BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department COMPUTER SCIENCE AND ENGINEERING
Class:-Second Year B.TECH Sem:-III
Course: - Discrete Mathematics & Structures

Course Outcomes:
Upon successful completion of this course, the student will be able to –

1. Apply logic concepts in designing a program.
2. Illustrate basic set concepts & apply operations on set.
3. Minimize the Boolean Function.
4. Apply basic concepts of probability to solve real world problem.
5. Represent data structures using graph concepts.
6. Design abstract machine, detect deadlocks.

Course Name	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
PCC-CS302		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Discrete Mathematics &Structures	CO1	2	1		1								2	2		
	CO2	3	3	2	2	1							2	1	2	
	CO3	1	3	2	2	2	2		2	2		3	2	1	1	
	CO4	1	2	2	1	1	2	1	2					2	2	
	CO5	3	3	3	3	3	3							3	2	
	CO6	2	2	3	3	3	3							3	2	
	Total	12	14	12	12	10	10	1	4	2	0	3	6	12	9	0
	Average	2.0	2.3	2.0	2.0	1.7	1.7	0.2	0.7	0.3	0.0	0.5	1.0	2.0	1.5	0.0

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1: Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science and Engineering
Class:-Second Year BTECH Sem:-III
Course: - Data Structures

Course Outcomes:

Upon successful completion of this course, the student will be able to –

1. Identify the appropriate data structure for specific application.
2. Design and analyze programming problem statements.
3. Chose appropriate sorting and searching algorithms.
4. Outline the solution to the given software problem with appropriate data structure.
5. Articulate the principles of procedure oriented problem solving and programming.
6. Explain programming fundamentals including statements, control flow and recursion

Course Name PCC-CS303	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Data Structures	CO1	2	3	1	2	3								3		1
	CO2	3	3	3	3	2	1	1				1	1	3	1	1
	CO3	3	3	3	3	3	1	1				1		3	2	1
	CO4	2	2	3	2	1			1	1		1	1	3	2	1
	Total	10	11	10	10	9	2	2	1	1		3	2	12	5	4
	Average	2.5	2.8	2.5	2.5	2.25	0.5	0.5	0.25	0.3	0	0.75	0.5	3	1.3	1

Note: ***Enter numbers 1, 2, 3 where the correlation levels are***

1: Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science and Engineering
Class:-Second Year BTECH Sem:-III
Course: - Computer Networks – I

Course Outcomes:
Upon successful completion of this course, the student will be able to –

1. Demonstrate concepts of Computer Networks.
2. Explain OSI and TCP/IP layer architecture
3. Implement network and data link layer.
4. Demonstrate TCP protocol in detail.
5. To analyze the protocol structure using network analyzing tools.
6. Apply the principals of socket programming in the networks.

Course Name PCC-CS304	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Computer Networks – I	CO1	3	2		1								1	3	1	
	CO2	1	3	2	1	3							1	2		
	CO3		1		1								2		2	
	CO4	1		2		2								2	1	
	CO5	2	1		2						2		2			
	CO6	1	1		2	1				1		2	1	2	2	
	Total	8	8	4	7	6				1	2	2	7	9	6	
	Average	1.3	1.3	0.7	1.2	1.0	0.0	0.0	0.0	0.2	0.3	0.3	1.2	1.5	1.0	

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department COMPUTER SCIENCE AND ENGINEERING
Class:-Second Year BTECH Sem:-III
Course: - Microprocessors

Course Outcomes:
Upon successful completion of this course, the student will be able to –

1. Describe the Architecture of 8085 microprocessors and microcontroller
2. Classify the 8086 Assembly Instructions set and use in Assembly language Programs
3. Explain Programming model's of 8086microprocessors
4. Classify the 8086 Assembly Instructions set and use in Assembly language Programs
5. Understand the higher processor architecture
6. Understand the need for other Microprocessors

Course Name PCC-CS305	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Microprocessors	CO1	1	2	3	2	3		1						2	1	1
	CO2	1	2	2	2	2	1							1	2	1
	CO3	2	2	2	3	3								2	2	2
	CO4	1	2	3	3	3	1	1						3	3	1
	CO5	2	2		2	2	1							3	3	2
	CO6	1		2		2		1						3	3	1
	Total	8	10	12	12	15	3	3						14	14	8
	Average	1.3	1.7	2.0	2.0	2.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	2.3	2.3	1.3

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science and Engineering
Class:-Second Year Sem:-III
Course: - Applied Mathematics
Course Outcomes:

Upon successful completion of this course, the student will be able to:

1. Describe the statistical data numerically by using Lines of regression and Curve Fittings.
2. Solve basic problems in probability theory, including problems involving the binomial, Poisson, and normal distributions.
3. Calculate numerical Integration.
4. Define fuzzy sets using linguistic words and represent these sets bymembership functions, convexity, Normality, support etc.
5. Solve examples on the principle in performing fuzzy number arithmeticoperations such as Addition, Multiplication & fuzzy equation.
6. Solve assignment problems by using techniques of operation research.

