



# JEPPIAAR INSTITUTE OF TECHNOLOGY

"Self Belief || Self Discipline || Self Respect"

REGULATIONS- 2017

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

I - VIII SEMESTERS CURRICULUM & SYLLABUS



## SEMESTER 1

S.NO	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1	HS8151	Communicative English	4	0	0	4
2	MA8151	Engineering Mathematics – I	4	0	0	4
3	PH8151	Engineering Physics	3	0	0	3
4	CY8151	Engineering Chemistry	3	0	0	3
5	GE8151	Problem Solving and Python Programming	3	0	0	3
6	GE8152	Engineering Graphics	2	0	4	4
<b>PRACTICALS</b>						
7	GE8161	Problem Solving and Python Programming Laboratory	0	0	4	2
8	BS8161	Physics and Chemistry laboratory	0	0	4	2

## SEMESTER 2

S.NO	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1	HS8251	Technical English	4	0	0	4
2	MA8251	Engineering Mathematics - II	4	0	0	4
3	PH8252	Physics for Information Science	3	0	0	3
4	BE8255	Basic Electrical, Electronics and Measurement Engineering	3	0	0	3
5	GE8291	Environmental Science and Engineering	3	0	0	3
6	CS8251	Programming in C	3	0	0	3
<b>PRACTICALS</b>						
7	GE8261	Engineering Practices Laboratory	0	0	4	2
8	CS8261	C Programming Laboratory	0	0	4	2

<b>SEMESTER 3</b>						
<b>S.NO</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>THEORY</b>						
1	MA8351	Discrete Mathematics	4	0	0	4
2	CS8351	Digital Principles and System Design	4	0	0	4
3	CS8391	Data Structures	3	0	0	3
4	CS8392	Object Oriented Programming	3	0	0	3
5	EC8395	Communication Engineering	3	0	0	3
<b>PRACTICALS</b>						
6	CS8381	Data Structures Laboratory	0	0	4	2
7	CS8383	Object Oriented Programming Laboratory	0	0	4	2
8	CS8382	Digital Systems Laboratory	0	0	4	2
9	HS8381	Interpersonal Skills/Listening & Speaking	0	0	2	1
<b>SEMESTER 4</b>						
<b>S.NO</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>THEORY</b>						
1	MA8402	Probability and Queueing Theory	4	0	0	4
2	CS8491	Computer Architecture	3	0	0	3
3	CS8492	Database Management Systems	3	0	0	3
4	CS8451	Design and Analysis of Algorithms	3	0	0	3
5	CS8493	Operating Systems	3	0	0	3
6	CS8494	Software Engineering	3	0	0	3
<b>PRACTICALS</b>						
7	CS8481	Database Management Systems Laboratory	0	0	4	2
8	CS8461	Operating Systems Laboratory	0	0	4	2
9	HS8461	Advanced Reading and Writing	0	0	2	1

SEMESTER 5						
S.NO	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1	MA8551	Algebra and Number Theory	4	0	0	4
2	CS8591	Computer Networks	3	0	0	3
3	EC8691	Microprocessors and Microcontrollers	3	0	0	3
4	CS8501	Theory of Computation	3	0	0	3
5	CS8592	Object Oriented Analysis and Design	3	0	0	3
6	OMD551	Basics of Biomedical Engineering ( <u>Open Elective I</u> )	3	0	0	3
<b>PRACTICALS</b>						
6	EC8681	Microprocessors and Microcontrollers Laboratory	0	0	4	2
7	CS8582	Object Oriented Analysis and Design Laboratory	0	0	4	2
8	CS8581	Networks Laboratory	0	0	4	2
<b>SEMESTER 6</b>						
S.NO	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1	CS8651	Internet Programming	3	0	0	3
2	CS8691	Artificial Intelligence	3	0	0	3
3	CS8601	Mobile Computing	3	0	0	3
4	CS8602	Compiler Design	3	0	2	4
5	CS8603	Distributed Systems	3	0	0	3
6	IT8076	<u>Professional Elective I - Software Testing</u>	3	0	0	3
<b>PRACTICALS</b>						
7	CS8661	Internet Programming Laboratory	0	0	4	2
8	CS8662	Mobile Application Development Laboratory	0	0	4	2
9	CS8611	Mini Project	0	0	2	1
10	HS8581	Professional Communication	0	0	2	1

<b>SEMESTER 7</b>						
<b>S.NO</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>THEORY</b>						
1	MG8591	Principles of Management	3	0	0	3
2	CS8792	Cryptography and Network Security	3	0	0	3
3	CS8791	Cloud Computing	3	0	0	3
4	OME752	Open Elective II -Supply Chain Management	3	0	0	3
5	IT8075	Professional Elective II -Software Project Management	3	0	0	3
6	CS8079	Professional Elective III -Human Computer Interaction	3	0	0	3
<b>PRACTICALS</b>						
7	CS8711	Cloud Computing Laboratory	0	0	4	2
8	IT8761	Security Laboratory	0	0	4	2
<b>SEMESTER 8</b>						
<b>S.NO</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>THEORY</b>						
1	GE8076	Professional Elective IV - Professional Ethics in Engineering	3	0	0	3
2	CS8080	Professional Elective V - Information Retrieval Techniques	3	0	0	3
<b>PRACTICALS</b>						
3	CS8811	Project Work	0	0	20	10

**SEMESTER 1**

**Course Outcome No.CO101**

Subject Code & Name : HS8151 -Communicative English

Department: CSE

Year/Sem: I/01

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 of basic grammar to enhance language for a better communication	K3, A2
CO101.2	Strengthen general comprehending skills and present lucid skills in free writing	K2, A2
CO101.3	Foster an environment for reading and develop good language skills.	A2
CO101.4	Speak, read and write effectively for a variety of professional and social settings	A2
CO101.5	Listen, comprehend and respond to different spoken and written discourses/excerpts in different accents and write different genres of texts adopting various writing strategies.	A3

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO101.1	K3, A2	-	-	-	-	-	-	-	-	-	2	-	3	-	-	-
CO101.2	K2, A2	-	-	-	-	-	-	-	-	2	2	-	3	-	-	-
CO101.3	A2	-	-	-	-	-	-	-	-	-	2	-	3	-	-	-
CO101.4	A2	-	-	-	-	-	-	-	-	-	2	-	3	-	-	-
CO101.5	A3	-	-	-	-	-	-	-	-	3	2	-	3	-	-	-
		-	-	-	-	-	-	-	-	2.5	2	-	3	-	-	-

**Course Outcome No. CO102**

Subject Code & Name : MA8151 - Engineering Mathematics – I

Department: CSE

Year/Sem: I/01

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO102.1	Apply limit definition and rules of differentiation to differentiate functions	K3
CO102.2	Associate differentiation to solve maxima and minima problems	K2
CO102.3	Explain integrals both by using Riemann sums and by using the Fundamental Theorem of Calculus Also Evaluate integrals using techniques of integration, such as substitution, partial fractions and integration by parts	K2
CO102.4	Associate integration to compute multiple integrals, area, volume, integrals in polar coordinates, in addition to change of order and change of variables	K2
CO102.5	Explain various techniques in solving differential equations	K2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
C102.1	K3	3	2	1	-	-	-	-	-	-	-	-	-	1	1	-
C102.2	K2	2	2	1	-	-	-	-	-	-	-	-	-	1	1	-
C102.3	K2	2	2	1	-	-	-	-	-	-	-	-	-	1	1	-
C102.4	K2	2	2	1	-	-	-	-	-	-	-	-	-	1	1	-
C102.5	K2	2	2	1	-	-	-	-	-	-	-	-	-	1	1	-
		2	2	1	-	-	-	-	-	-	-	-	-	1	1	-



**Course Outcome No.CO105**

Subject Code & Name : GE8151- Problem Solving and Python Programming

Department: CSE

Year/Sem: I/01

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	Develop simple python programming constructs using expressions and statements	K3
CO105.3	Examine the programs into functions using control flow	K2
CO105.4	Examine the compound data using Python lists, tuples, and dictionaries	K2
CO105.5	Develop program to read from and write data into files	K3

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO105.1	K2	2	1	1	-	-	-	-	-	-	-	-	-	1	2	-
CO105.2	K3	3	2	2	-	1	-	-	-	-	-	-	-	1	2	2
CO105.3	K2	2	2	2	1	1	-	-	-	-	-	-	-	1	2	1
CO105.4	K2	2	2	2	1	1	-	-	-	-	-	-	-	1	2	1
CO105.5	K3	3	2	2	1	1	-	-	-	-	-	-	-	1	2	2
		2.4	1.8	1.8	1	1	-	-	-	-	-	-	-	1	2	1.5

**Course Outcome No.CO106**

Subject Code & Name : GE8152 - Engineering Graphics

Department: CSE

Year/Sem: I/01

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.	K2
CO106.3	Classify solids and projection of solids at different positions.	K3
CO106.4	Show sectioned view of solids and development of surface.	K3
CO106.5	Draw isometric projection and perspective views of an object/solid.	K2
CO106.6	Apply the concept of drawing in practical applications.	K3

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO106.1	K2	2	1	-	-	-	-	-	-	-	2			1	2	1
CO106.2	K2	2	1	-	-	-	-	-	-	-	1			1	2	1
CO106.3	K3	3	2	-	-	-	-	-	-	-	3			1	2	1
CO106.4	K3	3	2	-	-	-	-	-	-	-	3			1	2	1
CO106.5	K2	2	1	-	-	-	-	-	-	-	1			1	2	1
CO106.6	K3	3	2	2	-	-	-	-	-	-	3			1	2	1
		2.5	1.5	2	-	-	-	-	-	-	2.17	-	-	1	2	1

