SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

I SEMESTER

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REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name		Course Outcome (CO) Students will be able to
HS6151	TECHNICAL ENGLISH-I	C101.1	Apply the collaborative and social aspects of research and writing processes.
		C101.2	Comprehend that research and writing is a series of tasks, including accessing, retrieving, evaluating, analyzing and synthesizing appropriate data and information from sources that vary in content, format, structure and scope.
		C101.3	Use appropriate technologies to organize, present and communicate information to address a range of audiences and genres.
		C101.4	Design the multidisciplinary settings to manage projects as an individual, as a member or leader after taking the exercises like role-play, group discussion and making presentations.
		C101.5	Model the life-long learning methods suitable for all the environments committed to professional ethics and responsibilities after inculcating the habit of reading and writing
		C101.6	Analyze and identify the root for effective managerial skills through different spoken discourse and excerpts.

CO-PO MAPPING

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
C101.1	2	2	1	1	-	-	1	-	-	1	-	1	1	-	-
C101.2	2	2	1	1	-	-	1	-	-	1	-	1	1	-	-
C101.3	2	2	1	1	-	-	1	-	-	1	-	1	1	-	-
C101.4	2	2	1	1	-	-	1	-	-	1	-	1	1	-	-
C101.5	2	2	1	1	-	-	1	-	-	1	-	1	1	-	-
C101.6	2	2	1	1	-	-	1	-	-	1	-	1	1	-	-
C101	**2**	**2**	**1**	**1**	**-**	**-**	**1**	**-**	**-**	**1**	**-**	**1**	**1**	**-**	**-**

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REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name		Course Outcome (CO) Students will be able to
MA6151	MATHEMATICS-I	C102.1	Describe a clear idea of matrix algebra pertaining Eigen values and Eigen vectors in addition dealing with quadratic forms
		C102.2	Learn infinite series and their convergence and acquire the knowledge of with limitations.
		C102.3	Use infinite series approximations for solutions arising in mathematical modeling.
		C102.4	Explain and characterize phenomena which evolve around circle of curvature and envelope.
		C102.5	Extend the function of a one variable to several variables. Multivariable functions of real variables arise inevitable in engineering.
		C102.6	Exposed to double and triple integration so that they can handle integrals of higher order which are applied in engineering field.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
C102.1	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C102.2	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C102.3	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C102.4	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C102.5	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C102.6	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C102	**3**	**2**	**1**	**1**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1**	**-**	**-**

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome (CO) Students will be able to	
PH6151	**ENGINEERING PHYSICS-I**	**C103.1**	Classify the Bravais lattices and different types of crystal structures and growth technique.
		C103.2	Demonstrate the properties of elasticity and heat transfer through objects.
		.C103.3	Explain black body radiation, properties of matter waves and Schrodinger wave equations
		C103.4	Describe and analyzing the quantum nature of radiation and matter to solve the real time societal and technological problems.
		C103.5	Illustrate the acoustic requirements, production and application of ultrasonic.
		C103.6	Examine the characteristics of laser and optical fiber.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
C103.1	2	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C103.2	2	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C103.3	2	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C103.4	2	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C103.5	2	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C103.6	2	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C103	**2**	**2**	**1**	**1**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1**	**-**	**-**

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name		Course Outcome (CO) Students will be able to
N CY6151	ENGINEERING CHEMISTRY-I	C104.1	Classify the polymers, different polymerization techniques and its uses.
		C104.2	Describe the laws of thermodynamics, various thermodynamics functions and their significance
		C104.3	Explain the photo physical processes and the components of analytical instruments.
		C104.4	Illustrate the phase diagrams, alloys and heat treatment processes
		C104.5	Discuss the synthesis, characteristics and the applications of nano materials.
		C104.6.	Create the knowledge of nonmaterial's and their applications in fields like medicinal, electrical, electronic, chemical, etc

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
C104.1	3	2	1	1	-	-	1	-	-	-	-	1	1	-	-
C104.2	3	2	1	1	-	-	1	-	-	-	-	1	1	-	-
C104.3	3	2	1	1	-	-	1	-	-	-	-	1	1	-	-
C104.4	3	2	1	1	-	-	1	-	-	-	-	1	1	-	-
C104.5	3	2	1	1	-	-	1	-	-	-	-	1	1	-	-
C104.6	3	2	1	1	-	-	1	-	-	-	-	1	1	-	-
C104	**3**	**2**	**1**	**1**	**-**	**-**	**1**	**-**	**-**	**-**	**-**	**1**	**1**	**-**	**-**

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name		Course Outcome (CO) Students will be able to
GE6151	COMPUTER PROGRAMMING	C105.1	Explain the basic organization of computers, the number systems and write the pseudo code for algorithms and flow chart.
		C105.2	Develop 'C' programming fundamentals, looping statements and solve problems.
		C105.3	Design 'C' programs for arrays and strings
		C105.4	Use functions with pass by value and reference, pointers in programs.
		C105.5	Develop coding in 'C' for structu res and unions with storage classes and pre-processor.
		C105.6	Design and execute C programs for simple applications.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
C105.1	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-
C105.2	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-
C105.3	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-
C105.4	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-
C105.5	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-
C105.6	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-
C105	**3**	**2**	**1**	**1**	**1**	**-**	**-**	**-**	**-**	**-**	**-**	**1**	**1**	**-**	**-**

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome (CO) Students will be able to	
GE6152	ENGINEERING GRAPHICS	C106.1	Construct the conic sections and special curves and outline their practical applications and sketch the orthographic views from pictorial views and models.
		C106.2	Apply the principles of orthographic projections of points in all quadrants, lines and planes in first quadrant.
		C106.3	Draw the projections of simple solids like prisms, pyramids, cylinder and cone and obtain the traces of plane figures.
		C106.4	Design the sectional views of solids like cube, prisms, pyramids, cylinders & cones and Development of its lateral surfaces.
		C106.5	Apply the principles of isometric projection and perspective projection of simple solids and truncated prisms, pyramids, cone and cylinders.
		C106.6	Build an engineering component using Paper drawing as well as in CAD.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
C106.1	2	1	1	1	-	1	-	-	-	1	-	-	1	-	-
C106.2	2	1	1	1	-	1	-	-	-	1	-	-	1	-	-
C106.3	3	2	1	1	-	1	-	-	-	1	-	-	1	-	-
C106.4	3	2	1	1	-	1	-	-	-	1	-	-	1	-	-
C106.5	2	2	1	1	-	1	-	-	-	1	-	-	1	-	-
C106.6	2	1	1	1	-	1	-	-	-	1	-	-	1	-	-
C106	**3**	**2**	**1**	**1**	**-**	**1**	**-**	**-**	**-**	**1**	**-**	**-**	**1**	**-**	**-**

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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome (CO) Students will be able to	
GE6161	COMPUTER PRACTICES LABORATORY	C107.1	Prepare data using MS-word & Excel to visualize graphs, charts in MS-Excel.
		C107.2	Outline the given problem using flowchart and to program using Switch case & Control structures
		C107.3	Develop the code using decision making & looping statements.
		C107.4	Apply passing parameters using Arrays & Functions.
		C107.5	Use structure and Union for a given database and to bring out the importance of Unions over structure.
		C107.6	Design and implement C programs for simple applications.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
C107.1	2	2	1	1	-	-	-	-	1	-	-	1	1	-	-
C107.2	2	2	1	1	-	-	-	-	1	-	-	1	1	-	-
C107.3	2	2	1	1	-	-	-	-	1	-	-	1	1	-	-
C107.4	2	2	1	1	-	-	-	-	1	-	-	1	1	-	-
C107.5	2	2	1	1	-	-	-	-	1	-	-	1	1	-	-
C107.6	2	2	1	1	-	-	-	-	1	-	-	1	1	-	-
C107	**2**	**2**	**1**	**1**	**-**	**-**	**-**	**-**	**1**	**-**	**-**	**1**	**1**	**-**	**-**

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REGULATION 2013
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Course Code	Course Name		Course Outcome (CO) Students will be able to
GE6162	ENGINEERING PRACTICES LABORATORY	C108.1	Demonstrate wiring for a simple residential house, identify the ratings of various appliances like Fluorescent tube, incandescent lamp, etc.
		C108.2	Calculate the different Electrical quantities, measure the energy consumption using single phase energy meter.
		C108.3.	Measure the resistance to earth of an electrical equipment, analyze AC signal parameters using CRO
		C108.4	Verify the Truth tables of Logic gates AND, OR, EOR and NOT, generate clock signal using suitable gates.
		C108.5	Develop soldering in a PCB, measure ripple factor of Half Wave Rectifier and Full Wave Rectifier.
		C108.6.	Provide exposure to the students with hands-on experience on various basic engineering practices in Civil and Mechanical Engineering

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
C108.1	2	1	1	1	1	-	-	-	1	-	-	1	2	1	-
C108.2	2	1	1	1	1	-	-	-	1	-	-	1	2	1	-
C108.3	2	1	1	1	1	-	-	-	1	-	-	1	2	1	-
C108.4	2	1	1	1	1	-	-	-	1	-	-	1	2	1	-
C108.5	2	1	1	1	1	-	-	-	1	-	-	1	2	1	-
C108.6	2	1	1	1	1	-	-	-	1	-	-	1	2	1	-
C108	**2**	**1**	**1**	**1**	**1**	**-**	**-**	**-**	**1**	**-**	**-**	**1**	**2**	**1**	**-**

