrices	K2
CO110.2	Explain gradients, potential functions, and directional derivatives of functions of several variables	K2
CO110.3	Compute line, surface and volume integral using Gauss divergence, Green's and stoke's theorem.	K2
CO110.4	Discuss analytic functions in heat and fluid flow.	K2
CO110.5	Extend the concept of contour integrals in evaluating Real integrals.	K2
CO110.6	Discuss Laplace Transform methods to solve initial value problems for constant coefficient linear ODEs.	K2

# CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program	Specific Outcome	es
Course No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	F50-1	FSO-2	130-3
CO110.1	K2	2	1	-	-	-	-	-	-	-	-	-	-	1	-	-
CO110.2	K2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	1
CO110.3	K2	2	1	-	1	-	1	-	-	1	-	-	-	-	2	-
CO110.4	K2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
CO110.5	K2	2	1	-	1	-	1	-	-	1	-	-	-	-	-	2
CO110.6	K2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-

## CO111

Subject Code & Name: PH8252-Physics for Information Science

Department: IT

Year/Sem: I/II

#### After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO111.1	Discuss about Wiedemann Franz law and the conduction in solids	K2
CO111.2	Associate the concept of quantum electron theories with energy band structures	K2
CO111.3	Discuss the carrier concentration in semiconducting materials.	K2
CO111.4	Explain the origin of magnetism and the properties of magnetic materials	K2
CO111.5	Discuss the working of Opto-electronic devices	K2
CO111.6	Summarize the basics of quantum structures and their applications in nano devices.	K2

						P	rogram	Outcom	es					Program	Specific Outcom	es
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	F50-1	FSO-2	130-3
C111.1	K2	2	1	-	-	-	1	-	-	1	2	-	-	1	-	-
C111.2	K2	2	1	-	-	-	-	-	-	-	2	-	-	-	-	1
C111.3	K2	2	1	-	-	-	-	-	-	-	2	-	-	-	2	-
C111.4	K2	2	1	-	-	-	-	-	-	-	2	-	-	-	-	-

C111.5	K2	2	1	-	-	-	-	-	-	-	2	-	-	-	-	2
C111.6	K2	2	1		-	-	-	-	-	-	2	-	1	-	-	-

<u>CO112</u>

Subject Code & Name : BE8254 & Basic Electrical and Electronics Measureme Department: IT

Year/Sem: I/II

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO112.1	Illustrate the behavior of electric circuits using fundamental laws and techniques	K2
CO112.2	Explain the operation of DC, AC and Special machines	K2
CO112.3	Summarize different energy sources, protective devices and its applications	K2
CO112.4	Outline the characteristics and applications of semiconductor diodes.	K2
CO112.5	Summarize the characteristics and errors of the instruments	K2
CO112.6	Explain the working of different types of Analog Instruments and transducers.	K2

#### CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program	Specific Outcome	es
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	F50-1	FSO-2	130-3
C112.1	K2	2	1	-	-	-	-	-	-	-	1	-	-	1	-	-
C112.2	K2	2	1	-	1	-	-	-	-	1	1	-	-	-	-	1
C112.3	K2	2	1	-	-	-	2	-	-	-	1	-	-	-	2	-
C112.4	K2	2	1	-	-	-	-	-	-	-	1	-	-	-	-	-
C112.5	K2	2	1	-	-	-	-	-	-		1	-		-	-	2
C112.6	K2	2	1	-	1	-	-	-	-	1	1	-	-	-	-	-

#### CO113

Subject Code & Name: IT8201 & Information Technology Essentials

Department: IT

Year/Sem: I/II

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO113.1	Design and deploy web-sites	K3
CO113.2	Design and deploy web-applications	К3
CO113.3	Create simple database application	К3
CO113.4	Develop information system	К3
CO113.5	Describe the basic of networking and mobile communication	K2

#### CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program	Specific Outcome	es
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	130-1	130-2	130-3
CO113.1	K3	3	2	2	2	-	-	-	-	-	-	-	-	1	-	-
CO113.2	K3	3	2	2	2	-	-	-	-	-	-	-	-	1	-	-
CO113.3	K3	3	2	2	2	-	-	-	-	-	-	-	-	1	-	-
CO113.4	K3	3	2	2	2	-	-	-	-	-	-	-	-	1	-	-
CO113.5	K2	2	1	1	1	-	-	-	-	1	-	-	,	1	-	-

## CO114

Subject Code & Name : CS8251 & Programming in C Department: IT

Year/Sem: I/II

## After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO114.1	Explain the syntaxes for C programming.	K2
CO114.2	Associate the programs in 'C' for real world situation	K2
CO114.3	Apply the concepts of Arrays, Strings in 'C' language for user defined problems	K2
CO114.4	Apply the concept of functions and pointers	K2
CO114.5	Associate the programs with structure using 'C' language.	K2
CO114.6	Discuss to read and write data from/to files in 'C' Programs	K2

							P	rogram	Outcom	es					Program	Specific Outcome	es
Co	urse No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
			PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	150-1	130-2	130-3

C114.1	K2	2	1	1	1	-	-	-	-	-	-	-	-	3	-	-
C114.2	K2	2	1	1	1	2	-	-	-	1	-	-	-	3	-	1
C114.3	K2	3	2	2	1	3	-	-	-	-	-	-	-	3	-	
C114.4	K2	3	2	2	1	3	-	-	-	-	-	-	-	3	-	-
C114.5	K2	2	1	1	1	2	-	-	-	1	-	-	-	3	-	1
C114.6	K2	2	1	1	1	2	-	-	-	-	-	-	-	3	-	-

CO115

Subject Code & Name: GE8261 Engineering Practices laboratory Department: IT

Year/Sem: I/II

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO115.1	Identify Tools and Techniques used for Sheet Metal Fabrication	K1
CO115.2	Use welding equipment to join the structures	К3
CO115.3	Demonstrate Plumbing requirements of domestic buildings.	K3
CO115.4	Apply the skills of basic electrical engineering for house wiring practice	K3
CO115.5	Measure various electrical quantities	K2
CO115.6	Explain the working of electronic components and its utilization	K3
CO115.7	Apply electronic principles to develop circuits for primitive application	K4
CO115.8	Exhibit ethical principles in engineering practices	K3
CO115.9	Perform task as an individual and / or team member to manage the task in time	K3
CO115.10	Express the Engineering activities with effective presentation and report.	K3
CO115.11	Interpret the findings with appropriate technological / research citation.	K1
CO115.12	Exhibit ethical principles in engineering practices.	A3
CO115.13	Perform task as an individual and / or team member to manage the task in time.	A3
CO115.14	Express the Engineering activities with effective presentation and report.	A3
CO115.15	Interpret the findings with appropriate technological / research citation.	A2

#### CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program	Specific Outcom	es
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSU-3
C115.1	K1	1	-	1	-	1	-	-	-	-	-	-	-	1	-	-
C115.2	K3	3	2	-	-	-	-	-	-	-	-	-	-	-	-	1
C115.3	K3	3	2	-	-	-	-	-	-	-	-	-	-	-	2	-
C115.4	K3	3	2	2	1	3	-	-	-	-	-	-	-	-	-	-
C115.5	K2	3	2	2	1	3	-	-	-	-	-	-	-	-	-	2
C115.6	К3	2	1	-	1	2	-	-	-	2	2	2	-	-	-	-
C115.7	K4	-	-	-	-	-	-	-	-				-	-	-	-
C115.8	K3	3	2	2	1	3	-	-	-	3	3	3	-	-	-	-
C115.9	K3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C115.10	K3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
C115.11	K1	-	-	-	-	-	-	-	-	3		3	-	-	-	-
C115.12	A3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C115.13	A3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C115.14	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
C115.15	A2	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
								<u>CO116</u>								

Subject Code & Name: CS8261 Programming in C Laboratory Department: IT

After successful completion of the course, the students should be able to

Year/Sem: I/II

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO116.1	Develop C programs for simple applications making use of basic constructs	K3
CO116.2	Apply the concept of conditionals and loops in C programs.	К3
CO116.3	Develop the C programs with arrays and strings	К3
CO116.4	Apply the concept of functions, recursion in C programs	K3
CO116.5	Analyze the concept of pointers, and structures in C	К3
CO116.6	Examine the use of sequential and random access file processing.	К3
CO116.7	Exhibit ethical principles in engineering practices	K3
CO116.8	Perform task as an individual and / or team member to manage the task in time	К3

CO116.9	Express the Engineering activities with effective presentation and report.	K3
CO116.10	Interpret the findings with appropriate technological / research citation	K2
CO116.11	Exhibit ethical principles in engineering practices.	A3
CO116.12	Perform task as an individual and / or team member to manage the task in time.	A3
CO116.13	Express the Engineering activities with effective presentation and report.	A3
CO116.14	Interpret the findings with appropriate technological / research citation.	A2

								04						_	a .m.o.	
			,		,		rogram	Outcom	es					Program	Specific Outcon	nes
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	1001	100 2	1500
C116.1	K3	3	3	3	2		-	-	-	-	-	-	-	1	-	-
C116.2	K3	3	2	2	1	3	-	-	-	-	-	-	-	-	-	1
C116.3	K3	3	3	3	2	3	1	-	-	-	-	-	-	-	2	-
C116.4	K3	3	2	2	1	3	-	-	-	-	-	-	-	-	-	-
C116.5	K3	3	3	3	2	3	1	-	-	-	-	-	-	-	-	2
C116.6	K3	3	2	2	1	3	-	-	-	-	-	-	-	-	-	-
C116.7	K3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
C116.8	K3	-	-	-	-	-	-	-	-	3		3	-	-	-	-
C116.9	K3	-	-	-	-	-	-	-	-	-	3		-	-	-	-
C116.10	K2	-	-	-	-	-	-	-	-	-			3	-	-	-
C116.11	A3	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
C116.12	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
C116.13	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
C116.14	A2	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
<u>CO117</u>																

#### $Subject\ Code\ \&\ Name: \qquad IT8211\ \&\ Information\ Technology\ Essentials\ labora\ Department:\ IT$

Year/Sem: I/II

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO117.1	Design an interactive websites using basic HTML tags, different style, links.	K3
CO117.2	Create client side and server side script using PHP	К3
CO117.3	Design dynamic websites and handle multimedia components	K3
CO117.4	Create applications with PHP connected to MYSQL	К3
CO117.5	Implement the technologies behind computer networks and mobile communication	K2
CO117.6	Exhibit ethical principles in engineering practices	K3
CO117.7	Perform task as an individual and / or team member to manage the task in time	К3
CO117.8	Express the Engineering activities with effective presentation and report.	K3
CO117.9	Interpret the findings with appropriate technological / research citation	K2
CO117.10	Exhibit ethical principles in engineering practices.	A3
CO117.11	Perform task as an individual and / or team member to manage the task in time.	А3
CO117.12	Express the Engineering activities with effective presentation and report.	А3
CO117.13	Interpret the findings with appropriate technological / research citation.	A2

co a	ι PO	and PSO	Mapping

									) Mappi	ng						
							rogram	Outcom	es					Program	Specific Outcon	ies
Course No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12			
CO117.1	K3	3	2	2	2	-	-	-	-	-	-	-	-	1	-	-
CO117.2	K3	3	2	2	2	-	-	-	-	-	-	-	-	1	-	-
CO117.3	K3	3	2	2	2	-		-	-	-	-	-	-	1	-	-
CO117.4	K3	3	2	2	2	-	-	-	-	-	-	-	-	1	-	-
CO117.5	K2	2	1	1	1	-	-	-	-	-	-	-	-	1	-	-
CO117.6	K3	2	1	1	1	-	-	-	-	-	-	-	-	1	-	-
CO117.7	K3	2	1	1	1	-	-	-	-	-	-	-	-	1	-	-
CO117.8	K3	2	1	1	1	-	-	-	-	-	-	-	-	1	-	-
CO117.9	K2	2	1	1	1	-	-	-	-	-	-	-	-	1	-	-
CO117.10	A3	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
CO117.11	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
CO117.12	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
CO117.13	A2	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-

CO201

Subject Code & Name: MA8351 & Discrete Mathematics Department: IT Year/Sem: II/III

After successful completion of the course, the students should be able to

Course Outcome No.		Highest Cognitive Level
CO201.1	Summarize the concepts needed to test the logic of a program.	K2
CO201.2	Classify structures on many levels.	K2
CO201.3	Cite the class of functions which transform a finite set into another finite set which relates to input and output functions in computer science.	K2
CO201.4	Develop the knowledge of the counting principles.	K2
CO201.5	Interpret the concepts and properties of algebraic structures such as groups, rings and fields.	K2

#### CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program Specific Outcomes		
Course No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	100 1	150-2	150-3
C201.1	K2	2	2	2	1	2	- 1	-	-	-	-	-	-	1	-	-
C201.2	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	-	1
C201.3	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	2	-
C201.4	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	-	-
C201.5	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	-	2

CO202

Subject Code & Name :  $\,$  CS8351 & Digital System Principles and Design

Department: IT

Year/Sem: II/III

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO202.1	Solve Boolean functions using K - Map	К3
CO202.2	Design and Analyze Combinational Circuits	K4
CO202.3	Design and Analyze Synchronous Sequential Circuits	K4
CO202.4	Design and Analyze Asynchronous Sequential Circuits	K4
CO202.5	Complete designs using Programmable Logic Devices	К3
CO202.6	Articulate HDL code for combinational and Sequential Circuits	К3

# CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program Specific Outcomes			
Course No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3	
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	150-1	130-2	1200	
C202.1	K3	3	2	2	2	3	-	-	-	-	-	-	-	1	-	-	
C202.2	K4		3	3	2		-	-	-	-	-	-	-	-	-	1	
C202.3	K4		3	3	2		-	-	-	-	-	-	-	-	2	-	
C202.4	K4		3	3	2		-	-	-	-	-	-	-	-	-	-	
C202.5	K3	3	2	2	2	3	-	-	-	-	-	-	-	-	-	2	
C202.6	K3	3	2	2	2	3	1	-	-	- 1	-	i	-	-	-	-	

<u>C0203</u>

Subject Code & Name : CS8391& Data Structures

Department: IT

Year/Sem: II/III

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO203.1	Summarize abstract data types for linear data structures	K2
CO203.2	Interpret the various linear data structures concepts Lists, Stack, & Queue	K2
CO203.3	Interpret how trees & heaps are used in various applications	K2
CO203.4	Solve and implement Graph structures and algorithm	К3
CO203.5	Complete various searching, sorting, & Hashing techniques.	K3

						P	rogram	Outcom	es					Program Specific Outcomes			
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3	
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	150-1	150-2	130-3	

C203.1	K2	2	2	2	1	2	-	-	-	-	-	-	=	2	-	=
C203.2	K2	2	2	2	1	2	-	-	-	-	-	-	-	2	-	-
C203.3	K2	2	2	2	1	2	-	-	-	-	-	-	-	2	-	-
C203.4	К3	3	2	2	2	3	-	-	-	-	-	-	-	2	-	-
C203.5	K3	3	2	2	2	3	-	-	-	-	-	-	-	2	-	-

C0204

Subject Code & Name: CS8392& Object Oriented Programming

Department: IT

Year/Sem: II/III

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO204.1	Summarize the Object Oriented Programming concepts and basic features of Java	K2
CO204.2	Interpret the OOPS principles with packages, inheritance and interfaces	K2
CO204.3	Interpret exceptions and use I/O streams	K2
CO204.4	Develop a java application with threads and generics classes	К3
CO204.5	Articulate and build simple Graphical User Interfaces	К3

# CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program	Specific Outcomes		
Course No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PCO 1	PSO 4	DGO 2	
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSO-3	
C204.1	K2	2	2	2	1	2	-	-	-	-	-	-	-	2	-	-	
C204.2	K2	2	2	2	1	2	-	-	-	-	-	-	-	2	-	-	
C204.3	K2	2	2	2	1	2	-	-	-	-	-	-	-	2	-	-	
C204.4	К3	3	2	2	2	3	-	-	-	-	-	-	-	2	-	-	
C204.5	К3	3	2	2	2	3	-	-	-	-	-	-	-	2	-	-	

#### CO205

Subject Code & Name: EC8394 & Analog and Digital Communication

Department: IT

Year/Sem: II/III

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO205.1	Summarize various analog communication techniques.	K2
CO205.2	Use various pulse and data communication techniques.	K3
CO205.3	Classify different digital modulation schemes in communication.	К3
CO205.4	Categorize source and error control coding schemes.	K4
CO205.5	Articulate about multi user radio communication.	K3

# CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program	Specific Outcomes		
Course No.	Level of CO	К3	К4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3	
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	rs0-1	PSO-2	150-5	
C205.1	K2	2	2	2	1	2	-	-	-	-	-	-	-	1	-	-	
C205.2	K3	3	2	2	2	3	-	-	-	-	-	i	-	ii.	-	1	
C205.3	K3	3	2	2	2	3	-	-	-	-	-	-	-	=	2	-	
C205.4	K4		3	3	2		-	-	-	-	-	-	-	=	-	-	
C205.5	K3	3	2	2	2	3	-	=	=	-	=	-	=	=	-	2	

#### CO206

Subject Code & Name : CS8381 &Data Structures Lab

Department: IT

Year/Sem: II/III

#### After successful completion of the course, the students should be able to

	Arter successful completion of the course, the students should be able to	
Course Outcome No.	Course Outcome	Highest Cognitive Level
CO206.1	Summarize functions to implement linear and non-linear data structure operations.	K2
CO206.2	Devise practical applications of data structures.	К3
CO206.3	Design and develop appropriate linear / non-linear data structure operations for solving a given problem.	K3
CO206.4	Design new solutions for programming problems or improve existing code using learned algorithms and data structures.	К3
CO206.5	Complete the linear / non-linear data structure operations for a given problem based on the user needs.	К3
CO206.6	Complete appropriate hash functions that result in a collision free scenario for data storage and retrieval	К3