**Course Outcome No.CO107**

Subject Code & Name : GE8161- Problem Solving and Python Programming  
Laboratory

Department: CSE

Year/Sem: I/01

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.	K2
CO107.2	Apply the concept of conditionals and loops in Python programs.	K3
CO107.3	Develop the Python programs step-wise by defining functions and calling them.	K3
CO107.4	Use Python lists, tuples, dictionaries for representing compound data.	K3
CO107.5	Read and write data from/to files in Python.	K2
CO107.6	Apply the concept of Pygame.	K3
CO107.7	Exhibit ethical principles in engineering practices.	A3
CO107.8	Perform task as an individual and / or team member to manage the task in time.	A3
CO107.9	Express the Engineering activities with effective presentation and report.	A3
CO107.10	Interpret the findings with appropriate technological / research citation.	A2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO107.1	K2	2	2	2	-	-	-	-	-	-	-	-	-	2	2	1
CO107.2	K3	3	2	2	-	3	-	-	-	-	-	-	-	2	2	1
CO107.3	K3	3	3	3	-	3	-	-	-	-	-	-	-	2	2	1
CO107.4	K3	3	2	2	-	3	-	-	-	-	-	-	-	2	2	1
CO107.5	K2	2	2	2	-	1	-	-	-	-	-	-	-	2	2	1
CO107.6	K3	3	2	2	-	3	-	-	-	-	-	-	-	-	-	
CO107.7	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	
CO107.8	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	
CO107.9	A3	-	-	-	-	-	-	-	-	-	3	-	-	-	-	
CO107.10	A2	-	-	-	-	-	-	-	-	-	-	-	3	-	-	1
		2.7	2.2	2.2	-	2.6	-	-	3.0	3.0	3.0	3.0	3.0	2.0	2.0	1.0



**Course Outcome No.CO108**

Subject Code & Name :BS8161 -Physics and Chemistry laboratory

Department: CSE

Year/Sem: I/01

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
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.	A3
CO108.12	Perform task as an individual and / or team member to manage the task in time.	A3
CO108.13	Express the Engineering activities with effective presentation and report.	A3
CO108.14	Interpret the findings with appropriate technological / research citation.	A2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes			
		K3	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				
CO108.1	K2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO108.2	K2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO108.3	K2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO108.4	K2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO108.5	K2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO108.6	K2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO108.7	K2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO108.8	K2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO108.9	K2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO108.10	K2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO108.11	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
CO108.12	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-	-
CO108.13	A3	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-
CO108.14	A2	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-
		2	1	-	-	-	-	-	3	3	3	3	3	-	-	-	-

**SEMESTER-2**

**Course Outcome No.CO109**

Subject Code & Name : HS8251 -Technical English

Department: CSE

Year/Sem: I/02

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO109.1	Reading technical texts and writing by the Pupils on area-specific texts effectively and effortlessly	K2, A2
CO109.2	Expand comprehensive skills to listen a lecture and talks in their area of specialization successfully.	K3, A2
CO109.3	Develop Formal and informal communication is easy to speak fluently and impeccably	K3, A2
CO109.4	Write job application and resume, Bio-data and Profile with cover letter	A2
CO109.5	Understand technical article, writing reports and minutes of meeting.	A2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO109.1	K2, A2	-	-	-	-	-	-	-	2	-	2	-	3	-	-	-
CO109.2	K3, A2	-	-	-	-	-	-	-	-	2	2	-	3	-	-	-
CO109.3	K3, A2	-	-	-	-	-	-	-	2	-	2	-	3	-	-	-
CO109.4	A2	-	-	-	-	-	-	-	-	2	-	2	3	-	-	-
CO109.5	A2	-	-	-	-	-	-	-	-	2	2	-	3	-	-	-
		-	-	-	-	-	-	-	2	2	2	-	3	-	-	-

**Course Outcome No.CO110**

Subject Code & Name : MA8251 -

Engineering Mathematics – II

Department: CSE

Year/Sem: I/02

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

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

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO110.1	K2	2	2	-	-	-	-	-	-	-	-	-	-	1	1	-
CO110.2	K2	2	2	-	-	-	-	-	-	-	-	-	-	1	1	-
CO110.3	K2	2	2	-	-	-	-	-	-	-	-	-	-	1	1	-
CO110.4	K2	2	2	-	-	-	-	-	-	-	-	-	-	1	1	-
CO110.5	K2	2	2	-	-	-	-	-	-	-	-	-	-	1	1	-
		2	2	-	-	-	-	-	-	-	-	-	-	1	1	-



**Course Outcome No.CO113**

Subject Code & Name : GE8291 & Environmental Science and Engineering

Department: CSE

Year/Sem: I/02

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO113.1	Interpret the basic concept of Ecosystems and Biodiversity.	K2
CO113.2	Distinguish the types of pollution and its control measures.	K2
CO113.3	Describe the importance of natural resources and Disaster management.	K2
CO113.4	Illustrate the importance of environment by assessing its impact on the human world.	K2
CO113.5	Summarize the population related issues and types of welfare programmes in the society.	K2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO113.1	K2	2	-	-	-	-	2	2		-	-	-	-	-	-	-
CO113.2	K2	2	-	-	-	-	2	2		-	-	-	-	-	-	-
CO113.3	K2	2	-	-	-	-	2	2		-	-	-	-	-	-	-
CO113.4	K2	2	-	-	-	-	2	2	2	-	-	-	-	-	-	-
CO113.5	K2	2	-	-	-	-	2	2		-	-	-	-	-	-	-
		2	-	-	-	-	2	2	2	-	-	-	-	-	-	-

**Course Outcome No.CO114**

Subject Code & Name : CS8251 & Programming in C

Department: CSE

Year/Sem: I/02

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO114.1	Describe the basic constructs and syntax of C programming	K2
CO114.2	Apply the concepts of Arrays, Strings for user defined problems.	K3
CO114.3	Develop programs using functions and pointers.	K3
CO114.4	Apply the concepts of structure and develop applications using structures.	K3
CO114.5	Explain the concepts of read and write data from/to files	K2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO114.1	K2	2	2	2	1		-	-	-	-	-	-	-	1	-	-
CO114.2	K3	3	2	2	1	1	-	-	-	-	-	-	-	1	2	-
CO114.3	K3	3	2	2	1	1	-	-	-	-	-	-	-	2	2	1
CO114.4	K3	3	2	2	1	1	-	-	-	-	-	-	-	2	2	-
CO114.5	K2	2	2	2	1	1	-	-	-	-	-	-	-	2	2	1
		2.6	2	2	1	1	-	-	-	-	-	-	-	1.6	2	1

**Course Outcome No.CO115**

Subject Code & Name : GE8261 Engineering Practices laboratory

Department: CSE

Year/Sem: I/02

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	K2
CO115.2	Use welding equipment to join the structures	K3
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	K3
CO115.8	Exhibit ethical principles in engineering practices	A3
CO115.9	Perform task as an individual and / or team member to manage the task in time	A3
CO115.10	Express the Engineering activities with effective presentation and report.	A3
CO115.11	Interpret the findings with appropriate technological / research citation.	A2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes			
		K3	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				
CO115.1	K2	2	-	2	-	2	-	-	-	-	-	-	-	-	-	-	-
CO115.2	K3	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO115.3	K3	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO115.4	K3	3	2	2	1	3	-	-	-	-	-	-	-	-	-	-	-
CO115.5	K2	2	2	2	1	3	-	-	-	-	-	-	-	-	-	-	-
CO115.6	K3	3	2		1	2	-	-	-	2	2	2	-	-	-	-	-
CO115.7	K3	3	2	2	1	3	-	-	-	3	3	3	-	-	-	-	-
CO115.8	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
CO115.9	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-	-
CO115.10	A3	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-
CO115.11	A2	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-
		2.71	2.00	2.00	1.00	2.60	-	-	3.00	2.67	2.67	2.67	3	-	-	-	-

**Course Outcome No.CO116**

Subject Code & Name : CS8261 & C Programming Laboratory

Department: CSE

Year/Sem: I/02

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO116.1	Develop C programs for simple applications by making use of basic constructs.	K3
CO116.2	Implement the concept of conditionals and loops in C programs.	K3
CO116.3	Develop the C programs with arrays and strings.	K3
CO116.4	Apply the concept of functions, recursion in C programs	K3
CO116.5	Interpret the concept of pointers, and structures in C	K3
CO116.6	Examine the use of file processing techniques.	K3
CO116.7	Exhibit ethical principles in engineering practices.	A3
CO116.8	Perform task as an individual and / or team member to manage the task in time.	A3
CO116.9	Express the Engineering activities with effective presentation and report.	A3
CO116.10	Interpret the findings with appropriate technological / research citation.	A2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO116.1	K3	3	3	3	1		-	-	-	-	-	-	1	1	1	
CO116.2	K3	3	2	2	1	2	-	-	-	-	-	-	1	2	1	
CO116.3	K3	3	3	3	1	2	-	-	-	-	-	-	1	1	2	
CO116.4	K3	3	2	2	1	2	-	-	-	-	-	-	1	2	1	
CO116.5	K3	3	3	3	1	2	-	-	-	-	-	-	1	2	1	
CO116.6	K3	3	2	2	1	2	-	-	-	-	-	-	-	1	2	
CO116.7	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	
CO116.8	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	
CO116.9	A3	-	-	-	-	-	-	-	-	-	3	-	-	-	-	
CO116.10	A2	-	-	-	-	-	-	-	-	-	-	-	3	-	-	
		3	2.5	2.5	1	2	-	-	3	3	3	3	1.33	1.50	1.33	-