Course Name	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
BSC-CS301		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Applied Mathematics	CO1	3	2											1		
	CO2	3	2											1		
	CO3	3	2											1		
	CO4	3	2											1		
	CO5	3	2											1		
	CO6	3	2											1		
	Total	18	12											6		
	Average	3	2	0	0	0	0	0	0	0	0	0	0	1		

Note: ***Enter numbers 1, 2, 3 where the correlation levels are:***

Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science and Engineering
Class:-Second Year BTECH Sem:-III
Course: - C Programming

Course Outcomes:
Upon successful completion of this course, the student will be able to –

1. Articulate the principles of procedure oriented problem solving and programming.
2. Explain programming fundamentals including statements, control flow and recursion
3. Able to formulate problems and implement algorithms in C
4. Analyze and use data structures to solve the complex problem statements.
5. Demonstrate file operations using file handling concepts through developing applications.

Course Name PCC-CS306	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C Programming	CO1	3	3	1	3	1								3	2	
	CO2	1	2	3	3	2								2	2	
	CO3	1	2	3	3	1								2	2	
	CO4	2	2	3	3	0								2	2	
	CO5	2	2	3	3	0								2	2	
	CO6	3	3	1	3	1								3	2	
	Total	12	14	14	18	5								14	12	
	Average	2.0	2.3	2.3	3.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.0	

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science and Engineering
Class:-Second Year BTECH Sem:-III
Course: - SOFT SKILLS

Course Outcomes:
Upon successful completion of this course, the student will be able to –

1. Effectively communicate through verbal/oral communication and improve the listeningskills
2. Actively participate in group discussion / meetings / interviews and prepare & deliverpresentations.
3. Function effectively in multi-disciplinary and heterogeneous teams through the knowledge ofteam work, Inter-personal relationships, conflict management and leadership quality.

Course Name HM-CS307	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
SOFT SKILLS	CO1	3	3	3	3	3								3	3	
	CO2	2	3	3	3	2		1						3	3	
	CO3	2	3	3	3	1						1		3	3	
	Total	7	9	9	9	6		1				1		9	9	
	Average	2.3	3.0	3.0	3.0	2.0	0.0	0.3	0.0	0.0	0.0	0.3	0.0	3.0	3.0	

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department COMPUTER SCIENCE AND ENGINEERING

Class:-Second Year Sem:- IV

Course: - Automata Theory

Course Outcomes:

Upon successful completion of this course, the student will be able to –

1. Understand basic concepts of Regular Language and Regular Expressions
2. Select appropriate abstract machine to recognize a given formal language.
3. Generate complex languages by applying Union, Intersection, Complement Concatenation Kleene * operations on simple languages.
4. Apply parsing concepts for syntax analysis.
5. Be familiar with thinking analytically and intuitively for problem solving situations
6. Areas of theory in computer science.

Course Name PCC-CS-401	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Automata Theory	CO1	1			1									1		1
	CO2		1	1	1	1							1	1	1	
	CO3	3	1	1	1											1
	CO4	1			1											
	CO5	1	2	2	2		1	1					1	1		1
	Total	6	4	4	6	1	1	1					2	3	1	3
	Average	1.2	0.8	0.8	1.2	0.2	0.2	0.2	0	0	0	0	0.4	0.6	0.2	0.6

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science and Engineering

Class:-Second Year BTECH **Sem:- IV**

Course: - Computer Networks-II

Course Outcomes:

Upon successful completion of this course, the student will be able to –

1. program the client server model using sockets
2. understand and apply next generation protocol and addressing model
3. Elaborate the fundamentals of Domain Name Systems
4. apply the concepts of Remote login and FTP in network applications
5. Learn fundamentals of web, HTTP and e-mail communication protocols.
6. Understand multimedia streaming and relevant protocols.

Course Name PCC-CS-402	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Computer Networks-II	CO1	2	2		3	3						1	2	3	3	
	CO2		3	2	2	2								3	2	
	CO3	1	3	2		1							1	2	2	
	CO4	2	3	2	2									1	2	
	CO5				1							2	1			
	CO6				2							2		2	2	
	Total	5	11	6	10	6	0	0	0	0	0	5	4	11	11	
	Average	0.8	1.8	1.0	1.7	1.0	0.0	0.0	0.0	0.0	0.0	0.8	0.7	1.8	1.8	

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science and Engineering

Class:-Second Year BTECH **Sem:- IV**

Course:-Computer Organization and Architecture

Course Outcomes:
Upon successful completion of this course, the student will be able to –

1. Recapitulate the history of computer system and the basic concepts of computer architectureand organization.
2. Understand the concept of I/O Organization.
3. Apply the different algorithms to perform arithmetic operations.
4. Articulate the design issues in the development of processor.
5. Conceptualize instruction level parallelism.
6. Understand the concept of memory techniques.

