DEPARTMENT OF COMPUTER SCIENCE

CO – PO MAPPING

YEAR:2017 SEM: I

S. N	SUBJECT NAME/CODE	COURSE CREDIT	COURSE CODE	COURSE OUTCOMES				PR	OGR	AMN	VE O	UTC	ОМЕ	(PO)			P O 1	P O 2
0					1	2	3	4	5	6	7	8	9	10	11	12		
				Read articles of a general kind in magazines and newspapers.								٧	٧	٧		٧		
				Participate effectively in informal														
	HS8151/CO	_		conversations; introduce themselves and their friends and express opinions in								٧	٧	٧		٧		
1	MMUNICAT IVE ENGLISH	4	HS8151	English.														<u> </u>
				Comprehend conversations and short talks delivered in English								٧	٧	٧		٧		
				Write short essays of a general kind and personal letters and emails in English.								٧	٧	٧		٧		
				Use both the limit definition and rules of														
				differentiation to differentiate functions.	٧	٧	٧						٧					
				Apply differentiation to solve maxima and minima problems.	٧	٧	٧						٧					
				Evaluate integrals both by using Riemann														
				sums and by using the Fundamental Theorem of Calculus	٧	٧	٧						٧					
	MA8151/ Engineering			Apply integration to compute multiple integrals, area, volume, integrals in polar	V	٧	٧						٧					
2	Mathematic	4	MA8151	coordinates, in addition to change of order and change of variables.	V	V	V						V					
	s - I			Evaluate integrals using techniques of integration, such as substitution, partial	٧	٧	٧						٧					
				fractions and integration by parts. Determine convergence/divergence of														
				improper integrals and evaluate convergent improper integrals.	٧	٧	٧						٧					
				Apply various techniques in solving differential equations.	٧	٧	٧						٧					
				The students will gain knowledge on the														<u> </u>
				basics of properties of matter and its applications,	٧	٧	٧											
				The students will acquire knowledge on														
				the concepts of waves and optical devices and their applications in fibre	٧	٧	٧											
				optics, The students will have adequate														
	PH8151/			knowledge on the concepts of thermal properties of materials and their	v	v	v											
3	Engineering Physics	3	PH8151	applications in expansion joints and heat														
				exchangers, The students will get knowledge on														
ì				advanced physics concepts of quantum theory and its applications in tunneling microscopes, and	٧	٧	٧											
Ì				The students will understand the basics of crystals, their structures and different crystal growth techniques.	٧	٧	٧											

4	CY8151 / Engineering Chemistry	3	CY8151	The knowledge gained on engineering materials, fuels, energy sources and water treatment techniques will facilitate better understanding of engineering processes and applications for further learning.	٧	٧	٧						
				Develop algorithmic solutions to simple computational problems	٧	٧	٧						
	CE01E1 /			Read, write, execute by hand simple Python programs.	٧	٧	٧						
	GE8151 / Problem Solving and			Structure simple Python programs for solving problems.	٧	٧	٧						
5	Python Programmin	3	GE8151	Decompose a Python program into functions.	٧	٧	٧						
	g			Represent compound data using Python lists, tuples, dictionaries.	٧	٧	٧						
				Read and write data from/to files in Python Programs.	٧	٧	٧						
				Familiarize with the fundamentals and standards of Engineering graphics	٧	٧	٧	٧	٧	٧	٧	٧	
	GE8152 /			Perform freehand sketching of basic geometrical constructions and multiple views of objects	٧	٧	٧	٧	٧	٧	٧	٧	
6	Engineering Graphics	4	GE8152	Project orthographic projections of lines and plane surfaces.	٧	٧	٧	٧	٧	٧	٧	٧	
				Draw projections and solids and development of surfaces.	٧	٧	٧	٧	٧	٧	٧	٧	
				Visualize and to project isometric and perspective sections of simple solids.	٧	٧	٧	٧	٧	٧	٧	٧	
	CE01C1 /			Write, test, and debug simple Python programs.	٧	٧	٧	٧	٧	٧	٧	٧	
	GE8161 / Problem Solving and			Implement Python programs with conditionals and loops.	٧	٧	٧	٧	٧	٧	٧	٧	
7	Python Programmin	2	GE8161	Develop Python programs step-wise by defining functions and calling them.	٧	٧	٧	٧	٧	٧	٧	٧	
	g Laboratory			Use Python lists, tuples, dictionaries for representing compound data.	٧	٧	٧	٧	٧	٧	٧	٧	
	Laboratory			Read and write data from/to files in Python.	٧	٧	٧	٧	٧	٧	٧	٧	