**SEMESTER 3**

**Course Outcome No.CO201**

Subject Code & Name : MA8351 & Discrete Mathematics

Department: CSE

Year/Sem: II/03

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO201.1	Describe the concepts needed to test the logic of a program.	K2
CO201.2	Describe structures on many levels.	K2
CO201.3	Illustrate 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**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes			
		K3	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				
C201.1	K2	2	2	2	-	-	-	-	-	-	-	-	-	-	1	1	-
C201.2	K2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	1
C201.3	K2	2	2	2	-	-	-	-	-	-	-	-	-	-	1	1	-
C201.4	K2	2	2	2	-	-	-	-	-	-	-	-	-	-	1	1	-
C201.5	K2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	1	-
		2	2	2	-	-	-	-	-	-	-	-	-	-	1	1	-

**Course Outcome No.CO202**

Subject Code & Name : CS8351 Digital Principles and System Design

Department: CSE

Year/Sem: II/03

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO202.1	Apply Arithmetic operations in any number system and various techniques to simplify the Boolean function	K3
CO202.2	Build combinational circuits that perform arithmetic operations & code Conversions.	K3
CO202.3	Design synchronous sequential circuits.	K3
CO202.4	Design Asynchronous sequential circuits.	K3
CO202.5	Model memory arrays for any boolean function.	K2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes			
		K3	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				
CO202.1	K3	3	2	2	-	-	-	-	-	-	-	-	-	-	2	1	-
CO202.2	K3	3	2	2	-	-	-	-	-	-	-	-	-	-	2	1	-
CO202.3	K3	3	2	2	-	-	-	-	-	-	-	-	-	-	1	1	-
CO202.4	K3	3	2	2	-	-	-	-	-	-	-	-	-	-	1	1	-
CO202.5	K2	2	1	1	-	-	-	-	-	-	-	-	-	-	2	1	-
		2.8	1.8	1.8	-	-	-	-	-	-	-	-	-	-	1.6	1	-

**Course Outcome No.CO203**

Subject Code & Name : CS8391 DATA STRUCTURES

Department: CSE

Year/Sem: II/03

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO203.1	Illustrate the basic concepts of abstract data types and implement List ADT	K3
CO203.2	Implement Stack, Queue Data structures and its operations	K3
CO203.3	Illustrate the basic concepts of tree & heaps and its applications	K3
CO203.4	Implement Graph Data structures and Summarize its applications	K3
CO203.5	Summarize various searching, sorting and hashing techniques	K2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO203.1	K3	3	2	2	1	--	--	--	--	--	--	--	--	2	3	1
CO203.2	K3	3	2	2	1	--	--	--	--	--	--	--	--	2	2	1
CO203.3	K3	3	2	2	1	--	--	--	--	--	--	--	--	2	2	1
CO203.4	K3	3	2	2	1	--	--	--	--	--	--	--	--	2	3	1
CO203.5	K2	2	1	1	1	--	--	--	--	--	--	--	--	2	3	1
		2.8	1.8	1.8	1	--	--	--	--	--	--	--	--	2	2.6	1

**Course Outcome No.CO204**

Subject Code & Name : CS8392 OBJECT ORIENTED PROGRAMMING

Department: CSE

Year/Sem: II/03

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO204.1	Summarize Object Oriented Programming concepts and basic characteristics of Java	K2
CO204.2	Interpret principles of packages, inheritance and interfaces	K2
CO204.3	Interpret exceptions and use I/O streams	K2
CO204.4	Solve a java application with threads and generics classes	K3
CO204.5	Demonstrate and build simple Graphical User Interfaces	K3

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO204.1	K2	2	2	2	1	2	--	--	--	--	--	--	--	2	2	1
CO204.2	K2	2	2	2	1	2	--	--	--	--	--	--	--	2	2	1
CO204.3	K2	2	2	2	1	2	--	--	--	--	--	--	--	2	2	2
CO204.4	K3	3	2	2	2	2	--	--	--	--	--	--	--	2	2	2
CO204.5	K3	3	2	2	2	2	--	--	--	--	--	--	--	2	2	2
		2.4	2	2	1.4	2	--	--	--	--	--	--	--	2	2	1.6



**Course Outcome No.CO205**

Subject Code & Name : EC8395 COMMUNICATION ENGINEERING

Department: CSE

Year/Sem: II/03

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO205.1	Discuss about various analog modulation techniques.	K2
CO205.2	Describe various pulse modulation techniques.	K2
CO205.3	Classify different digital modulation and transmission schemes in communication.	K3
CO205.4	Analyze information theory and error control coding schemes.	K3
CO205.5	Explain about Spread spectrum and multiple access technique	K3

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes			
		K3	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				
C205.1	K2	2	2	2	2	2	-	-	-	-	-	-	-	-	-	1	2
C205.2	K2	3	2	2	2	2	-	-	-	-	-	-	-	-	-	1	2
C205.3	K3	3	2	2	3	3	-	-	-	-	-	-	-	-	-	1	2
C205.4	K3	3	3	3	2	3	-	-	-	-	-	-	-	-	-	1	2
C205.5	K3	3	2	2	3	3	-	-	-	-	-	-	-	-	-	1	2
		2.8	2.2	2.2	2.4	2.6	-	-	-	-	-	-	-	-	-	1	2

**Course Outcome No.CO206**

Subject Code & Name : CS8381 DATASTRUCTURES LABORATORY

Department: CSE

Year/Sem: II/03

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO206.1	Implement various Abstract Data Types and its operations	K2
CO206.2	Develop simple applications using various data structures	K3
CO206.3	Implement various tree operations	K3
CO206.4	Implement various graphs algorithms	K3
CO206.5	Implement various sorting and searching algorithms	K3
CO206.6	Exhibit ethical principles in engineering practices.	A3
CO206.7	Perform task as an individual and / or team member to manage the task in time.	A3
CO206.8	Express the Engineering activities with effective presentation and report.	A3
CO206.9	Interpret the findings with appropriate technological / research citation.	A2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes			
		K3	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				
CO206.1	K2	2	2	2	-	-	-	-	-	-	-	-	-	-	2	2	1
CO206.2	K3	3	2	2	-	-	-	-	-	-	-	-	-	-	2	2	1
CO206.3	K3	3	2	2	-	-	-	-	-	-	-	-	-	-	2	2	1
CO206.4	K3	3	2	2	-	-	-	-	-	-	-	-	-	-	2	2	1
CO206.5	K3	3	2	2	-	-	-	-	-	-	-	-	-	-	2	2	1
CO206.6	A3	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
CO206.7	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
CO206.8	A3	-	-	-	-	-	-	-	-	3	-	-	3	-	-	-	-
CO206.9	A2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		2.8	2	2	-	-	-	3	3	3	-	3	-	2	2	1	

**Course Outcome No.CO207**

Subject Code & Name : CS8383 OBJECT ORIENTED PROGRAMMING LABORATORY

Department: CSE

Year/Sem: II/03

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO207.1	Develop java programs using class concepts	K2
CO207.2	Implement java programs for simple application that makes use of packages and interfaces	K3
CO207.3	Develop Java programs using Arrays and Lists	K2
CO207.4	Demonstrate java programs with exception handling and multithreading	K2
CO207.5	Design application using file processing, generic programming and event handling	K3
CO207.6	Exhibit ethical principles in engineering practices.	A3
CO207.7	Perform task as an individual and / or team member to manage the task in time.	A3
CO207.8	Express the Engineering activities with effective presentation and report.	A3
CO207.9	Interpret the findings with appropriate technological / research citation.	A2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes			
		K3	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				
CO207.1	K2	3	2	2	1	1									2	2	1
CO207.2	K3	3	2	2	1	1									2	2	1
CO207.3	K2	3	2	2	1	1									2	2	1
CO207.4	K2	3	2	2	1	1									2	2	1
CO207.5	K3	3	2	2	1	1									2	2	1
CO207.6	A3	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
CO207.7	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
CO207.8	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-	-
CO207.9	A2	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
		3	2	2	1	1	-	3	3	3	3	3	-	2	2	1	

**Course Outcome No.CO208**

Subject Code & Name : CS882 DIGITAL SYSTEM LABORATORY

Department: CSE

Year/Sem: II/03

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO208.1	Interpret Combinational circuits Using Logic gates.	K3
CO208.2	Illustrate Combinational circuits Using MSI Devices.	K3
CO208.3	Practice various counters using Flip-flops.	K3
CO208.4	Practice shift registers using Flip-flops	K3
CO208.5	Solve verilog codes for the design of digital circuits.	K3
CO208.6	Demonstrate simple digital system.	K3
CO208.7	Exhibit ethical principles 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

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes			
		K3	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				
CO208.1	K3	3	2	2	-	-	-	-	-	-	-	-	-	-	1	-	-
CO208.2	K3	3	2	2	-	-	-	-	-	-	-	-	-	-	1	-	-
CO208.3	K3	3	2	2	-	-	-	-	-	-	-	-	-	-	1	-	-
CO208.4	K3	3	2	2	-	-	-	-	-	-	-	-	-	-	1	-	-
CO208.5	K3	3	2	2	-	-	-	-	-	-	-	-	-	-	1	-	-
CO208.6	K3	3	2	2	-	-	-	-	-	-	-	-	-	-	1	-	-
CO208.7	A3	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
CO208.8	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
CO208.9	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-	-
CO208.10	A2	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
		3	2	2	-	-	-	3	3	3	3	3	3	-	1	-	-