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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome (CO) Students will be able to	
GE6163	PHYSICS AND CHEMISTRY LABORATORY-I	C109.1.	Apply the physics principles of Thermal physics and Properties of Matter to evaluate properties of materials
		C109.2.	Evaluate the wavelength of spectral lines using spectrometer, the wavelength of laser, particle size, acceptance angle of an optical fiber using semiconductor diode laser and the thickness of a thin wire through interference fringes using Air wedge apparatus
		C109.3.	Appraise the velocity of sound and compressibility of the liquid using ultrasonic interferometer and thermal conductivity for bad conductors using Lee's disc apparatus
		C109.4	Determine the DO content in water sample by winkler's method and molecular weight of polymer by Ostwald viscometer.
		C109.5	Find the strength of an acid using pH meter and conductometer.
		C109.6	Estimate the amount of weak and strong acids in a mixture by conductometer.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
C109.1	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C109.2	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C109.3	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C109.4	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C109.5	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C109.6	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C109	**3**	**2**	**1**	**1**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1**	**-**	**-**

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

II SEMESTER

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome (CO) Students will be able to	
HS6251	TECHNICAL ENGLISH-II	C110.1	Speak clearly, confidently, comprehensibly, and communicate with one or many listeners using appropriate communicative strategies.
		C110.2	Define the impact of the professional engineering solution in societal and environmental contexts with the help of the basic grammar taught to communicate effectively and confidently.
		C110.3	Write cohesively and coherently and flawlessly avoiding grammatical errors, using a wide vocabulary range, organizing their ideas logically on a topic.
		C110.4	Read different genres of texts adopting various reading strategies.
		C110.5	Listen/view and comprehend different spoken discourses/excerpts in different accents.
		C110.6	Recognize, understand, and analyze the context within which language, information, and knowledge are produced, managed, organized, and disseminated.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
C110.1	2	2	1	1	-	-	1	-	1	1	-	1	1	-	-
C110.2	2	2	1	1	-	-	1	-	1	1	-	1	1	-	-
C110.3	2	2	1	1	-	-	1	-	1	1	-	1	1	-	-
C110.4	2	2	1	1	-	-	1	-	1	1	-	1	1	-	-
C110.5	2	2	1	1	-	-	1	-	1	1	-	1	1	-	-
C110.6	2	2	1	1	-	-	1	-	1	1	-	1	1	-	-
C110	**2**	**2**	**1**	**1**	**-**	**-**	**1**	**-**	**1**	**1**	**-**	**1**	**1**	**-**	**-**

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome (CO) Students will be able to	
MA6251	MATHEMATICS-II	C111.1	Solve ordinary differential equations that model most of the engineering problems.
		C111.2	Acquaint the concepts of vector calculus-like Gradient, Divergence, Curl, Directional derivative, Irrotational vector and Solenoidal vector.
		C111.3	Make to appreciate the e of using transforms to create new domain in which it is easier to handle the problem that is being investigated.
		C111.4	Develop an Explaining of the standard techniques of complex variable and mapping so as to enable the student to apply them with confidence, in application areas such as heat conduction, elasticity, fluid dynamics and flow of electric current.
		C111.5	Exposed to the concept of Cauchy's integral theorem, Taylor, Laurent expansions and Singular points.
		C111.6	Use Application of residue theorem to evaluate complex integrals.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
C111.1	2	2	2	1	-	-	-	-	1	-	-	1	1	-	-
C111.2	2	2	2	1	-	-	-	-	1	-	-	1	1	-	-
C111.3	2	2	2	1	-	-	-	-	1	-	-	1	1	-	-
C111.4	2	2	2	1	-	-	-	-	1	-	-	1	1	-	-
C111.5	2	2	2	1	-	-	-	-	1	-	-	1	1	-	-
C111.6	2	2	2	1	-	-	-	-	1	-	-	1	1	-	-
C111	2	2	2	1	-	-	-	-	1	-	-	1	1	-	-

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name		Course Outcome (CO) Students will be able to
PH6251	ENGINEERING PHYSICS - II	C112.2	Illustrate classical and quantum free electron theory and calculate carrier concentration in metals.
		C112.2	Describe the carrier concentration in semi conductors and identify the p-type and n-type semi conductor using hall effect.
		C112.3	Illustrate the special material properties such as magnetism.
		C112.4	Discuss the super conductivity.
		C112.5	Explain the dielectrics, types of polarization, losses and breakdown
		C112.6	Discuss the properties, preparation and applications of metallic alloys, SMA, nano materials, NLO, Bio-materials.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
C112.1	2	2	1	1	-	1	1	-	-	-	-	-	1	-	-
C112.2	2	2	1	1	-	1	1	-	-	-	-	-	1	-	-
C112.3	2	2	1	1	-	1	1	-	-	-	-	-	1	-	-
C112.4	2	2	1	1	-	1	1	-	-	-	-	-	1	-	-
C112.5	2	2	1	1	-	1	1	-	-	-	-	-	1	-	-
C112.6	2	2	1	1	-	1	1	-	-	-	-	-	1	-	-
C112	**2**	**2**	**1**	**1**	**-**	**1**	**1**	**-**	**-**	**-**	**-**	**-**	**1**	**-**	**-**

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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name		Course Outcome (CO) Students will be able to
CY6251	ENGINEERING CHEMISTRY-II	C113.1	Explain the problems of using hard water in boilers and the methods of treatment of water for boiler use.
		C113.2	Design the electrochemical cells and to identify the types of corrosion and the methods of preventing.
		C113.3	Illustrate the methods of harnessing energy from non-conventional energy sources.
		C113.4	Classify various engineering materials and their importance.
		C113.5	Relate the significance of solid, liquid and gaseous fuels and to calculate the calorific values of fuels and the requirement of air for combustion in furnaces.
		C113.6	Analyze issues related to fuels and their synthesis and able to understand working of IC and diesel engines.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
C113.1	2	2	1	1	-	-	-	-	-	-	-	1	1	-	-
C113.2	2	2	1	1	-	-	-	-	-	-	-	1	1	-	-
C113.3	2	2	1	1	-	-	-	-	-	-	-	1	1	-	-
C113.4	2	2	1	1	-	-	-	-	-	-	-	1	1	-	-
C113.5	2	2	1	1	-	-	-	-	-	-	-	1	1	-	-
C113.6	2	2	1	1	-	-	-	-	-	-	-	1	1	-	-
C113	**2**	**2**	**1**	**1**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1**	**1**	**-**	**-**

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name		Course Outcome(CO) Students will be able to
CS6201	**Digital Principles and System Design**	**C114.1**	Perform arithmetic operations in any number system..
		C114.2	Explain the basics of Boolean algebra
		C114.3	Simplify the Boolean expression using K-Map and Tabulation techniques.
		C114.4	Use boolean simplification techniques to design a combinational hardware circuit.
		C114.5	Design and Analysis of a given digital circuit – combinational and sequential.
		C114.6	Design using PLD

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C114.1	2	2	2	1	-	-	-	-	-	-	-	-	1	1	-
C114.2	3	2	2	1	-	-	-	-	-	-	-	-	1	1	-
C114.3	3	2	2	1	-	-	-	-	-	-	-	-	1	1	-
C114.4	2	2	2	1	-	-	-	-	-	-	-	-	1	1	-
C114.5	3	2	2	1	-	-	-	-	-	-	-	-	1	1	-
C114.6	3	2	2	1	-	-	-	-	-	-	-	-	1	1	-
C114	**3**	**2**	**2**	1	-	-	-	-	-	-	-	-	**1**	**1**	-

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

COURSE OUTCOMES – REGULATIONS 2017

Course Code	Course Name		Course Outcome(CO) Students will be able to
CS6202	**PROGRAMMING AND DATA STRUCTURES I**	**C115.1**	Explain the basics of C programming.
		C115.2	Use the conditional and control statements of C appropriately for problems.
		C115.3	Distinguish the usage of Structures and Unions
		C115.4	Implement abstract data types for linear data structures.
		C115.5	Apply the different linear data structures to problem solutions.
		C115.6	Critically analyse the various algorithms like sorting,searching etc.,

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C115.1	3	2	1	1	-	2	-	-	-	-	-	-	1	1	-
C115.2	3	2	1	1	-	2	-	-	-	-	-	-	1	1	-
C115.3	3	2	1	1	-	2	-	-	-	-	-	-	1	1	-
C115.4	3	2	1	1	-	2	-	-	-	-	-	-	1	1	-
C115.5	3	2	1	1	-	2	-	-	-	-	-	-	1	1	-
C115.6	3	2	1	1	-	2	-	-	-	-	-	-	1	1	-
C115	**3**	**2**	**1**	1	-	**2**	-	-	-	**-**	-	-	**1**	**1**	-