S. NO	SUBJECT NAME/C	COURSE	COURSE	COURSE OUTCOMES			ı	PRO	GRA	MN	1E O	UTO	OM	IE (PO))		P O	-
NO	ODE	CREDIT	CODE		1	2	3	4	5	6	7	8	9	10	11	12	1	2
	BS8161 / Physics			Apply principles of elasticity, optics and thermal properties for engineering applications.	٧	٧	٧					٧	٧	٧				
8	and Chemistry Laborator Y	2	BS8161	The students will be outfitted with hands-on knowledge in the quantitative chemical analysis of water quality related parameters.	٧	٧	٧					٧	٧	٧				

YEAR:2017 SEM: II

S.	SUBJECT NAME/CO	COURSE	COURSE	COURSE OUTCOMES				PR)GR	AMN	/IE O	UTC	ОМІ	E (PO)			P O	P O
NO	DE	CREDIT	CODE		1	2	3	4	5	6	7	8	9	10	11	12	1	2
				Read technical texts and write areaspecific texts effortlessly								٧	٧	٧		٧		
1	HS8251 / Technical	4	HS8251	Listen and comprehend lectures and talks in their area of specialisation successfully.								٧	٧	٧		٧		
	English			Speak appropriately and effectively in varied formal and informal contexts.								٧	٧	٧		٧		
				Write reports and winning job applications.								٧	٧	٧		٧		
				Eigen values and eigenvectors, diagonalization of a matrix, Symmetric matrices, Positive definite matrices and similar matrices.	٧	٧	٧						٧					
	MA8251 /			Gradient, divergence and curl of a vector point function and related identities.	٧	٧	٧						٧					
2	Engineeri ng Mathema	4	MA8251	Evaluation of line, surface and volume integrals using Gauss, Stokes and Green's theorems and their verification.	٧	٧	٧						٧					
	tics II			Analytic functions, conformal mapping and complex integration.	٧	٧	٧						٧					
				Laplace transform and inverse transform of simple functions, properties, various related theorems and application to differential equations with constant coefficients.	٧	٧	٧						٧					
				Gain knowledge on classical and quantum electron theories, and energy band structuues,	٧	٧	٧											
	PH8252 / Physics			Acquire knowledge on basics of semiconductor physics and its applications in various devices	٧	٧	٧											
3	for Informati	3	PH8252	Get knowledge on magnetic properties of materials and their applications in data storage,	٧	٧	٧											
	on Science			Have the necessary understanding on the functioning of optical materials for optoelectronics	٧	٧	٧											
				Understand the basics of quantum structures and their applications in carbon electronics	٧	٧	٧											
	BE8255 /			Discuss the essentials of electric circuits and analysis.	٧	٧	٧											
4	Basic Electrical, Electronic s and	3	BE8255	Discuss the basic operation of electric machines and transformers	٧	٧	٧											
	Measure ment			Introduction of renewable sources and common domestic loads.	٧	٧	٧											
	Engineeri ng			Introduction to measurement and metering for electric circuits.	٧	٧	٧											