CO206.7	Exhibit ethical principles in engineering practices	A3
CO206.8	Perform task as an individual and / or team member to manage the task in time	A3
CO206.9	Express the Engineering activities with effective presentation and report	A3
CO206.10	Interpret the findings with appropriate technological / research citation.	A2

						P	rogram	Outcom	es					Program Specific Outcomes		
Course No.	Level of CO	К3	К4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	rs0-1	PSO-2	rs0-3
C206.1	K2	2	2	2	-	-	2	1	1	-	-	-	-	2	-	-
C206.2	К3	2	2	2	1	1	1	1	1	-	-	-	-	2	-	-
C206.3	К3	1	3	2	-	-	2	1	1	-	-	-	-	2	-	-
C206.4	К3	2	2	2	2	-	2	2	1	-	-	-	-	2	-	-
C206.5	К3	3	2	1	1	-	2	1	1	-	-	-	-	2	-	-
C206.6	К3	2	1	1	1	-	1	2	1	-	-	-	-	2	-	-
C206.7	К3	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
C206.8	К3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
C206.9	К3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
C206.10	K2	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-

<u>CO207</u>

Subject Code & Name : CS8383 & Object Oriented Programming Lab

Department: IT

Year/Sem: II/III

#### After successful completion of the course, the students should be able to

	•	
Course Outcome No.	Course Outcome	Highest Cognitive Level
CO207.1	Develop and implement Java programs for simple applications that make use of classes.	K3□
CO207.2	Develop and implement Java programs with array list.	К3
CO207.3	Design applications using file processing.	K3
CO207.4	Build software development skills using java programming for real-world applications.	К3
CO207.5	Apply the concepts of classes, packages, interfaces, exception handling .	К3
CO207.6	Develop applications using generic programming and event handling.	К3
CO207.7	Exhibit ethical principles in engineering practices.	A3
CO207.8	Perform task as an individual and / or team member to manage the task in time.	A3
CO207.9	Express the Engineering activities with effective presentation and report.	A3
CO207.10	Interpret the findings with appropriate technological / research citation.	A2

## CO & PO and PSO Mapping

CO & PO and PSO Mapping																
						P	rogram	Outcom	es	•				Program	Specific Outcom	ies
Course No.	Level of CO	К3	К4	К4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	150-1	130-2	130-3
C207.1	K3 □	3	2	2	1	-	-	-	-	-	-	-	-	2	-	-
C207.2	К3	3	2	2	1	-	-	-	-	-	-	-	-	2	-	-
C207.3	К3	3	2	2	1	-	-	-	-	-	-	-	-	2	-	-
C207.4	К3	3	2	2	1	-	-	-	-	-	-	-	-	2	-	-
C207.5	К3	3	2	2	1	-	-	-	-	-	-	-	-	2	-	-
C207.6	К3	3	2	2	1	-	-	-	-	-	-	-		2	-	-
C207.7	A3	-	-	-	-	-	-	3	-	-	-	-		-	-	-
C207.8	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
C207.9	A3	-	-	-	-	-	-	-	-	3	-	3	-	=	-	-
C207.10	A2	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-

#### <u>C0208</u>

Subject Code & Name : CS8382 & Digital Systems laboratory

Department: IT

Year/Sem: II/III

## After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO208.1	Solve the functional characteristics of basic logic gates	К3

CO208.2	Complete the various combinational circuits and Sequential circuits	K3
CO208.3	connect various combinational circuits using MSI devices	K4
CO208.4	Discover the various code with HDL programming	K3
CO208.5	Solve Verilog codes for the design of Digital Circuits	К3
CO208.6	Interpret Simple Digital System	К3
CO208.7	Exhibit ethical prrinciples in Engineering Practices	A3
CO208.8	Perform Task as an Individual and/or team member to manage the task in time	A3
CO208.9	Express the Engineering activities with effective presentation and report	A3
CO208.10	Interpret the findings with appropriate technological / research citation	A2

						P	rogram	Outcom	es					Program	Specific Outcom	ies
Course No.	Level of CO	К3	К4	К4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	rs0-1	PSO-2	rs0-3
CO208.1	К3	3	2	2	-	3	-	-	-	-	-	-	-	2	2	2
CO208.2	K3	3	2	2	-	3	-	-	-	-	-	-	-	2	2	2
CO208.3	K4	3	2	2	-	2	-	-	-	-	-	-	-	2	2	2
CO208.4	К3	3	2	2	-	3	-	-	-	-	-	-	-	2	2	2
C0208.5	К3	3	2	2	-	-	-	-	-	-	-	-	-	-	-	-
CO208.6	K3	3	2	2	-	-	-	-	-	-	-	-	-	-	-	-
CO208.7	A3	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
CO208.8	A3	-	-	-	-	-	-	-	3	-	-	-	-	=	-	-
CO208.9	A3	-	-	-	-	-	- 1	-	-	3	-	3	-	=	÷	-
CO208.10	A2	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-

#### <u>C0209</u>

 $Subject\ Code\ \&\ Name: \quad HS8381\&\ Interpersonal\ skill/Listening\ \&speaking \qquad \quad Department:\ IT$ 

Year/Sem: II/III

# After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO209.1	Listen and react by giving verbal and non verbal feedback.	A2
CO209.2	To make effective contribution in Group Discussions.	K2,A3
CO209.3	Compare and Contrast the ideas from multiple choices and summarize.	K2,A3
CO209.4	Respond confidently in both Formal and Informal conversations.	A2
CO209.5	To Greet and to respond to Greetings.	A2
CO209.6	Apply stress and intonation while speaking to make the presentation effective.	К3
CO209.7	Exhibit ethical principles in engineering practices.	A3
CO209.8	Perform task as an individual and / or team member to manage the task in time.	A3
CO209.9	Express the Engineering activities with effective presentation and report.	A3
CO209.10	Interpret the findings with appropriate technological / research citation.	A2

CO & PO and PSO Mapping																
					•	P	rogram	Outcom	es	•	•			Program	Specific Outcom	ies
Course No.	Level of CO	К3	К4	К4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	150-1	130-2	130-3
C209.1	A2	-	-	-	-	-	-	-	-	2	3	-	3	-	-	-
C209.2	K2,A3	-	-	-	-	-	-	-	-	3	2	-	3	-	-	-
C209.3	K2,A3	-	-	-	-	-	-	-	-	2	2	-	3	-	-	-
C209.4	A2	-	-	-	-	-	-	-	-	2	2	-	3	-	-	-
C209.5	A2	-	-	-	-	-	-	-	-	3	2	-	3	-	-	-
C209.6	К3	-	-	-	-	-	-	-	-	2	3	-	2	-	-	-
C209.7	A3	-	-	-	-	-	-	3	-	-	-	-	-	=	-	-
C209.8	A3	-	-	-	-	-	-	-	3	-	-	-	-	=	÷	-
C209.9	A3	-	-	-	-	-	-	-	-	3	-	3	=	=	-	-
C209.10	A2	-	-	-	-	-	1	-	-	-	3	-	1	-	-	-

<u>CO210</u>

Subject Code & Name :MA8391 Probability and Statistics

Department: IT

Year/Sem: II/IV

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO210.1	Summarize the fundamental knowledge of the concepts of probability and have knowledge of standard distributions which can describe real life phenomenon.	K2
CO210.2	Interpret the basic concepts of one and two dimensional random variables and apply in engineering applications.	K2
CO210.3	Apply the concept of testing of hypothesis for small and large samples in real life problems.	K3
CO210.4	Apply the basic concepts of classifications of design of experiments in the field of agriculture and statistical quality control.	K3
CO210.5	Relate the notion of sampling distributions and statistical techniques used in engineering and management problems.	K4

#### CO & PO and PSO Mapping

	Lovelof					P	rogram	Outcom	es					Program Specific Outcomes			
Course No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3	
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	1001	150 2		
CO210.1	K2	2	2	2	1	2	-	-	-	-	-	-	1	1	-	-	
CO210.2	K2	2	2	2	1	2	-	-	-	-	-	-	1	1	-	-	
CO210.3	K3	3	2	2	2	3	-	-	-	-	-	-	1	1	-	-	
CO210.4	K3	3	2	2	2	3	-	-	-	-	-	-	1	1	-	-	
CO210.5	K4		3	3	2	-	-	-	-	-	-	-	1	1	-	-	
	<u>C0211</u>																

Subject Code & Name: CS8491 - Computer Architecture

Department: IT

Year/Sem: II/IV

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO211.1	Summarize the basic structures of a computer system	K2
C0211.2	Interpret the various arithmetic operations for computers	K2
CO211.3	Analyze pipelined control units and the different types of hazards in the instructions	К3
CO211.4	Interpret the concepts of parallel processing architecture	K2
CO211.5	Summarize the fundamentals of memory system	K2
C0211.6	Summarize the concepts of I/O system.	K2

# CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program Specific Outcomes			
Course No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3	
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	FSO-1	FSO-2	1200	
C211.1	K2	2	2	2	1	2	-	-	-	-	-	-		1	-	-	
C211.2	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	-	1	
C211.3	K3	3	2	2	2	3	-	-	-	-	-	-	-	-	2	-	
C211.4	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	-	-	
C211.5	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	-	2	
C211.6	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	-	-	
			,	•	•	•		CO212	•	•	,	•					

Subject Code & Name: CS8492-Database Management System

Department: IT

Year/Sem: II/IV

# After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO212.1	Cite the fundamental concepts of relational database and SQL	K2
CO212.2	Use ER Model for Relational model mapping to perform database design effectively	K3
CO212.3	Summarize the properties of Transactions and concurrency control mechanisms	K2
CO212.4	Summarize the various storage and optimization techniques	K2
CO212.5	Compare and contrast various indexing strategies in different database systems	K2
CO212.6	Summarize the different advanced databases	K2

						P	rogram	Outcom	es					Program Specific Outcomes			
Course No.	Level of CO	К3	К4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3	
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	rso-1	F50-2	130-3	
CO212.1	K2	2	2	2	1	2	-	-	-	-	-	-	-	2	-	-	
CO212.2	K3	3	2	2	2	3	-	-	-	-	-	-	-	2	-	-	
CO212.3	K2	2	2	2	1	2	-	-	-	-	-	-	-	2	-	-	
CO212.4	K2	2	2	2	1	2	-	-	-	-	-	-	-	2	-	-	
CO212.5	K2	2	2	2	1	2	-	-	-	-	-	-	-	2	-	-	
CO212.6	K2	2	2	2	1	2	-	-	-	-	-	-	-	2	-	-	

#### CO213

Subject Code & Name: CS8451 - DESIGN AND ANALYSIS OF ALGORITHMS Department: IT

Year/Sem: III/IV

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO213.1	Interpret the Fundamental needs of algorithms in problem solving and Analyze the time and space complexity of algorithms.	K3
CO213.2	Analyze Critically the Brute Force and divive and conquer techniques for the given real time problems	K4
C0213.3	Apply Critically the Dynamic programming and Greedy Techniques for the given real time problems.	K3
CO213.4	Relate an Iterative Improvement technique for various computing problems.	K2
C0213.5	Apply the Approximation Algorithms and Design of Branch and Bound and Back Tracking techniques for the given real time problems.	К3

#### CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program Specific Outcomes			
Course No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	BCO 1	BCO 2	PSO-3	
	CO212 1	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSU-3	
CO213.1	К3	3	2	2	2	3	-	-	-	-	-	-	3	2	-	-	
C0213.2	K4		3	3	2	-	-	-	-	-	-	-	2	2	-	-	
CO213.3	К3	3	2	2	2	3	-	-	-	-	-	-	2	2	-	-	
CO213.4	K2	2	2	2	1	2	-	-	-	-	-	-	2	2	-	-	
CO213.5	К3	3	2	2	2	3	-	-	-	-	-	-	3	2	-	-	

#### CO214

Subject Code & Name : CS8493 & Operating Systems

Department: IT

Year/Sem: II/IV

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO214.1	Infer knowledge in various concepts, structure and functions of operating system.	K2
CO214.2	Apply the principles of process management and concurrency to design various scheduling algorithms	К3
C0214.3	Design deadlock detection and avoidance algorithms.	K6
CO214.4	Compare and contrast various memory management schemes.	K4
CO214.5	Design various disk systems, file systems and I/O sub systems.	K6
CO214.6	Complete administrative tasks on Linux Servers.	К3

#### CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program	Program Specific Outcomes				
Course No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	neo a			
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSO-3			
CO214.1	K2	2	-	-	2	-	-	-	-	-	-	-	-	-	1	1			
CO214.2	K3	3	3	3	3	2	-	-	-	-	-	-	-	-	1	1			
C0214.3	K6		3	3	-	0	-	-	-	-	-	-	-	-	1	1			
CO214.4	K4		3	3	3	2	-	-	-	-	-	-	-	-	1	1			
CO214.5	K6		2	3	-	-	-	-	-	-	-	-	-	-	1	1			
CO214.6	К3	3	-	-	-	-	-	-	-	-	-	-	-	-	1	1			
		•	•	•	•	•		<u>C0</u> :	215			•	•			•			

# Subject Code & Name : GE8291 Environmental science and engineering Department: IT

Year/Sem: II/IV

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO215.1	Interpret the basic concept of Ecosystems and Biodiversity.	K2
CO215.2	Compare the types of pollution and its control measures.	K2
CO215.3	Summarize the importance of natural resources and Disaster management.	K2
CO215.4	Infer the importance of environment by assessing its impact on the human world.	K2
CO215.5	Summarize the population related issues and types of welfare programmes in the society.	K2

#### CO & PO and PSO Mapping

					Program Specific Outcomes											
Course No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	FSO-1	130-2	130-3
CO215.1	K2	2	2	2	1	2	-	-	-	-	-	-		1	-	-
CO215.2	K2	2	2	2	1	2	-	-	-	-	-	-		-	-	1
CO215.3	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	2	-
CO215.4	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	-	-
CO215.5	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	-	2

<u>C0216</u>

#### After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO216.1	Use typical data definitions and manipulation commands.	К3
CO216.2	Design applications to test Nested and Join Queries	К3
CO216.3	Solve simple applications that use Views	К3
C0216.4	Use ER modeling and normalization to design and implement database	К3
C0216.4	Complete applications that require a Front-end Tool	К3
C0216.4	Critically analyze the use of Tables, Views, Functions and Procedures	К3
C0216.4	Exhibit ethical principles in engineering practices	A3
C0216.4	Perform task as an individual and / or team member to manage the task in time	A3
C0216.4	Express the Engineering activities with effective presentation and report.	A3
C0216.4	Interpret the findings with appropriate technological / research citation	A2

#### CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program Specific Outcomes			
Course No.	Level of CO	К3	К4	К4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3	
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	FSO-1	FSO-2	130-3	
C216.1	К3	3	2	2	2	-	-	-	-		-	-	-	2	-	-	
C216.2	К3	3	2	2	2	-	-	-	-	-	-	-	-	2	-	-	
C216.3	К3	3	2	2	2	-	-	-	-	-	-	-	-	2	-	-	
C216.4	К3	3	2	2	2	-	-	-	-	-	-	-	-	2	-	-	
C216.5	К3	3	2	2	2	-	-	-	-	-	-	-	-	2	-	-	
C216.6	К3	3	3	3	2	-	-	-	-	-	-	-	-	2	-	-	
C216.7	A3	-	-	-		-	-	-	3	-	-	-	-	-	-	-	
C216.8	A3	-	-	-		-	-	-	-	3	-	3	-	-	-	-	
C216.9	A3	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	
C216.10	A2	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	

#### C0217

Subject Code & Name :CS8461 & Operating Systems Laboratory

Department: IT

Year/Sem: II/IV

## After successful completion of the course, the students should be able to $% \left\{ 1,2,\ldots ,n\right\}$

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO217.1	Illustrate the various CPU scheduling algorithms.	К3
CO217.2	Complete deadlock avoidance and detection algorithms.	К3
CO217.3	Use semaphore concepts.	К3
C0217.4	Design processes and implement IPC	К3
CO217.5	Analyze the performance of the various page replacement algorithms	К3
CO217.6	Summarize file organization and file allocation strategies	К3
CO217.7	Exhibit ethical principles in engineering practices	A3
CO217.8	Perform task as an individual and / or team member to manage the task in time	A3
CO217.9	Express the Engineering activities with effective presentation and report.	A3
CO217.10	Interpret the findings with appropriate technological / research citation	A2

	CO & PO and PSO Mapping																	
						P	rogram	Outcom	es					Program	Program Specific Outcomes			
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	А3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3		
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	150-1	150-2	150-5		
CO217.1	К3	3	2	2	-	-	-	-	-	-	-	-	-	-	1	1		
CO217.2	K3	3	2	2	-	-	-	-	-	-	-	-	-	-	1	1		
CO217.3	K3	3	2	2	-	-	-	-	,	,	-	-	-	-	1	1		
C0217.4	K3	3	2	2	-	-	-	-	-	-	-	-	-	-	1	1		
C0217.5	K3	3	2	2	-	-	-	-	-	-	-	-	-	-	1	1		
C0217.6	K3	3	2	2	-	-	-	-	-	-	-	-	-	-	1	1		
C0217.7	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-		
C0217.8	A3	-	-	-	-	-	-	-	,	3	-	3	-	-	-	-		
C0217.9	A3	-	-	-	-	-	-	-	-	-	3		-	-	-	-		
C0217.10	A2	-	-	-	-	-	-	-		-	-	-	3	-	-	-		

# SEMESTER 5 C0301 Subject Code & Name : MA8551& Algebra and Number Theory Department: IT Year/Sem: III/V After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO301.1	Apply the basic notions of groups, rings, fields which will then be used to solve related problems.	K3
CO301.2	Relate the fundamental concepts of advanced algebra and their role in modern mathematics and applied contexts.	K3
CO301.3	Compare accurate and efficient use of advanced algebraic techniques.	K2
CO301.4	Solve non - trivial problems related to the concepts, and by proving simple theorems about the, statements proven by the text.	K3
CO301.5	Apply integrated approach to number theory and abstract algebra, and provide a firm basis for further reading and study in the subject.	К3

#### CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program Specific Outcomes			
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3	
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12				
CO301.1	K3	3	2	2	2	3	-	-	-	-	-	-		1	-	-	
CO301.2	K3	3	2	2	2	3	-	-	-	-	-	-		-	-	-	
CO301.3	K2	2	2	2	1	2	-	-	-	-	-	-		-	2	-	
CO301.4	K3	3	2	2	2	3	-	-	-	-	-	-		-	-	-	
CO301.5	K3	3	2	2	2	3	-	-	-	-	-	-	-	1	-	-	

Subject Code & Name : CS8591 & Computer Networks

Department: IT Year/Sem: III/V

#### After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO302.1	Cite various layers of network and discuss the functions of physical layer	K2
CO302.2	Summarize how data flows from one node to another node with regard to data link layer	K2
CO302.3	Cite the different services of network layer	K2
CO302.4	Compare the different transport layer protocols and their applicability based on user requirements	К3
CO302.5	Summarize the working of various application layer protocols	K2
CO302 6	Analyze the performance of network and analyze routing algorithms	К3

#### CO & PO and PSO Mapping

			Program Outcomes												Program Specific Outcomes				
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3			
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	130-1	130-2				
C302.1	K2	2	1	1	2	2	-	-	-	-	-	-	-	1	=	-			
C302.2	K2	2	1	1	1	2	-	-	-	-	-	-	-	÷	-	-			
C302.3	K2	2	1	1	1	2	-	-	-	-	-	-	-	=-	2	-			
C302.4	K3	3	2	2	2	3	-	-	-	-	-	-	-	=-	-	-			
C302.5	K2	2	1	1	1	2	1	1	-	1	-	1	1	1	-	-			
C302.6	K3	3	2	2	2	3	-	-	-	-	-	-	-	9	2	2			

#### CO303

Subject Code & Name: EC8691& Microprocessor and Microcontroller

partment: IT

Year/Sem: III/V

#### After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO303.1	Summarize about internal architecture of 8086 Microprocessor	K2
CO303.2	Summarize about system bus structure of 8086 Microprocessor	K2
CO303.3	Relate the various interfacing modules with 8086 Microprocessor	K2
CO303.4	Illustrate the architecture of 8051 microcontroller	К3
CO303.5	Illustrate about various interfacine modules with 8051 microcontroller	K2

#### CO & PO and PSO Mapping

			Program Outcomes											Program Specific Outcomes				
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3		
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	130-1	130-2	150-5		
C303.1	K2	2	1	1	1	2	-	-	-	-	-	-	-	1	1	1		
C303.2	K2	2	1	1	1	2	-	-	-	-	-	-	-	1	1	1		
C303.3	K2	2	1	1	1	2	-	-	-	-	-	-	-	1	1	1		
C303.4	K3	3	2	2	2	3	-	-	-	-	-	-	-	2	2	2		
C303.5	K2	2	1	1	1	2	1	1	-	1	-	1	1	1	1	1		

#### CO304

Subject Code & Name IT8501&Web Technology

Department: IT Year/Sem: III/V

#### After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO304.1	Design Simple web Pages using Markup Language like HTML and XHTML	K3
CO304.2	Design Dynamic web pages using CSS and Javascript	K3
CO304.3	Develop Server side web pages that have to process request from client side using Servlets and JDBC	К3
CO304.4	Illustarte the Web data using XML and develop server side web pages using JSP	К3
CO304.5	Develop web services and how these web services interact with web service Technologies	K3
CO304.6	Develop Interactive Web Applications for real world problems	К3

			Program Outcomes											Program	n Specific Outcom	ies
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3

ii.	1																
			PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12			
CO304	4.1	К3	2	1	1	2	3	-	-	-	-	-	-		1	=	-
CO304	4.2	K3	3	2	2	2	3	-	-	-	-	-	-		1	=	-
CO304	4.3	K3	2	1	1	2	3	-	-	-	-	-	-		1	-	-
CO304	4.4	K3	2	1	1	2	3	-	-	-	-	-	-		1	=	-
CO304	4.5	K2	2	1	1	1	2	-	-	-	-	-	-	-	1	-	-
C0304	4.6	К3	3	2	2	1	3	-	-	-	-	-	-	-	1	9	1

C0305

Subject Code & Name : CS8494 &Software Engineering

Department: 11

Year/Sem: III/V

After successful completion of the course, the students should be able to  $% \left\{ 1,2,\ldots ,n\right\}$ 

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO305.1	Identify the key activities in managing a software project and recognize different process model	K2
CO305.2	Cite the concepts of requirements engineering and Analysis Modeling.	K2
CO305.3	Summarize the systematic procedures for software design and deployment	K2
CO305.4	Compare various testing and maintenance methods	K2
CO305.5	Interpret the project schedule, estimate project cost and effort required	K2
CO305.6	Develop a software using the software engineering principles	K3

#### CO & PO and PSO Mapping

		Program Outcomes										Program	Program Specific Outcomes				
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3	
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	130-1	130-2		
C0305.1	K2	2	2	1	1	2	-	-	-	-	-	-	-	1	1	1	
CO305.2	K2	2	2	1	1	2	-	-	-	-	-	-	-	1	1	1	
CO305.3	K2	3	2	2	1	2	-	-	-	-	-	-	-	1	1	1	
CO305.4	K2	2	2	2	1	2	-	-	-	-	-	-		2	2	2	
CO305.5	K2	2	2	2	1	2	-	-	-	-	-	-	-	1	1	1	
C0305.6	K3	3	2	2	2	3	-	-	-	-	-	-	-	1	1	1	

CO306

Subject Code & Name :OMD551 &Basics of biomedical instrumentation

Department: IT

Year/Sem: III/V

After successful completion of the course, the students should be able to  $% \left\{ \left( 1\right) \right\} =\left\{ \left( 1\right$ 

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO306.1	Summarize different biopotential electrodes and its propagation mechanism	K2
CO306.2	Illustrate different types of electrodes and its placement for various recording	K2
CO306.3	Summarize the concepts of bio ampifiers for various physiological recording	K2
CO306.4	Summarize the different measurement techniques for non-physiological parameters	K2
CO306.5	Categorize the different types of biochemical measurement	K2

#### CO & PO and PSO Mapping

			Program Outcomes											Program Specific Outcomes				
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3		
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	rs0-3		
CO306.1	K2	2	2	2	1	2	-	-	-	-	-	-	-	1	1	1		
CO306.2	K2	2	2	2	1	2	-	-	-	-	-	-	-	1	1	1		
CO306.3	K2	2	2	2	1	2	-	-	-	-	-	-	-	1	1	1		
CO306.4	K2	2	2	2	1	2	-	-	-	-	-	1	1	2	2	2		
CO306.5	K2	2	2	2	1	2	-	-	-	-	-	1	1	1	1	1		

CO307

Subject Code & Name : EC8681& Micfroprocessor and Microcontroller Laborator Department: IT

After successful completion of the course, the students should be able to

Year/Sem: III/V

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO307.1	Interpret the Architecture and operation of Microprocessor(8086)	K2
CO307.2	Devise simple Assembly Language programs using instruction sets of microprocessor and microcontroller	K3
CO307.3	Compare instruction sets of 8086 microprocessor and 8051 microcontroller	К3
CO307.4	Devise Assembly language programs using instruction set of microprocesssor	K3
C0307.5	Develop applications using instructions of microprocessors and microcontroller	К3
C0307.6	Interpret the Architecture and operation of Microcontroller(8051)	K2
C0307.7	Exhibit Ethical principles in engineering practices	A3
C0307.8	Perform task as an individual and /or a team member to manage the task in time	A3
C0307.9	Express the engineering activities with effective presentation and report	A3
C0307.10	Interpret the findings with apppropriate technological/research citation	A2

						P	rogram	Outcom	es					Program	n Specific Outcon	nes
Course No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	130-1	130-2	130-3
CO307.1	K2	2	2	2	1	2	-	-	-	-	-	-	-	1	1	1
CO307.2	К3	2	2	2	2	3	-	-	-	-	-	-	-	1	1	1
CO307.3	K3	3	2	2	1	3	-	-	-	-	-	-	-	1	1	1
CO307.4	K3	3	2	2	1	3	-	-	-	-	-	-	-	2	2	2

CO307.5	K3	3	2	2	2	3	-	-	-	-	-	-	-	1	1	1
CO307.6	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	-	-
CO307.7	A3	-	-	-	-	-	-	-	3	-	-	-	-	=	-	-
CO307.8	A3	-	-	-	-	-	-	-	-	3	-	3	-	÷	-	
CO307.9	A3	-	-	-	-	-	-	-	-	-	3	-	-	=	-	-
CO307.10	A2	-	-	-	-	-	-	-	-	-	-	-	3	=-	-	-

C0308

Subject Code & Name: CS8581& Networks Laboratory

Department: IT

Year/Sem: III/V

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO308.1	Devise various protocols using TCP and UDP	К3
CO308.2	Compare the performance of different transport layer protocols	К3
CO308.3	Use simulation tools to analyze the performance of various network protocols	К3
CO308.4	Analyze various routing algorithms	К3
CO308.5	Implement error correction codes	К3
CO3O8.6	Illustrate Network simulator (NS) and Simulate Congestion Control Algorithms using NS	A3
CO3O8.7	Exhibit ethical principles in engineering practices	A3
CO3O8.8	Perform task as an individual and / or team member to manage the task in time	A3
CO3O8.9	Express the Engineering activities with effective presentation and report.	A3
CO3O8.10	Interpret the findings with appropriate technological / research citation.	A2.

#### CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program	n Specific Outcon	ies
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	130-1	130-2	130-3
CO308.1	K3	3	2	2	2	3	-	-	-	-	-	-	-	2	1	1
CO308.2	K3	3	2	2	2	3	-	-	-	-	-	-	-	2	1	1
CO308.3	K3	3	2	2	2	3	-	-	-	-	-	-	-	2	1	1
CO308.4	K3	3	2	2	2	3	-	-	-	-	-	-	-	2	1	1
CO308.5	K3	3	2	2	2	3	-		-	,	-	-	-	2	1	1
CO3O8.6	A3	3	2	2		3	-	-	-	-	-	-	-	2	1	1
CO3O8.7	A3	-	-	-	-	-	-		3		-	-	-	-	-	-
CO3O8.8	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
CO3O8.9	A3	-	-	-	-	-	,		-	,	3	-	-	-	-	-
CO3O8.10	A2	-	-	-	-	-	,		-	,	-	-	3	-	-	-

CO309

Subject Code & Name: IT8511& Web Technology Laboratory

Department: IT

Year/Sem: III/V

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO309.1	Construct web pages using HTML and stylesheet	K3
CO309.2	Design dynamic web pages with validation using Javscript and apply different event handling mechanisms	K3
CO309.3	Develop dynamic web pages using server side scripting	К3
CO309.4	Develop Complete web application using Three tier architecture(JDBC)	K3
CO309.5	Construct web application using AJAX and web services	K3
C0309.6	Develop interactive web applications for real world problems	K3
CO3O9.7	Exhibit ethical principles in engineering practices	A3
CO3O9.8	Perform task as an individual and / or team member to manage the task in time	A3
CO3O9.9	Express the Engineering activities with effective presentation and report.	A3
CO3O9.10	Interpret the findings with appropriate technological / research citation.	A2

						P	rogram	Outcom	es					Program	n Specific Outcom	nes
Course No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	130-1	130-2	1303
CO309.1	K3	3	2	2	1	3	-	-	-	-	-	-		2	1	1
CO309.2	K3	3	2	2	1	3	-	-	-	-	-	-		2	1	1
CO309.3	K3	3	2	2	1	3	-	-	-	-	-	-	-	2	1	1
CO309.4	K3	3	2	2	1	3	-	-	-	-	-	-	-	2	1	1
CO309.5	K3	3	2	2	1	3	-	-	-	-	-	-	-	2	1	1
CO309.6	K3	3	2	2	1	3	-	-	-	-	-	-		2	1	1
CO309.7	A3	-	-	-	-		-	-	3	-	-	-		-	-	-
CO309.8	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
CO309.9	A3		-	-	-	-	-	-		-	3	1	-	-	-	-
CO309.10	A2		-	-	-	-	-	-		1	-	1	3	-	-	-

#### CO310

Subject Code & Name: IT8601& Computational Intelligence

Department: IT

Year/Sem: III/VI

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO310.1	Interpret Search algorithms for any AI Problem	K2
CO310.2	Illustarte a problem using first order and predicate first order logics	K2
CO310.3	Improve problem solving skills using the acquired knowledge in the areas of Fuzzy set and Neural Networks	K2
C0310.4	Improve problem solving skills using the acquired knowledge in the areas of Machine learning and statistics	K2
CO310.5	Interpret applications for NLP that uses Aritificial Intelligence	K2

#### CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program	Specific Outcome	es
Course No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	150-1	150-2	150-5
CO310.1	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	2	2
CO310.2	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	2	2
CO310.3	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	2	2
CO310.4	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	2	2
CO310.5	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	2	2

#### C0311

Subject Code & Name : CS8592 & Object Oriented Analysis and Design

Department: IT

Year/Sem: III/VI

#### After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO311.1	Describe the fundamentals of object modeling	K1
CO311.2	Describe and differentiate Unified Process from other approaches.	K1
CO311.3	Design with static UML diagrams.	K2
CO311.4	Design with the UML dynamic and implementation diagrams.	K2
CO311.5	Interpret the software design with design patterns.	К3
CO311.6	Compare software against its requirements specification	К3

# CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program	Specific Outcom	es
Course No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	DCO 1	BCO 2	DCO 2
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSO-3
CO311.1	K1	1	1	1	1	1	1	-	-	-	-	-	1	-	1	1
CO311.2	K1	1	1	1	1	1	-	-	-	-	-	-	-	-	1	1
CO311.3	K2	3	2	2	1	2	1	-	-	-	-	-	-	-	1	1
CO311.4	K2	2	2	2	1	2	1	-	-	-	-	-	1	-	1	1
CO311.5	К3	3	2	2	2	3	-	-	-	-	-	-	-	-	1	1
CO311.6	К3	2	2	1	2	3	-	-	-	-	-	-	-	-	1	1
								CO312								

Subject Code & Name : IT8602 & Mobile Communication

Department: IT

Year/Sem: III/VI

# After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO312.1	Illustrate the basic concepts of mobile computing	K2
CO312.2	Infer the basics of mobile teele communication system	K2
CO312.3	Illustrate the generations of tele communication systems in wireless networks	K2
CO312.4	Summarize the functinality of MAC,network Layer and Identify a routing protocol for a given adhoc network	K2
CO312.5	Infer the functionality of transport and application layer	K2

						P	rogram	Outcom	es					Program	Specific Outcome	es
Course No.	Level of CO	К3	К4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSU-3
CO312.1	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	1	1
CO312.2	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	1	1
CO312.3	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	1	1
CO312.4	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	1	1
CO312.5	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	1	1

# <u>CO313</u>

Year/Sem: III/VI

Subject Code & Name: CS8092& Graphics and Multimedia Department: IT

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO313.1	Summarize the various output primitives ,color models	K2
CO313.2	Summarize various 2D Transformations, Viewing and clipping algorithms	K2
CO313.3	Analyze the 3D Objects and Projections	К3
CO313.4	Interpret Multimedia System design and File Handling	K2
CO313.5	Summarize Hypermedia and blender Graphics	K2

# CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program Specific Outcomes				
Course No.	Level of CO	К3	К4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	DCO 2		
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSO-3		
CO313.1	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	2	2		
CO313.2	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	2	2		
CO313.3	К3	3	2	2	2	3	-	-	-	-	-	-	-	-	2	2		
CO313.4	K2	2	2	1	1	2	-	-	-	-	-	-	-	-	2	2		
CO313.5	K2	2	2	1	1	2	ı	-	1	-1	-	1	-	-	2	2		

# <u>CO314</u>

Subject Code & Name: CS8091 & Big data Anaytics Department: IT Year/Sem: III/VI

#### After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO314.1	Summarize the working of bigdata tools and it's Analysis techniques	K1
CO314.2	Summarize the data analysis by utilizing clustering and classification algorithms	K2
CO314.3	Apply different mining algorithms and recommendation system for large volume of data	К3
CO314.4	Analyze Data Streams	К3
CO314.5	Summarize the NoSQL Databases and Management	K2

# CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program Specific Outcomes			
Course No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3	
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	P50-3	
CO314.1	K1	1	1	1	1	1	-	-	-	-	-	-	-	-	2	2	
CO314.2	K2	2	2	2	1	2	-	-	-	-	-	-	,	-	2	2	
CO314.3	K3	3	2	2	2	3	-	-	-	-	-	-	,	-	2	2	
CO314.4	K3	3	2	2	2	3	1	-	-	-	-	-	-	-	-	-	
CO314.5	K2	2	2	2	1	2	1	-	-	-	-	-	-	-	2	2	

<u>CO315</u>

#### After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
C0315.1	Illustarte Mobile Application using GUI and Layouts	K3
C0315.2	Develop mobile applications using Event Listener	К3
C0315.3	Design mobile applications using Database	К3
C0315.4	Use mobile applications using RSS Feed, Internal/External Storage "SMS and Multithreading with GPS	К3
C0315.5	Develop own mobile application for simple needs	К3
C0315.6	Develop mobile applications using different application development frameworks	К3
C0315.7	Exhibit Ethical principles in engineering practices	A3
C0315.8	Perform task as an individual and /or a team member to manage the task in time	A3
C0315.9	Express the engineering activities with effective presentation and report	A3
C0315.10	Interpret the findings with apppropriate technological/research citation	A2

# CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program	Specific Outcom	es
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	F5O-1	FSO-2	130-3
CO315.1	К3	3	2	2	2	3	-	-	-	-	-	- 1	- 1	-	1	1
CO315.2	К3	3	2	2	2	3	-	-	-	-	-	1	1	-	1	1
CO315.3	К3	3	2	2	2	3	-	-	-	-	-	-	-	-	1	1
CO315.4	К3	3	2	2	2	3	-	-	-	-	-	1	1	-	1	1
CO315.5	К3	3	2	2	2	3	-	-	-	-	-	-	-	-	1	1
CO315.6	К3	3	2	2	2	3	-	-	-	-	-	1	1	-	1	1
CO315.7	A3	-	-	-	-	-	-	-	3	-	-	1	1	-	-	-
CO315.8	A3	-	-	-	-	-	-	-	-	3	-	3	1	-	-	-
CO315.9	A3	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
CO315.10	A2	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-

# <u>CO316</u>

## Subject Code & Name: CS8552& Object Oriented Analysis and Design Laborator Department: IT

Year/Sem: III/VI

#### After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO316.1	Summarize the requirements specification for an intended software system	K3
CO316.2	Summarize UML diagrams for the given specification	K2
CO316.3	Relate the design properly to code	K3
CO316.4	Devise software system test cases thoroughly for all scenarios	К3
CO316.5	Design by applying appropriate design patterns.	К3
CO316.6	Exhibit Ethical principles in engineering practices	A3
CO316.7	Perform task as an individual and /or a team member to manage the task in time	A3
CO316.8	Express the engineering activities with effective presentation and report	A3
CO316.9	Interpret the findings with apppropriate technological/research citation	A2

						P	rogram	Outcom	es					Program	Specific Outcom	es
Course No.	Level of CO	К3	К4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	150-2	130-3
CO316.1	К3	3	2	2	2	3	-	-	-	-	-	-	-	-	1	1
CO316.2	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	1	1

CO316.3	К3	3	2	2	2	3	-	-	-	-	-	-	-	-	1	1
CO316.4	K3	3	2	2	2	3	-	-	-	-	-	-	1	=	1	1
CO316.5	K3	3	2	2	2	3	-	-	-	-	-	-	-	-	1	1
CO316.6	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
CO316.7	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
CO316.8	A3	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
CO316.9	A2	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-

CO317

Subject Code & Name : IT8611&Mini Project Department: IT Year/Sem: III/VI

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO317.1	Choose problems with technical importance and societal contribution	K3
CO317.2	Identify and survey the relevant literature for getting exposed to related solutions	К3
CO317.3	Build project plans with feasible requirements	К3
CO317.4	Analyse, design and develop adaptable and reusable solutions	K4
CO317.5	Implement and test solutions to trace against the user requirements	K4
CO317.6	Deploy the solutions for better manageability and provide scope for improvability	K4
CO317.7	Exhibit Ethical principles in engineering practices	A3
CO317.8	Perform task as an individual and /or a team member to manage the task in time	A3
CO317.9	Express the engineering activities with effective presentation and report	A3
CO317.10	Interpret the findings with apppropriate technological/research citation	A2

						P	rogram	Outcom	es					Program	Specific Outcom	ies
Course No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	130-3
CO317.1	К3	3	2	2	2	3	-	-	-	-	-	-	-	1	-	-
CO317.2	К3	3	2	2	2	3	-	-	-	-	-	-	-	1	-	-
CO317.3	К3	3	2	2	2	3	-	-	-	-	-	-	-	1	-	-
CO317.4	K4	-	3	3	2	-	-	-	-	-	-	-	-	1	-	-
CO317.5	K4	-	3	3	2	-	-	-	-	-	-	-	-	1	-	-
CO317.6	K4	-	3	3	2	-	-	-	-	-	-	-	-	1	-	-
CO317.7	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
CO317.8	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
CO317.9	A3	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
CO317.10	A2	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-

CO401

Subject Code & Name : MG8591-Principles of Management

Department: IT

Year/Sem: IV/VII

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO401.1	Summarize the evolution of management thoughts and the challenges of managerial activities in a global business environment.	K2
CO401.2	Classify the types of Planning and Decision making methodologies in Organizations	K2
CO401.3	Summarize various types of Organization structure and associated Human Resources activities for man-power utilization	K2
CO401.4	Compare motivation theories, behavior, leadership theories and communication for effective directing	K2
CO401.5	Summarize various Controlling techniques to maintain standards in Organizations	K2
CO401.6	Relate managerial functions and knowledge on international aspect for Organizational growth	K2

#### CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program	Specific Outcom	ies
Course No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	1001	1502	1500
C401.1	K2	2	2	2	1	2		-		2	2		-	1	-	-
C401.2	K2	2	2	2	1	2	-	-	-	2	-	2	-	-	-	-
C401.3	K2	2	2	2	1	2		-	2	2	-	2	-	1	2	-
C401.4	K2	2	2	2	1	2	-	-	2	2	2	-	3	-	-	-
C401.5	K2	2	2	2	1	2		-		2	2	2	-	1	-	-
C401.6	K2	2	2	2	1	2	2	-	2	2	2	-	3	2	-	-

<u>CO402</u>

Subject Code & Name : CS8792-Cryptography and Network Security

Department: IT

Year/Sem: IV/VII

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO402.1	Summarize the fundamentals of networks security, security architecture, threats and vulnerabilities	K2
CO402.2	Summarize the mathematical support for both symmetric and asymmetric key cryptography	K2
CO402.3	Use of symmetric key cryptographic algorithms to perform cryptographic operations	K3
CO402.4	Solve cryptographic operations using public key cryptographic algorithms	K3
CO402.5	Apply the various Authentication schemes to simulate different applications	K3
CO402.6	Compare various Security practices and System security standards.	K2

#### CO & PO and PSO Mapping

	Program Outcomes															
						P	rogram	Outcom	es					Program	Specific Outcom	es
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	130-1	150-2	130-3
C402.1	K2	2	2	2	1	2	-	-	-	-	-	-	-	1	-	-
C402.2	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	-	-
C402.3	K3	3	2	2	2	3	-	-	-	-	-	-	-	-	2	-
C402.4	K3	3	2	2	2	3	-	-	-	-	-	-	-	-	-	-
C402.5	K3	3	2	2	2	3	-	-	-	-	-	-	-	1	-	-
C402.6	K2	2	2	2	1	2	-	-	-	-	-	-	-	2	-	-

<u>CO403</u>

Subject Code & Name : CS8791 -Cloud Computing

Department: IT

Year/Sem: IV/VII

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO403.1	Articulate the main concepts, key technologies, strengths and limitations of cloud computing	K2
CO403.2	Compare the key and enabling technologies that help in the development of cloud	K2
CO403.3	Use NIST cloud computing architecture to solve architecture design challenges	K3
CO403.4	Summarize the core issues of cloud computing such as resource management and security	K2
CO403.5	Install and use current cloud technologies.	K3
CO403.6	Illustrate and choose the appropriate technologies, algorithms and approaches for implementation and use of cloud	K3

## Course Outcome No.

		Differ	entiate l	between	the gene	ral purp	ose oper	ating sys	stem and	the real	l time op	erating s	system	Program	Specific Outcom	es
Course No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	150-1	150-2	150-5
C403.1	K2	2	2	2	1	2	-	-	-	-	-	-	-	1	-	-
C403.2	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	-	-

C403.3	K3	3	2	2	2	3	-	-	-	-	-	-	-	-	2	-
C403.4	K2	2	2	2	1	2	-	-	-	-	-	-	-	-	-	-
C403.5	K3	3	2	2	2	3	-	-	-	-	-	-	-	1	-	-
C403.6	K3	3	2	2	2	3	-	-	-	-	-	-	-	2	-	-

# <u>CO404</u>

Subject Code & Name :OME752-Supply Chain Management

Department: IT

Year/Sem: IV/VII

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO404.1	Illustrate the basic concepts of decision phases, drivers and apply competitive supply chain strategies.	K2
CO404.2	Analyze factors influencing network design.	K3
CO404.3	Apply the design, routing and scheduling pricriples of transportation network in supply chain.	К3
CO404.4	Summarize Sourcing and Coordination Effects of Supply Chain	К3
CO404.5	Summarize the role of Information Technolgy and analyse the Customer, Supllier Relationship Coordination in a supply	K2

#### CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program	Specific Outcom	es
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSU-3
CO404.1	K2	2	2	2	1	2	2	2	2	1	1	1	2	1	2	-
CO404.2	K3	3	2	2	2	3	-	-	-	-	-	-	-	1	2	-
CO404.3	K3	3	2	2	2	3	2	2	2	1	1	1	2	1	2	2
CO404.4	K3	3	2	2	2	3	2	2	2	1	1	1	2	1	2	
CO404.5	K2	2	2	2	1	2	2	2	2	1	1	1	2	1	2	2

#### C0405

Subject Code & Name: IT8075-Software Project Management

Department: IT

Year/Sem: IV/VII

After successful completion of the course, the students should be able to  $% \left\{ 1,2,\ldots ,n\right\}$ 

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO405.1	Summarize the software project evaluation techniques and planning	K2
CO405.2	Compare different software process models and cost estimation techniques.	К3
CO405.3	Illustrate the risk management process.	K3
CO405.4	Explain the need for Software Project Management and control.	K2
CO405.5	Summarize the organizational behavior and working in teams.	K2

## CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program	Specific Outcom	es
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	F50-1	130-2	130-3
CO405.1	K2	2	2	2	1	2	-	-	-	-	-	-	-	1	2	-
CO405.2	K3	3	2	2	2	3	-	-	-	-	-	-	-	1	2	-
CO405.3	K3	3	2	2	2	3	-	-	-	-	-	-	-	1	2	2
CO405.4	K2	2	2	2	1	2	-	-	-	-	-	-	-	1	2	
CO405.5	K2	2	2	2	1	2	-	-	-	-	-	ı	-	1	2	2

# Subject Code & Name : CS8079-Human Computer Interaction

CO406

Department: IT

Year/Sem: IV/07

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO406.1	Interpret the computer devices and HCI models.	K2
CO406.2	Summarize the interactive design basics and HCI software process.	K2
CO406.3	Analyze the stake holders requirements and choose the appropriate models.	K3
CO406.4	Develop mobile HCI using mobile elements and tools by considering mobile eco system.	K3
CO406.5	Design meaningful user interface.	K3

						P	rogram	Outcom	es					Program	Specific Outcom	es
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	150-1	F3O-2	130-3
C0406.1	K2	2	2	2	1	2	-	-	-	-	-	-	-	1	1	1
C0406.2	K2	2	2	2	1	2	-	-	-	-	-	-	-	1	2	-

C0406.3	K3	3	2	2	2	3	Í	-	-	Í	-	-	Ī	2	1	-
C0406.4	К3	3	2	2	2	3	1	-	1	1	-	1	1	2	2	1
C0406.5	K3	3	2	2	2	3	-	-	-	-	-	-	-	1	1	-

# <u>CO407</u>

Subject Code & Name : IT8711 - FOSS and Cloud Computing Laboratory

Department: IT

Year/Sem: I/I

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO407.1	Configure various virtualization tools such as Virtual Box,Vmware workstation	K2
CO407.2	Design and deploy a web application in a Paas Environment link layer	K2
CO407.3	Use cloud environment to implement new schedulers	K2
CO407.4	Develop generic cloud environment that can be used as private cloud	K3
CO407.5	Modify large data sets in a parallel environment.	K2
CO407.6	Exhibit Ethical principles in engineering practices	A3
CO407.7	Perform task as an individual and /or a team member to manage the task in time	A3
CO407.8	Express the engineering activities with effective presentation and report	A3
CO407.9	Interpret the findings with apppropriate technological/research citation	A2

#### CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program Specific Outcomes			
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3	
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSU-3	
CO407.1	K3	3	2	2	2	3	1	-	-	-	-	-	-	1	1	1	
CO407.2	K3	3	2	2	2	3	-	-	-	-	-	-	-	1	1	1	
CO407.3	K3	3	2	2	2	3	-	-	-	-	-	-	-	2	2	-	
CO407.4	K3	3	2	2	2	3	-	-	-	-	-	-	-	2	2	-	
CO407.5	K2	2	2	2	1	2	-	-	-	-	-	-	-	2	1	2	
CO407.6	A3	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	
CO407.7	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	
CO407.8	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-	
CO407.9	A2	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	

# C0408

Subject Code & Name : IT8761-Security laboratory

Department: IT

Year/Sem: I/I

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO408.1	Develop code for classical Encryption techniques to solve the problems.	K3
CO408.2	Build cryptosytems by applying symmetric and public key generation algorithms	K3
CO408.3	Construct code for authentication algorithms	K3
CO408.4	Develop a signature scheme using Digital Signature standard.	K3
CO408.5	Demonstrate the network security system using open source tools	K2
CO408.6	Exhibit Ethical principles in engineering practices	A3
CO408.7	Perform task as an individual and /or a team member to manage the task in time	A3
CO408.8	Express the engineering activities with effective presentation and report	A3
CO408.9	Interpret the findings with apppropriate technological/research citation	A2

						P	rogram	Outcom	es					Program	Specific Outcom	ies
Course No.	Level of CO	К3	K4	K4	K5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSU-3
CO408.1	K3	3	2	2	2	3	-	-	-	-	-	-	-	1	1	1
CO408.2	K3	3	2	2	2	3	-	-	-	-	-	-	-	1	1	1
CO408.3	K3	3	2	2	2	3	-	-	-	-	-	-	-	2	2	-
CO408.4	K3	3	2	2	2	3	-	-	-	-	-	-	-	2	2	-
CO408.5	K2	2	2	2	1	2	-	-	-	-	-	-	-	2	1	2
CO408.6	A3	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
CO408.7	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
CO408.8	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
CO408.9	A2	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-

#### CO409

Subject Code & Name: GE8076- Professional Ethics in Engineering

Department: IT

Year/Sem: IV/VIII

After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO409.1	Describe the human values with regard to the individual life style for the society	K1
CO409.2	Illustrate the moral issues and models of professional roles.	K2
CO409.3	Interpret code of Ethics applied in Engineering.	K2
CO409.4	Summarize the Ethical issues, responsibilities and rights in the society.	K2
CO409.5	Summarize the social responsibility on multinational corporations related to engineering.	K2

# CO & PO and PSO Mapping

						P	rogram	Outcom	es					Program Specific Outcomes			
Course No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3	
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	150-1	150-2		
C0409.1	KI	1	1	1	1	1	-	-	-	-	-	-	-	1	-	-	
C0409.2	K2	2	2	2	1	2	i	-	-	-	-	-	-	1	-	-	
C0409.3	K2	2	2	2	1	2	1	-	i	1	-	1	-	1	2	-	
C0409.4	K2	2	2	2	1	2	1	-	1	1	-	1	-	-	-	-	
C0409.5	K2	2	2	2	1	2	1	-	1	1	-	1	-	1	-	-	
								CO410									

Subject Code & Name: IT8005 Electronic Commerce

Department: IT

Year/Sem: IV/VIII

#### After successful completion of the course, the students should be able to

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO410.1	Design website using HTML CSS and JS	K4
CO410.2	Design Responsive sites	K4
CO410.3	Develop and manage web apps	K5
CO410.4	Maintain and support web apps	K4

#### CO & PO and PSO Mapping

Course No.	Level of CO					P	rogram	Outcom	es					Program Specific Outcomes			
		К3	К4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3	
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	150-1	130-2	130-3	
CO410.1	K4	-	3	3	2	-	-	-	-	-	-	-	-	1	-	-	
CO410.2	K4	-	3	3	2	-	-	-	-	-	-	-	-	-	-	-	
CO410.3	K5	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	
CO410.4	K4	-	3	3	2	-	-	-	-	-	-	-	-	-	-	-	
	•	•	•	•	•			CO411	·	•	•	•					

Subject Code & Name: IT8811 Project work

Department: IT

Year/Sem: IV/VIII

# After successful completion of the course, the students should be able to

	•	
Course Outcome No.	Course Outcome	Highest Cognitive Level
CO411.1	Identify Technically and economically feasible problems of social relevance	К3
CO411.2	Plan and build the project team with assigned responsibilities	K5
CO411.3	Identify and survey the relevant literature for getting exposed to related solutions	K4
CO411.4	Analyze, design and develop adaptable and reusable solutions of minimal complexity by using modern tools	K6
CO411.5	Implement and test solutions to trace against the user requirements	K4
C0411.6	Develop and support the solutions for better manageability of the solutions provide scope for improvability.	K5

	со кто аки 150 маррия																
						P	rogram	Outcom	es					Program Specific Outcomes			
Course No.	Level of CO	К3	K4	K4	К5	K3,K5, K6	A3	A2	A3	A3	A3	A3	A2	PSO-1	PSO-2	PSO-3	
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	rs0-1	PSO-2	rs0-3	
CO411.1	K3	3	2	2	-	3	-	-	-	-	-	-	-	1	-	-	
CO411.2	K5	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	
CO411.3	K4	-	3	3	2	-	-	-	-	-	-	-	-	-	2	-	
CO411.4	K6	-	-	-	-	-	- 1	-	-	1	-	-	-	=	-	-	
CO411.5	K4	-	3	3	2	-	-1	-	-	-	-	-	-	-	-	-	
CO411.6	K5	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	