**Course Outcome No.CO209**

Subject Code & Name :HSS381/INTERPERSONNEL SKILL/LISTENING AND SPEAKING

Department: CSE

Year/Sem: II/03

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO209.1	Listen and respond appropriately.	K2
CO209.2	Participate in group discussions	K3
CO209.3	Make effective presentations	K3
CO209.4	Participate confidently and appropriately in conversations both formal and informal	K3
CO209.5	Exhibit ethical principles in engineering practices	A3
CO209.6	Perform task as an individual and / or team member to manage the task in time	A3
CO209.7	Express the Engineering activities with effective presentation and report.	A3
CO209.8	Interpret the findings with appropriate technological / research citation.	A2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes			
		K3	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				
CO209.1	K2	2	1	1	1	1	-	-	-	-	2	-	-	1	2		
CO209.2	K3	3	2	2	2	1	-	-	-	-	2	-	-	2	3		
CO209.3	K3	3	2	2	2	1	-	-	-	-	2	-	-	2	3		
CO209.4	K3	3	2	2	2	1	-	-	-	-	2	-	-	2	3		
CO209.5	A3	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
CO209.6	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
CO209.7	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-	-
CO209.8	A2	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
		2.75	1.75	1.75	1.75	1	-	3	3	3	2.2	3	-	1.75	2.75	-	-

**SEMESTER 4**

**Course Outcome No.CO210**

Subject Code & Name : MA8402 -PROBABILITY AND QUEUING THEORY

Department: CSE

Year/Sem: II/04

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO210.1	Develop the fundamental knowledge of the concepts of probability and have knowledge of standard distributions which can describe real life phenomenon.	K3
CO210.2	Describe the basic concepts of one and two dimensional random variables which used in engineering applications.	K2
CO210.3	Demonstrate the concept of random processes in engineering disciplines.	K2
CO210.4	Apply the concept of Queuing Models in real life problem.	K3
CO210.5	Interpret the various series queues and open Jackson Network.	K2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes			
		K3	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				
CO210.1	K3	3	2	2	-	-	-	-	-	-	-	-	-	-	2	2	-
CO210.2	K2	2	2	2	-	-	-	-	-	-	-	-	-	-	2	2	-
CO210.3	K2	2	2	2	-	-	-	-	-	-	-	-	-	-	2	2	-
CO210.4	K3	3	2	2	-	-	-	-	-	-	-	-	-	-	2	2	-
CO210.5	K2	2	2	2	-	-	-	-	-	-	-	-	-	-	2	2	-
		2.4	2	2	-	-	-	-	-	-	-	-	-	-	2	2	-

**Course Outcome No.CO211**

Subject Code & Name : CS8491/ COMPUTER ARCHITECTURE

Department: CSE

Year/Sem: II/04

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO211.1	Explain the basics structure of computers, operations and instructions.	K2
CO211.2	Apply the arithmetic algorithms to design Arithmetic and Logic Unit	K3
CO211.3	Discuss about the concepts of pipelined execution and control unit	K2
CO211.4	Outline the parallel processing architectures	K2
CO211.5	Predict the memory systems and input-output communication.	K2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO211.1	K2	2	2	2	-	-	-	-	-	-	-	-	-	1	2	1
CO211.2	K3	3	2	2	-	-	-	-	-	-	-	-	-	1	2	1
CO211.3	K2	2	2	2	-	-	-	-	-	-	-	-	-	1	2	1
CO211.4	K2	2	2	2	-	-	-	-	-	-	-	-	-	1	2	1
CO211.5	K2	2	2	2	-	-	-	-	-	-	-	-	-	1	2	1
		2.2	2	2	-	-	-	-	-	-	-	-	-	1	2	-

**Course Outcome No.CO212**

Subject Code & Name : CS8492 -DATABASE MANAGEMENT SYSTEMS

Department: CSE

Year/Sem: II/04

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO212.2	Describe the fundamental concepts of relational database and SQL.	K2
CO212.2	Illustrate and Use ER model for Relational model mapping to perform database design effectively.	K3
CO212.3	Discuss the concepts of transaction processing and concurrency control.	K2
CO212.4	Outline the various internal storage structure and optimization techniques.	K2
CO212.5	Examine the advanced concepts of security in databases systems.	K2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes			
		K3	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				
CO212.1	K2	2	2	2	1	-	-	-	-	-	-	-	-	-	1	2	2
CO212.2	K3	3	2	2	1	-	-	-	-	-	-	-	-	-	2	2	2
CO212.3	K2	2	2	2	1	-	-	-	-	-	-	-	-	-	1	2	2
CO212.4	K2	2	2	2	1	-	-	-	-	-	-	-	-	-	2	2	2
CO212.5	K2	2	2	2	1	-	-	-	-	-	-	-	-	-	1	2	2
		2.2	2	2	1	-	-	-	-	-	-	-	-	-	1.4	2	2

**Course Outcome No.CO213**

Subject Code & Name : CS8451/DESIGN AND ANALYSIS OF ALGORITHM

Department: CSE

Year/Sem: II/04

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.	K2
CO213.2	Apply brute force and divide and conquer technique for the given real time problem.	K3
CO213.3	Apply dynamic programming and greedy technique for the given real time problem	K3
CO213.4	Demonstrate iterative improvement design technique for various computing problems	K3
CO213.5	Apply approximation algorithm and demonstrate branch and bound and backtracking techniques for the given real time problem	K3

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes			
		K3	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				
CO213.1	K2	2	2	2	1	-	-	-	-	-	-	-	-	-	1	2	1
CO213.2	K3	3	2	2	1	-	-	-	-	-	-	-	-	-	1	2	1
CO213.3	K3	3	2	2	1	-	-	-	-	-	-	-	-	-	1	2	1
CO213.4	K3	3	2	2	1	-	-	-	-	-	-	-	-	-	1	2	1
CO213.5	K3	3	2	2	1	-	-	-	-	-	-	-	-	-	1	2	1
		2.8	2	2	1	-	-	-	-	-	-	-	-	-	1	2	1

**Course Outcome No.CO214**

Subject Code & Name : CS8493 -OPERATING SYSTEMS

Department: CSE

Year/Sem: II/04

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO214.1	Illustrate the operating system basic concepts, System call, structure and its functionalities.	K2
CO214.2	Apply various CPU scheduling algorithms for problems and Outline the needs and applications of process synchronization.	K3
CO214.3	Identify the issues in memory management and Demonstrate the usage of various memory management schemes	K2
CO214.4	Encapsulate the concepts of Mass Storage Structure, File System Structure and I/O Systems.	K2
CO214.5	Implement administrative tasks on Linux servers	K3

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO214.1	K2	2	2	1	1	1	-	-	-	-	-	-	-	1	2	2
CO214.2	K3	3	2	2	1	2	-	-	-	-	-	-	-	1	2	1
CO214.3	K2	2	2	1	1	1	-	-	-	-	-	-	-	1	2	1
CO214.4	K2	2	2	1	1	2	-	-	-	-	-	-	-	1	2	1
CO214.5	K3	3	2	3	1	2	-	-	-	-	-	-	-	1	2	1
		2.4	2	1.6	1	1.6	-	-	-	-	-	-	-	1	2	1.2

**Course Outcome No.CO215**

Subject Code & Name : CS8494 - SOFTWARE ENGINEERING

Department: CSE

Year/Sem: II/04

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO215.1	Identify the key activities in managing a software project and recognize different process model.	K2
CO215.2	Explain the concepts of requirements engineering and Analysis Modeling.	K2
CO215.3	Outline the systematic procedures for software design and deployment.	K2
CO215.4	Compare various testing and maintenance methods	K3
CO215.5	Interpret the project schedule, estimate project cost and effort required.	K2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO215.1	K2	2	2	1	-	-	-	-	-	-	-	-	-	2	2	1
CO215.2	K2	2	2	1	-	-	-	-	-	-	-	-	-	2	2	1
CO215.3	K2	3	2	1	-	-	-	-	-	-	-	-	-	2	2	1
CO215.4	K3	3	2	2	-	-	-	-	-	-	-	-	-	2	2	2
CO215.5	K2	3	2	1	-	-	-	-	-	-	-	-	-	2	2	1
		2.6	2	1.2	-	-	-	-	-	-	-	-	-	2	2	1.2

**Course Outcome No.CO216**

Subject Code & Name : CS8481/DATABASE MANAGEMENT SYSTEMS  
LABORATORY

Department: CSE

Year/Sem: II/04

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO216.1	Compute typical data definitions and manipulation commands.	K3
CO216.2	Design applications to test Nested and Join Queries.	K3
CO216.3	Implement simple applications that use Views.	K2
CO216.4	Design and implement database using ER model and normalization to design and implement database.	K2
CO216.5	Implement applications that require a Front-end Tool.	K3
CO216.6	Exhibit ethical principles in engineering practices.	A3
CO216.7	Perform task as an individual and / or team member to manage the task in time.	A3
CO216.8	Express the Engineering activities with effective presentation and report.	A3
CO216.9	Interpret the findings with appropriate technological / research citation.	A2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO216.1	K3	3	2	2	-	-	-	-	-	-	-	-	-	1	2	1
CO216.2	K3	3	2	2	-	-	-	-	-	-	-	-	-	1	2	1
CO216.3	K2	2	1	1	-	-	-	-	-	-	-	-	-	2	1	1
CO216.4	K2	2	1	1	-	-	-	-	-	-	-	-	-	1	1	1
CO216.5	K3	3	2	2	-	-	-	-	-	-	-	-	-	2	2	2
CO216.6	A3	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
CO216.7	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
CO216.8	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
CO216.9	A2	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
		2.6	1.6	1.6	-	-	-	3	3	3	3	3	-	1.4	1.6	1.2