S.	SUBJECT NAME/CO	COURSE	COURSE	COURSE OUTCOMES				PR	OGR	AMN	VE O	UTC	ОМЕ	(PO)			P O	P O
NO	DE	CREDIT	CODE		1	2	3	4	5	6	7	8	9	10	11	12	1	2
5	GE8291 / Environm ental Science	3	GE8291	Environmental Pollution or problems cannot be solved by mere laws. Public participation is an important aspect which serves the environmental Protection. One will obtain knowledge on the following after completing the course.	٧	٧	٧				٧	٧	٧	٧		٧		
	and Engineeri	-		Public awareness of environmental is at infant stage. Ignorance and incomplete knowledge has	٧	٧	٧				٧	٧	٧	٧		٧		
	ng			lead to misconceptions	٧	٧	٧				٧	٧	٧	٧		٧		
				Development and improvement in std. of living has lead to serious environmental disasters	٧	٧	٧				٧	٧	٧	٧		٧		
				Develop simple applications in C using basic constructs	٧	٧	٧					٧	٧	٧		٧		
	CC02E1 /			Design and implement applications using arrays and strings	٧	٧	٧					٧	٧	٧		٧		
6	CS8251 / PROGRA MMING	3	CS8251	Develop and implement applications in C using functions and pointers.	٧	٧	٧					٧	٧	٧		٧		
	IN C			Develop applications in C using structures.	٧	٧	٧					٧	٧	٧		٧		
				Design applications using sequential and random access file processing	٧	٧	٧					٧	٧	٧		٧		
				Fabricate carpentry components and pipe connections including plumbing works.	٧	٧	٧	٧	٧	٧		٧	٧	٧		٧		
				Use welding equipments to join the structures.	٧	٧	٧	٧	٧	٧		٧	٧	٧		٧		
				Carry out the basic machining operations	٧	٧	٧	٧	٧	٧		٧	٧	٧		٧		
	GE8261 / Engineeri			Make the models using sheet metal works	٧	٧	٧	٧	٧	٧		٧	٧	٧		٧		
7	ng Practices Laborator	2	GE8261	Illustrate on centrifugal pump, Air conditioner, operations of smithy, foundary and fittings	٧	٧	٧	٧	٧	٧		٧	٧	٧		٧		
	У			Carry out basic home electrical works and appliances	٧	٧	٧	٧	٧	٧		٧	٧	٧		٧		
				Measure the electrical quantities	٧	٧	٧	٧	٧	٧		٧	٧	٧		٧		
				Elaborate on the components, gates, soldering practices.	٧	٧	٧	٧	٧	٧		٧	٧	٧		٧		
	CS8261 / C			Develop C programs for simple applications making use of basic constructs, arrays and strings.	٧	٧	٧					٧	٧	٧		٧		
8	Program ming Laborator	2	CS8261	Develop C programs involving functions, recursion, pointers, and structures.	٧	٧	٧					٧	٧	٧		٧		
	у			Design applications using sequential and random access file processing	٧	٧	٧					>	٧	٧		٧		

YEAR:2017 SEM:III

S.	SUBJECT NAME/C	COURSE	COURSE	COURSE OUTCOMES			ı	PRO	GRA	MM	IE C	UTO	CON	IE (PC))		P O	P O
NO	ODE	CREDIT	CODE		1	2	3	4	5	6	7	8	9	10	11	12	1	2
				Have knowledge of the concepts needed to test the logic of a program.	٧	٧	٧						٧					
				Have an understanding in identifying structures on many levels.	٧	٧	٧						٧					
1	MA8351/ Discrete Mathema tics	4	MA8351	Be aware of a class of functions which transform a finite set into another finite set which relates to input and output functions in computer science.	٧	٧	٧						٧					Ī
				Be aware of the counting principles.	٧	٧	٧						٧					
				Be exposed to concepts and properties of algebraic structures such as groups, rings and fields	٧	٧	٧						٧					
				Simplify Boolean functions using KMap	٧	٧	٧											1
	CS8351 / Digital	_	000054	Design and Analyze Combinational and Sequential Circuits	٧	٧	٧											
2	Principles and Design	4	CS8351	Implement designs using Programmable Logic Devices	٧	٧	٧											
	Design			Write HDL code for combinational and Sequential Circuits	٧	٧	٧											
	CS8391/			Implement abstract data types for linear data structures.	٧	٧	٧											
3	Data Structure	3	CS8391	Apply the different linear and non-linear data structures to problem solutions.	٧	٧	٧											
	S			Critically analyze the various sorting algorithms.	٧	٧	٧											
				Develop Java programs using OOP principles	٧	٧	٧											 -
	CS8392/ Object			Develop Java programs with the concepts inheritance and interfaces	٧	٧	٧											
4	Oriented Program	3	CS8392	Build Java applications using exceptions and I/O streams	٧	٧	٧											
	ming			Develop Java applications with threads and generics classes	٧	٧	٧											
				Develop interactive Java programs using swings	٧	٧	٧											
	EC8395 /			Ability to comprehend and appreciate the significance and role of this course in the present contemporary world	٧	٧	٧											
5	Communi cation Engineeri	3	EC8395	Apply analog and digital communication techniques.	٧	٧	٧											
	ng			Use data and pulse communication techniques.	٧	٧	٧											
				Analyze Source and Error control coding.	٧	٧	٧											
				Write functions to implement linear and non-linear data structure operations	٧	٧	٧					٧	٧	٧		٧		
	CS8381 / Data			Suggest appropriate linear / non-linear data structure operations for solving a given problem	٧	٧	٧					٧	٧	٧		٧		
6	Structures Laboratory	2	CS8381	Appropriately use the linear / non-linear data structure operations for a given problem	٧	٧	٧					٧	٧	٧		٧		<u> </u>
				Apply appropriate hash functions that result in a collision free scenario for data storage and retrieval	٧	٧	٧					٧	٧	٧		٧		