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name		Course Outcome (CO) Students will be able to
GE6262	PHYSICS AND CHEMISTRY LABORATORY II	C116.1	Appraise the Young's modulus of the beam by uniform and non uniform bending method, the moment of inertia and Rigidity Modulus for thin wire using Torsion Pendulum.
		C116.2	Use Poiseuille's method for determining the coefficient of viscosity of the liquid
		C116.3	Estimate the refractive index of spectral lines for determining the dispersive power of a prism circuit.
		C116.4	Determine the type, amount of alkalinity, hardness in a given water sample.
		C116.5	Evaluate the amount of copper using EDTA method.
		C116.6	Examine the potentiometric redox titration and Conductometric precipitation titration.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
C116.1	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C116.2	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C116.3	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C116.4	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C116.5	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C116.6	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C116	**3**	**2**	**1**	**1**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1**	**-**	**-**

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name		Course Outcome (CO) Students will be able to
CS6211	DIGITAL LABORATORY	C117.1	Evaluate the basic gates using boolean theorms
		C117.2	Use boolean simplification techniques to design a combinational hardware circuit.
		C117.3	Design and Implement combinational and sequential circuits.
		C117.4	Analyze a given digital circuit – combinational and sequential.
		C117.5	Design the different functional units in a digital computer system.
		C117.6	Design and Implement a simple digital system.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
C117.1	3	2	2	1	-	-	-	-	-	-	-	-	1	1	-
C117.2	3	2	2	1	-	-	-	-	-	-	-	-	1	1	-
C117.3	3	2	2	1	-	-	-	-	-	-	-	-	1	1	-
C117.4	3	2	2	1	-	-	-	-	-	-	-	-	1	1	-
C117.5	3	2	2	1	-	-	-	-	-	-	-	-	1	1	-
C117.6	3	2	2	1	-	-	-	-	-	-	-	-	1	1	-
C117	**3**	**2**	**2**	**1**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1**	**1**	**-**

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name		Course Outcome (CO) Students will be able to
CS6212	PROGRAMMING AND DATA STRUCTURES LABORATORY I	C118.1	Design and implement C programs for implementing stacks, queues, linked lists.
		C118.2	Apply good programming design methods for program development
		C118.3	Illustration of usage of files
		C118.4	Apply the different data structures for implementing solutions to practical problems
		C118.5	Develop searching and sorting programs
		C118.6	Develop searching and sorting programs

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
C118.1	3	2	2	1	1	-	-	-	-	1	-	-	1	1	-
C118.2	3	2	2	1	1	-	-	-	-	1	-	-	1	1	-
C118.3	3	2	2	1	1	-	-	-	-	1	-	-	1	1	-
C118.4	3	2	2	1	1	-	-	-	-	1	-	-	1	1	-
C118.5	3	2	2	1	1	-	-	-	-	1	-	-	1	1	-
C118.6	3	2	2	1	1	-	-	-	-	1	-	-	1	1	-
C118	**3**	**2**	**2**	**1**	**1**	**-**	**-**	**-**	**-**	**1**	**-**	**-**	**1**	**1**	**-**

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

SEMESTER III

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
MA6351	**TRANSFORMS AND PARTIAL DIFFERENTIAL EQUATIONS**	**C201.1**	Develop boundary value problem using Fourier series analysis.
		C201.2	Explain about the higher order LPDE
		C201.3	Develop the complex form of Fourier series
		C201.4	Develop mathematical tools for the solutions of partial differential equations
		C201.5	Apply Fourier transform techniques used in wide variety of situations
		C201.6	Develop Z transform techniques for discrete time systems.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C201.1	3	3	2	2	2	2	2	2	1	1	1	1	3	1	-
C201.2	3	3	2	2	2	1	1	1	1	1	1	1	3	2	-
C201.3	3	3	2	2	1	1	1	1	1	1	1	1	3	1	-
C201.4	3	3	2	2	2	2	1	1	1	1	1	1	2	2	-
C201.5	3	2	2	2	2	1	1	1	1	1	1	1	3	1	-
C201.6	3	3	2	2	2	2	2	1	1	1	1	1	3	1	-
C201	**3**	**2.8**	**2**	**2**	**1.8**	**1.5**	**1.3**	**1.2**	**1**	**1**	**1**	**1**	**2.8**	**1.3**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, Affiliated to Anna University, Chennai, India)

Kaikkurichi, Pudukkottai – 622 303

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

REGULATION 2013

COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6301	PROGRAMMING AND DATA STRUCTURES II	C202.1	Design problem solutions using Object Oriented Techniques
		C202.2	Apply the concepts of data abstraction, encapsulation and inheritance for problem solutions.
		C202.3	Use the control structures of C++ appropriately.
		C202.4	Critically analyze the various algorithms.
		C202.5	Apply the linear data structures to problem solutions.
		C202.6	Apply the non-linear data structures to problem solutions.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO 1	PO2	PO3	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C202.1	2	2	1	1	2	-	-	-	-	-	-	1	2	1	-
C202.2	2	2	2	2	2	-	-	-	-	-	-	1	2	2	-
C202.3	2	2	2	2	2	-	-	-	-	-	-	1	2	2	-
C202.4	3	2	2	2	2	-	-	-	-	-	-	1	2	1	-
C202.5	2	2	2	2	2	-	-	-	-	-	-	1	2	2	-
C202.6	3	2	2	2	2	-	-	-	-	-	-	1	2	2	-
C202	**2.3**	**2**	**1.8**	**1.8**	**2**	**-**	**-**	**-**	**-**	**-**	**-**	**1**	2	**1.7**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6302	**DATABASE MANAGEMENT SYSTEMS**	**C203.1**	Design Databases for applications.
		C203.2	Use the Relational model, ER diagrams.
		C203.3	Apply concurrency control and recovery mechanisms for practical problems.
		C203.4	Design the Query Processor and Transaction Processor.
		C203.5	Apply advanced concepts in databases.
		C203.6	Apply security concepts to databases.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	**PO 2**	**PO 3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**	**PSO 1**	**PSO 2**	**PSO 3**
C203.1	3	3	3	1	1	-	-	-	1	1	1	1	2	2	-
C203.2	2	2	1	1	1	-	-	-	1	1	1	1	2	2	-
C203.3	3	2	2	1	1	-	-	-	1	1	1	1	2	2	-
C203.4	3	3	3	1	1	-	-	-	1	1	1	1	2	1	-
C203.5	3	3	3	2	1	-	-	-	2	1	1	1	2	2	-
C203.6	3	3	3	2	1	-	-	-	2	1	1	1	2	2	-
C203	**2.8**	**2.7**	**2.5**	**1.3**	**1**	**-**	**-**	**-**	**1.3**	**1**	**1**	**1**	**2**	**1.8**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6303	COMPUTER ARCHITECTURE	C204.1	Analyze the concept of instructions
		C204.2	Design arithmetic and logic unit.
		C204.3	Design and analyze pipelined control units
		C204.4	Evaluate performance of memory systems.
		C204.5	Explore the parallel processing architectures
		C204.6	Explain the concept of I/O systems

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO 2	PO 3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C204.1	3	3	1	1	-	1	-	-	1	1	1	1	1	3	1
C204.2	3	3	1	1	-	1	-	-	1	1	1	1	1	3	1
C204.3	3	3	2	2	-	1	-	-	1	1	1	1	1	3	2
C204.4	3	3	3	3	-	1	-	-	1	1	1	1	1	3	2
C204.5	3	3	2	1	-	1	-	-	1	1	1	1	1	3	2
C204.6	3	3	2	1	-	1	-	-	1	1	1	1	1	3	2
C204	**3**	**3**	**1.8**	**1.5**	**-**	**1**	**-**	**-**	**1**	**1**	**1**	**1**	**1**	**3**	**1.7**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6304	ANALOG AND DIGITAL COMMUNICATION	C205.1	Apply analog communication techniques
		C205.2	Apply digital communication techniques
		C205.3	Use data communication techniques
		C205.4	Use pulse communication techniques
		C205.5	Analyze Source and Error control coding.
		C205.6	Utilize multi-user radio communication.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO 2	PO 3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C205.1	3	1	1	1	1	1	-	-	1	2	-	-	2	1	-
C205.2	3	1	1	1	1	1	-	-	1	2	-	-	2	1	-
C205.3	3	1	1	1	1	1	-	-	1	2	-	-	2	1	-
C205.4	3	2	2	2	1	1	-	-	1	2	-	-	3	2	-
C205.5	3	3	2	2	1	1	-	-	1	2	-	-	3	2	-
C205.6	3	1	1	1	1	1	-	-	1	2	-	-	3	1	-
C205	**3**	**1.5**	**1.3**	**1.3**	**1**	**1**	**-**	**-**	**1**	**2**	**-**	**-**	**2.5**	**1.3**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
GE6351	ENVIRONMENTAL SCIENCE AND ENGINEERING	C206.1	Finding and implementing scientific, technological solutions to environmental problems
		C206.2	Finding and implementing economic and political solutions to environmental problems
		C206.3	Discuss about interrelationship between living organism and environment.
		C206.4	Describe about the surrounding environment, its functions and its value
		C206.5	Explain about dynamic process and features of earth's interior surface
		C206.6	Learn about natural resources, pollution control and waste management