Course Name PCC-CS-403	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Computer Organization and Architecture	CO1	2										1	1	1	1	
	CO2	1											1	1	1	
	CO3			1	1								1			1
	CO4		1	2	1	1						1	1			1
	CO5		1										1	1		1
	CO6	1											1	1		
	Total	4	2	3	2	1	0	0	0	0	0	2	6	4	2	3
	Average	0.7	0.3	0.5	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.3	1.0	0.7	0.3	0.5

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science and Engineering

Class:-Second Year BTECH **Sem:- IV**

Course:-Operating System I

Course Objectives:

1. To make the students understand basic concepts of operating system
2. To expose the students to various functions of the Operating system and their usage
3. To give hands on exposure to Linux commands and system calls.

Course Name	Course Outcomes	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
PCC-CS-404	(CO)	PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
OperatingSystem I	CO1	2	2										2	2		
	CO2	2	3	2		2	2							1	2	
	CO3	1	3	2		3	2	2	2	1		2	2	2	2	
	CO4	1	2	2	1	1	2	2	1			2	2	2	2	
	CO5	2	2										2	2		
	CO6	2	3	2		2	2							1	2	
	Total	10	15	8	1	8	8	4	3	1	0	4	8	10	8	
	Average	1.7	2.5	1.3	0.2	1.3	1.3	0.7	0.5	0.2	0.0	0.7	1.3	1.7	1.3	

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department COMPUTER SCIENCE AND ENGINEERING
Class:-Second Year BTECH Sem:- IV
Course: - Software Engineering
Course Outcomes:

Upon successful completion of this course, the student will be able to –

1. Comprehend systematic methodologies of SDLC (Software Development Life Cycle)
2. Discriminate competing and feasible system requirements indicating correct real world problem scope and prepare stepwise system conceptual model using stakeholder analysis and requirement validation.
3. Prepare SRS document for a project
4. Apply software design and development techniques
5. Develop a quality software project through effective team-building, planning, scheduling and risk
6. Understand testing methods at each phase of SDLC. To tackle real world problems indomain of data mining, information retrieval, computer vision, linguistics and bioinformatics, etc .retrieval, computer vision, linguistics and bioinformatics, etc.

Course Name	Course Outcomes	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
PCC- CS405	(CO)	PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Software Engineering	CO1	3	2		1								1	3	1	
	CO2	1	3	2	1	3										
	CO3	2	1		1											
	CO4	1	2	2		2								2	1	
	CO5	2	1		2						2		2	2		
	CO6	1	1		2	1				1		2	1	2	2	
	Total	10	10	4	7	6	0	0	0	1	2	2	4	9	4	
	Average	1.7	1.7	0.7	1.2	1.0	0.0	0.0	0.0	0.2	0.3	0.3	0.7	1.5	0.7	

Note: ***Enter numbers 1, 2, 3 where the correlation levels are***

1: Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science and Engineering

Cass:-Second Year BTECH Sem:-IV

Course:-Object Oriented Programming

Course Outcomes:

After the completion of this course, a successful student will be able to do the following:

1) Use the characteristics of an object-oriented programming language in a program.
2) Use the basic object-oriented design principles in computer problem solving.
3) Use the basic principles of software engineering in managing complex software project.
4) Program with advanced features of the C++ programming language.
5) Develop programs in the LINUX programming environment.
6) Basic principles of software engineering in managing

Course Name	Course Outcomes	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
PCC-CS-406	(CO)	PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Object Oriented Programming	CO1	2	3	3	1		1							3	1	
	CO2	3	3	3	3	2	1	1						2	2	
	CO3	1	2	3	2	3	2	1	1					2	2	
	CO4	3	2	2	3	3	2	1	1	1				2	2	
	CO5	2	2	1	1	2	1	1						2	1	
	CO6	2	3	3	1		1							3	1	
	Total	13	15	15	11	10	8	4	2	1	0	0	0	14	9	
	Average	2.2	2.5	2.5	1.8	1.7	1.3	0.7	0.3	0.2	0.0	0.0	0.0	2.3	1.5	

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3:Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science and Engineering
Class:-Second Year BTECH Sem:-IV
Course:-Mini Project

Course Outcomes:

1. Define the problem statement.
2. Organize, Plan and prepare the detailed project activities.
3. Construct Flowchart, System Architecture based on the project description
4. Implement the solution for their problem.
5. Understand testing methods at each phase of SDLC

Course Name PCC-CS-407	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Mini Project	CO1	3	3	1	3	1								3	2	
	CO2	1	2	3	3	2								2	2	
	CO3	1	2	3	3	1								2	2	
	CO4	2	2	3	3	0								2	2	
	Total	7	9	10	12	4	0	0	0	0	0	0	0	9	8	
	Average	1.8	2.3	2.5	3.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.0	

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science and Engineering

Class:-THIRD YEAR BTECH **Sem:- V**

Course:-Information Security

Course Outcomes:
Upon successful completion of this course, the students will be able to :

1. Understand principles of Crypto-systems.
2. Compare and analyze various security services and mechanisms.
3. Apply and use the features of PGP, S/MIME, DSA, IPSec, SSL in their profession.
4. Takeprecautionsoftheirpersonalcomputingsystemfrompossiblethreatsand attacks.
5. Explore newer vulnerabilities and provide the solutions to them.
6. Various security services and mechanisms

Course Name PCC-CS501	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Information Security	CO1	2	2		1								2	3	2	
	CO2	2	3	3	1	3							2	2	2	
	CO3	1	2		2									2	1	
	CO4	3	2		2	2				1					2	
	CO5	3	2		2	3	2			1		2	1	2		
	CO6	3	2	2	2	2	2		2	2	2	2	2	2	2	
	Total	14	13	5	10	10	4	0	2	4	2	4	7	11	9	
	Average	2.3	2.2	0.8	1.7	1.7	0.7	0.0	0.3	0.7	0.3	0.7	1.2	1.8	1.5	

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science and Engineering

Class:-THIRD YEAR BTECH **Sem:- V**

Course:-System Programming

Course Outcomes:

1. Student will be able to identify the role of system programs and application programs.
2. Student will be able to understand the basics of system programs like editors,compiler, assembler , linker, loader, interpreter and debugger.
3. Students able to describe the various concepts of assemblers and macro -processors.
4. Students able to understand the various phases of compiler and compare itsworking with assembler.
5. Students understand how linker and loader create an executable program from an objectmodule created by assembler and compiler.
6. Student will be able to create graphical user interfaces for basic programs and learn about terminalinput/output through the term ios libraries.

Course Name PCC-CS502	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
System Programming	CO1	1	1										1	3	2	
	CO2		1	1		2		1		1				1	2	
	CO3	2		2	2	2	1	1	1	1			1	1	1	
	CO4	1	1	2	2	2	1	1	1	1			1	1	2	
	CO5	2	3	3	2	2	1	1	1	1				2	2	
	CO6	3	3	2	2	2	1	1					1	2	2	
	Total	9	9	10	8	10	4	5	3	4	0	0	4	10	11	
	Average	1.50	1.50	1.67	1.33	1.67	0.67	0.83	0.50	0.67	0.00	0.00	0.67	1.67	1.83	

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science and Engineering

Course:-Object Oriented Modeling and Design

Course Outcomes

1. Ability to analyze and model software systems
2. Ability to construct OO view of the system
3. Ability to design a Software System using OMT design techniques.
4. Ability to design a Software System using UML design techniques.

Course Name	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
PCC - CS503		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Object Oriented Modeling and Design	CO1	3	2		1								1	3	1	
	CO2	1	3	2	1	3							1	2	1	
	CO3	2	1		1											
	CO4	1	2	2		2				2		2		2	1	
	Total	7	8	4	3	5	0	0	0	2	0	2	2	7	3	
	Average	1.75	2	1	0.75	1.25	0	0	0	0.5	0	0.5	0.5	1.75	0.75	

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science and Engineering

Class:- THIRD YEAR BTECH Sem:-V

Course Name PCC - CS504	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Computer Algorithms	CO1	2	1		1								2	2		
	CO2	2	3	2	2								2	1	2	
	CO3	1	1			2			2	2		3	2	1	1	
	CO4	1	1	2		2		1	2					2	2	
	Total	6	6	4	3	4	0	1	4	2	0	3	6	6	5	
	Average	1.5	1.5	1	0.75	1	0	0.25	1	0.5	0	0.75	1.5	1.5	1.25	

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science and Engineering

Class:- THIRD YEAR BTECH Sem:-V

Course Name	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
OEC - CS505		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Computer Graphics and Multimedia	CO1	2										1	1	1	1	
	CO2	1											1	1	1	
	CO3			1	1								1			1
	CO4		1	2	1	1						1	1			1
	Total	3	1	3	2	1	0	0	0	0	0	2	4	2	2	2
	Average	0.75	0.25	0.75	0.5	0.25	0	0	0	0	0	0.5	1	0.5	0.5	0.5

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science and Engineering

Class:- THIRDYEARBTECH Sem:-V

Course:-Java Programming

Course Outcomes

1. Students will be able to articulate the principle of object-oriented problem solving& programming.
2. Students will be able to illustrate code reusability, security and abstraction using inheritance,package and interface.
3. Students will be able to develop reliable and user-friendly applications using exceptionhandling and file handling.
4. Students will be able to create desktop apps using SWING and event handling and alsoillustrate multithreading concepts.
5. Students will be able to use JDBC & collection framework.
6. Studentswillbeabletoapplynetworkprogrammingconcept&developwebapplications usingservlet and jsp.

Course Name PCC - CS507	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Java Programming	CO1	3	3	2	2	1	1						1			
	CO2	3	3	2	2	1								3	2	
	CO3	3	3	3	3	2	1	1					1	3	3	
	CO4	3	3	3	3	3	2	1	1			1	1	3	3	
	CO5	3	3	3	3	3	2	1	1			1	1	3	3	
	CO6	3	3	3	3	3	2	1	1			1	1	3	3	
	Total	18	18	16	16	13	8	4	3	0	0	3	5	15	14	
	Average	3.0	3.0	2.7	2.7	2.2	1.3	0.7	0.5	0.0	0.0	0.5	0.8	2.5	2.3	

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science and Engineering

Class:T.Y.CSE SEM:V

Course: Business English

Course Outcomes (COs)

1. Learn to communicate with others in practical, business oriented situations
2. Learn to express themselves in English with greater fluency, accuracy and confidence
3. Learn to handle themselves in English in a variety of business contexts, from negotiating, tousing the telephone, to making presentations, to socializing
4. Enhance the skills of listening, speaking, pronunciation skills, as well as business vocabulary
5. Acquire the communicative competencies crucial for appropriate work place behavior

Course Name HM CS508	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Business English	CO1	3	3	1	3	1								3	2	
	CO2	1	2	3	3	2								2	2	
	CO3	1	2	3	3	1								2	2	
	CO4	2	2	3	3	0								2	2	
	CO5	2	2	3	3	0								2	2	
	Total	9	11	13	15	4	0	0	0	0	0	0	0	11	10	
	Average	1.8	2.2	2.6	3	0.8	0	0	0	0	0	0	0	2.2	2	

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science and Engineering
Class:- THIRD YEAR B TECH Sem:-VI
Course:-Compiler Construction

Course Outcomes

1. Recall the compiler phases and compiler construction tools like LEX and YACC.
2. To design and implement Lexical Analyzer for a simple language.
3. To design and implement Syntax analyzer for a simple expression.
4. To apply Syntax directed translations and Syntax Directed definitions to generate intermediate code.
5. To identify appropriate code optimizing transformation for the given code.
6. To explain concept of code generation.

Course Name PCC - CS601	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Compiler Construction	CO1	3	2		1								1	3	1	
	CO2	1	3	2	1	3							1	2	1	
	CO3	2	1		1											
	CO4	1	1		2	1										
	CO5	1	1	2	2	1				2	2	2	1	2	3	
	CO6	2	2		1									1		
	Total	10	10	4	8	5	0	0	0	2	2	2	3	8	5	
	Average	1.7	1.7	0.7	1.3	0.8	0.0	0.0	0.0	0.3	0.3	0.3	0.5	1.3	0.8	

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science and Engineering

class:- THIRD YEAR BTECH Sem:-VI

Course:-Operating System-II

Course Outcomes

Upon Completion of this course, students will be able to:

1. To understand UNIX kernel, its architectural components like file subsystem , process controlsubsystem, memory management.
2. To understand a concrete way (UNIX i-nodes) of organizing a file system on aphysical storage medium.
3. To maintain UNIX directories, files, manage processes, manipulate data with proper use ofpipes and file redirection, UNIX filters.
4. To implement and handle various UNIX system calls.
5. To explain the principles of paging, virtual memory (VM) and describe the data structures and components (both hardware and software) that are necessary to implement it.
6. To perform shell programming involving decision control, looping and control flow statements on UNIX based machines.

Course Name PCC - CS601	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Operating System-II	CO1	2	2	2	1							1	1	2	1	2
	CO2	2	2	2	1		2					1	1	2	1	2
	CO3	2	2	2	1		2					1	1	2	1	2
	CO4	2	2	2	1		3					1	1	2	1	2
	CO5	1	3	2	1	3							1			
	CO6	2	1		1										1	
	Total	11	12	10	6	3	7	0	0	0	0	4	5	8	5	8
	Average	1.83	2.00	1.67	1.00	0.50	1.17	0.00	0.00	0.00	0.00	0.67	0.83	1.33	0.83	1.33

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science and Engineering
Class:- THIRD YEAR BTECH Sem:-VI

Course:-Database Engineering

Course Outcomes
1. Understand fundamentals of database management systems.
2. Represent logical design of database using E-R Diagram.
3. Analyze & construct good database design.
4. Apply SQL queries to design & manage the database.

Course Name	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
PCC - CS603		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Database Engineering	CO1	3	2		1								1	3	1	
	CO2	1	3	2	1	3							1	2	1	
	CO3	2	1		1								2	1	2	
	CO4		2	2		2										
	CO5	1			1						1		1		1	
	CO6	1	1		2	1				1		2	1	2	2	
	Total	8	9	4	6	6	0	0	0	1	1	2	6	8	7	
	Average	1.3	1.5	0.7	1.0	1.0	0.0	0.0	0.0	0.2	0.2	0.3	1.0	1.3	1.2	

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science and Engineering

Class:-THIRD YEAR BTECH **Sem:- VI**

Course:-Machine Learning

Course Outcomes

On completion of the course, student will be able to

1. Explain Machine Learning concepts.
2. Analyze the Machine Learning model.
3. Design solution using Machine Learning techniques.
4. To tackle real world problems in domain of data mining, information retrieval, computervision ,linguistics and bio informatics ,etc..

Course Name PCC - CS604	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Machine Learning	CO1	1	1	1		2		2					2	1		
	CO2	3	3	3	3		2	3				1	1	2	1	3
	CO3	2	3	3	1		1	2				3		2	1	
	CO4	1	3	3	2		1							1		1
	CO5		1	2	1	1		1				1	2	2	2	1
	CO6			1			3		1					2	1	1
	Total	7	11	13	7	3	7	8	1	0	0	5	5	10	5	6
	Average	1.2	1.8	2.2	1.2	0.5	1.2	1.3	0.2	0.0	0.0	0.8	0.8	1.7	0.8	1.0

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science and Engineering

Class:-THIRD YEAR BTECH **Sem:- VI**

Course: Cyber Security

Course Outcomes

On completion of the course, student will be able to

1. Explain the cyber security concepts.
2. Describe the cyber security vulnerabilities and prevention techniques.
3. Explain the different rules and regulations under I.T.ACT.
4. Explain the concepts of digital forensics & incident management tools.

Course Name	Course Outcomes (CO)	Program Outcomes(PO)											Program Specific Outcomes (PSO)		
OEC - CS606		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Cyber Security	CO1	3	3	2	2	3							2	3	2	
	CO2	3	3		2	3							2	3	2	
	CO3	3	3		2	3				2				3	2	
	CO4	3	3	3	3	3				2			2	2	2	
	CO5	3	3	2	3	3				1			2	2	2	
	CO6	3	3	2	2	3							2	3	2	
	Total	18	18	9	14	18	0	0	0	5	0	0	10	16	12	
	Average	3	3	2	2	3	0	0	0	1	0	0	2	3	2	

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department COMPUTER SCIENCE AND ENGINEERING

Class:-THIRD YEAR BTECH **Sem:- VI**

Course: C# Programming

Course Outcomes

1. Students will be able to develop correct, well-documented programs using the C#programming language.
2. Students will be able to learn to develop object-oriented programs using C# classes andobjects
3. Students will be able to learn to use Windows Forms and WPF to create GUI-basedprograms
4. Students will be able to build networking and multithreading based programs using C#
5. Students will be able to design web applications using ASP.NETusingASP.NET controls inweb applications.
6. Students will be able to debug and deploy ASP.NET web applications and create databasedriven ASP.NET web applications.

Course Name PCC - CS607	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C# Programming	CO1	2	2		1								1	3	2	
	CO2	1	3	3	1	3							1	2	1	
	CO3	1	1		1									1	1	
	CO4	1	1		2	2									2	
	CO5	2	2	2	2	3				2		2	1	2		
	CO6	2	2	2	2	2	2		1	2	2	2	1	2	2	
	Total	9	11	7	9	10	2		1	4	2	4	4	10	8	
	Average	1.5	1.8	1.2	1.5	1.7	0.3	0.0	0.2	0.7	0.3	0.7	0.7	1.7	1.3	

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department COMPUTER SCIENCE AND ENGINEERING

Class:-FINAL YEAR BTECH **Sem:- VII**

Course: - Advanced Computer Architecture

Course Outcomes:
Upon successful completion of this course, the students will be able to:
1. Demonstrate concepts of parallelism in hardware/software.
2. Discuss memory organization and mapping techniques.
3. Describe architectural features of advanced processors.
4. Interpret performance of different pipelined processors.
5. Explain data flow in arithmetic algorithms.
6. Development of software to solve computationally intensive problems.

Course Name PCC-CS701	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Advanced Computer Architecture	CO1	2	2		1								1	1		
	CO2	2	2	1	1								1	1		
	CO3	2	2		1	1								1		
	CO4	1	1	2	2	1				1	1	1		1		
	CO5	1	1	1	1	1							1	1	1	
	CO6	1	1		1	1				1	1	1			2	
	Total	9	9	4	7	4	0	0	0	2	2	2	3	5	3	
	Average	2	2	1	1	1	0	0	0	0	0	0	1	1	1	

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department COMPUTER SCIENCE AND ENGINEERING

Class:-FINAL YEAR BTECH **Sem:- VII**

Course: - Cloud Computing

Course Outcomes:

Upon successful completion of this course, the students will be able to:

1. Describe the main concepts, key technologies, strengths, and limitations ofcloud computing and the Possible applications for state-of-the-art cloud computing.
2. Explain the architecture and infrastructure of cloud computing, including SaaS, PaaS, IaaS ,public cloud, private cloud, hybrid cloud, etc.
3. Collaboratively research on the state of the art (and open problems)in cloud computing.
4. Identify problems, and explain, analyze, and evaluate various cloud computing solutions.
5. Choose the appropriate technologies, algorithms, and approaches for the related issues.
6. Display new ideas and innovations in cloud computing.

Name (PCC – CS702)	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Cloud Computing	CO1	2	2	3	2	3							2	3	2	
	CO2		3	2	2									3	2	
	CO3	1	3	2		1							1	2	2	
	CO4	2	3	2	2									1	2	
	CO5				1							2	1			
	CO6				2							2		2	2	
	Total	5	11	9	9	4						4	4	11	10	
	Average	0.83	1.83	1.50	1.50	0.67	0.00	0.00	0.00	0.00	0.00	0.67	0.67	1.83	1.67	

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science and Engineering
Class:-Final Year Btech Sem:- Vii
Course: -Web Technologies

Course Outcomes:
Upon successful completion of this course, the students will be able to:

1. Implement different types of tags in HTML, CSS, client side scripting
2. Design an application to process Web forms using Java script
3. Design web application using MVC and Angular JS
4. Demonstrate use of server side technologies using PHP
5. Design and implement database applications using PHP
6. Explore newer tools for web development

Course Name PCC-CS705	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Web Technologies	CO1	2	2		1								1	3		
	CO2	1	3	2	1	3							1	2	1	
	CO3	1	1		1									1	1	
	CO4	1	1		2	1									2	
	CO5	2	2	3	2	1				2	2	2	1	2		
	Total	7	9	5	7	5				2	2	2	3	8	4	
	Average	1.4	1.8	1	1.4	1	0	0	0	0.4	0.4	0.4	0.6	1.6	0.8	

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name of Department Computer Science And Engineering
Class:-Final Year Btech Sem:- VII /VIII
Course: -Project-I

Course Outcomes:

Upon successful completion of this course, the students will be able to:

1. Explain the need of a software project for the society
2. Identify requirement analysis like functional and technical requirements for the project
3. Comeupwithdesigndocumentsfortheprojectconsistingof Architecture,Dataflowdiagram, classDiagram, Algorithmic descriptions of various modules, collaboration diagram, ER Diagrams, Database Design Documents, Sequence Diagram, Use Case Diagram
4. Able to demonstrate analysis and design.
5. Prepare the technical report consisting of Requirements specification,
6. Analysis and Design of project

Course Name PW- CS706	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Project-I	CO1	3	3	1	3	1								3	2	
	CO2	1	2	3	3	2								2	2	
	CO3	1	2	3	3	1								2	2	
	CO4	2	2	3	3	0								2	2	
	CO5	2	2	3	3	0								2	2	
	Total	9	11	13	15	4								11	10	
	Average	1.8	2.2	2.6	3	0.8	0	0	0	0	0	0	0	2.2	2	

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name Of Department Computer Science and Engineering
Class:-FINAL YEAR BTECH **Sem:- VIII**
Course: -Mobile Application Development

Course Outcomes:

Upon successful completion of this course, the students will be able to:

1. To Install and configure Android application development tools.
2. To Design and develop user Interfaces for the Android platform.
3. To Design and develop database based android application.
4. To Apply Java programming concepts to Android app development.

Course Name (PCC- CS805)	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Mobile application development	CO1	2				2								3	3	
	CO2	2	2	3	2									3	3	
	CO3	2	3	2	3	3			1			2	1	3	3	
	CO4	3	1	1	2	2						2	2	3	2	
	Total	9	6	6	7	7			1			4	3	12	11	
	Average	2.25	1.5	1.5	1.75	1.75	0	0	0.25	0	0	1	0.75	3	2.75	

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Name Of Department Computer Science and Engineering

Class:- FINAL YEAR BTECH **Sem:-VIII**

Course: - Deep Learning

Upon successful completion of this course, the students will be able to :

1. Describe basic concepts of artificial intelligence and
2. Deep learning.
3. Develop different deep learning models for given tasks.
4. Devise the correct parameters and hyper-
5. parameters of developed model forgetting
6. Improved results.

Course Name	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
PCC - CS802		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Deep Learning	CO1	2	2	3	1								1	2	2	
	CO2	1	2	2	2	3							2	2	1	
	CO3	2	1		1					1	1	3	2	1	2	
	Total	5	5	5	4	3				1	1	3	5	5	5	
	Average	1.7	1.7	1.7	1.3	1.0	0.0	0.0	0.0	0.3	0.3	1.0	1.7	1.7	1.7	

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Class:- FINAL YEAR BTECH **Sem:-VIII**

Course: - Ad-Hoc Wireless Sensor Networks ()

1) Describe issues and design goals in Ad Hoc wireless networks
2) Explain and classify various routing protocols in Ad Hoc wireless networks
3) Describe design issues and classify transport layer protocols and security protocols in Ad Hoc wireless Networks
4) Describe challenges and routing protocols in sensor networks
5) Explain sensor networks infrastructure management and sensor tasking and control techniques

Course Name PCE- CS803	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Ad-Hoc Wireless Sensor Networks	CO1	3	3		1	2								3	2	
	CO2	2	2		2	2								3	1	
	CO3	2	2		2	2				2				3	1	
	CO4	3	3	3	3	2				2				2	2	
	CO5	3	3	2	2	2				1				2	2	
		13	13	5	10	10	0	0	0	5	0	0	0	13	8	0
	Average	2.6	2.6	1	2	2	0	0	0	1	0	0	0	2.6	1.6	0

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Class:- FINAL YEAR BTECH **Sem:-VIII**

Course: - Block chain Technology ()

Upon successful completion of this course, the students will be able to :

1. Explain design principles of Bitcoin and Ethereum.
2. Explain Nakamoto consensus.
3. Explain the Simplified Payment Verification protocol.
4. List and describe differences between proof-of-work and proof-of-stake consensus.
5. Interact with a blockchain system by sending and reading transactions.
6. Design, build, and deploy a distributed application..

Course Name	Course Outcomes	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
PCE- CS804	(CO)	PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Block chain Technology	CO1	1	2		1									3		
	CO2	1	1		1								1	2		
	CO3	2	2	2	1									2		
	CO4	2	2		2		1						1	2	1	
	CO5	2	2	2	2	2			1					1	2	
	CO6	3	2	3	2	3	1	1	1				2	1	3	
	Total	11	11	7	9	5	2	1	2	0	0	0	4	11	6	0
	Average	1.83	1.83	1.17	1.50	0.83	0.33	0.17	0.33	0.00	0.00	0.00	0.67	1.83	1.00	0.00

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Class:- FINAL YEAR BTECH **Sem:-VIII**

Course: - Project-II (PW- CS806)

Upon successful completion of this course, the students will be able to :

1. Design and develop usable User Interface
2. Analyze and apply emerging technologies in development of a project
3. Test the modules in Project
4. Demonstrate working of project

Course Name	Course Outcomes	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
PW- CS806	(CO)	PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Project-II	CO1	3	3	1	3	2				3	3			3	2	
	CO2	2	2	3	3	2				3	3	3		2	2	
	CO3	2	2	3	3	2		2	2	3	3	3		2	2	
	CO4	2	2	3	3	0				3	3	3		2	2	
	Total	9	9	10	12	6	0	2	2	12	12	9	0	9	8	0
	Average	2.25	2.25	2.5	3	1.5	0	0.5	0.5	3	3	2.25	0	2.25	2	0

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Class:- FINAL YEAR BTECH **Sem:-VIII**

Course: - Big Data Analytics

Upon successful completion of this course, the students will be able to :

1. Analyze several key technologies used in manipulating, storing, and analyzing big data.
2. Acquire clear understanding of R & Hadoop.
3. Acquire clear understanding of Integrating R & Hadoop and Acquire clear understanding of Hadoop Streaming and its importance.
4. Manage Big Data and analyze Big Data.
5. Apply tools and techniques to analyze Big Data.

Course Name PCC- CS801	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Big Data Analytic	CO1	2	1	2		2						1	1	3	2	1
	CO2	1	3	2		3						2		3	2	1
	CO3	2	3	2		2						2		3	2	1
	CO4	1	2									1		1	3	1
	CO5	1	3	2		2						2	1	1	2	3
	Total	7	12	8	0	9	0	0	0	0	0	8	2	11	11	7
	Average	1.4	2.4	1.6	0	1.8	0	0	0	0	0	1.6	0.4	2.2	2.2	1.4

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING, KOLHAPUR

Class:- FINAL YEAR BTECH **Sem:-VIII**

Course: - Artificial Intelligence (Elective-I)

Upon successful completion of this course, the students will be able to :

1. Evaluate Artificial Intelligence (AI) methods and describe their foundations..
2. Apply basic principles of AI in solutions that require problem solving, inference,
3. Demonstrate knowledge of reasoning and knowledge representation for solving real world problems
4. Analyze and illustrate how search algorithms play vital role in problem solving.
5. Illustrate the construction of learning and expert system.
6. Discuss current scope and limitations of AI and societal implications.

Course Name PCE– CS704	Course Outcomes (CO)	Program Outcomes(PO)												Program Specific Outcomes (PSO)		
		PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Artificial Intelligence (Elective-I)	CO1	1	1	1		2		2					2	1		
	CO2	3	3	3	3		2	3				1	1	2	1	3
	CO3	2	3	3	1		1	2				3		2	1	
	CO4	1	3	3	2		1							1		1
	CO5		1	2	1	1		1				1	2	2	2	1
	CO6			1			3		1					2	1	1
	Total	7	11	13	7	3	7	8	1	0	0	5	5	10	5	6
	Average	1.17	1.83	2.17	1.17	0.50	1.17	1.33	0.17	0.00	0.00	0.83	0.83	1.67	0.83	1.00

Note: ***Enter numbers 1,2, 3 where the correlation levels are***

1:Slightly 2: Moderately 3: Significantly

Vijay Ram Ghorpade

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