S. NO	SUBJECT NAME/CO	COURSE CREDIT	COURSE	COURSE OUTCOMES				PR)GR	AMN	ΛE O	UTC	ОМЕ	(PO)			Р О	P O
NO	DE	CREDIT	CODE		1	2	3	4	5	6	7	8	9	10	11	12	1	2
	CS8383/			Develop and implement Java programs for simple applications that make use of classes, packages and interfaces.	٧	٧	٧					٧	>	>		>		
7	Object Oriented Programmi ng	2	CS8383	Develop and implement Java programs with arraylist, exception handling and multithreading.	٧	٧	٧					٧	>	>		>		
	Laboratory			Design applications using file processing, generic programming and event handling.	٧	٧	٧					٧	٧	٧		٧		
				Implement simplified combinational circuits using basic logic gates	٧	٧	٧			٧		٧	٧	٧		٧		
8	CS8382/ Digital Systems	2	CS8382	Implement combinational circuits using MSI devices	٧	٧	٧			٧		٧	٧	٧		٧		
	Laborator	_	C30302	Implement sequential circuits like registers and counters	٧	٧	٧			٧		٧	٧	٧		٧		
	,			Simulate combinational and sequential circuits using HDL	٧	٧	٧			٧		٧	٧	٧		٧		

S. NO	SUBJECT NAME/CO	COURSE CREDIT	COURSE	COURSE OUTCOMES				PRO	OGR/	٩M٨	1E O	UTC	ОМЕ	(PO)			P O	P O
NO	DE	CKLDII	CODE		1	2	3	4	5	6	7	8	9	10	11	12	1	2
	HS8381/			Listen and respond appropriately.								^	^	٧		٧		
	INTERPER			Participate in group discussions								٧	٧	٧		٧		
9	SONAL SKILLS/LIS	1	HS8381	Make effective presentations								^	^	٧		٧		
	TENING& SPEAKING			Participate confidently and appropriately in conversations both formal and informal								٧	٧	٧		٧		

YEAR:2017 SEM: IV

S.	SUBJECT NAME/CO	COURSE	COURSE	COURSE OUTCOMES				PRO	OGR	AMN	ΛE C	OUTO	ОМІ	E (PO)			P O	P O
NO	DE	CREDIT	CODE		1	2	3	4	5	6	7	8	9	10	11	12	1	2
				Understand the fundamental knowledge of the concepts of probability and have knowledge of standard distributions which can describe real life phenomenon.	٧	٧	٧						٧	٧		٧		
1	MA8402 / Probabilit y and	4	MA8402	Understand the basic concepts of one and two dimensional random variables and apply in engineering applications.	٧	٧	٧						٧	٧		٧		
	Queueing Theory			Apply the concept of random processes in engineering disciplines.	٧	٧	٧						٧	٧		٧		
				Acquire skills in analyzing queueing models.	٧	٧	٧						٧	٧		٧		
				Understand and characterize phenomenon which evolve with respect to time in a probabilistic manner	٧	٧	٧						٧	٧		٧		
				Understand the basics structure of computers, operations and instructions	٧	٧	٧											
	CS8491/			Design arithmetic and logic unit.	٧	٧	٧											
2	Computer Architect	3	CS8491	Understand pipelined execution and design control unit.	٧	٧	٧											
	ure			Understand parallel processing architectures	٧	٧	٧											
				Understand the various memory systems and I/O communication	٧	٧	٧											
				Classify the modern and futuristic database applications based on size and complexity	٧	٧	٧											
	CS8492/ Database			Map ER model to Relational model to perform database design effectively	٧	٧	٧											
3	Managem ent	3	CS8492	Write queries using normalization criteria and optimize queries	٧	٧	٧											
	Systems			Compare and contrast various indexing strategies in different database systems	٧	٧	٧											
				Appraise how advanced databases differ from traditional databases	٧	٧	٧											
				Design algorithms for various computing problems.	٧	٧	٧						٧	٧		٧		
4	CS8451/ Design and	3	CS8451	Analyze the time and space complexity of algorithms	٧	٧	٧						٧	٧		٧		
	Analysis of Algorithms	-		Critically analyze the different algorithm design techniques for a given problem.	٧	٧	٧						٧	٧		٧		
				Modify existing algorithms to improve efficiency.	٧	٧	٧						٧	٧		٧		<u></u>
				Analyze various scheduling algorithms.	٧	٧	٧											
				Understand deadlock, prevention and avoidance algorithms.	٧	٧	٧											
_	CS8493/	-		Compare and contrast various memory management schemes.	٧	٧	٧											
5	Operating Systems	3	CS8493	Understand the functionality of file systems.	٧	٧	٧											
				Perform administrative tasks on Linux Servers.	٧	٧	٧											
				Compare iOS and Android Operating Systems.	٧	٧	٧											