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO 2	PO 3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C206.1	3	2	2	2	-	2	1	1	1	-	-	1	-	2	-
C206.2	3	3	2	2	-	3	2	2	1	-	-	1	-	2	-
C206.3	3	2	2	2	-	2	2	1	1	-	-	1	-	2	-
C206.4	3	2	2	2	-	1	1	1	1	-	-	1	-	2	-
C206.5	3	2	2	2	-	1	1	1	1	-	-	1	-	2	-
C206.6	3	3	3	2	-	1	1	1	1	-	-	1	-	2	-
C206	**3**	**2.3**	**2.2**	**2**	**-**	**1.7**	**1.3**	**1.2**	**1**	**-**	**-**	**1**	**-**	**2**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
IT6311	**PROGRAMMING AND DATA STRUCTURES LABORATORY II**	**C207.1**	Design and implement C++ programs for manipulating constructors, destructors and copy constructors
		C207.2	Design and implement C++ programs for manipulating friend function, friend class, inheritance, polymorphism
		C207.3	Design and implement C++ programs for manipulating stacks, queues, linked lists, trees, and Graphs.
		C207.4	Apply good programming design methods for program development.
		C207.5	Apply the different data structures for implementing solutions to practical problems.
		C207.6	Develop recursive programs using trees and graphs.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO 2	PO 3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C207.1	3	3	2	2	-	2	2	2	2	2	-	1	1	1	-
C207.2	2	2	2	2	-	2	2	2	2	2	-	1	1	1	-
C207.3	2	2	2	2	-	2	2	2	2	2	-	1	1	1	-
C207.4	3	3	3	2	-	2	2	2	2	2	-	1	1	1	-
C207.5	3	3	2	1	-	2	2	2	2	2	-	1	1	1	-
C207.6	3	3	2	1	-	2	2	2	2	2	-	1	1	1	-
C207	**2.7**	**2.7**	**2.2**	**1.7**	**-**	**2**	**2**	**2**	**2**	**2**	**-**	**1**	**1**	**1**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
IT6312	DATABASE MANAGEMENT SYSTEMS LABORATORY	C208.1	Design and implement a database schema for a given problem-domain
		C208.2	Populate and query a database
		C208.3	Create and maintain views, Synonyms, Sequence, Indexes, Save point..
		C208.4	Analyze relationship between database
		C208.5	Create and maintain tables using PL/SQL.
		C208.6	Prepare reports.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO 2	PO 3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C208.1	3	3	2	2	-	3	3	2	2	2	2	2	1	1	-
C208.2	3	3	2	2	-	2	2	2	2	2	2	2	1	1	-
C208.3	3	3	2	2	-	2	2	2	2	2	2	2	1	1	-
C208.4	3	3	2	2	-	2	2	2	2	2	2	2	1	1	-
C208.5	3	3	2	2	-	2	2	2	2	2	2	2	1	1	-
C208.6	3	3	2	2	-	2	2	2	2	2	2	2	1	1	-
C208	**3**	**3**	**2**	**2**	**-**	**2.2**	**2.2**	**2**	**2**	**2**	**2**	**2**	**1**	**1**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
MA6453	PROBABILITY AND QUEUEING THEORY	C209.1	Explain the fundamental knowledge of the probability concepts.
		C209.2	Describe phenomenon which evolve with respect to time in a probabilistic manner..
		C209.3	Explain how to usage of covaraince, distribution.
		C209.4	Describe about the different random process model.
		C209.5	Acquire skills in analyzing queuing models.
		C209.6	Detail about the queuing model in advanced method

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO 2	PO 3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C209.1	3	3	2	2	-	-	-	-	-	-	-	2	2	1	-
C209.2	2	2	1	1	-	-	-	-	-	-	-	1	1	1	-
C209.3	3	3	1	1	-	-	-	-	-	-	-	1	1	1	-
C209.4	2	1	1	1	-	-	-	-	-	-	-	1	1	1	-
C209.5	2	1	1	1	-	-	-	-	-	-	-	1	1	1	-
C209.6	2	1	1	1	-	-	-	-	-	-	-	1	1	1	-
C209	**2.3**	**1.8**	**1.2**	**1.2**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1.2**	**1.2**	**1**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name		Course Outcome(CO) Students will be able to
CS6551	COMPUTER NETWORKS	C210.1	Explain the basic layers and its functions in computer networks.
		C210.2	Evaluate the performance of a network.
		C210.3	Describe the basics of how data flows from one node to another.
		C210.4	Analyze and design routing algorithms.
		C210.5	Design protocols for various functions in the network
		C210.6	Illustrate the working of various application layer protocols.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO 2	PO 3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C210.1	3	3	1	1	-	-	-	-	3	2	1	1	1	2	2
C210.2	3	3	3	3	-	-	-	-	2	2	1	1	1	2	2
C210.3	2	2	1	1	-	-	-	-	2	2	1	1	1	2	2
C210.4	3	3	2	1	-	-	-	-	2	2	1	1	1	2	2
C210.5	3	3	1	1	-	-	-	-	2	2	1	1	1	2	2
C210.6	3	1	1	1	-	-	-	-	2	2	1	1	1	1	1
C210	**2.8**	**2.5**	**15**	**1.3**	**-**	**-**	**-**	**-**	**2.8**	**2**	**1**	**1**	**1.0**	**1.8**	**1.8**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6401	OPERATING SYSTEMS	C211.1	Design algorithms for various computing problems.
		C211.2	Apply the principles of concurrency.
		C211.3	Design deadlock, prevention and avoidance algorithms.
		C211.4	Compare and contrast various memory management schemes.
		C211.5	Design and Implement a prototype file systems
		C211.6	Perform administrative tasks on Linux Servers.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO 2	PO 3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C211.1	3	3	3	1	1	-	1	-	-	1	1	1	1	-	-
C211.2	3	2	2	2	1	-	1	-	-	1	1	1	1	-	-
C211.3	2	2	1	1	1	-	1	-	-	1	1	1	1	-	-
C211.4	2	2	2	1	1	-	1	-	-	1	1	1	1	-	-
C211.5	3	3	3	2	2	-	1	-	-	2	1	1	1	-	-
C211.6	2	2	1	1	1	-	1	-	-	1	1	1	1	-	-
C211	**2.5**	**2.3**	**2.0**	**1.3**	**1.2**	**-**	**1**	**-**	**-**	**1.2**	**1**	**1**	**1**	**-**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, Affiliated to Anna University, Chennai, India)

Kaikkurichi, Pudukkottai – 622 303

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6402	**DESIGN AND ANALYSIS OF ALGORITHMS**	**C212.1**	Learn about basics of algorithm with its notation
		C212.2	Analyze the time and space complexity of algorithms.
		C212.3	Design the algorithm for sorting and searching methods
		C212.4	Critically analyze the different algorithm design techniques using dynamic and greedy technique
		C212.5	Design algorithms for various computing problems.
		C212.6	Modify existing algorithms to improve efficiency.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO 2	PO 3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C212.1	3	3	3	2	-	-	-	1	1	-	-	1	1	2	1
C212.2	3	3	2	2	-	-	-	2	2	-	-	2	1	2	1
C212.3	2	2	2	2	-	-	-	2	2	-	-	2	1	2	1
C212.4	2	2	2	2	-	-	-	2	2	-	-	2	1	2	1
C212.5	2	2	2	2	-	-	-	2	2	-	-	2	1	2	1
C212.6	2	2	2	2	-	-	-	2	2	-	-	2	1	2	1
C212	**2.3**	**2.3**	**2.2**	**2**	**-**	**-**	**-**	**1.8**	**1.8**	**-**	**-**	**1.8**	**1**	**2**	**1**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
EC6504	MICROPROCESSOR AND MICROCONTROLLER	C213.1	Design and implement programs on 8086 microprocessor.
		C213.2	Explain about the Bus Structure in Micro Processor
		C213.3	Design I/O circuits.
		C213.4	Discuss about usage of i/o circuits in real time application
		C213.5	Design and implement 8051 microcontroller based systems
		C213.6	Design Memory Interfacing circuits.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO 2	PO 3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C213.1	3	3	3	2	-	2	2	2	2	2	-	1	1	1	-
C213.2	3	3	2	2	-	2	2	2	2	2	-	1	1	1	-
C213.3	3	3	3	2	-	2	2	2	2	2	-	1	1	1	-
C213.4	3	3	2	2	-	2	2	2	1	1	-	1	1	1	-
C213.5	3	3	3	2	-	2	2	2	1	1	-	1	1	1	-
C213.6	3	3	3	2	-	2	2	2	1	1	-	1	1	1	-
C213	**3.0**	**3.0**	**2.7**	**2**	**-**	**2**	**2**	**2**	**1.7**	**1.7**	**-**	**1**	**1**	**1**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6403	SOFTWARE ENGINEERING	C214.1	Identify the key activities in managing a software project.
		C214.2	Compare different process models.
		C214.3	Concepts of requirements engineering and Analysis Modeling.
		C214.4	Develop the architectural design for software
		C214.5	Compare and contrast the various testing.
		C214.6	Description of how to manage the software development