**Course Outcome No.CO217**

Subject Code & Name : CS8461/OPERATING SYSTEM LAB

Department: CSE

Year/Sem: II/04

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO217.1	Illustrate the various CPU scheduling algorithms.	K2
CO217.2	Implement deadlock avoidance and detection algorithms.	K3
CO217.3	Implement semaphore concepts.	K3
CO217.4	Create processes and implement IPC.	K3
CO217.5	Analyze the performance of the various page replacement algorithms.	K3
CO217.6	Exhibit ethical principles in engineering practices.	A3
CO217.7	Perform task as an individual and / or team member to manage the task in time.	A3
CO217.8	Express the Engineering activities with effective presentation and report.	A3
CO217.9	Interpret the findings with appropriate technological / research citation.	A2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO217.1	K2	3	2	2	-	-	-	-	-	-	-	-	-	2	2	1
CO217.2	K3	3	2	2	-	-	-	-	-	-	-	-	-	3	2	1
CO217.3	K3	3	2	2	-	-	-	-	-	-	-	-	-	3	2	1
CO217.4	K3	3	2	2	-	-	-	-	-	-	-	-	-	3	2	1
CO217.5	K3	3	2	2	-	-	-	-	-	-	-	-	-	3	2	1
CO217.6	A3	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
CO217.7	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
CO217.8	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
CO217.9	A2	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
		3	2	2	-	-	-	3	3	3	3	3	-	2.8	2	1

**Course Outcome No.CO218**

Subject Code & Name : HS8461/ADVANCED READING AND WRITING

Department: CSE

Year/Sem: II/04

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO218.1	Strengthen the reading skills.	A1
CO218.2	Enhance the technical writing skills.	K2,A2
CO218.3	Perform critical thinking in various professional contexts.	A2
CO218.4	Develop proposal writing skills.	K3
CO218.5	Write winning job applications.	A2
CO218.6	Exhibit ethical principles in engineering practices.	A3
CO218.7	Perform task as an individual and / or team member to manage the task in time.	A3
CO218.8	Express the Engineering activities with effective presentation and report.	A3
CO218.9	Interpret the findings with appropriate technological / research citation.	A2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO218.1	A1	-	-	-	-	-	-	-	-	2	3	-	3	1	1	-
CO218.2	K2,A2	-	-	-	-	-	-	-	-	2	2	-	2	1	1	-
CO218.3	A2	-	-	-	-	-	-	-	-	2	3	-	3	1	1	-
CO218.4	K3	-	-	-	-	-	-	-	-	2	2	-	3	1	1	-
CO218.5	A2	-	-	-	-	-	-	-	-	3	2	-	3	2	2	-
CO218.6	A3	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
CO218.7	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
CO218.8	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
CO218.9	A2	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-
		-	-	-	-	-	-	3.00	3.00	2.33	2.50	3.00	2.80	1.20	1.20	-

## SEMESTER 5

## Course Outcome No.CO301

Subject Code &amp; Name : MA8551/ALGEBRA AND NUMBER THEORY

Department: CSE

Year/Sem: III/05

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO301.1	Summarize the notations and properties of algebraic structures such as groups, rings and fields	K2
CO301.2	Explain the concepts of finite fields and polynomials to solve problems in advanced algebra.	K2
CO301.3	Associate the applications of divisibility theory and canonical decompositions.	K2
CO301.4	Describe the concept of Diophantine equations and congruences and exhibit the efficient use of advanced algebraic techniques in number theory.	K2
CO301.5	Extend the concepts of multiplicative functions and classical theorems. Also Associate the knowledge of integrated approach to Number theory and abstract algebra.	K2

## CO &amp; PO and PSO Mapping

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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	K2	2	2	1	--	--	--	--	--	--	--	--	--	1	1	--
CO301.2	K2	2	2	1	--	--	--	--	--	--	--	--	--	1	1	--
CO301.3	K2	2	2	1	--	--	--	--	--	--	--	--	--	1	1	--
CO301.4	K2	2	2	1	--	--	--	--	--	--	--	--	--	1	1	--
CO301.5	K2	2	2	1	--	--	--	--	--	--	--	--	--	1	1	--
		2	2	1	--	--	--	--	--	--	--	--	--	1	1	--

## Course Outcome No.CO302

Subject Code &amp; Name : CS8591 &amp; COMPUTER NETWORKS

Department: CSE

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	Identify various layers of network and discuss the functions of physical layer.	K2
CO302.2	Discuss how data flows from one node to another node with regard to data link layer.	K2
CO302.3	Explain the different services of network layer.	K2
CO302.4	Compare the different transport layer protocols and their applicability based on user requirements.	K3
CO302.5	Describe the working of various application layer protocols.	K2

## CO &amp; PO and PSO Mapping

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO302.1	K2	2	2	1	--	--	--	--	--	--	--	--	--	1	2	2
CO302.2	K2	2	2	1	--	--	--	--	--	--	--	--	--	1	2	2
CO302.3	K2	2	2	1	--	--	--	--	--	--	--	--	--	1	2	2
CO302.4	K3	3	2	2	--	--	--	--	--	--	--	--	--	1	2	2
CO302.5	K2	2	2	1	--	--	--	--	--	--	--	--	--	1	2	2
		2.2	2	1.2	--	--	--	--	--	--	--	--	--	1	2	2



**Course Outcome No.CO303**

Subject Code & Name : EC8691 & MICROPROCESSOR AND MICROCONTROLLER

Department: CSE

Year/Sem: III/05

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

Course Outcome No.	Course Outcome	Highest Cognitive
CO303.1	Discuss about internal architecture of 8086 Microprocessor	K2
CO303.2	Discuss about system bus structure of 8086 Microprocessor	K2
CO303.3	Explain the various interfacing modules with 8086 Microprocessor	K2
CO303.4	Illustrate the architecture of 8051 microcontroller	K3
CO303.5	Explain about various interfacing modules with 8051 microcontroller	K2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
C303.1	K2	2	1	1	--	2	--	--	--	--	--	--	--	1	2	--
C303.2	K2	2	1	1	--	2	--	--	--	--	--	--	--	1	2	--
C303.3	K2	2	1	1	--	2	--	--	--	--	--	--	--	1	2	--
C303.4	K3	3	2	2	--	3	--	--	--	--	--	--	--	1	2	--
C303.5	K2	2	1	1	--	2	--	--	--	--	--	--	--	1	2	--
4		2.2	1.2	1.2	--	2.2	--	--	--	--	--	--	--	1	2	--

**Course Outcome No.CO304**

Subject Code & Name : CS8501 & THEORY OF COMPUTATION

Department: CSE

Year/Sem: III/05

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO304.1	Illustrate the concept of automata, regular expression for any pattern to get the specified transition diagram.	K3
CO304.2	Discover various model using the regular expression for any pattern.	K3
CO304.3	Demonstrate Context free grammar for any construct and to design the parse tree for the given grammar.	K3
CO304.4	Solve simple computational problems by using Turing machine.	K3
CO304.5	Discuss decidable and undecidable problems, solvable and unsolvable problems to solve the NP complete.	K2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO304.1	K3	3	2	2	1	--	--	--	--	--	--	--	--	1	2	--
CO304.2	K3	3	2	2	1	--	--	--	--	--	--	--	--	1	2	--
CO304.3	K3	3	2	2	1	--	--	--	--	--	--	--	--	1	2	--
CO304.4	K3	3	2	2	1	--	--	--	--	--	--	--	--	1	2	--
CO304.5	K2	2	1	1	--	--	--	--	--	--	--	--	--	1	2	--
		2.8	1.8	1.8	1	--	--	--	--	--	--	--	--	1	2	--

**Course Outcome No.CO305**

Subject Code & Name : CS8592/ OBJECT ORIENTED ANALYSIS & DESIGN

Department: CSE

Year/Sem: III/V

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO305.1	Explain about the fundamentals of object modeling and differentiate Unified Process from other approaches.	K2
CO305.2	Apply the different static UML diagrams for the given scenario.	K3
CO305.3	Discover the UML dynamic and implementation diagrams with an example.	K3
CO305.4	Interpret the UML based software design into pattern based design.	K2
CO305.5	Discuss the various testing methodologies for Object Oriented software.	K2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO305.1	K2	2	1	1	--	--	--	--	--	--	--	--	--	1	2	1
CO305.2	K3	3	2	2	1	--	--	--	--	--	--	--	--	2	1	2
CO305.3	K3	3	2	2	1	--	--	--	--	--	--	--	--	1	1	2
CO305.4	K2	2	1	1	--	--	--	--	--	--	--	--	--	1	1	1
CO305.5	K2	2	1	1	--	--	--	--	--	--	--	--	--	1	1	1
		2.4	1.4	1.4	1	--	--	--	--	--	--	--	--	1.2	1.2	1.4

**Course Outcome No. CO306**

Subject Code & Name : OMD51&Basics of Biomedical Engineering

Department: CSE

Year/Sem: I/I

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO306.1	Outline different biopotential electrode and its propagation mechanism.	K2
CO306.2	Demonstrate different types of electrodes and its placement for various recording.	K2
CO306.3	Apply the concept of bioamplifier for various physiological recording.	K3
CO306.4	Analyze the different measurement technique for non physiological parameters.	K3
CO306.5	Categorize the different types biochemical measurements.	K3

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO306.1	K2	2	2	1	--	--	--	--	--	--	--	--	--	--	2	--
CO306.2	K2	2	2	1	--	--	--	--	--	--	--	--	--	1	--	--
CO306.3	K3	3	2	1	--	--	--	--	--	--	--	--	--	--	--	--
CO306.4	K3	3	2	1	--	--	--	--	--	--	--	--	--	2	--	--
CO306.5	K3	3	2	1	--	--	--	--	--	--	--	--	--	--	--	--
		2.6	2	1	--	--	--	--	--	--	--	--	--	1.5	2	--

**Course Outcome No. CO307**

Subject Code & Name : EC681 / Microprocessors and Microcontrollers Laboratory Department: CSE

Year/Sem:III/V

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO307.1	Write and execute ALP Program using Microprocessor	K2
CO307.2	Interface different I/O's with Microprocessor	K3
CO307.3	Generate waveforms using Microprocessor	K3
CO307.4	Execute programs in 8051 Microcontroller	K2
CO307.5	Develop a program to communicate Microprocessor with Personal Computer	K3
CO307.6	Use a combination of Hardware and software to solve a real time problem	K3
CO307.7	Exhibit ethical principles in engineering practices	A3
CO307.8	Perform task as an individual and / or team member to manage the task in time	A3
CO307.9	Express the Engineering activities with effective presentation and report.	A3
CO307.10	Interpret the findings with appropriate technological / research citation.	A2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO307.1	K2	2	1	1	1	1	-	-	-	-	2	-	-	1	-	1
CO307.2	K3	3	2	2	2	1	-	-	-	-	2	-	-	1	-	1
CO307.3	K3	3	2	2	2	1	-	-	-	-	2	-	-	1	-	1
CO307.4	K2	2	1	1	1	1	-	-	-	-	2	-	-	1	-	-
CO307.5	K3	3	2	2	2	1	-	-	-	-	2	-	-	1	-	-
CO307.6	K3	3	2	2	2	1	-	-	-	-	2	-	-	1	-	-
CO307.7	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
CO307.8	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
CO307.9	A3	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
CO307.10	A2	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
		2.67	1.67	1.67	1.67	1.00	-	-	3.00	3.00	2.14	3.00	3.00	1.00	-	1.00

**Course Outcome No. CO308**

Subject Code & Name : CS8582 & Object Oriented Analysis and Design Laboratory Department: CSE

Year/Sem: I/I

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO308.1	Explain Object Oriented analysis and design concept for a given problem specification	K2
CO308.2	Identify and map basic software requirements in UML mapping	K2
CO308.3	Differentiate the interaction between objects and represent them using UML Sequence and Collaboration Diagrams for the given scenario	K2
CO308.4	Predict the software quality using design patterns	K2
CO308.5	Examine the modified system and test it for various scenarios	K3
CO308.6	Exhibit ethical principles in engineering practices	A3
CO308.7	Perform task as an individual and / or team member to manage the task in time	A3
CO308.8	Express the Engineering activities with effective presentation and report.	A3
CO308.9	Interpret the findings with appropriate technological / research citation.	A2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO308.1	K2	2	2	1	-	-	-	-	-	-	-	-	-	2	1	1
CO308.2	K2	2	2	1	-	-	-	-	-	-	-	-	-	2	1	1
CO308.3	K2	2	2	1	-	-	-	-	-	-	-	-	-	2	1	1
CO308.4	K2	2	2	1	-	-	-	-	-	-	-	-	-	1	1	2
CO308.5	K3	3	2	1	1	-	-	-	-	-	-	-	-	1	1	2
CO308.6	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
CO308.7	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
CO308.8	A3	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
CO308.9	A2	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
		2.2	2	1	1	-	-	-	3	3	3	3	3	1.6	1	1.4

**Course Outcome No. CO309**

Subject Code & Name : CS8581 / Networks Laboratory

Department: CSE

Year/Sem: III/05

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO309.1	Implement various protocols using TCP and UDP	K3
CO309.2	Compare the performance of different transport layer protocols	K3
CO309.3	Use simulation tools to analyze the performance of various network protocols	K3
CO309.4	Analyze various routing algorithms	K3
CO309.5	Implement error correction codes	K3
CO309.6	Illustrate Network simulator (NS) and Simulate Congestion Control Algorithms using NS	A3
CO309.7	Exhibit ethical principles in engineering practices	A3
CO309.8	Perform task as an individual and / or team member to manage the task in time	A3
CO309.9	Express the Engineering activities with effective presentation and report.	A3
CO309.10	Interpret the findings with appropriate technological / research citation.	A2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes			
		K3	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				
CO309.1	K3	3	2	2	-	2	-	-	-	-	-	-	-	-	2	1	1
CO309.2	K3	3	1	1	-	1	-	-	-	-	-	-	-	-	2	1	1
CO309.3	K3	3	2	2	-	1	-	-	-	-	-	-	-	-	2	1	1
CO309.4	K3	3	2	2	-	2	-	-	-	-	-	-	-	-	2	1	1
CO309.5	K3	3	2	2	-	1	-	-	-	-	-	-	-	-	2	1	1
CO309.6	A3	3	2	2	-	3	-	-	-	-	-	-	-	-	2	1	1
CO309.7	A3	-	-	-	-	-	-	-	3						-	-	-
CO309.8	A3	-	-	-	-	-	-	-	-	3			3		-	-	-
CO309.9	A3	-	-	-	-	-	-	-	-	-	3				-	-	-
CO309.10	A2	-	-	-	-	-	-	-	-	-	-		3		-	-	-
		3	1.83	1.83	-	1.67	-	-	3	3	3	3	3	3	2	1	1

**SEMESTER 6**

**Course Outcome No.CO310**

Subject Code & Name : CS8651 & Internet Programming

Department: CSE

Year/Sem: III/06

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO310.1	Interpret a basic website using HTML and cascading style sheets	K2
CO310.2	Demonstrate dynamic web page with validation using javascript objects and by applying different event handling mechanisms	K3
CO310.3	Develop Server side programs using servlets and JSP	K2
CO310.4	Design Simple web pages in PHP and to present data in XML format	K3
CO310.5	Illustrate rich client presentation using AJAX	K3

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO310.1	K2	2	2	2	1	1	-	-	-	-	-	-	-	2	2	2
CO310.2	K3	3	2	2	1	1	-	-	-	-	-	-	-	3	3	2
CO310.3	K2	2	2	2	2	2	-	-	-	-	-	-	-	2	2	2
CO310.4	K3	3	2	2	2	2	-	-	-	-	-	-	-	3	3	2
CO310.5	K3	3	2	2	2	2	-	-	-	-	-	-	-	3	3	2
		2.6	2	2	1.6	1.6	-	-	-	-	-	-	-	2.6	2.6	2

**Course Outcome No. CO311**

Subject Code & Name : CS8691 & Artificial Intelligence

Department: CSE

Year/Sem: III/06

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO311.1	Determine and formulate a given A.I. problem that an Intelligent System must solve.	K2
CO311.2	Describe the role of heuristics and solve various types of search problems.	K3
CO311.3	Prepare for the ability to explore a variety of representational formalisms and associated algorithms.	K2
CO311.4	Illustrate the complications of planning and intelligent agents acting in the Real world.	K2
CO311.5	Demonstrate the fundamental concepts of machine learning and its related algorithms in the applications of NLP and agent design.	K2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO311.1	K2	2	2	1	-	-	-	-	-	-	-	-	-	1	1	1
CO311.2	K3	3	2	2	-	-	-	-	-	-	-	-	-	2	2	1
CO311.3	K2	2	2	1	-	-	-	-	-	-	-	-	-	1	1	1
CO311.4	K2	2	2	1	-	-	-	-	-	-	-	-	-	1	1	2
CO311.5	K2	2	2	1	-	-	-	-	-	-	-	-	-	1	1	2
		2.2	2	1.2	-	-	-	-	-	-	-	-	-	1.2	1.2	1.4

**Course Outcome No.CO312**

Subject Code & Name : CS8601 & Mobile Computing

Department: CSE

Year/Sem: III/06

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO312.1	Summarize the basic concepts of mobile computing and MAC protocol.	K2
CO312.2	Describe the required functionality at each layer for given application.	K2
CO312.3	Explain the basics of mobile telecommunication system	K2
CO312.4	Identify routing protocols for adhoc networks	K3
CO312.5	Experiment various mobile applications and m-commerce payment modules.	K3

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO312.1	K2	2	2	1	-	-	-	-	-	-	-	-	-	2	3	-
CO312.2	K2	2	2	1	-	-	-	-	-	-	-	-	-	2	2	1
CO312.3	K2	2	2	1	-	-	-	-	-	-	-	-	-	2	2	2
CO312.4	K3	3	2	2	-	-	-	-	-	-	-	-	-	2	3	-
CO312.5	K3	3	2	2	-	-	-	-	-	-	-	-	-	2	3	2
		2.4	2	1.4	-	-	-	-	-	-	-	-	-	2	2.6	1.67

**Course Outcome No.CO313**

Subject Code & Name : CS8602 & Compiler Design

Department: CSE

Year/Sem: III/06

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO313.1	Implement the functionalities of lexical analysis phase like conversion of regular expression to DFA and minimization of DFA.	K2
CO313.2	Construct parsers like top-down ,bottom-up with an understanding of Context Free Grammars.	K3
CO313.3	Develop semantic analyzers for type-checking and intermediate code generators to translate the source program into an intermediate code.	K3
CO313.4	Describe the issues in Code Generation and Storage Organization.	K2
CO313.5	Apply the various optimization techniques to Optimize the target code.	K3

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO313.1	K2	2	1	1	-	-	-	-	-	-	2	-	1	2	1	1
CO313.2	K3	3	2	2	-	-	-	-	-	-	-	-	-	3	2	2
CO313.3	K3	3	2	2	-	-	-	-	-	-	-	-	-	3	2	2
CO313.4	K2	2	1	1	-	-	-	-	-	-	1	-	-	2	1	1
CO313.5	K3	3	2	2	-	-	-	-	-	-	2	-	1	3	2	2
		2.6	1.6	1.6	-	-	-	-	-	-	-	-	1	2.6	1.6	1.6

**Course Outcome No.CO314**

Subject Code & Name : CS8603 & Distributed Systems

Department: CSE

Year/Sem: III/06

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO314.1	Describe the foundations and issues of distributed systems.	K2
CO314.2	Summarize the various synchronization issues and global state of distributed systems.	K2
CO314.3	Interpret the mutual exclusion and deadlock detection algorithms in distributed systems.	K2
CO314.4	Illustrate the agreement protocols and fault tolerance mechanism in distributed systems.	K2
CO314.5	Explain the features of peer to peer and distributed shared memory system.	K2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes			
		K3	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				
CO314.1	K2	2	1	1	1	-	-	-	-	-	-	-	-	-	1	1	1
CO314.2	K2	2	1	1	1	-	-	-	-	-	-	-	-	-	1	1	1
CO314.3	K2	2	1	1	-	-	-	-	-	-	-	-	-	-	2	1	2
CO314.4	K2	2	1	1	-	-	-	-	-	-	-	-	-	-	1	1	1
CO314.5	K2	2	1	1	-	-	-	-	-	-	-	-	-	-	1	1	1
		2	1	1	1	-	-	-	-	-	-	-	-	-	1.2	1	1.2

**Course Outcome No. CO315**

Subject Code & Name : IT8076 & Software Testing

Department: CSE

Year/Sem: III/06

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO315.1	Explain about Software testing principles and the Defect Repository and Test Design	K2
CO315.2	Predict test cases suitable for a software development for different domains	K2
CO315.3	Outline the various levels of testing	K2
CO315.4	Summarize, how to document test plans and test cases designed	K2
CO315.5	Demonstrate the use of automatic testing tools, develop and validate a test plan.	K3

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO315.1	K2	2	1	1	-	-	-	-	-	-	-	-	-	2	1	1
CO315.2	K2	2	1	1	-	-	-	-	-	-	-	-	-	1	2	2
CO315.3	K2	2	1	1	-	-	-	-	-	-	-	-	-	1	1	1
CO315.4	K2	2	1	1	-	-	-	-	-	-	-	-	-	1	1	1
CO315.5	K3	3	2	2	1	-	-	-	-	-	-	-	-	1	1	1
		2.2	1.2	1.2	1	-	-	-	-	-	-	-	-	1.2	1.2	1.2

**Course Outcome No.CO316**

Subject Code & Name : CS8661 & Internet Programming Laboratory

Department: CSE

Year/Sem: III/06

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO316.1	Design web pages using HTML/XML and style sheets	K3
CO316.2	Create dynamic web pages with validation using JavaScript objects and by applying different event handling mechanisms.	K3
CO316.3	create dynamic web pages using server side scripting	K3
CO316.4	Demonstrate PHP programming to develop web applications.	K3
CO316.5	Create web applications using AJAX and web services.	K3
CO316.6	Exhibit ethical principles in engineering practices.	A3
CO316.7	Perform task as an individual and / or 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 appropriate technological / research citation.	A2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO316.1	K3	3	2	2	-	2	-	-	-	-	-	-	-	1	2	2
CO316.2	K3	3	2	2	-	2	-	-	-	-	-	-	-	2	2	2
CO316.3	K3	3	2	2	-	2	-	-	-	-	-	-	-	2	1	1
CO316.4	K3	3	2	2	-	2	-	-	-	-	-	-	-	2	2	2
CO316.5	K3	3	2	2	-	2	-	-	-	-	-	-	-	2	1	1
CO316.6	A3	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
CO316.7	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
CO316.8	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
CO316.9	A2	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
		3	2	2	-	2	-	3	3	3	3	3	-	1.8	1.6	1.6

**Course Outcome No. CO317**

Subject Code & Name : CS8662 & Mobile Application Development Laboratory

Department: CSE

Year/Sem: III/06

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO317.1	Demonstrate the architecture of mobile application development frameworks	K3
CO317.2	Predict the required architecture based upon the mobile application to be developed	K2
CO317.3	Discover mobile applications using various layout and widgets.	K3
CO317.4	Apply various mobile applications using emulators	K3
CO317.5	Apply applications to hand-held devices	K3
CO317.6	Exhibit ethical principles in engineering practices.	A3
CO317.7	Perform task as an individual and / or team member to manage the task in time.	A3
CO317.8	Express the Engineering activities with effective presentation and report.	A3
CO317.9	Interpret the findings with appropriate technological / research citation.	A2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO317.1	K3	3	2	1	-	-	-	-	-	-	-	-	-	3	2	1
CO317.2	K2	2	1	2	-	-	-	-	-	-	-	-	-	2	2	1
CO317.3	K3	3	2	2	-	-	-	-	-	-	-	-	-	3	2	1
CO317.4	K3	3	2	2	-	-	-	-	-	-	-	-	-	3	2	2
CO317.5	K3	3	2	3	-	-	-	-	-	-	-	-	-	3	2	2
CO317.6	A3	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
CO317.7	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
CO317.8	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
CO317.9	A2	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
		2.8	1.8	2	-	-	-	3	3	3	3	3	-	2.8	2	1.4



**Course Outcome No.CO318**

Subject Code & Name : CS8611 & Mini Project

Department: CSE

Year/Sem: III/06

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO318.1	Identify the problem by applying acquired knowledge and survey the relevant literature for getting exposed to related solutions.	K2
CO318.2	Analyze and categorize executable project modules after considering risks.	K4
CO318.3	Choose efficient tools for designing project modules.	K3
CO318.4	Combine all the modules through effective team work after efficient testing.	K3
CO318.5	Implement and test solutions to trace against the user requirements.	K3
CO318.6	Elaborate the completed task and compile the project report.	K2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO318.1	K2	2	1	1	1	2	2	1	2	2	2	2	1	1	2	2
CO318.2	K4	3	3	3	2	3	2	2	3	3	3	3	1	1	2	1
CO318.3	K3	3	2	2	1	2	2	1	2	2	2	2	2	1	2	1
CO318.4	K3	3	2	2	1	2	1	2	3	2	3	3	1	1	1	1
CO318.5	K3	3	2	2	1	2	2	1	2	2	2	2	1	1	1	1
CO318.6	K2	2	1	1	1	1	1	1	2	2	2	2	1	1	1	1
		2.67	1.83	1.83	1.17	2.00	1.67	1.33	2.33	2.17	2.33	2.33	1.17	1.00	1.50	1.17

**Course Outcome No.CO319**

Subject Code & Name : HS8581 & Professional Communication

Department: CSE

Year/Sem: III/06

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO319.1	Classify the content material and make effective presentations.	K2
CO319.2	Express adequate soft skills to successfully execute the job on hand.	A3
CO319.3	To respond favorably to the values of others opinion and manage difficult situations in group discussions wisely grooming for any profession.	K2
CO319.4	Express the body language in a very pleasant manner and react to even tough situations with ease.	A2
CO319.5	To perform intelligently during job interviews and be successful.	A3
CO319.6	Exhibit ethical principles in engineering practices.	A3
CO319.7	Perform task as an individual and / or team member to manage the task in time.	A3
CO319.8	Express the Engineering activities with effective presentation and report.	A3
CO319.9	Interpret the findings with appropriate technological / research citation.	A2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO319.1	K2	-	-	-	-	-	-	-	2	2	-	2	-	1	2	-
CO319.2	A3	-	-	-	-	-	-	-	3	2	-	3	-	-	-	-
CO319.3	K2	-	-	-	-	-	-	-	2	3	-	3	-	2	-	-
CO319.4	A2	-	-	-	-	-	-	-	3	2	-	3	-	2	-	-
CO319.5	A3	-	-	-	-	-	-	-	2	2	-	3	-	2	-	-
CO319.6	A3	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
CO319.7	A3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
CO319.8	A3	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
CO319.9	A2	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
		-	-	-	-	-	-	3.00	2.50	2.33	3.00	2.83	-	1.75	2.00	-

**SEMESTER 7**

**Course Outcome No.CO401**

Subject Code & Name : MG8591-Principles of Management

Department: CSE

Year/Sem: IV/07

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO401.1	Discuss the evolution of management thoughts and the challenges of managerial activities in a global business environment	K2
CO401.2	Outline the nature and purpose of planning and decision-making process in the Organizations.	K2
CO401.3	Summarize various types of Organization structure and associated Human Management activities for man-power utilization.	K2
CO401.4	Compare and explain the theories of leadership ,motivation, and effective communication method.	K3
CO401.5	Analyze various Controlling techniques to maintain standards in Organizations.	K3

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
C0401.1	K2	2	1	1	-	-	-	-	-	-	-	-	-	1	-	-
C0401.2	K2	2	1	1	-	-	-	-	-	-	-	-	-	1	-	-
C0401.3	K2	2	1	1	-	-	-	-	-	-	-	-	-	1	-	-
C0401.4	K3	3	2	2	-	-	-	-	-	-	-	-	-	1	-	-
C0401.5	K3	3	2	2	-	-	-	-	-	-	-	-	-	1	-	-
		2.4	1.4	1.4	-	-	-	-	-	-	-	-	-	1	-	-

**Course Outcome No. CO402**

Subject Code & Name : CS8792-Cryptography and Network security

Department: CSE

Year/Sem: IV/07

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

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

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
C402.1	K2	2	1	1	-	-	-	-	-	-	-	-	-	1	1	1
C402.2	K2	2	1	1	-	-	-	-	-	-	-	-	-	1	1	1
C402.3	K2	2	2	2	1	-	-	-	-	-	-	-	-	1	1	2
C402.4	K3	3	2	2	1	-	-	-	-	-	-	-	-	1	1	1
C402.5	K3	3	2	2	1	-	-	-	-	-	-	-	-	1	1	2
		2.4	1.6	1.6	1	-	-	-	-	-	-	-	-	1	1	1.4

**Course Outcome No.CO403**

Subject Code & Name : CS8791-Cloud Computing

Department: CSE

Year/Sem: IV/07

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO403.1	Discuss the concepts, key technologies of cloud computing.	K2
CO403.2	Explain the evolution of cloud from the existing technologies.	K2
CO403.3	Describe the various issues in cloud computing and its Architecture.	K2
CO403.4	Illustrate the Security issues of cloud computing and resource management .	K3
CO403.5	Summarize the cloud computing technologies and its paradigm.	K2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO403.1	K2	2	1	1	-	-	-	-	-	-	-	-	-	2	1	1
CO403.2	K2	2	1	1	-	-	-	-	-	-	-	-	-	2	1	1
CO403.3	K2	2	1	1	-	-	-	-	-	-	-	-	-	2	1	1
CO403.4	K3	3	2	2	-	-	-	-	-	-	-	-	-	3	2	2
CO403.5	K2	2	1	1	-	-	-	-	-	-	-	-	-	2	1	1
		2.2	1.2	1.2	-	-	-	-	-	-	-	-	-	2.2	1.2	1.2

**Course Outcome No.CO404**

Subject Code & Name : OME752-Supply Chain Management

Department: CSE

Year/Sem: IV/07

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 principles of transportation network in supply chain.	K3
CO404.4	Describe Sourcing and Coordination Effects of Supply Chain	K3
CO404.5	Summarize the role of Information Technology and analyse the Customer, Supplier Relationship Coordination in a supply chain.	K2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO404.1	K2	2	1	1	1	-	2	2	2	1	1	1	2	1	2	-
CO404.2	K3	3	2	2	1	-	-	-	-	-	-	-	-	1	2	-
CO404.3	K3	3	2	2	1	-	2	2	2	1	1	1	2	1	2	2
CO404.4	K3	3	2	2	1	-	2	2	2	1	1	1	2	1	2	-
CO404.5	K2	2	1	1	1	-	2	2	2	1	1	1	2	1	2	2
		2.6	1.6	1.6	1	-	2	2	2	1	1	1	2	1	2	2

**Course Outcome No. CO405**

Subject Code & Name : IT8075-Software Project Ma

Department: CSE

Year/Sem: IV/07

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO405.1	Explain the software project evaluation techniques and planning	K2
CO405.2	Demonstrate different software process models and cost estimation techniques.	K3
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**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO405.1	K2	2	1	1	-	-	-	-	-	-	-	-	-	1	2	1
CO405.2	K3	3	2	2	1	-	-	-	-	-	-	-	-	2	2	2
CO405.3	K3	3	2	2	1	-	-	-	-	-	-	-	-	2	2	2
CO405.4	K2	2	1	1	-	-	-	-	-	-	-	-	-	1	2	1
CO405.5	K2	2	1	1	-	-	-	-	-	-	-	-	-	1	2	1
		2.4	1.4	1.4	1	-	-	-	-	-	-	-	-	1.4	2	1.4

**Course Outcome No. CO406**

Subject Code & Name : CS8079-Human Computer Interaction

Department: CSE

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	Demonstrate 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 user interface for various applications	K3

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO406.1	K2	2	1	1	1	1	-	-	-	-	-	-	-	1	1	1
CO406.2	K2	2	1	1		1	-	-	-	-	-	-	-	1	2	1
CO406.3	K3	3	2	2	1	2	-	-	-	-	-	-	-	2	1	2
CO406.4	K3	3	2	2	1	2	-	-	-	-	-	-	-	2	2	2
CO406.5	K3	3	2	2	1	2	-	-	-	-	-	-	-	1	1	2
		2.6	1.6	1.6	1	1.6	-	-	-	-	-	-	-	1.4	1.4	1.6

**Course Outcome No. CO407**

Subject Code & Name : CS8711 -Cloud Computing laboratory  
Laboratory

Department: CSE

Year/Sem: IV/07

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO407.1	Implement various virtualization tools such as Virtual Box, VMware workstation.	K3
CO407.2	Design and deploy web application in a PaaS environment.	K3
CO407.3	Illustrate the simulation of a cloud environment to implement new schedulers.	K3
CO407.4	Demonstrate the installation and usage of a cloud environment as a private cloud.	K3
CO407.5	Interpret 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 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 appropriate technological / research citation.	A2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO407.1	K3	3	2	2	-	-	-	-	-	-	-	-	-	1	1	1
CO407.2	K3	3	2	2	-	-	-	-	-	-	-	-	-	1	1	1
CO407.3	K3	3	2	2	-	-	-	-	-	-	-	-	-	2	2	1
CO407.4	K3	3	2	2	-	-	-	-	-	-	-	-	-	2	2	1
CO407.5	K2	2	1	1	-	-	-	-	-	-	-	-	-	2	1	2
CO407.6	A3	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
CO407.7	A3	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
CO407.8	A3	-	-	-	-	-	-	-	3	-	3	-	-	-	-	-
CO407.9	A2	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-
		2.8	1.8	1.8	-	-	-	3	3	3	3	3	-	1.6	1.4	1.2

**Course Outcome No. CO408**

Subject Code & Name : IT8761- Security Laboratory  
Laboratory

Department: CSE

Year/Sem: IV/07

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 cryptosystems 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
CO317.6	Exhibit ethical principles in engineering practices.	A3
CO317.7	Perform task as an individual and / or team member to manage the task in time.	A3
CO317.8	Express the Engineering activities with effective presentation and report.	A3
CO317.9	Interpret the findings with appropriate technological / research citation.	A2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO408.1	K3	3	2	2	-	-	-	-	-	-	-	-	-	2	2	1
CO408.2	K3	3	2	2	-	-	-	-	-	-	-	-	-	2	2	1
CO408.3	K3	3	2	2	-	-	-	-	-	-	-	-	-	2	2	1
CO408.4	K3	3	2	2	-	-	-	-	-	-	-	-	-	2	2	1
CO408.5	K2	2	1	1	-	-	-	-	-	-	-	-	-	2	2	1
CO408.6	A3	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
CO408.7	A3	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
CO408.8	A3	-	-	-	-	-	-	-	3	-	3	-	-	-	-	-
CO408.9	A2	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-
		2.8	1.8	1.8	-	-	-	3	3	3	3	3	-	2	2	1



**SEMESTER 8**

Course Outcome No.CO409

Subject Code & Name : GE8076- Professional Ethics in Engineering

Department: CSE

Year/Sem: IV/08

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	K2
CO409.2	Illustrate the moral issues and models of professional roles.	K2
CO409.3	Demonstrate code of Ethics applied in Engineering.	K2
CO409.4	Discuss 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

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes			
		K3	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				
C0409.1	K2	2	1	1	-	-	-	-	-	-	-	-	-	-	1	-	-
C0409.2	K2	2	1	1	-	-	-	-	-	-	-	-	-	-	1	-	-
C0409.3	K2	2	1	1	-	-	-	-	-	-	-	-	-	-	1	-	-
C0409.4	K2	2	1	1	-	-	-	-	-	-	-	-	-	-	1	-	-
C0409.5	K2	2	1	1	-	-	-	-	-	-	-	-	-	-	1	-	-
		2	1	1	-	-	-	-	-	-	-	-	-	-	1	-	-

Course Outcome No. CO410

Subject Code & Name : CS8080- Information Retrieval Techniques

Department: CSE

Year/Sem: IV/08

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

Course Outcome No.	Course Outcome	Highest Cognitive Level
CO410.1	Explain the basic concept of information retrieval.	K2
CO410.2	Classify the appropriate method of classification, clustering for modelling and retrieval evaluation.	K2
CO410.3	Design and implement innovative features in a web search engine.	K3
CO410.4	Implement a recommender system.	K3
CO410.5	Demonstrate an open source search engine framework , work flow and its capabilities	K2

CO & PO and PSO Mapping

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes		
		K3	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			
CO410.1	K2	2	1	1	1	1	-	-	-	-	-	-	-	1	1	1
CO410.2	K2	2	1	1	1	1	-	-	-	-	-	-	-	2	1	1
CO410.3	K3	3	2	2	1	2	-	-	-	-	-	-	-	1	2	1
CO410.4	K3	3	2	2	2	3	-	-	-	-	-	-	-	2	2	1
CO410.5	K2	2	2	1	1	1	-	-	-	-	-	-	-	1	2	1
		2.40	1.60	1.40	1.20	1.60	-	-	-	-	-	-	-	1.40	1.60	1.00

**Course Outcome No.CO411**

Subject Code & Name : CS8811- Project Work

Department: CSE

Year/Sem: IV/08

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

Course Outcome No.	Course Outcome	Highest Cognitive
CO411.1	Identify the problem by applying acquired knowledge and survey the relevant literature for getting exposed to related solutions.	K2
CO411.2	Analyze and categorize executable project modules after considering risks.	K4
CO411.3	Choose efficient tools for designing project modules.	K3
CO411.4	Combine all the modules through effective team work after efficient testing.	K3
CO411.5	Implement and test solutions to trace against the user requirements.	K3
CO411.6	Elaborate the completed task and compile the project report.	K2

**CO & PO and PSO Mapping**

Course No.	Level of CO	Program Outcomes												Program Specific Outcomes			
		K3	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				
C0411.1	K2	2	1	1	1	2	2	1	2	2	2	2	2	1	1	2	2
C0411.2	K4	3	3	3	2	3	2	2	3	3	3	3	3	1	1	2	1
C0411.3	K3	3	2	2	1	2	2	1	2	2	2	2	2	2	1	2	1
C0411.4	K3	3	2	2	1	2	1	2	3	2	3	3	1	1	1	1	1
C0411.5	K3	3	2	2	1	2	2	1	2	2	2	2	2	1	1	1	1
C0411.6	K2	2	1	1	1	1	1	1	2	2	2	2	2	1	1	1	1
		2.67	1.83	1.83	1.17	2.00	1.67	1.33	2.33	2.17	2.33	2.33	1.17	1.00	1.50	1.17	