S. NO	SUBJECT NAME/C	COURSE	COURSE	COURSE OUTCOMES			F	PRO	GRA	MN	1E C	UTO	ON	IE (PO)		Р О	Р О
NO	ODE	CKEDII	CODE		1	2	3	4	5	6	7	8	9	10	11	12	1	2
				Identify the key activities in managing a software project.	٧	٧	٧		٧	>		٧	٧	٧		٧		
				Compare different process models.	٧	٧	٧		٧	^		٧	٧	٧		٧		
	CS8494/ Software			Concepts of requirements engineering and Analysis Modeling	٧	٧	٧		٧	>		٧	٧	٧		٧		
6	Engineeri ng	3	CS8494	Apply systematic procedure for software design and deployment.	٧	٧	٧		٧	٧		٧	٧	٧		٧		
	116			Compare and contrast the various testing and maintenance.	٧	٧	٧		٧	٧		٧	٧	٧		٧		
				Manage project schedule, estimate project cost and effort required.	٧	٧	٧		٧	٧		٧	٧	٧		٧		1
	6504047			Use typical data definitions and manipulation commands.	٧	٧	٧					٧	٧	٧		٧		
	CS8481/ Database Managem			Design applications to test Nested and Join Queries	٧	٧	٧					٧	٧	٧		٧		
7	ent Systems	2	CS8481	Implement simple applications that use Views	٧	٧	٧					٧	٧	٧		٧		
	Laborator			Implement applications that require a Front-end Tool	٧	٧	٧					٧	٧	٧		٧		
	,			Critically analyze the use of Tables, Views, Functions and Procedures	٧	٧	٧					٧	٧	٧		٧		
				Compare the performance of various CPU Scheduling Algorithms	٧	٧	٧					٧	٧	٧		٧		
	CS8461/ Operating			Implement Deadlock avoidance and Detection Algorithms	٧	٧	٧					٧	٧	٧		٧		
8	Systems	2	CS8461	Implement Semaphores	٧	٧	٧					٧	٧	٧		٧		
	Laborator	_	C50-01	Create processes and implement IPC	٧	٧	٧					٧	٧	٧		٧		
	у			Analyze the performance of the various Page Replacement Algorithms	٧	٧	٧					٧	٧	٧		٧		
				Implement File Organization and File Allocation Strategies	٧	٧	٧					٧	٧	٧		٧		

S. NO	SUBJECT NAME/CO	COURSE CREDIT	COURSE CODE	COURSE OUTCOMES			F	PRO	GRA	MM	E O	UTC	ЮМ	E (PO)		Р О	P O
NO	DE	CREDIT	CODE		1	2	3	4	5	6	7	8	9	10	11	12	1	2
	HS8461 / Advanced			Write different types of essays.								٧	٧	٧		٧		
0		1	HS8461	Write winning job applications.								٧	٧	٧		٧		
9	Reading and	1	H38401	Read and evaluate texts critically.								٧	٧	٧		٧		
	Writing			Display critical thinking in various professional contexts.								٧	٧	٧		٧		