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO 2	PO 3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C214.1	2	2	2	1	1	-	-	-	1	-	1	1	2	-	-
C214.2	3	2	2	2	1	-	-	-	1	-	1	1	2	-	-
C214.3	2	2	2	1	1	-	-	-	1	-	1	1	2	-	-
C214.4	2	2	2	1	1	-	-	-	1	-	1	1	2	-	-
C214.5	3	3	2	2	1	-	-	-	1	-	1	1	2	-	-
C214.6	3	2	1	1	1	-	-	-	1	-	1	1	2	-	-
C214	**2.5**	**2.2**	**1.8**	**1.3**	**1**	**-**	**-**	**-**	**1**	**-**	**1**	**1**	**2**	**-**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6411	NETWORKS LABORATORY	C215.1	Implement various protocols using TCP and UDP
		C215.2	Compare the performance of different transport layer protocols
		C215.3	Use simulation tools to analyze the performance of various network protocols.
		C215.4	Analyze various routing algorithms.
		C215.5	Implement error correction codes.
		C215.6	Illustrate simulation tools to analyze the performance of various network protocols.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO 2	PO 3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C215.1	3	2	2	1	-	-	-	-	2	1	2	-	2	1	1
C215.2	3	3	3	3	-	-	-	-	2	1	2	-	2	1	1
C215.3	3	2	2	2	-	-	-	-	2	1	2	-	2	1	1
C215.4	3	3	2	1	-	-	-	-	2	1	2	-	2	1	1
C215.5	3	2	2	1	-	-	-	-	2	1	2	-	2	1	1
C215.6	3	2	2	2	-	-	-	-	2	1	2	-	2	1	1
C215	**3.0**	**2.3**	**2.2**	**1.7**	**-**	**-**	**-**	**-**	**2.0**	**1.0**	**2.0**	**-**	**2.0**	**1.0**	**1.0**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6412	MICROPROCESSOR AND MICROCONTROLLER LABORATORY	C216.1	Write ALP Program for fixed and Floating Point and Arithmetic
		C216.2	Interface different I/Os with processor
		C216.3	Generate waveforms using Microprocessors.
		C216.4	Execute Programs in 8051.
		C216.5	Explain the difference between simulator and Emulator
		C216.6	Working with MASM

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO 2	PO 3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C216.1	3	2	2	2	-	-	2	1	-	-	-	-	2	-	-
C216.2	3	2	2	1	-	-	2	1	-	-	-	-	2	-	-
C216.3	3	2	1	1	-	-	2	1	-	-	-	-	2	-	-
C216.4	2	2	1	1	-	-	1	1	-	-	-	-	2	-	-
C216.5	3	3	2	1	-	-	2	1	-	-	-	-	2	-	-
C216.6	3	2	2	1	-	-	2	1	-	-	-	-	1	-	-
C216	**2.8**	**2.2**	**1.7**	**1.2**	**-**	**-**	**1.8**	**1**	**-**	**-**	**-**	**-**	**1.8**	**-**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6413	OPERATING SYSTEMS LABORATORY	C217.1	Implement deadlock avoidance, and Detection Algorithms
		C217.2	Compare the performance of various CPU Scheduling Algorithm
		C217.3	Critically analyze the performance of the various page replacement algorithms
		C217.4	Create processes and implement IPC
		C217.5	Develop the program in C using system calls.
		C217.6	Detail about shell programming

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO 2	PO 3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C217.1	3	2	2	1	-	1	1	-	-	-	-	-	1	-	-
C217.2	3	2	2	1	-	1	1	-	-	-	-	-	1	-	-
C217.3	3	2	2	2	-	1	1	-	-	-	-	-	2	-	-
C217.4	3	2	2	2	-	1	1	-	-	-	-	-	1	-	-
C217.5	3	2	2	2	-	2	1	-	-	-	-	-	2	-	-
C217.6	3	1	2	1	-	1	1	-	-	-	-	-	1	-	-
C217	3	1.8	2	1.5	-	1.2	1	-	-	-	-	-	1.3	-	-

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
MA6566	DISCRETE MATHEMATICS	C301.1	Describe about the concepts needed to test the logic of a program.
		C301.2	Describe the ideas to identifying structures on many levels.
		C301.3	Elobrate functions to transform a finite set into another finite set.
		C301.4	Associate the applications of Graph theory models and data structures.
		C301.5	Detail about counting principles
		C301.6	Explain the concepts and properties of algebraic structures such as groups, rings and fields

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C301.1	3	2	2	1	-	-	-	-	-	-	-	-	1	2	-
C301.2	3	2	2	1	-	-	-	-	-	-	-	-	2	2	-
C301.3	3	2	2	1	-	-	-	-	-	-	-	-	2	2	-
C301.4	3	2	2	1	-	-	-	-	-	-	-	-	2	2	-
C301.5	3	2	1	1	-	-	-	-	-	-	-	-	1	2	-
C301.6	3	2	1	1	-	-	-	-	-	-	-	-	1	2	-
C301	**3.0**	**2.0**	**1.7**	**1.0**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1.5**	**2.0**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

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Kaikkurichi, Pudukkottai – 622 303

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

REGULATION 2013

COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6501	**INTERNET PROGRAMMING**	**C302.1**	Construct a basic website using HTML and Cascading Style Sheets.
		C302.2	Build dynamic web page with validation using Java Script objects and by applying different event handling mechanisms.
		C302.3	Develop server side programs using Servlets and JSP
		C302.4	Construct simple web pages in PHP and to represent data in XML format. ·
		C302.5	Use AJAX and web services to develop interactive web applications
		C302.6	Explain about java-specific web services architecture

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C302.1	2	2	2	1	1	-	-	-	-	-	-	1	2	2	2
C302.2	3	2	2	1	1	-	-	-	-	-	-	1	3	3	2
C302.3	2	2	2	2	2	-	-	-	-	-	-	2	2	2	2
C302.4	3	2	2	2	2	-	-	-	-	-	-	1	3	3	2
C302.5	3	2	2	2	2	-	-	-	-	-	-	1	3	3	2
C302.6	2	2	2	1	1	-	-	-	-	-	-	1	2	2	2
C302	**2.5**	**2**	**2**	**1.5**	**1.5**	**-**	**-**	**-**	**-**	**-**	**-**	**1.2**	**2.5**	**2.5**	**2**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6502	**OBJECT ORIENTED ANALYSIS AND DESIGN**	**C303.1**	Explain the basics of Object oriented analysis and design
		C303.2	Design and implement projects using OO concepts
		C303.3	Use the UML analysis and design diagrams
		C303.4	Apply appropriate design patterns
		C303.5	Create code from design.
		C303.6	Compare and contrast various testing techniques

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C303.1	3	3	3	2	2	1	1	1	1	1	1	1	3	2	3
C303.2	3	3	3	2	2	1	1	1	1	1	1	1	3	2	3
C303.3	3	3	3	2	2	1	1	1	1	1	1	1	3	2	3
C303.4	3	3	3	2	2	2	1	1	1	1	1	1	3	1	3
C303.5	3	3	2	2	2	2	2	2	1	1	1	1	3	2	3
C303.6	3	3	3	2	2	2	2	2	1	1	1	1	3	2	3
C303	**3.0**	**3.0**	**2.8**	**2.0**	**2.0**	**1.5**	**1.3**	**1.3**	**1.0**	**1.0**	**1.0**	**1.0**	**3.0**	**1.8**	**3.0**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6503	THEORY OF COMPUTATION	C304.1	Discuss the basics of fourier transforms.
		C304.2	Perform frequency transforms for the signals.
		C304.3	Design IIR and FIR filters.
		C304.4	Finite word length effects in digital filters
		C304.5	Implement different frequency sampling techniques
		C304.6	Explain the fixed and floating point numbers representations

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C304.1	3	3	3	2	1	-	-	-	-	-	-	-	1	2	-
C304.2	3	3	2	2	1	-	-	-	-	-	-	-	1	2	-
C304.3	3	3	2	2	1	-	-	-	-	-	-	-	1	2	-
C304.4	3	3	2	2	1	-	-	-	-	-	-	-	2	3	-
C304.5	3	2	2	2	1	-	-	-	-	-	-	-	1	2	-
C304.6	3	3	3	2	1	-	-	-	-	-	-	-	1	2	-
C304	**3.0**	**2.8**	**2.3**	**2.0**	**1.0**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1.2**	**2.2**	**-**

*3-HighCorrelation;2-MediumCorrelation;1-LowCorrelation

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6504	COMPUTER GRAPHICS	C305.1	Describe the graphics hardware devices, software used and different drawing algorithms
		C305.2	Apply two dimensional transformations and clipping techniques to graphical object
		C305.3	Design three-dimensional graphical objects and apply three dimensional transformations into graphical objects.
		C305.4	Create the illumination and color models.
		C305.5	Design an animation sequences.
		C305.6	Apply clipping techniques in graphics.

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C305.1	3	3	3	2	1	2	-	-	1	1	1	1	3	2	3
C305.2	3	3	3	2	2	2	-	-	1	1	1	1	3	2	3
C305.3	3	3	3	2	2	2	-	-	1	1	1	1	3	2	3
C305.4	3	3	3	2	2	2	-	-	2	2	2	1	3	2	3
C305.5	3	3	3	2	2	2	-	-	2	2	2	1	3	2	3
C305.6	3	3	3	2	2	2	-	-	2	2	2	1	3	2	3
C305	**3.0**	**3.0**	**3.0**	**2.0**	**1.8**	**2.0**	**-**	**-**	**1.5**	**1.5**	**1.5**	**1.0**	**3.0**	**2.0**	**3.0**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6511	CASE TOOLS LABORATORY	C306.1	Design and implement projects using OO concepts.
		C306.2	How to map design to code.
		C306.3	Use the UML analysis and design diagrams.
		C306.4	Apply appropriate design patterns.
		C306.5	Create code from design.
		C306.6	Compare and contrast various testing techniques.

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C306.1	3	3	2	2	2	2	2	2	1	1	1	1	-	-	-
C306.2	3	3	3	3	3	2	1	1	1	1	1	1	-	-	-
C306.3	3	3	3	3	3	2	2	2	2	2	1	1	-	-	-
C306.4	3	3	3	3	3	2	2	2	2	1	1	1	-	-	-
C306.5	3	3	3	3	3	2	2	2	2	2	2	2	-	-	-
C306.6	3	3	3	3	3	2	2	2	2	2	2	2	-	-	-
C306	**3.0**	**3.0**	**2.8**	**2.8**	**2.8**	**2.0**	**1.8**	**1.8**	**1.7**	**1.5**	**1.3**	**1.3**	-	-	-

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name		Course Outcome(CO) Students will be able to
CS6512	INTERNET PROGRAMMING LABORATORY	C307.1	Construct Web pages using HTML/XML and stylesheets..
		C307.2	Build dynamic webpages with validation using Java Script objects and by applying different event handling mechanisms.
		C307.3	Develop dynamic webpages using server side scripting
		C307.4	Use PHP programming to develop web applications.
		C307.5	Construct web applications using AJAX and web services.
		C307.6	Design Client Server applications.

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C307.1	3	3	3	2	1	-	-	-	2	1	1	-	1	2	-
C307.2	3	3	2	2	1	-	-	-	2	1	1	-	1	2	-
C307.3	3	3	2	2	1	-	-	-	2	2	1	-	1	2	-
C307.4	3	3	2	2	1	-	-	-	2	2	1	-	2	3	-
C307.5	3	2	2	2	1	-	-	-	2	1	1	-	1	2	-
C307.6	3	3	3	2	1	-	-	-	2	2	1	-	1	2	-
C307	**3.0**	**2.8**	**2.3**	**2.0**	**1.0**	**-**	**-**	**-**	**2**	**1.5**	**1.0**	**-**	**1.2**	**2.2**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6513	COMPUTER GRAPHICS LABORATORY	C308.1	Make use of algorithms to draw 2D and 3D objects
		C308.2	Show transformations and projections for 2D and 3D objects
		C308.3	Manipulate a graphical object using clipping algorithms and viewing technique
		C308.4	Use an image editing tool for image manipulation and enhancement
		C308.5	Utilize for image manipulation and enhancement the authoring tool to develop a 3D scene and to perform 2D animation
		C308.6	Design multimedia presentation/Game/Project.

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C308.1	3	3	3	2	1	-	-	-	2	2	1	-	1	2	-
C308.2	3	3	3	2	1	-	-	-	2	2	1	-	1	2	-
C308.3	3	3	2	2	1	-	-	-	2	2	1	-	1	3	-
C308.4	3	3	3	1	1	-	-	-	2	2	1	-	2	3	-
C308.5	3	3	3	2	1	-	-	-	2	2	1	-	2	2	-
C308.6	3	3	3	2	1	-	-	-	2	2	1	-	2	2	-
C308	**3.0**	**3.0**	**2.8**	**1.8**	**1.0**	**-**	**-**	**-**	**2**	**2**	**1.0**	**-**	**1.5**	**2.3**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6601	DISTRIBUTED SYSTEMS	C309.1	Discuss trends in Distributed Systems
		C309.2	Apply network virtualization.
		C309.3	Apply remote method invocation and objects.
		C309.4	Explain the ideas behind the peer to peer and file system
		C309.5	Analyze about Synchronization in Distributed Systems
		C309.6	Design process and resource management systems.

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C309.1	3	3	2	2	2	2	1	1	1	1	1	1	3	2	-
C309.2	3	3	2	2	2	2	1	1	1	1	1	1	3	2	-
C309.3	3	3	3	2	2	2	2	1	1	1	1	1	3	2	-
C309.4	3	3	3	2	2	2	2	1	1	1	1	1	3	3	-
C309.5	3	3	2	2	2	2	1	1	1	1	1	1	3	3	-
C309.6	3	3	2	2	2	2	2	1	1	1	1	1	3	3	-
C309	**3.0**	**3.0**	**2.3**	**2.0**	**2.0**	**2.0**	**1.5**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**3.0**	**2.5**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
IT6601	MOBILE COMPUTING	C310.1	Explain the basics of mobile telecommunication system
		C310.2	Choose the required functionality at each layer for given application.
		C310.3	Description of the services provided in network layer and transport layer.
		C310.4	Identify solution for each functionality at each layer.
		C310.5	Use simulator tools and design Ad hoc networks.
		C310.6	Develop a mobile application..

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C310.1	3	3	3	2	2	2	2	2	2	2	-	2	1	-	-
C310.2	3	3	3	2	2	2	2	2	1	1	-	1	1	-	-
C310.3	3	3	3	2	2	2	2	2	2	1	-	1	1	-	-
C310.4	3	3	2	2	2	2	2	2	2	2	-	2	1	-	-
C310.5	3	2	2	2	2	2	2	2	2	1	-	1	1	-	-
C310.6	3	2	2	2	2	2	2	2	2	1	-	1	1	-	-
C310	**3.0**	**2.7**	**2.5**	**2.0**	**2.0**	**2.0**	**2.0**	**2.0**	**1.8**	**1.3**	**-**	**1.3**	**1.0**	**-**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6660	COMPILER DESIGN	C311.1	Design and implement a prototype compiler
		C311.2	Understand the Conversion of Regular Expression to Automata,
		C311.3	Design and implement a parser
		C311.4	Identify the SDD and implement the Type Systems.
		C311.5	In detail about the storage Organization
		C311.6	Apply the various optimization techniques

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C311.1	3	3	2	2	-	2	2	2	2	2	-	2	1	1	-
C311.2	3	3	2	2	-	2	2	2	2	2	-	2	1	1	-
C311.3	3	3	3	3	-	3	3	2	2	2	-	2	1	1	-
C311.4	3	3	3	3	-	2	2	2	2	2	-	2	1	1	-
C311.5	3	3	2	2	-	1	1	1	1	1	-	1	1	1	-
C311.6	3	2	2	2	-	2	2	2	2	2	-	2	1	1	-
C311	3.0	2.8	2.3	2.3	-	2.0	2.0	1.8	1.8	1.8	-	1.8	1.0	1.0	-

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
IT6502	DIGITAL SIGNAL PROCESSING	C312.1	Discuss the basics of fourier transforms.
		C312.2	Perform frequency transforms for the signals.
		C312.3	Design IIR and FIR filters.
		C312.4	Finite word length effects in digital filters
		C312.5	Implement different frequency sampling techniques
		C312.6	Explain the fixed and floating point numbers representations

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C312.1	3	3	3	2	1	-	-	-	-	1	-	1	1	2	-
C312.2	3	3	2	2	1	-	-	-	-	1	-	1	1	2	-
C312.3	3	3	2	2	1	-	-	-	-	1	-	1	1	2	-
C312.4	3	3	2	2	1	-	-	-	-	1	-	1	2	3	-
C312.5	3	2	2	2	1	-	-	-	-	1	-	1	1	2	-
C312.6	3	3	3	2	1	-	-	-	-	1	-	1	1	2	-
C312	**3.0**	**2.8**	**2.3**	**2.0**	**1.0**	**-**	**-**	**-**	**-**	**1.0**	**-**	**1.0**	**1.2**	**2.2**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6659	ARTIFICIAL INTELLIGENCE	C313.1	Identify problems that are amenable to solution by AI methods.
		C313.2	Identify appropriate AI methods to solve a given problem.
		C313.3	Formalize a given problem in the language/framework of different AI methods..
		C313.4	Implement basic AI algorithms.
		C313.5	Design an empirical evaluation of different algorithms on a problem formalization
		C313.6	Carry out an empirical evaluation of different algorithms on a problem formalization

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C313.1	3	3	2	2	-	2	2	2	2	2	-	2	1	1	-
C313.2	3	2	2	2	-	2	2	2	2	2	-	2	1	1	-
C313.3	3	3	2	2	-	2	2	2	2	2	-	1	1	1	-
C313.4	3	3	3	3	-	2	2	1	1	1	-	1	1	1	-
C313.5	3	3	2	2	-	2	2	2	2	2	-	2	1	1	-
C313.6	3	3	3	3	-	3	2	2	2	2	-	2	1	1	-
C313	3.0	2.8	2.3	2.3	-	2.2	2.0	1.8	1.8	1.8	-	1.7	1.0	1.0	-

*3-HighCorrelation;2-MediumCorrelation;1-LowCorrelation

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
GE6757	**TOTAL QUALITY MANAGEMENT**	**C314.1**	Explain the basics of Total Quality Management
		C314.2	Elaborate key concepts of Customer satisfaction
		C314.3	Learn about the principles and improvement process
		C314.4	Describe about traditional tools for quality
		C314.5	Identify the sigma concepts for quality function development
		C314.6	Explain the key constraints for Quality Systems

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C314.1	3	2	2	2	-	2	2	2	2	2	-	2	1	-	-
C314.2	3	3	2	2	-	2	2	2	2	2	-	2	1	-	-
C314.3	3	3	2	2	-	2	2	2	1	1	-	1	1	-	-
C314.4	3	3	3	2	-	2	2	2	2	2	-	2	1	-	-
C314.5	3	3	3	2	-	1	1	1	1	1	-	1	1	-	-
C314.6	3	3	3	2	-	2	2	2	2	2	-	2	1	-	-
C314	**3.0**	**2.8**	**2.5**	**2.0**	**-**	**1.8**	**1.8**	**1.8**	**1.7**	**1.7**	**-**	**1.7**	**1.0**	**-**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

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Kaikkurichi, Pudukkottai – 622 303

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name		Course Outcome(CO) Students will be able to
CS6611	MOBILE APPLICATION DEVELOPMENT LABORATORY	C315.1	Design and Implement various mobile applications using emulators.
		C315.2	Know the components and structure of mobile application development frameworks for Android OS based mobiles
		C315.3	Know the components and structure of mobile application development frameworks for windows OS based mobiles.
		C315.4	How to work with various mobile application development frameworks
		C315.5	Design concepts and issues of development of mobile applications.
		C315.6	Deploy applications to hand-held devices

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C315.1	3	3	3	2	-	2	2	2	2	2	-	2	1	-	-
C315.2	3	3	3	3	-	2	2	1	1	1	-	1	1	-	-
C315.3	3	3	2	2	-	2	2	2	2	2	-	2	1	-	-
C315.4	3	3	3	3	-	2	2	2	1	1	-	1	1	-	-
C315.5	3	3	2	2	-	1	1	1	1	1	-	1	1	-	-
C315.6	3	3	2	2	-	2	2	2	2	2	-	2	1	-	-
C315	**3.0**	**3.0**	**2.5**	**2.3**	**-**	**1.8**	**1.8**	**1.7**	**1.5**	**1.5**	**-**	**1.5**	**1.0**	**-**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6612	**COMPILER LABORATORY**	**C316.1**	Implement the different Phases of compiler using tools
		C316.2	Analyze the control flow and data flow of a typical program
		C316.3	Usage of the LEX and YACC tools
		C316.4	Implement the strategies for storage allocation.
		C316.5	Optimize a given program
		C316.6	Generate an assembly language program equivalent to a source language program

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C316.1	3	2	2	2	-	2	2	2	2	2	2	2	1	1	-
C316.2	3	3	3	3	-	2	2	1	1	1	1	1	1	1	-
C316.3	2	2	2	2	-	2	2	2	1	1	1	1	2	2	-
C316.4	3	3	3	3	-	2	2	2	1	1	1	1	2	2	-
C316.5	3	3	3	2	-	1	1	1	1	1	1	1	1	1	-
C316.6	3	3	2	2	-	2	2	2	2	2	1	2	1	1	-
C316	**2.8**	**2.7**	**2.5**	**2.3**	**-**	**1.8**	**1.8**	**1.7**	**1.3**	**1.3**	**1.3**	**1.3**	**1.3**	**1.3**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
GE6674	**COMMUNICATION AND SOFT SKILLS LABORATORY**	**C317.1**	To be totally learner-centric with minimum teacher intervention as the course revolves around practice
		C317.2	Suitable audio/video samples from Podcast/YouTube to be used for illustrative purposes.
		C317.3	Portfolio approach for writing to be followed. Learners are to be encouraged to blog, tweet, text and email employing appropriate language
		C317.4	GD/Interview/Role Play/Debate could be conducted off the laboratory (in a regular classroom)
		C317.5	Expose to telephonic interview and video conferencing.
		C317.6	Learners are to be assigned to read/write/listen/view materials outside the classroom as well for graining proficiency and better participation in the class.

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C317.1	3	3	3	2	2	2	2	2	2	2	1	1	2	-	-
C317.2	3	3	3	2	2	2	2	2	2	2	1	1	2	-	-
C317.3	3	3	2	1	2	2	2	1	1	2	1	1	1	-	-
C317.4	3	3	3	2	2	2	2	2	1	2	1	1	1	-	-
C317.5	3	3	3	3	2	2	2	2	1	2	1	1	1	-	-
C317.6	3	3	2	2	2	2	2	2	1	2	1	1	2	-	-
C317	**3.0**	**3.0**	**2.7**	**2.0**	**2.0**	**2.0**	**2.0**	**1.8**	**1.3**	**2.0**	**1.0**	**1.0**	**1.5**	**-**	**-**

*3-HighCorrelation;2-MediumCorrelation;1-LowCorrelation

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6701	CRYPTOGRAPHY AND NETWORK SECURITY	C401.1	Explain various encryption techniques and the basics of number theory and apply algorithm to test the numbers
		C401.2	Use block cipher methods to calculate the ciphers ans summarize public key crytography
		C401.3	Discuss authentication algorithm and apply various authentication functions and secure algorithms.
		C401.4	Evaluate firewall rules and policy setup implementations
		C401.5	Design secure applications
		C401.6	Inject secure coding in the development applications

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C401.1	3	3	2	1	1	1	1	1	1	1	1	1	2	3	-
C401.2	3	3	2	2	1	1	1	1	1	1	1	1	3	2	-
C401.3	3	3	3	2	2	2	2	2	1	1	1	1	3	2	-
C401.4	3	3	3	2	2	2	2	2	1	1	1	1	3	3	-
C401.5	3	3	3	2	2	2	1	1	1	1	1	1	3	3	-
C401.6	3	3	2	2	1	1	1	1	1	1	1	1	3	3	-
C401	**3.0**	**3.0**	**2.5**	**1.8**	**1.5**	**1.5**	**1.3**	**1.3**	**1.0**	**1.0**	**1.0**	**1.0**	**2.8**	**2.7**	-

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6702	**GRAPH THEORY AND APPLICATIONS**	**C402.1**	Define basic concepts & terminologies of Graph, Isomorphism, Trees and its properties
		C402.2	Analyze solution for Konigsberg bridge problem using Euler's graph
		C402.3	Analyze a solution for a maximum flow in network using Network Flow Graph theory
		C402.4	Describe the principles of Inclusion and Exclusion, Binomial theorem and traffic problem.
		C402.5	Apply permutation and Combination and solve seating arrangement problem.
		C402.6	Evaluate precise and accurate mathematical definitions of objects in graph theory

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C402.1	3	3	3	2	2	2	1	1	1	-	1	1	2	3	-
C402.2	3	2	2	2	1	1	1	1	1	-	1	1	3	2	-
C402.3	3	3	2	2	2	2	2	2	1	-	1	1	3	2	-
C402.4	3	3	3	2	2	2	2	2	1	-	1	1	3	2	-
C402.5	3	3	3	2	2	2	1	1	1	-	1	1	2	2	-
C402.6	3	3	2	2	2	2	2	1	1	-	1	1	3	3	-
C402	**3.0**	**2.8**	**2.5**	**2.0**	**1.8**	**1.8**	**1.5**	**1.3**	**1.0**	**-**	**1.0**	**1.0**	**2.7**	**2.3**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6703	GRID AND CLOUD COMPUTING	C403.1	Use of the basics of distributed computing and grid
		C403.2	Apply grid computing techniques to solve large scale scientific problems
		C403.3	Apply the concept of virtualization
		C403.4	List out the deployment models of cloud
		C403.5	Use the grid and cloud tool kits
		C403.6	Apply the security models in the grid and the cloud environment

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C403.1	3	3	2	2	2	2	2	2	2	1	1	1	3	2	-
C403.2	2	3	3	2	2	2	2	2	1	1	1	1	2	2	-
C403.3	3	3	3	3	3	2	2	2	2	1	1	1	3	2	-
C403.4	3	3	3	3	3	3	2	2	2	2	2	1	3	2	-
C403.5	3	3	3	2	3	2	2	2	1	1	1	1	3	2	-
C403.6	3	3	2	2	2	2	2	2	2	2	2	1	3	2	-
C403	**2.8**	**3.0**	**2.7**	**2.3**	**2.5**	**2.2**	**2.0**	**2.0**	**1.7**	**1.3**	**1.3**	**1.0**	**2.8**	**2.0**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6704	RESOURCE MANAGEMENT TECHNIQUES	C404.1	Solve the linear programming problems using Graphical method and implex method
		C404.2	Solve specialized Linear programming problems like transportation and assignment problems.
		C404.3	Using Branch & Bound technique solve real world problems.
		C404.4	Compute critical path analysis to solve real life project schedule time and timely delivery
		C404.5	Analyze the role & applications of PERT/COST/CPM for project scheduling
		C404.6	Evaluate the optimization problems using simple method.

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C404.1	3	2	2	2	2	-	-	-	-	1	1	1	3	2	-
C404.2	2	2	1	1	1	-	-	-	-	1	1	1	2	2	-
C404.3	3	3	3	3	2	-	-	-	-	1	1	1	3	2	-
C404.4	3	3	3	3	2	-	-	-	-	2	2	1	3	2	-
C404.5	3	3	3	2	2	-	-	-	-	1	1	1	3	2	-
C404.6	3	3	2	2	2	-	-	-	-	2	2	1	3	2	-
C404	**2.8**	**2.7**	**2.3**	**2.2**	**1.8**	**-**	**-**	**-**	**-**	**1.3**	**1.3**	**1.0**	**2.8**	**2.0**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6003	AD HOC AND SENSOR NETWORKS	C405.1	Detail about the needs of wireless Adhoc and sensor network in current scenario of technology
		C405.2	Explain the concepts, network architectures and applications of ad hoc and wireless sensor networks
		C405.3	Analyze the protocol design issues of ad hoc and sensor networks.
		C405.4	Design routing protocols for ad hoc and wireless sensor networks with respect to some protocol with design issues
		C405.5	Detail about how various signal processing and coding techniques combat channel un certainties
		C405.6	Evaluate the QoS related performance measurements of ad hoc and sensor networks. .

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C405.1	3	3	3	3	3	3	2	2	2	-	1	1	3	2	-
C405.2	2	3	3	3	2	2	2	2	1	-	1	1	2	2	-
C405.3	3	3	3	3	3	2	2	2	2	-	2	2	3	2	-
C405.4	3	3	3	3	3	3	2	2	1	-	1	1	3	3	-
C405.5	3	3	3	2	3	2	2	2	2	-	1	1	2	3	-
C405.6	3	3	3	3	2	2	2	1	1	-	1	1	2	2	-
C405	**2.8**	**3.0**	**3.0**	**2.8**	**2.7**	**2.3**	**2.0**	**1.8**	**1.5**	**-**	**1.2**	**1.2**	**2.5**	**2.3**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, Affiliated to Anna University, Chennai, India)
Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6007	INFORMATION RETRIEVEL TECHNIQUES	C406.1	Make use of an open source search engine framework and explore its capabilities
		C406.2	Apply appropriate method of classification or clustering.
		C406.3	Design and implement innovative features in a search engine.
		C406.4	Design and implement a recommender system
		C406.5	Explain about the concepts of Collaborative Filtering
		C406.6	Apply the algorithm for Neural Network Model

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C406.1	2	1	1	1	-	-	-	-	-	-	-	-	1	-	-
C406.2	2	1	1	1	-	-	-	-	-	-	-	-	1	-	-
C406.3	2	1	1	1	-	-	-	-	-	-	-	-	1	-	-
C406.4	2	1	1	1	-	-	-	-	-	-	-	-	1	-	-
C406.5	2	1	1	1	-	-	-	-	-	-	-	-	1	-	-
C406.6	1	1	1	1	-	-	-	-	-	-	-	-	1	-	-
C406	**1.8**	**1.0**	**1.0**	**1.0**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1.0**	**-**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6711	SECURITY LABORATORY	C407.1	Implement the cipher techniques
		C407.2	Implement the Encryption techniques
		C407.3	Develop the various security algorithms
		C407.4	Learn about secure data transfer
		C407.5	Use different open source tools for network security
		C407.6	Analysis different open source tools for network security

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C407.1	3	3	3	2	2	2	-	2	2	2	-	2	3	2	-
C407.2	3	3	3	3	2	2	-	2	2	2	-	2	3	3	-
C407.3	3	3	3	3	3	2	-	2	2	2	-	2	3	3	-
C407.4	3	3	3	3	3	2	-	2	2	2	-	2	3	3	-
C407.5	3	3	3	3	3	2	-	2	2	2	-	2	3	2	-
C407.6	3	3	3	3	3	2	-	2	2	1	-	1	3	2	-
C407	**3.0**	**3.0**	**3.0**	**2.8**	**2.7**	**2**	**-**	**2**	**2**	**1.8**	**-**	**1.8**	**3.0**	**2.5**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6712	GRID AND CLOUD COMPUTING LABORATORY	C4081	Use the grid and cloud tool kits
		C408.2	Apply the Virtualization
		C408.3	Design applications on the Grid
		C408.4	Implement applications on the Grid
		C408.5	Design applications on the Cloud.
		C408.6	Implement applications on the Cloud.

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C4081	3	3	3	3	3	3	2	2	2	2	2	2	3	3	-
C408.2	3	3	3	3	3	3	2	2	2	2	2	2	3	3	-
C408.3	3	3	3	3	2	2	2	2	2	2	2	2	3	3	-
C408.4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	-
C408.5	3	3	3	3	3	3	3	2	2	2	2	2	3	3	-
C408.6	3	3	3	3	3	3	3	2	2	2	2	2	3	3	-
C408	**3.0**	**3.0**	**3.0**	**3.0**	**2.8**	**2.8**	**2.5**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**	**3.0**	**3.0**	-

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6801	MULTI CORE ARHITECTURES AND PROGRAMMING	C409.1	Describe the parallel architecture and parallel programming model
		C409.2	Analyze the issues related to various challenges in parallel programming model
		C409.3	Develop parallel programming applications using OpenMp.
		C409.4	Design and Develop distributed programming application using OpenMPI
		C409.5	Compare and analyze parallel programming model for serial processor and parallel processor implementation
		C409.6	Analyze OpenMP and OpenMPI implementations.

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C409.1	3	2	2	1	-	-	-	-	-	-	-	1	3	3	-
C409.2	3	2	1	1	-	-	-	-	-	-	-	1	2	2	-
C409.3	3	3	2	1	-	-	-	-	-	-	-	1	3	1	-
C409.4	3	3	2	1	-	-	-	-	-	-	-	1	3	3	-
C409.5	3	3	2	1	-	-	-	-	-	-	-	1	3	3	-
C409.6	3	3	2	1	-	-	-	-	-	-	-	1	2	3	-
C409	**3.0**	**2.7**	**1.8**	**1.0**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1.0**	**2.7**	**2.5**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
IT6011	**KNOWLEDGE MANAGEMENT**	**C410.1**	Usage about Introduction to Yoga and meditation
		C410.2	Apply ethics in society,
		C410.3	Discuss the ethical issues related to engineering and realize the responsibilities and rights in the society.
		C410.4	Analyze the Weapons Development – Engineers as Managers
		C410.5	Analyze the concept of Risk Benefit Analysis and Reducing Risk
		C410.6	Gain knowledge about Senses of 'Engineering Ethics'

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C410.1	2	2	2	2	-	-	2	2	-	2	2	2	1	2	-
C410.2	3	3	3	2	-	-	2	1	-	1	1	1	1	3	-
C410.3	2	2	2	2	-	-	2	1	-	1	1	1	2	2	-
C410.4	3	3	3	2	-	-	2	1	-	1	1	1	2	2	-
C410.5	2	2	2	2	-	-	2	1	-	1	1	1	2	3	-
C410.6	3	3	2	2	-	-	2	2	-	1	1	2	2	3	-
C410	**2.5**	**2.5**	**2.3**	**2.0**	-	-	**2.0**	**1.3**	-	**1.2**	**1.3**	**1.3**	**1.7**	**2.5**	-

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
GE6075	PROFESSIONAL ETHICS IN ENGINEERING	C411.1	Describe basic purpose of profession, professional ethics and various moral and social issues
		C411.2	Outline of professional rights and responsibilities of a Engineer, safety and risk benefit analysis of a Engineer
		C411.3	Utilize acquiring knowledge of various roles of EngineerIn applying ethical principles at various professional levels
		C411.4	Define professional Ethical values and contemporary issues
		C411.5	Relate in competitive and challenging environment to contribute to industrial growth.
		C411.6	Choose academic learning with experimental learning in a profession.

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C411.1	3	2	2	2	2	-	2	2	1	-	-	1	2	3	-
C411.2	3	3	3	3	2	-	2	2	2	-	-	1	3	3	-
C411.3	3	3	3	2	2	-	2	2	2	-	-	1	3	3	-
C411.4	3	3	3	2	2	-	2	2	1	-	-	1	3	3	-
C411.5	3	3	3	3	2	-	2	2	2	-	-	2	2	3	-
C411.6	3	3	3	2	2	-	2	2	1	-	-	1	3	3	-
C411	**3.0**	**2.8**	**2.8**	**2.3**	**2.0**	**-**	**2.0**	**2**	**1.5**	**-**	**-**	**1.2**	**2.7**	**3.0**	**-**

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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Kaikkurichi, Pudukkottai – 622 303
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
REGULATION 2013
COURSE OUTCOMES (CO) & CO-PO MAPPING

Course Code	Course Name	Course Outcome(CO) Students will be able to	
CS6811	**PROJECT WORK**	**C412.1**	Identify technically and economically feasible problems of social relevance
		C412.2	Plan and build the project team with assigned responsibilities
		C412.3	Identify and survey the relevant literature for getting exposed to related solutions
		C412.4	Analyse, design and develop adaptable and reusable solutions of minimal complexity by using modern tools
		C412.5	Implement and test solutions to trace against the user requirements
		C412.6	Deploy and support the solutions for better manageability of the solutions and provide scope for improvability

CO PO MAPPING

COs	PROGRAM OUTCOMES												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C412.1	3	3	3	3	2	2	2	2	2	2	2	2	2	2	-
C412.2	3	3	3	3	3	2	2	2	2	2	2	1	1	2	-
C412.3	3	3	3	3	2	2	2	2	2	2	2	2	1	2	-
C412.4	3	2	2	2	2	2	2	2	2	2	2	1	1	1	-
C412.5	3	2	2	2	2	2	2	2	2	2	2	1	1	1	-
C412.6	2	2	2	2	2	2	2	2	1	1	1	1	1	1	-
C412	**2.8**	**2.5**	**2.5**	**2.5**	**2.2**	**2.0**	**2.0**	**2.0**	**1.8**	**1.8**	**1.8**	**1.3**	**1.2**	**1.5**	-

*3-HighCorrelation; 2-MediumCorrelation;1-LowCorrelation