YEAR: 2017 SEM: V

S.	SUBJECT NAME/CO	COURSE	COURSE	COURSE OUTCOMES				PRO	OGR	AMN	VE C	UT	СОМ	E (PO)			P O	P O
NO	DE	CREDIT	CODE		1	2	3	4	5	6	7	8	9	10	11	12	1	2
				Apply the basic notions of groups, rings, fields which will then be used to solve related problems.	٧	٧	٧						٧					
				Explain the fundamental concepts of														
				advanced algebra and their role in modern mathematics and applied	٧	٧	٧						٧					
	MA8551/			contexts														
	Algebra			Demonstrate accurate and efficient use	٧	٧	٧						٧					
1	and	4	MA8551	of advanced algebraic techniques. Demonstrate their mastery by solving														
	Number			non - trivial problems related to the														
	Theory			concepts, and by proving simple	٧	٧	٧						٧					
				theorems about the, statements proven														
				by the text.														
				Apply integrated approach to number														
				theory and abstract algebra, and provide a firm basis for further reading and study	٧	٧	٧						٧					
				in the subject.														
				Understand the basic layers and its														
				functions in computer networks.	٧	٧	٧											
				Evaluate the performance of a network	٧	٧	٧											
	CS8591/			Understand the basics of how data flows	٧	٧	٧											
2	Computer	3	CS8591	from one node to another														<u> </u>
	Networks			Analyze and design routing algorithms.	٧	٧	٧											<u> </u>
				Design protocols for various functions in the network.	٧	٧	٧											
				Understand the working of various application layer protocols.	٧	٧	٧											
	EC8691 / Micropro			Understand and execute programs based on 8086 microprocessor.	٧	٧	٧											
3	cessors	3	EC8691	Design Memory Interfacing circuits.	٧	٧	٧											
,	and	3	100031	Design and interface I/O circuits.	٧	٧	٧											
	Microcon trollers			Design and implement 8051 microcontroller based systems.	٧	٧	٧											
				Construct automata, regular expression for any pattern.	٧	٧	٧											
	CC0504 /			Write Context free grammar for any	٧	v	V											
	CS8501/ Theory of			construct.	-1													
4	Computat	3	CS8501	Design Turing machines for any language. Propose computation solutions using	٧	٧	٧											
	ion			Turing machines.	٧	٧	٧											
				Derive whether a problem is decidable or not.	٧	٧	٧											
				Express software design with UML diagrams	٧	٧	٧			٧								
	CCOEO2/			Design software applications using OO concepts.	٧	٧	٧			٧								
	CS8592/ Object Oriented			Identify various scenarios based on software requirements	٧	٧	٧			٧								
5	Analysis and Design	3	CS8592	Transform UML based software design into pattern based design using design patterns	٧	٧	٧			٧								
				Understand the various testing methodologies for OO software	٧	٧	٧			٧								

S. NO	SUBJECT NAME/CO	COURSE	COURSE	COURSE OUTCOMES	PROGRAMME OUTCOME (PO)										P S	P S		
NO	DE	CREDIT	CODE		1	2	3	4	5	6	7	8	9	10	11	12	1	2
	EC8681 / Micropro			Write ALP Programmes for fixed and Floating Point and Arithmetic operations	٧	٧	٧					٧	٧	٧		٧		
	cessors			Interface different I/Os with processor	٧	٧	٧					٧	٧	٧		٧		
6	and Microcon	2	EC8681	Generate waveforms using Microprocessors	٧	٧	٧					٧	٧	٧		٧		
	trollers			Execute Programs in 8051	٧	٧	٧					٧	٧	٧		٧		
	Laborator y			Explain the difference between simulator and Emulator	٧	٧	٧					٧	٧	٧		٧		
	CS8582 /			Perform OO analysis and design for a given problem specification.	٧	٧	٧		٧	٧		٧	٧	٧		٧		
	Object Oriented			Identify and map basic software requirements in UML mapping.	٧	٧	٧		٧	٧		٧	٧	٧		٧		
7	Analysis and Design Laborator	2	CS8582	Improve the software quality using design patterns and to explain the rationale behind applying specific design patterns	٧	٧	٧		٧	٧		٧	٧	٧		٧		
	У			Test the compliance of the software with the SRS.	٧	٧	٧		٧	٧		٧	٧	٧		٧		
				Implement various protocols using TCP and UDP.	٧	٧	٧					٧	٧	٧		٧		
	CS8581/			Compare the performance of different transport layer protocols.	٧	٧	٧					٧	٧	٧		٧		
8	Networks Laborator Y	2	CS8581	Use simulation tools to analyze the performance of various network protocols.	٧	٧	٧					٧	٧	٧		٧		
				Analyze various routing algorithms.	٧	٧	٧					٧	٧	٧		٧		
				Implement error correction codes.	٧	٧	٧					٧	٧	٧		٧		

YEAR:2017 SEM:VI

S.	SUBJECT NAME/CO	COURSE	COURSE	COURSE OUTCOMES			PROGRAMME OUTCOME (PO)											P O
NO	DE	CREDIT	CODE		1	2	3	4	5	6	7	8	9	10	11	12	1	2
				Construct a basic website using HTML and Cascading Style Sheets.	٧	٧	٧					٧	٧	٧		٧		
	CS8651/			Build dynamic web page with validation using Java Script objects and by applying	٧	٧	٧					٧	٧	٧		٧		
1	Internet Program	3	CS8651	different event handling mechanisms. Develop server side programs using	٧	٧	٧					٧	٧	٧		٧		
	ming			Servlets and JSP Construct simple web pages in PHP and	٧	٧	٧					٧	٧	٧		V		
				Use AJAX and web services to develop	٧	٧	٧					٧	٧	٧		٧		
				interactive web applications Use appropriate search algorithms for any Al problem	٧	٧	٧											
	CS8691/			Represent a problem using first order and predicate logic	٧	٧	٧											
2	Artificial Intelligenc	3	CS8691	Provide the apt agent strategy to solve a given problem	٧	٧	٧											
	е			Design software agents to solve a problem	٧	٧	٧											
				Design applications for NLP that use Artificial Intelligence.	٧	٧	٧											
				Explain the basics of mobile telecommunication systems	٧	٧	٧											
				Illustrate the generations of telecommunication systems in wireless networks	٧	٧	٧											
3	CS8601/ Mobile Computing	3	CS8601	Determine the functionality of MAC, network layer and Identify a routing protocol for a given Ad hoc network	٧	٧	٧											
				Explain the functionality of Transport and Application layers	٧	٧	٧											
				Develop a mobile application using android/blackberry/ios/Windows SDK	٧	٧	٧											
				Understand the different phases of compiler.	٧	٧	٧					٧	٧	٧		٧		
				Design a lexical analyzer for a sample language.	٧	٧	٧					٧	٧	٧		٧		
4	CS8602/ Compiler	4	CS8602	Apply different parsing algorithms to develop the parsers for a given grammar	٧	٧	٧					٧	٧	٧		٧		
-	Design	·		Understand syntax-directed translation and run-time environment.	٧	٧	٧					٧	٧	٧		٧		
				Learn to implement code optimization techniques and a simple code generator.	٧	٧	٧					٧	٧	٧		٧		
				Design and implement a scanner and a parser using LEX and YACC tools. Elucidate the foundations and issues of	٧	٧	٧					٧	٧	٧		٧		
				distributed systems	٧	٧	٧											
	CS8603/			Understand the various synchronization issues and global state for distributed systems.	٧	٧	٧											
5	Distributed Systems	3	CS8603	Understand the Mutual Exclusion and Deadlock detection algorithms in distributed systems	٧	٧	٧									_		_
				Describe the agreement protocols and fault tolerance mechanisms in distributed systems.	٧	٧	٧											
				Describe the features of peer-to-peer and distributed shared memory systems	٧	٧	٧											

S. NO	SUBJECT NAME/	COURSE	COURSE	COURSE OUTCOMES				PROGRAMME OUTCOME (PO) 4 5 6 7 8 9 10 11							P O	P O		
NO	CODE	CREDIT	CODE		1	2	3	4	5	6	7	8	9	10	11	12	1	2
				Construct Web pages using HTML/XML and style sheets.	٧	٧	٧		٧			٧	٧	٧		٧		
	CS8661/ Internet			Build dynamic web pages with validation using Java Script objects and by applying different event handling mechanisms.	٧	٧	٧		٧			٧	٧	٧		٧		
6	Programmi ng	2	CS8661	Develop dynamic web pages using server side scripting.	٧	٧	٧		>			٧	٧	٧		>		
	Laboratory			Use PHP programming to develop web applications.	٧	٧	٧		>			٧	٧	٧		>		
				Construct web applications using AJAX and web services.	٧	٧	٧		٧			٧	٧	٧		٧		į.
				Develop mobile applications using GUI and Layouts.	٧	٧	٧		٧	٧		٧	٧	٧		٧		
	CS8662 /			Develop mobile applications using Event Listener.	٧	٧	٧		٧	٧		٧	٧	٧		٧		
7	Mobile Application Developme	2	CS8662	Develop mobile applications using Databases.	٧	٧	٧		٧	٧		٧	٧	٧		٧		
	nt Laboratory			Develop mobile applications using RSS Feed, Internal/External Storage, SMS, Multithreading and GPS.	٧	٧	٧		٧	٧		٧	٧	٧		٧		
				Analyze and discover own mobile app for simple needs.	٧	٧	٧		٧	٧		٧	٧	٧		٧		
8	Mini Project	1	CS8611		٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧		

S. NO	SUBJECT NAME/	COURSE	COURSE	COURSE OUTCOMES				PRO)GR/	AMN	1E O	UTC	ОМЕ	(PO)			P O	P O
NO	CODE	CKLDII	CODE		1	2	3	4	5	6	7	8	9	10	11	12	1	2
				Make effective presentations						٧				٧		٧		
9	HS8581/ Profession al	1	HS8581	Participate confidently in Group Discussions						٧				٧		٧		
9	Communic ation	1	П30301	Attend job interviews and be successful in them						٧				>		٧		
				Develop adequate Soft Skills required for the workplace						٧				٧		٧		

YEAR:2017 SEM:VII

S.	SUBJECT	COURSE	COURSE		PROGRAMME OUTCOME (PO) 1 2 3 4 5 6 7 8 9 10 11 12 1													P
NO	NAME/CODE	CREDIT	CODE	COURSE OUTCOMES	1	2	3	4	5	6	7	8	9	10	11	12		O 2
1	MG8591 / Principles of Manageme nt	3	MG8591	Upon completion of the course, students will be able to have clear understanding of managerial functions like planning, organizing, staffing, leading & controlling and have same basic knowledge on international aspect of management	٧	٧	٧								٧			
				Understand the fundamentals of networks security, security architecture, threats and vulnerabilities	٧	٧	٧											
	CS8792/ Cryptograp			Apply the different cryptographic operations of symmetric cryptographic algorithms	٧	٧	٧											
2	hy and Network Security	3	CS8792	Apply the different cryptographic operations of public key cryptography	٧	٧	٧											
	,			Apply the various Authentication schemes to simulate different applications.	٧	٧	٧											
				Understand various Security practices and System security standards	٧	٧	٧											
				Articulate the main concepts, key technologies, strengths and limitations of cloud computing	٧	٧	٧											
				Learn the key and enabling technologies that help in the development of cloud.	٧	٧	٧											
3	CS8791/ Cloud	3	CS8791	Develop the ability to understand and use the architecture of compute and storage cloud, service and delivery models	٧	٧	٧											
	Computing			Explain the core issues of cloud computing such as resource management and security.	٧	٧	٧											
				Be able to install and use current cloud technologies.	٧	٧	٧											
				Evaluate and choose the appropriate technologies, algorithms and approaches for implementation and use of cloud.	٧	٧	٧											
				Configure various virtualization tools such as Virtual Box, VMware workstation.	٧	٧	٧		٧			٧	٧	٧		٧		
				Design and deploy a web application in a PaaS environment.	٧	٧	٧		٧			٧	٧	٧		٧		
4	CS8711 / Cloud Computing	2	CS8711	Learn how to simulate a cloud environment to implement new schedulers.	٧	٧	٧		٧			٧	٧	٧		٧		
	Laboratory			Install and use a generic cloud environment that can be used as a private cloud.	٧	٧	٧		٧			٧	٧	٧		٧		
				Manipulate large data sets in a parallel environment	٧	٧	٧		٧			٧	٧	٧		٧		

				Develop code for classical Encryption Techniques to solve the problems.	٧	٧	٧	٧		٧	٧	٧	٧	
	IT8761/			Build cryptosystems by applying symmetric and public key encryption algorithms.	٧	٧	٧	٧		٧	٧	٧	٧	
5	Security Laboratory	2	IT8761	Construct code for authentication algorithms.	٧	٧	٧	٧		^	^	٧	٧	
				Develop a signature scheme using Digital signature standard.	٧	٧	٧	٧		^	^	٧	٧	
				Demonstrate the network security system using open source tools	٧	٧	٧	٧		٧	٧	٧	٧	

YEAR: SEM: VIII

S. NO	SUBJECT NAME/COD	COURSE	COURSE CODE	COURSE OUTCOMES		1 _	ı	-	GRA		1E C			IE (PO	<u>, </u>		P 0	P O
	E				1	2	3	4	5	6	7	8	9	10	11	12	1	2
1	CS8811 / Project Work	10	CS8811	On Completion of the project work students will be in a position to take up any challenging practical problems and find solution by formulating proper methodology.	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧		