



PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMILNADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF COMPUTER SCIENCE

Bachelor of Computer Science

PROGRAMME OUTCOMES	
PO1	Able to design and develop reliable software applications for social needs and Excel in IT enabled services.
PO2	Able to analyze and identify the customer requirements in multidisciplinary domains, create high level design and implement robust software applications using latest technological skills.
PO3	Proficient in successfully designing innovative solutions for solving real life business problems and addressing business development issues with a passion for quality, competency and holistic approach
PO4	Perform professionally with social, cultural and ethical responsibility as an individual as well as in multifaceted teams with positive attitude
PO5	Capable of adapting to new technologies and constantly upgrade their skills with An attitude towards independent and lifelong learning.
PO6	Develop various real time applications using latest technologies and programming languages
PROGRAM SPECIFIC OUTCOME	
PSO1	Professional Skills: Attain the ability to design and develop computer applications, evaluate and recognize potential risks and provide innovative solutions.

PSO2	Successful Career and Entrepreneurship: Explore technical knowledge in diverse areas of Computer Applications and experience an environment conducive in Cultivating skills for successful career, entrepreneurship and higher studies.
PSO3	To formulate and develop mathematical arguments in a logical manner.
PSO4	To acquire good knowledge and understanding in advanced areas of mathematics and statistics, chosen by the student from the given courses.
PSO5	To understand, formulate and use quantitative models arising in social science, Business and other contexts.
PROGRAM EDUCATIONAL OBJECTIVES	
PEO1	Evolve as globally competent computer professionals possessing leadership skills

Sem	Course code	Course title	CO's	PO1	PO2	PO3	PO4	PO5	PO6
				I	22110AEC11	Tamil- I	Learn the changes occurred in literature since classical period.	3	1
			Obtaining More information about one's culture and tradition	2	0	3	2	1	0
			Encourage creative writing and developing self-confidence.	1	2	3	3	3	1
	22111AEC11	Hindi-I	Enables other state students to continue their learning phase without any disruptions.	2	1	3	2	1	0
			Through this language they can learn spirituality.	2	0	3	1	2	0
			Students can learn social discrimination	2	3	1	2	1	1
			Students can learn grammar techniques	2	1	2	1	3	0
	22132AEC11	Advanced English-I	Academic skills in preparation for tertiary study.	1	2	1	1	2	3

			Presentation and participation skills.	3	2	1	1	2	2
			Learning strategies and research skills	1	2	3	1	2	1
			Academic essay and report writing skills	2	0	1	3	1	1
	22135AEC11	French-I	Focus on all four modalities of the language: speaking, listening, reading and writing	2	3	2	2	3	1
			As well as knowledge of Francophone cultures and the skills of collaboration and critical thinking	1	2	3	1	2	1
			Students can compare and contrast cultural practices as they relate to French and American culture.	2	1	2	1	3	0
			Improves their proficiency in English language.	1	2	1	1	2	3
			Develops functional communicative aspect of language through a series of real life tasks	3	2	1	1	2	2

	221220EC13	PROBLEM SOLVING USING PYTHON	To understand the principles of Python and acquire skills in programming in python To develop the emerging applications of relevant field using Python	1	2	3	1	2	1
			Interpret the fundamental Python syntax and semantics and be fluent in the use of Python control flow statements.	2	0	1	3	1	1
	22112AEC14B	CLASSICAL ALGIBRA	Understand the theory of, and be able to solve problems in Caylee Hamilton Theorem, and finding the Eigen values & Eigen vectors	2	3	2	2	3	1
			Able to manipulate relation between root and coefficients, symmetric functions of the roots in terms of the coefficients and transformation of equation	3	0	3	3	2	3
			be able to calculate summation related to Binomial,	2	1	2	3	1	3
			be able to calculate summation related to Binomial, Exponential and Logarithmic series	3	2	1	1	1	0
	22112AEC15B	Numerical And Statistical Methods	Apply numerical methods to find the solution of algebraic equations using different method and numerical	2	0	1	1	2	0

			Apply various interpolation methods and finite difference concepts.	2	3	1	1	3	1
			Work out numerical differentiation and integration whenever and wherever routine methods are not applicable.	2	1	1	3	1	0
			Solve a differential equation using an appropriate numerical method	1	2	2	2	3	0
2210SEC16L	PROBLEM SOLVING USING PYTHON LAB		To implement the python programming features in practical applications	2	3	1	1	3	1
			To implement Python programs with conditionals and loops	2	1	1	3	1	0
			Represent compound data using Python lists, tuples, dictionaries, turtles, Files and modules	1	2	2	2	3	0
			Use functions for structuring Python programs.	3	2	1	2	1	1
221LSCIC	Indian Constitution		To make the students understand about the Democratic Rule and Parliamentary administration.	2	1	3	1	3	1

			To appreciate the salient features of the Indian Constitution	2	1	1	3	1	0
	221LSCUV	Universal Human Values	Know about universal human values and understand the importance of values in individual, social circles, career path, and national life.	1	2	1	2	3	0
From case studies of lives of great and successful people who followed and practiced human values and achieved self-actualization.			3	2	3	2	1	3	
Realize their potential as human beings and conduct themselves properly in the ways of the world.			2	3	1	1	1	2	
II	22110AEC21	Tamil- II	Know what devotion really is. Know the fruitfulness obtained through devotion	2	1	3	2	1	1
			Perceive the progress achieved in the society through devotion	2	0	1	2	3	0
			Obtaining More information about one's culture and tradition	2	1	2	3	1	1
			Encourage creative writing and developing self-confidence.	2	1	2	3	1	0

			Aiming at enriching human excellence	2	1	1	3		3
22111AEC21	Hindi-II		Enables other state students to continue their learning phase without any disruptions	1	2	2	2	3	1
			Through this language the can learn spirituality Students can learn grammar techniques. Enables them to enhance their language skills. Enables them to develop creative writing.	2	2	3	2	2	1
			Students can learn social discrimination.D18	1	1	1	3	1	2
22132AEC21	Advanced English-II		Communicate effectively in most daily practical and social situations at both concrete and abstract levels	2	0	2	3	1	1
			Participate in formal and informal conversations involving problem solving and decision making	2	1	3	1	1	0
			Speak on familiar concrete topics at a descriptive level and present a detailed analysis or comparison	2	0	1	3	1	1

			Demonstrate an increased ability to respond appropriately to the formality level of a social interaction	2	1	2	2	3	1
22135AEC21	French-II		Focus on all four modalities of the language: speaking, listening, reading and writing.	2	1	1	1	2	3
			As well as knowledge of Francophone cultures and the skills of collaboration and critical thinking.	3	2	1	1	2	1
			Students can compare and contrast cultural practices as they relate to French and American culture	3	2	1	1	2	1
22111AEC22	English-II		Read and appreciate literature	2	3	1	1	1	0
			Know more about Mahatma Gandhi, Mother Teresa, and Martin Luther King.	2	1	2	3	1	0
			Describe Daffodils, beauty of Byron's Maid, Painful account of apple- pickers	2	1	3	2	3	0
			Understand the basic Grammar, and Spoken English. Ability to write composition, letter and vocabulary	2	1	2	2	2	3

			Gain vocabulary through reading. Acquire fluency in English language.	3	1	3	2	2	2
22120SEC23	Internet and Java Programming	➤ To understand the core principles of the Java Language	3	2	3	3	2	3	
		➤ To study about Graphics programming using java Language	2	2	3	2	3	3	
22112AEC24B	Discrete Mathematics	Students completing this course will be able to express a logic sentence in terms of predicates, quantifiers, and logical connectives	3	2	3	2	3	3	
22112AEC25B	Operations Research	Identify and develop operational research models from the verbal description of the real system	3	2	2	2	3	3	
		Use mathematical software to solve the proposed models.	2	3	1	2	1	3	
		Develop a report that describes the model And the solving technique, analyses the results and propose recommendations in language	2	1	3	1	2	0	
		Understand variety of problems such as assignment, transportation, travelling salesman etc.	1	1	2	2	3	0	
22120SEC26L	Internet and Java	learn the Internet Programming, using Java Applets	2	1	1	2	2	3	

			create a full set of UI widgets and other components, including windows, menus, buttons, checkboxes, text fields, scrollbars and scrolling lists, using Abstract Windowing Toolkit (AWT) & Swings	3	0	2	3	2	
			apply event handling on AWT and Swing components	1	2	2	2	1	3
			Learn to access database through Java programs, using Java Data Base Connectivity (JDBC)	2	0	3	2	2	2
	201LSCCS	Communication Skills	Learning to communicate through the digital media .By the end of this program participants should have a clear understanding of what good	2	2	1	2	2	1
			Understand the importance of empathetic listening	2	1	3	2	2	2
			Explore communication beyond language.	3	1	2	1	1	0

		Communication skills are and what they can do to improve their abilities. Understand role of communication in teaching-learning process	1	2	3	1	1	0
22110AEC31	Tamil-III	Achieve one's goal by following the ancestral path.	2	0	3	2	2	0
		They will expose themselves into many question and answer session in research stations through which they can mould themselves for their better subject knowledge.	2	3	1	2	1	1
22132AEC31	Hindi-III	Enables other state students to continue their learning phase without any disruptions.	2	1	2	3	2	0
		Through this language they can learn spirituality.	1	2	1	2	3	0
		Students can learn social discrimination.D18.	2	1	3	2	2	0
22111AEC31	Advanced English-III	➤ Follow main ideas, key words, and important details in an authentic 2-3 page text on a familiar and partially predictable topic.	2	3	1	3	2	0
		Read in English for information, to learn the language and to develop reading skills.	2	0	1	3	1	0

			Write coherent paragraphs on familiar topics with clear main ideas and some supporting details. Develop a sense of audience.	3	1	2	3	2	1
22135AEC31	French-III		Focus on all four modalities of the language: speaking, listening, reading and writing.	2	3	1	1	2	2
			As well as knowledge of Francophone cultures and the skills of collaboration and critical thinking.	1	2	3	2	1	1
			Students can compare and contrast cultural practices as they relate to French and American culture.	2	1	3	2	1	2
			Students can demonstrate critical thinking and Collaborative problem-solving through advanced task-based language activities.	2	1	2	1	2	3
22120SEC33	Visual Programming		Students list the visual programming concepts. Explain basic concepts and definitions. Express constants and arithmetic operations.	2	1	1	2	2	1
			The students can learn in selection of suitable farm equipment for tillage to harvest based on field and crop conditions.	2	1	3	3	2	2

			· The students can able to estimate the cost of farm equipment operation, coverage and power requirements	2	3	3	2	2	1
			· Students prepare various projects by helping visual programming.	3	1	3	3	2	2
22113AEC34A	Applied physics –I		Cognitive abilities and skills relating to solution of problems in Physics and Physics Related Disciplines	2	1	3	3	2	3
			Practical skills relating to the conduct of laboratory and industrial work in General skills relating to non-subject specific competencies, communication, ICT knowledge, interpersonal, organization skills and ethical standards.	3	3	1	2	1	3
22120SEC35L	Visual Programming Lab		To understand arithmetic operations	2	2	3	1	2	3
			To understand string and matrix operations	2	2	1	3		3
22113AEC36AL	Applied physics Lab-I		An ability to apply knowledge of mathematics, science, and engineering. Graduates should transform knowledge of mathematics, Physics, chemistry, Engineering Mechanics, probability and statistics, and engineering drawing in solving a wide range of civil engineering problems.	3	1	3	1	3	0
			An ability to design, implement, evaluate a system and conduct experiments, as well as to analyze and interpret data. Graduates should	2	0	3	2	1	0

			show that they can make decisions regarding type, and number of data points to be collected, duration of the experiment						
			data points to be collected, duration of the experiment to obtain intended results, and demonstrate an understanding of accuracy and precision of data	1	2	3	3	3	1
			An ability to design, implement and evaluate a system, or process to meet desired needs Graduates should be able to identify the project goal;	2	1	3	2	1	0
III	22120RMC37	Research Methodology	Students who complete this course will be able to understand and comprehend the basics in research methodology and applying them in research/ project work.	2	0	3	1	2	-1
			This course will help them to select an appropriate research design.	2	1	3	1	2	0
			The course will also enable them to collect the data, edit it properly and analyses it accordingly. Thus, it will facilitate students' prosperity in higher education.	2	3	1	1	3	0
			With the help of this course, students will be able to take up and implement a research project/ study.	1	1	1	3	1	0

	1ACLOSAN	OFFICE AUTOMATION	Recognize when to use each of the Microsoft Office programs to create professional and academic documents.	2	1	3	2	3	0
			Use Microsoft Office programs to create personal, academic and business documents following current professional and/or industry standards.	3	2	3	2	1	3
IV	22110AEC41	Tamil-IV	Realize how the ancient people changed their life style according to the ages	3	1	2	1	2	0
			Learn how to change one's lifestyle according to the needs of the future	2	3	1	2	1	1
			Obtaining More information about one's culture and tradition; Encourage creative writing and developing self-confidence.	1	2	3	1	2	1
	22111AEC41	Hindi-IV	Enables other state students to continue their learning phase without any disruptions.	2	1	2	1	3	0
			Through this language they can learn spirituality.	1	2	1	1	2	3
			Students can learn social discrimination.D18.	3	2	1	1	2	2

	22132AEC41	Advanced English-IV	Make oral presentations effectively for academic purposes by using appropriate discourse markers, transitions and conjunctions.	1	2	3	1	2	1
			Respond to spoken discourse in their content courses and academic presentations.	2	0	1	3	1	1
			Follow oral instructions, identify details, and evaluate the speakers' viewpoints and attitudes	2	3	2	2	3	1
	19135AEC41	French-IV	Focus on all four modalities of the language: speaking, listening, reading and writing. As well as knowledge of Francophone cultures and the skills of collaboration and critical	3	0	3	3	2	3
			Students can compare and contrast cultural practices as they relate to French and American culture.	2	1	2	3	1	3
	22111AEC42	English-IV	Know about genius of Shakespeare, Martin Luther King, Mahatma Gandhi, and Mother Teresa.	3	2	1	1	1	0
			Describe Daffodils, beauty of Byron's Maid, Painful account of apple-pickers.	2	0	1	1	2	0
			Understand the basic Grammar, and Spoken English. Ability to write composition, letter and vocabulary	2	1	1	3	3	0

22120SEC43	Active Server Programming	Learners will be able to design web applications using ASP.NET	1	1	3	2	3	1
		Learners will be able to use ASP.NET controls in web applications	2	0	3	2	1	0
22113AEC44A	Applied physics II	Effectively use and critically evaluate current technical/scientific research literature, online information, as well as information related to scientific issues in the mass media	2	1	3	1	2	0
		Integrate and relate scientific knowledge learned from classroom with real life situations.	2	3	1	1	3	1
		Students acquire knowledge about the plant and host relationship and their management	2	1	1	3	1	0
		They get knowledge about the integrated management of plant diseases and pest.	1	2	2	2	3	0
221ENSTU45	Environmental Studies	Apply systems concepts and methodologies to analyze and understand interactions between social and environmental processes.	3	2	1	1	1	3
		Reflect critically about their roles and identities as citizens, consumers and environmental actors in a complex, interconnected world.	2	1	3	1	1	0
		Demonstrate proficiency in quantitative methods, qualitative analysis, critical thinking, and written and oral communication needed to	1	1	1	3	1	2

			conduct high- level work as interdisciplinary scholars and/or practitioners.						
			Analyze the ecosystem and able to understand the different types of pollutions in country. Learn about environmental pollution.	1	3	2	2	3	0
	221201SEC46L	Active Server Page Lab	Learners will be able to design web applications using ASP.NET	1	2	3	3	2	3
			Learners will be able to create database driven ASP.NET web applications and web services demonstrate advanced knowledge of programming for network communications	3	2	1	1	1	0
	22113AEC47AL	Applied physics lab II	Effectively use and critically evaluate current technical/scientific research literature, online information, as well as information related to scientific issues in the mass media	3	1	2	1	1	1
			Integrate and relate scientific knowledge learned from classroom with real life situations.	2	1	3	1	1	0
	221LSCLS	Leadership and Management Skills	Help students to develop essential skills to influence and motivate others	2	0	1	1	3	0
			Nurture a creative and entrepreneurial mindset	2	0	1	1	1	3

			Make students understand the personal values and apply ethical principles in professional	2	1	3	1	2	0
V	22120SEC51	Data Communication and Networking	Identify the components required to build different types of networks.	3	1	1	2	2	1
			Another node. Identify the components required to build different types of networks	3	2	2	3	3	2
			Learning all farm activities field management and to gain maximum knowledge about crops of a particular season	2	3	2	1	1	3
	22120SEC52	Operating System	Design various Scheduling algorithms.	1	2	2	3		3
			Compare and contrast various memory management schemes.	1		2	1	3	3
			Design and Implement a prototype file systems.	3	2	1	1	1	1
	22120SEC53	Microprocessor and its Applications	Design and implement programs on 8086 microprocessor.	1	1	1	3	1	0
			Design and implement 8051 microcontroller based systems	1	2	1	2	3	0
	22120DSC56A	Cloud Computing	Identify the architecture, infrastructure and delivery models of cloud computing	1	1	3	1	2	1

			Address the core issues of cloud computing such as security, privacy and interoperability	2	1	1	3	2	0
			· The students will be able to undertake commercial cultivation of flower crop, medicinal and aromatic plants.	2	1	3	2	1	0
			· Students will gain knowledge to establish different types garden in various locations.	3	3	1	2	2	0
22120DSC56B	Middleware Technology		Understand Distributed systems design and implementation	1	2	3	3	3	1
			Use Middleware to Build Distributed Applications	2	0	2	2	3	3
22120DSC56C	Enterprise resource planning		Make basic use of Enterprise software, and its role in integrating business functions	2	1	1	2	1	2
			Analyze the strategic options for ERP identification and adoption.	2	1	3	2	1	2
			Design the ERP implementation strategies.	3	2	1	2	1	1
			Create reengineered business processes for successful ERP implementation.	2	1	3	1	3	0
22120SEC55LC	Microprocessor Lab		Design and implement programs on 8085 microprocessor.	2	1	1	3	1	0

			Design and implement 8051 microcontroller based systems	1	2	1	2	3	1
			The student will learn the types of Intellectual Property and legislations covering IPR in India: Patents, Copyrights, Trademark, Industrial design, Geographical indications, Integrated circuits, Trade secrets.	3	2	3	2	1	1
	22120SEC56L	Operating System Lab	Execute the Unix Shell programming on the given system configuration.	2	3	1	1	1	0
			Studying the concepts and applications of remote sensing and image processing in agriculture	2	1	3	2	1	1
			Understanding the concepts of nanotechnology	2	0	1	2	3	0
			Students know about the economic and environmental feasibility of the precision farming technology.	2	1	2	3	1	3
	22120BRC57	Professional Skills	Prepare their resume in an appropriate template without grammatical and other errors and	2	1	2	3	1	1
			Actively participate in group discussions towards gainful employment	2	1	1	3		1
			Enlist the common errors generally made by candidates in an interview	1	2	2	2	3	0

VI 22120SEC61	.NET Programming/	Create web-based distributed applications using ASP.NET, SQL Server and ADO.NET	2	2	3	2	2	0
		Utilize DirectX libraries in the .NET environment to implement 2D and 3D Animations and game-related graphic displays and audio.	1	1	1	3		0
		Understand the key protocols which support The internet.		1	3	2	2	0
22120SEC62	Relational Data Base Management System	Demonstrate the basic elements of a relational database management system.	3 3	1 2	2 1	2 1	1 1	0 0
		Design entity relationship and convert entity relationship diagrams into RDBMS and formulate	2	2	3		3	1
		summarization forms and determine data mining functionalities	1	1	1	3	1	1
		· Students learn to use the natural farm resources produced within the farm	2	0	1	2	3	2

22120DSC65A	Data Mining	Assess raw input data, and process it to provide suitable input for a range of data mining algorithms.	3	0	3	1	1	0
		Students will be equipped with management concepts and management of common resources.	3	1	1	1	1	0
		Evaluate and select appropriate data-mining algorithms and apply, and interpret and	2	1	3	1	2	0
22120SEC64L	NET Programming Lab	Contrast and compare major elements of the .NET Framework and explain how C# fits into the .NET platform.	2	1	2	3		2
		Analyze the basic structure of a C# application and be able to document, debug, compile, and run a simple application.	2	1	3	3	2	1
		Create methods (functions and subroutines) that can return values and take parameters.	2	0	2	3	1	1
		Use common statements to implement flow control, looping, and exception handling.	2	1	3	1	1	0
22120SEC65L	Oracle Lab	Summarizationforms and determine data mining functionalities.	2	0	1	3	1	1

		· They have been familiarized with methods of food preservation and the fundamentals of human Nutrition.	2	1	2	2	3	1
		Brief knowledge about SQL Fundamentals	2	1	1	1	2	3
22120DSC65B	Artificial Intelligence and Expert Systems	Develop mathematical thinking and problem solving skills associated with research and writing proofs.	3	2	1	1	2	1
		Get exposure to a wide variety of mathematical concepts used in computer science discipline like probability.	3	2	1	1	2	1
		Understand the mathematical fundamentals that are prerequisites for a variety of courses like Data Mining, Network protocols, analysis of Web traffic, Computer security, Bioinformatics and Machine Learning.	2	3	1	1	1	0
22120DSC65C	Ethical hacking	To understand and analyses Information security threats & countermeasures	2	1	2	3	1	0
		To understand penetration and security testing issues	2	1	3	2	3	0
		To understand issues relating to ethical hacking	2	1	2	2	2	3
22120DSC65D	Journalism	To understand and analyses Information security threats & countermeasures	3	1	3	2	2	2

			To understand penetration and security testing issues	3	1	3	1	3	0
			To understand issues relating to ethical hacking	2	0	3	2	1	0
			Develop and maintain problem-solving skills. Use mathematical ideas to model real-world problems	1	2	3	3	3	1
	221MAOEC	Development Of Mathematical Skills	know and demonstrate understanding of the concepts from the five branches of mathematics (Operations Research, Set Theory, statistics, Matrices and Business mathematics)	2	1	3	2	1	0
			use appropriate mathematical concepts and skills to solve problems in both familiar and unfamiliar situations including those in real-life contexts	2	0	3	1	2	-1
	221PHOEC	Instrumentation	➤ To use the techniques and skills for electrical projects.	2	1	3	1	2	0
			Design a system, component or process to meet desired needs in electrical engineering.	2	3	1	1	3	0
			Measurement of R,L,C ,Voltage, Current, Power factor , Power, Energy	1	1	1	3	1	0

			· Ability to measure strain, displacement, Velocity, Angular Velocity, temperature, Pressure, Vacuum, and Flow.	2	1	3	2	3	0
221CHOE	Food and Adulteration		Ability to apply principles of food engineering in industry	3	2	3	2	1	3
			Related to food industry and ability to find an appropriate solution for the same.	3	1	2	1	2	0
221MBOEC	Wild Life Conservation		Maintenance of rare species in protected areas such as national parks, sentries etc.,	2	3	1	2	1	1
			Maintenance of rare species in protected areas such as national parks, sentries etc.,	1	2	3	1	2	1
			Protection of wild life through legislation such as banning hunting etc.,	2	1	2	1	3	0
			Imposing specific restrictions on export of endangered plants and animals or their products	1	2	1	1	2	3
221CSOEC	Web Technology		Acquire knowledge about functionalities of world wide web	3	2	1	1	2	2
			Explore markup languages features and create interactive web pages using them	1	2	3	1	2	1

			Able to design front end web page and connect to the back end databases.	2	0	1	3	1	1
			Acquire knowledge about Open source Java ,Script libraries	2	3	2	2	3	1
221CMOEC	BANKING SERVICES		To help to gather knowledge on banking and Financial system in India.	3	0	3	3	2	3
			various types of risk based by banks	2	1	2	3	1	3
22120PRW66	Project Work		Learn to create animated graphics and sound and interactivity	3	2	1	1	1	0
			CD based presentations	2	0	1	1	2	0
			Add and Manage Tweens.	2	1	1	3	3	0
221LSCCE.	Communicative Engagement		Increases confidence in their ability to read comprehends organize and retain written information.	1	1	3	2	3	1
			Increases Vocabulary through the study of word parts, use of context clues and Practice with a dictionary.	2	0	3	2	1	0



PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMILNADU

SCHOOL OF ARTS AND SCIENCE
DEPARTMENT OF COMPUTER SCIENCE
Bachelor of Computer Application (B.C.A)

PROGRAMME OUTCOMES	
PO1	Able to design and develop reliable software applications for social needs and Excel in IT enabled services.
PO2	Able to analyze and identify the customer requirements in multidisciplinary domains, create high level design and implement robust software applications using latest technological skills.
PO3	Proficient in successfully designing innovative solutions for solving real life business problems and addressing business development issues with a passion for quality, competency and holistic approach
PO4	Perform professionally with social, cultural and ethical responsibility as an individual as well as in multifaceted teams with positive attitude
PO5	Capable of adapting to new technologies and constantly upgrade their skills with An attitude towards independent and lifelong learning.
PO6	Develop various real time applications using latest technologies and programming languages
PROGRAM SPECIFIC OUTCOME	

PSO1	Professional Skills: Attain the ability to design and develop computer applications, evaluate and recognize potential risks and provide innovative solutions.
PSO2	Successful Career and Entrepreneurship: Explore technical knowledge in diverse areas of Computer Applications and experience an environment conducive in Cultivating skills for successful career, entrepreneurship and higher studies.
PSO3	To formulate and develop mathematical arguments in a logical manner.
PSO4	To acquire good knowledge and understanding in advanced areas of mathematics and statistics, chosen by the student from the given courses.
PSO5	To understand, formulate and use quantitative models arising in social science, Business and other contexts.
PROGRAM EDUCATIONAL OBJECTIVES	
PEO1	Evolve as globally competent computer professionals possessing leadership skills

Sem	Course code	Course title	CO's	PO1	PO2	PO3	PO4	PO5	PO6
I	22110AEC11	Tamil- I	Learn the changes occurred in literature since classical period.	3	1	3	1	3	0
			Obtaining More information about one's culture and tradition	2	0	3	2	1	0
			Encourage creative writing and developing self-confidence.	1	2	3	3	3	1
	22111AEC11	Hindi-I	Enables other state students to continue their learning phase without any disruptions.	2	1	3	2	1	0
			Through this language they can learn spirituality.	2	0	3	1	2	0
			Students can learn social discrimination	2	3	1	2	1	1

			Students can learn grammar techniques	2	1	2	1	3	0
22132AEC11	Advanced English-I		Academic skills in preparation for tertiary study.	1	2	1	1	2	3
			Presentation and participation skills.	3	2	1	1	2	2
			Learning strategies and research skills	1	2	3	1	2	1
			Academic essay and report writing skills	2	0	1	3	1	1
22135AEC11	French-I		Focus on all four modalities of the language: speaking, listening, reading and writing	2	3	2	2	3	1
			As well as knowledge of Francophone cultures and the skills of collaboration and critical thinking	1	2	3	1	2	1
			Students can compare and contrast cultural practices as they relate to French and American culture.	2	1	2	1	3	0

		Improves their proficiency in English language.	1	2	1	1	2	3
		Develops functional communicative aspect of language through a series of real life tasks	3	2	1	1	2	2
22122SEC13	PROBLEM SOLVING USING PYTHON	To understand the principles of Python and acquire skills in programming in python To develop the emerging applications of relevant field using Python	1	2	3	1	2	1
		Interpret the fundamental Python syntax and semantics and be fluent in the use of Python control flow statements.	2	0	1	3	1	1
22112AEC14B	CLASSICAL ALGIBRA	Understand the theory of, and be able to solve problems in Caylee Hamilton Theorem, and finding the Eigen values & Eigen vectors	2	3	2	2	3	1
		Able to manipulate relation between root and coefficients, symmetric functions of the roots in terms of the coefficients and transformation of equation	3	0	3	3	2	3

		be able to calculate summation related to Binomial,	2	1	2	3	1	3
		be able to calculate summation related to Binomial, Exponential and Logarithmic series	3	2	1	1	1	0
22112AEC15B	Numerical And Statistical Methods	Apply numerical methods to find the solution of algebraic equations using different method and numerical	2	0	1	1	2	0
		Apply various interpolation methods and finite difference concepts.	2	3	1	1	3	1
		Work out numerical differentiation and integration whenever and wherever routine methods are not applicable.	2	1	1	3	1	0
		Solve a differential equation using an appropriate numerical method	1	2	2	2	3	0
22122SEC16L	PROBLEM SOLVING USING PYTHON LAB	To implement the python programming features in practical applications	2	3	1	1	3	1

			To implement Python programs with conditionals and loops	2	1	1	3	1	0
			Represent compound data using Python lists, tuples, dictionaries, turtles, Files and modules	1	2	2	2	3	0
			Use functions for structuring Python programs.	3	2	1	2	1	1
221LSCIC	Indian Constitution		To make the students understand about the Democratic Rule and Parliamentary administration.	2	1	3	1	3	1
			To appreciate the salient features of the Indian Constitution	2	1	1	3	1	0
221LSCUV	Universal Human Values		Know about universal human values and understand the importance of values in individual, social circles, career path, and national life.	1	2	1	2	3	0
			From case studies of lives of great and successful people who followed and practiced human values and achieved self-actualization.	3	2	3	2	1	3

			Realize their potential as human beings and conduct themselves properly in the ways of the world.	2	3	1	1	1	2
II	22110AEC21	Tamil- II	Know what devotion really is. Know the fruitfulness obtained through devotion	2	1	3	2	1	1
			Perceive the progress achieved in the society through devotion	2	0	1	2	3	0
			Obtaining More information about one's culture and tradition	2	1	2	3	1	1
			Encourage creative writing and developing self-confidence.	2	1	2	3	1	0
			Aiming at enriching human excellence	2	1	1	3		3
22111AEC21	Hindi-II	Enables other state students to continue their learning phase without any disruptions	1	2	2	2	3	1	
		Through this language the can learn spirituality Students can learn grammar techniques. Enables them to enhance their	2	2	3	2	2	1	

		language skills. Enables them to develop creative writing.							
		Students can learn social discrimination.D18	1	1	1	3	1	2	
22132AEC21	Advanced English-II	Communicate effectively in most daily practical and social situations at both concrete and abstract levels	2	0	2	3	1	1	
		Participate in formal and informal conversations involving problem solving and decision making	2	1	3	1	1	0	
		Speak on familiar concrete topics at a descriptive level and present a detailed analysis or comparison	2	0	1	3	1	1	
		Demonstrate an increased ability to respond appropriately to the formality level of a social interaction	2	1	2	2	3	1	
22135AEC21	French-II	Focus on all four modalities of the language: speaking, listening, reading and writing.	2	1	1	1	2	3	

		As well as knowledge of Francophone cultures and the skills of collaboration and critical thinking.	3	2	1	1	2	1
		Students can compare and contrast cultural practices as they relate to French and American culture	3	2	1	1	2	1
22111AEC22	English-II	Read and appreciate literature	2	3	1	1	1	0
		Know more about Mahatma Gandhi, Mother Teresa, and Martin Luther King.	2	1	2	3	1	0
		Describe Daffodils, beauty of Byron's Maid, Painful account of apple- pickers	2	1	3	2	3	0
		Understand the basic Grammar, and Spoken English. Ability to write composition, letter and vocabulary	2	1	2	2	2	3
		Gain vocabulary through reading. Acquire fluency in English language.	3	1	3	2	2	2
22122SEC23	Data Structure and Algorithms	➤ To understand the core principles of the Java Language	3	2	3	3	2	3

			➤ To study about Graphics programming using java Language	2	2	3	2	3	3
22112AEC24B	Discrete Mathematics	Students completing this course will be able to express a logic sentence in terms of predicates, quantifiers, and logical connectives		3	2	3	2	3	3
22112AEC25B	Operations Research	Identify and develop operational research models from the verbal description of the real system		3	2	2	2	3	3
		Use mathematical software to solve the proposed models.		2	3	1	2	1	3
		Develop a report that describes the model And the solving technique, analyses the results and propose recommendations in language		2	1	3	1	2	0
		Understand variety of problems such as assignment, transportation, travelling salesman etc.		1	1	2	2	3	0
22122SEC26L	Data Structure and Algorithms Lab	learn the Internet Programming, using Java Applets		2	1	1	2	2	3

			create a full set of UI widgets and other components, including windows, menus, buttons, checkboxes, text fields, scrollbars and scrolling lists, using Abstract Windowing Toolkit (AWT) & Swings	3	0	2	3	2	
			apply event handling on AWT and Swing components	1	2	2	2	1	3
			Learn to access database through Java programs, using Java Data Base Connectivity (JDBC)	2	0	3	2	2	2
	22122RLC27	Research Led Seminar	Learn about contemporary research topics in the domain of security and privacy of machine learning						
			Learn the methodology for scientific paper reading, analyzing and synthesizing information, and reporting the findings.						
			Identifying strengths and weaknesses of contributions and expanding a discussion beyond the						

			paper content.						
			This course provides an experience in leading and participating in a discussion about a scientific paper						
	221SSCBE	Basic Behavioral Etiquette	Learning to communicate through the digital media .By the end of this program participants should have a clear understanding of what good	2	2	1	2	2	1
			Construct formulas, including the use of built-in functions, and relative and absolute references.	2	1	3	2	2	2
			Create and modify charts. Preview and print worksheets.	3	1	2	1	1	0
			This course provides an experience in leading and participating in a discussion about a scientific paper						

		Communication skills are and what they can do to improve their abilities. Understand role of communication in teaching-learning process	1	2	3	1	1	0
22110AEC31	Tamil-III	Achieve one's goal by following the ancestral path.	2	0	3	2	2	0
		They will expose themselves into many question and answer session in research stations through which they can mould themselves for their better subject knowledge.	2	3	1	2	1	1
22132AEC31	Hindi-III	Enables other state students to continue their learning phase without any disruptions.	2	1	2	3	2	0
		Through this language they can learn spirituality.	1	2	1	2	3	0
		Students can learn social discrimination.D18.	2	1	3	2	2	0
22111AEC31	Advanced English-III	➤ Follow main ideas, key words, and important details in an authentic 2-3 page text on a familiar and partially	2	3	1	3	2	0

			predictable topic.						
			Read in English for information, to learn the language and to develop reading skills.	2	0	1	3	1	0
			Write coherent paragraphs on familiar topics with clear main ideas and some supporting details. Develop a sense of audience.	3	1	2	3	2	1
	22135AEC31	French-III	Focus on all four modalities of the language: speaking, listening, reading and writing.	2	3	1	1	2	2
			As well as knowledge of Francophone cultures and the skills of collaboration and critical thinking.	1	2	3	2	1	1
			Students can compare and contrast cultural practices as they relate to French and American culture.	2	1	3	2	1	2
			Students can demonstrate critical thinking and Collaborative problem-solving through advanced task-based language activities.	2	1	2	1	2	3

22122SEC33	Internet and Java Programming	Students list the visual programming concepts. Explain basic concepts and definitions. Express constants and arithmetic operations.	2	1	1	2	2	1
		· The students can learn in selection of suitable farm equipment for tillage to harvest based on field and crop conditions.	2	1	3	3	2	2
		· The students can able to estimate the cost of farm equipment operation, coverage and power requirements	2	3	3	2	2	1
		· Students prepare various projects by helping visual programming.	3	1	3	3	2	2
22122SEC36L	Internet and Java Programming Lab	Cognitive abilities and skills relating to solution of problems in Physics and Physics Related Disciplines	2	1	3	3	2	3
		Practical skills relating to the conduct of laboratory and industrial work in General skills relating to non-subject specific competencies, communication, ICT knowledge, interpersonal, organization skills and ethical standards.	3	3	1	2	1	3

22161SEC34	Financial Accounting	Equip with the knowledge of accounting process and preparation of final accounts of sole trader. Identify and analyze the reasons for the difference between cash	2	2	3	1	2	3
		Develop the skill of recording financial transactions and preparation of reports in accordance with GAAP	2	2	1	3		3
22113AEC35A	Applied physics Lab-I	An ability to apply knowledge of mathematics, science, and engineering. Graduates should transform knowledge of mathematics, Physics, chemistry, Engineering Mechanics, probability and statistics, and engineering drawing in solving a wide range of civil engineering problems.	3	1	3	1	3	0
		An ability to design, implement, evaluate a system and conduct experiments, as well as to analyze and interpret data. Graduates should show that they can make decisions regarding type, and number of data points to be collected, duration of the experiment	2	0	3	2	1	0
		data points to be collected, duration of the experiment to obtain intended results, and	1	2	3	3	3	1

	221ACLSOAN	OFFICE AUTOMATION	Recognize when to use each of the Microsoft Office programs to create professional and academic documents.	2	1	3	2	3	0
			Use Microsoft Office programs to create personal, academic and business documents following current professional and/or industry standards.	3	2	3	2	1	3
IV	22110AEC41	Tamil-IV	Realize how the ancient people changed their life style according to the ages	3	1	2	1	2	0
			Learn how to change one's lifestyle according to the needs of the future	2	3	1	2	1	1
			Obtaining More information about one's culture and tradition; Encourage creative writing and developing self-confidence.	1	2	3	1	2	1
	22111AEC41	Hindi-IV	Enables other state students to continue their learning phase without any disruptions.	2	1	2	1	3	0

		Through this language they can learn spirituality.	1	2	1	1	2	3
		Students can learn social discrimination.D18.	3	2	1	1	2	2
22132AEC41	Advanced English-IV	Make oral presentations effectively for academic purposes by using appropriate discourse markers, transitions and conjunctions.	1	2	3	1	2	1
		Respond to spoken discourse in their content courses and academic presentations.	2	0	1	3	1	1
		Follow oral instructions, identify details, and evaluate the speakers' viewpoints and attitudes	2	3	2	2	3	1
19135AEC41	French-IV	Focus on all four modalities of the language: speaking, listening, reading and writing. As well as knowledge of Francophone cultures and the skills of collaboration and critical	3	0	3	3	2	3
		Students can compare and contrast cultural practices as they relate to French and American culture.	2	1	2	3	1	3

	22111AEC42	English-IV	Know about genius of Shakespeare, Martin Luther King, Mahatma Gandhi, and Mother Teresa.	3	2	1	1	1	0
			Describe Daffodils, beauty of Byron's Maid, Painful account of apple- pickers.	2	0	1	1	2	0
			Understand the basic Grammar, and Spoken English. Ability to write composition, letter and vocabulary	2	1	1	3	3	0
	22122SEC43	Visual Programming	Learners will be able to design web applications using ASP.NET	1	1	3	2	3	1
			Learners will be able to use ASP.NET controls in web applications	2	0	3	2	1	0
	22122SEC45 L	Visual Programming Lab	Effectively use and critically evaluate current technical/scientific research literature, online information, as well as information related to scientific issues in the mass media	2	1	3	1	2	0
			Integrate and relate scientific knowledge learned from classroom with real life situations.	2	3	1	1	3	1

		Students acquire knowledge about the plant and host relationship and their management	2	1	1	3	1	0
		They get knowledge about the integrated management of plant diseases and pest.	1	2	2	2	3	0
221ENSTU45	Environmental Studies	Apply systems concepts and methodologies to analyze and understand interactions between social and environmental processes.	3	2	1	1	1	3
		Reflect critically about their roles and identities as citizens, consumers and environmental actors in a complex, interconnected world.	2	1	3	1	1	0
		Demonstrate proficiency in quantitative methods, qualitative analysis, critical thinking, and written and oral communication needed to conduct high-level work as interdisciplinary scholars and/or practitioners.	1	1	1	3	1	2
		Analyze the ecosystem and able to understand the different types of pollutions in country. Learn about environmental pollution.	1	3	2	2	3	0

	221SSCAQ	General Aptitude and Quantitative Ability	Learners will be able to design web applications using ASP.NET	1	2	3	3	2	3
			Learners will be able to create database driven ASP.NET web applications and web services demonstrate advanced knowledge of programming for network communications	3	2	1	1	1	0
	22113AEC44AZ	Applied physics lab II	Effectively use and critically evaluate current technical/scientific research literature, online information, as well as information related to scientific issues in the mass media	3	1	2	1	1	1
			Integrate and relate scientific knowledge learned from classroom with real life situations.	2	1	3	1	1	0
	221LSCLS	Leadership and Management Skills	Help students to develop essential skills to influence and motivate others	2	0	1	1	3	0
			Nurture a creative and entrepreneurial mindset	2	0	1	1	1	3
			Make students understand the personal values and apply ethical principles in professional	2	1	3	1	2	0

V	22122SEC51	Relational Database Management Systems	Identify the components required to build different types of networks.	3	1	1	2	2	1
			Another node. Identify the components required to build different types of networks	3	2	2	3	3	2
			Learning all farm activities field management and to gain maximum knowledge about crops of a particular season	2	3	2	1	1	3
	22122SEC52	NET Programming	Design various Scheduling algorithms.	1	2	2	3		3
			Compare and contrast various memory management schemes.	1		2	1	3	3
			Design and Implement a prototype file systems.	3	2	1	1	1	1
	22122SEC53	Designing and supporting Computer Networks	Design and implement programs on 8086 microprocessor.	1	1	1	3	1	0
			Design and implement 8051 microcontroller based systems	1	2	1	2	3	0
	22122DSC56A	Oracle Lab	Identify the architecture, infrastructure and delivery models of cloud computing	1	1	3	1	2	1

			Address the core issues of cloud computing such as security, privacy and interoperability	2	1	1	3	2	0
			· The students will be able to undertake commercial cultivation of flower crop, medicinal and aromatic plants.	2	1	3	2	1	0
			· Students will gain knowledge to establish different types garden in various locations.	3	3	1	2	2	0
	22122DSC56B	NET Programming Lab	Understand Distributed systems design and implementation	1	2	3	3	3	1
			Use Middleware to Build Distributed Applications	2	0	2	2	3	3
	22122DSC56C	Computer Organization and Architecture	Make basic use of Enterprise software, and its role in integrating business functions	2	1	1	2	1	2
			Analyze the strategic options for ERP identification and adoption.	2	1	3	2	1	2
			Design the ERP implementation strategies.	3	2	1	2	1	1

			Create reengineered business processes for successful ERP implementation.	2	1	3	1	3	0
	22122SEC55LC	E-learning	Design and implement programs on 8085 microprocessor.	2	1	1	3	1	0
Design and implement 8051 microcontroller based systems			1	2	1	2	3	1	
The student will learn the types of Intellectual Property and legislations covering IPR in India: Patents, Copyrights, Trademark, Industrial design, Geographical indications, Integrated circuits, Trade secrets.			3	2	3	2	1	1	
	22122SEC56L	Participation in Bounded Research	Execute the Unix Shell programming on the given system configuration.	2	3	1	1	1	0
Studying the concepts and applications of remote sensing and image processing in agriculture			2	1	3	2	1	1	
Understanding the concepts of nanotechnology			2	0	1	2	3	0	
Students know about the economic and environmental feasibility of the precision farming technology.			2	1	2	3	1	3	

	22122BRC57	Skill Based Elective-V	Prepare their resume in an appropriate template without grammatical and other errors and	2	1	2	3	1	1
			Actively participate in group discussions towards gainful employment	2	1	1	3		1
			Enlist the common errors generally made by candidates in an interview	1	2	2	2	3	0
	22122SEC61	Communicative English Lab-V	Increases confidence in their ability to read comprehends organize and retain written information. Increases Vocabulary through the study of word parts, use of context clues and Practice with a dictionary.	2	2	3	2	2	0
			➤ Uses standard Grammar, punctuation and spelling, be clear and concise in formal technical writing.	1	1	1	3		0
			Improves their ability to read and spell words through an analysis of structure of the English language		1	3	2	2	0

	VI 22122SEC62	Advanced Web Technology	Demonstrate the basic elements of a relational database management system.	3	1	2	2	1	0
			Design entity relationship and convert entity relationship diagrams into RDBMS and formulate	2	2	3		3	1
			summarization forms and determine data mining functionalities	1	1	1	3	1	1
			· Students learn to use the natural farm resources produced within the farm	2	0	1	2	3	2
	22122SEC65A	Operating System	Assess raw input data, and process it to provide suitable input for a range of data mining algorithms.	3	0	3	1	1	0
			Students will be equipped with management concepts and management of common resources.	3	1	1	1	1	0
			Evaluate and select appropriate data-mining algorithms and apply, and interpret and	2	1	3	1	2	0

	22122SEC64L	Advanced Web Technology Lab	Contrast and compare major elements of the .NET Framework and explain how C# fits into the .NET platform.	2	1	2	3		2
			Analyze the basic structure of a C# application and be able to document, debug, compile, and run a simple application.	2	1	3	3	2	1
			Create methods (functions and subroutines) that can return values and take parameters.	2	0	2	3	1	1
			Use common statements to implement flow control, looping, and exception handling.	2	1	3	1	1	0
	22122SEC65L	Operating System Lab	Summarization forms and determine data mining functionalities.	2	0	1	3	1	1
			· They have been familiarized with methods of food preservation and the fundamentals of human Nutrition.	2	1	2	2	3	1
			Brief knowledge about SQL Fundamentals	2	1	1	1	2	3

	22120DSC65B	Artificial Intelligence and Expert Systems	Develop mathematical thinking and problem solving skills associated with research and writing proofs.	3	2	1	1	2	1
			Get exposure to a wide variety of mathematical concepts used in computer science discipline like probability.	3	2	1	1	2	1
			Understand the mathematical fundamentals that are prerequisites for a variety of courses like Data Mining, Network protocols, analysis of Web traffic, Computer security, Bioinformatics and Machine Learning.	2	3	1	1	1	0
	22122DSC65C	Software Project Management		2	1	2	3	1	0
			To understand penetration and security testing issues	2	1	3	2	3	0
			To understand issues relating to ethical hacking	2	1	2	2	2	3
	22122DSC65D	Object Oriented Analysis and Design	To understand and analyses Information security threats & countermeasures	3	1	3	2	2	2
			To understand penetration and security testing issues	3	1	3	1	3	0

			To understand issues relating to ethical hacking	2	0	3	2	1	0
			Develop and maintain problem-solving skills. Use mathematical ideas to model real-world problems	1	2	3	3	3	1
	221MAOEC	Tamil Ilakkiya Varalaru	know and demonstrate understanding of the concepts from the five branches of mathematics (Operations Research, Set Theory, statistics, Matrices and Business mathematics)	2	1	3	2	1	0
			use appropriate mathematical concepts and skills to solve problems in both familiar and unfamiliar situations including those in real- life contexts	2	0	3	1	2	-1
	221PHOEC	Journalism	➤ To use the techniques and skills for electrical projects.	2	1	3	1	2	0
			Design a system, component or process to meet desired needs in electrical engineering.	2	3	1	1	3	0

			Measurement of R,L,C ,Voltage, Current, Power factor , Power, Energy	1	1	1	3	1	0
			· Ability to measure strain, displacement, Velocity, Angular Velocity, temperature, Pressure, Vacuum, and Flow.	2	1	3	2	3	0
	221CHOE	Development of Mathematical Skills	Ability to apply principles of food engineering in industry	3	2	3	2	1	3
			Related to food industry and ability to find an appropriate solution for the same.	3	1	2	1	2	0
	221MBOEC	Instrumentation	Maintenance of rare species in protected areas such as national parks, sentries etc.,	2	3	1	2	1	1
			Maintenance of rare species in protected areas such as national parks, sentries etc.,	1	2	3	1	2	1
			Protection of wild life through legislation such as banning hunting etc.,	2	1	2	1	3	0

			Imposing specific restrictions on export of endangered plants and animals or their products	1	2	1	1	2	3
221CSOEC	Food and Adulteration		Acquire knowledge about functionalities of world wide web	3	2	1	1	2	2
			Explore markup languages features and create interactive web pages using them	1	2	3	1	2	1
			Able to design front end web page and connect to the back end databases.	2	0	1	3	1	1
			Acquire knowledge about Open source Java ,Script libraries	2	3	2	2	3	1
221CMOEC	Wildlife Conservation		To help to gather knowledge on banking and Financial system in India.	3	0	3	3	2	3
			various types of risk based by banks	2	1	2	3	1	3
22120PRW66	E-Learning		Learn to create animated graphics and sound and interactivity	3	2	1	1	1	0

			CD based presentations	2	0	1	1	2	0
			Add and Manage Tweens.	2	1	1	3	3	0
	22161OEC	Banking Service	Increases confidence in their ability to read comprehends organize and retain written information.	1	1	3	2	3	1
			Increases Vocabulary through the study of word parts, use of context clues and Practice with a dictionary.	2	0	3	2	1	0



PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMILNADU

SCHOOL OF ARTS AND SCIENCE
DEPARTMENT OF COMPUTER SCIENCE
MCA

PROGRAMME OUTCOMES	
PO1	To communicate computer science concepts, designs, and solutions effectively and professionally;
PO2	To apply knowledge of computing to produce effective designs and solutions for specific problems;
PO3	To identify, analyses, and synthesize scholarly literature relating to the field of computer science;
PO4	To use software development tools, software systems, and modern computing platforms.
PO5	To an understanding of professional, ethical, legal, security and social issues and responsibilities
PO6	To do capable of evaluating personal and professional choices in terms of codes of ethics and ethical theories and understanding the impact of their decisions on themselves, their professions, and on society
PO7	To apply design and development principles in the construction of software systems of varying complexity.
PROGRAM SPECIFIC OUTCOME	

PSO1	➤ Demonstrate understanding of the principles and working of the hardware and software aspects of computer systems.
PSO2	➤ Understanding the structure and development methodologies of software systems. Possess professional skills and knowledge of software design process. Familiarity and practical competence with a broad range of
	Programming language and open source platforms.

Sem	Course code	Course title	CO's	PO1	PO2	PO3	PO4	PO5	PO6
				I	22220SEC11	J2EE programming	Understand the format and use of objects.	3	1

		Understand basic input/output methods and their use.	2	0	3	2	1	0
		Understand development of JAVA applets vs. JAVA applications.	1	2	3	3	3	1
22220SEC12	Relational Data Base Management System	Design a database using ER diagrams and map ER into Relations and normalize the relations.	2	1	3	2	1	0
		Acquire the knowledge of query evaluation to monitor the performance of the DBMS.	2	0	3	1	2	0
		Identify what students will know and be able to do if they master the material.	2	3	1	2	1	1
		Identify what students will know and be able to do if they master the material.	2	1	2	1	3	0
22222SEC13	Routing and Switching in LAN	Students develop PERT and CPM networks and finding the shortest path	1	2	1	1	2	1
		Understand the concept of sequencing problems and game theory	3	2	1	1	2	3
		Students gets the knowledge about inventory theory	1	2	3	1	2	1
		Extend knowledge to Non Linear Programming Problems	2	0	1	3	1	2
22212SEC14	Discrete Mathematics	The common 2-year sequence works well for many disciplines.	1	2	1	1	2	3

			Topics can be introduced ""just-in-time"" for many disciplines.	3	2	1	1	2	2
			Ability study of mathematical structures that are countable or otherwise distinct and separable.	1	2	3	1	2	1
			Examples of structures that are discrete are combinations, graphs, and logical statements. Discrete structures can be finite or infinite.	2	0	1	3	1	1
	22220SEC15L	J2EE programming Lab	The students able to Design and develop GUI applications using Abstract Windowing Toolkit (AWT)	2	3	2	2	3	1
			Programmer training by creating standardized, reusable modular components and by enabling the tier to handle many aspects of programming automatically.	1	2	3	1	2	1
			Swing and Event Handling	2	1	2	1	3	0
			Web applications and Designing	1	2	1	1	2	3

			Enterprise based applications for business logic	3	2	1	1	2	2
22220SEC16L	RDBMS Lab		Can Declare and enforce integrity constraints on a database using a state-of-the-art.	1	2	3	1	2	1
			Programming PL/SQL including stored Procedures.	2	0	1	3	1	1
22222DSC17A	Mobile Computing		Analyze processor Performance improvement using instruction level parallelism.	2	3	2	2	3	1
			Learn the function of each element of a memory hierarchy.	3	0	3	3	2	3
			Articulate design issues in the development of processor or other components that satisfy design requirements and objectives.	2	1	2	3	1	3
22222DSC17B -	Knowledge based decision support system		Analyze processor Performance improvement using instruction level parallelism.	2	0	1	1	2	0
			Study various data transfer techniques in digital computer.	2	3	1	1	3	1

22222RLC18	Research Led Seminar	The exam is supposed to measure the learning outputs of the program as a whole not a individual course.	1	2	1	1	2	1
		The primary purpose of the exit exams is to assess students' educational achievement in the courses in their major area of program study.	3	2	1	1	2	3
22220SEC21	Python Programming	To implement the python programming features in practical applications	2	3	1	1	3	1
		To implement Python programs with conditionals and loops	2	1	1	3	1	0
		Represent compound data using Python lists, tuples, dictionaries, turtles, Files and modules	1	2	2	2	3	0
		Use functions for structuring Python programs.	3	2	1	2	1	1
22220SEC22	Cryptography & Network Security	Develop basic skills of secure network architecture and explain the theory	2	1	3	1	3	1

			behind the security of different cryptographic algorithms.						
			Describe common network vulnerabilities and attacks, defense mechanisms against network attacks, and cryptographic protection mechanisms.	2	1	1	3	1	0
	22220SEC23	Open Source programming	Graduates of the program are expected to demonstrate the problem	1	2	1	2	3	0
			An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	3	2	3	2	1	3
			To Explain methods of capturing, specifying, visualizing and analyzing software requirements.	2	3	1	1	1	2
	22220SEC25L	Python Programming Lab	Able to determine the methods to create and manipulate Python programs.	2	1	3	2	1	1
			By utilizing the data structures like lists, dictionaries, tupelos and sets.	2	0	1	2	3	0
			Identify the commonly used operations involving file systems and regular expressions	2	1	2	3	1	1

		Duck typing and huge standard library	2	1	2	3	1	0
		Presence of third-party modules.	2	1	1	3		3
22220SEC24	Web Service	To introduce Basic Unix general purpose Commands	1	2	2	2	3	1
		To learn C programming in Unix editor environment.	2	2	3	2	2	1
		To learn shell script and sed concepts.	1	1	1	3	1	2
22222SEC26L	Open Source programming Lab	To impart basic proficiency in representing difficult real life problems in a state space representation so as to solve them using AI techniques like searching and game playing	2	0	2	3	1	1
		To introduce advanced topics of AI such as planning, Bayes networks,	2	1	3	1	1	0
		Analyze and formalize the problem as a state space, graph, design heuristics and select amongst different search or game based techniques to solve them.	2	0	1	3	1	1

			Develop intelligent algorithms for constraint satisfaction problems and also design intelligent systems for Game Playing	2	1	2	2	3	1
22222DSC27A	Game Programming		To understand the main components of an OS & their functions.	2	1	1	1	2	3
			To study the process management and scheduling.	3	2	1	1	2	1
			To understand various issues in Inter Process Communication (IPC) and the role of OS in IPC.	3	2	1	1	2	1
22222DSC27B	Multimedia and Graphics		Develop open source programming products which are normally free to download, although it does incur running costs such as storage and computing power.	2	3	1	1	1	0
			Even those rare paid-for open source products still tend to be far cheaper than closed source alternatives	2	1	2	3	1	0
			Understand process of executing a PHP-based script on a webserver.	2	1	3	2	3	0

		Be able to develop a form containing several fields and be able to process the data provided on the form by a user in a PHP-based script.	2	1	2	2	2	3
		Understand basic PHP syntax for variable use, and standard language constructs, such as conditionals and loops	3	1	3	2	2	2
2222DSC27C	Middleware Technology	To demonstrate advanced knowledge of networking understands the key protocols which support the Internet.	3	2	3	3	2	3
		Be familiar with several common programming interfaces for network communication.	2	2	3	2	3	3
2222RMC28	Research Methodology	These students able to develop efficient open source programmes for rapidly developing network world	3	2	3	2	3	3
2222BRC29	Participation in Bounded Research	The students are able to develop programs using C# based on object oriented concepts	3	2	2	2	3	3
		Write the ROBUST, EXTENSIBLE and EFFICIENT programs by using c# code and ASP.Net	2	3	1	2	1	3
		Create dynamic web pages for further development.	2	1	3	1	2	0
		It provides re-usability.	1	1	2	2	3	0

III 22222SEC31	Data mining and warehousing	Ability to estimate if a system takes distributed system characteristic into account in a reasonable way.	2	1	1	2	2	3
		Knowing the basic structures (e.g. client-server) and knowing the existing middleware frameworks.	3	0	2	3	2	
		Ability to estimate framework suitability for different applications.	1	2	2	2	1	3
		Ability to implement a simple distributed software laboratory work with socket and RMI interfaces.	2	0	3	2	2	2
22222SEC32	Grid and Cloud Computing.	These students able to understand and develop wireless communication and its infrastructure. Understand design considerations for wireless communication networks	2	2	1	2	2	1
		Understand the fundamentals of wireless networks.	2	1	3	2	2	2
		Learn and analyze the different wireless technologies.	3	1	2	1	1	0
		These students able to understand and develop wireless communication and its infrastructure.	1	2	3	1	1	0

22222SEC33	.NET Programming	It provides re-usability.	2	0	3	2	2	0
		Create web-based distributed applications using ASP.NET, SQL Server and ADO.NET	2	3	1	2	1	1
22222SEC34	Object Oriented System Design	develop menu based program for text manipulation.	2	1	2	3	2	0
		Utilize the .NET environment to create Web Service-based applications and components.	1	2	1	2	3	0
		Less Coding and Increased Reuse of Code: This framework works on object-oriented programming which eliminates unnecessary codes and involves less coding for the developers.	2	1	3	2	2	0
22222SEC35L	.NET Programming Lab.	Securing confidential information.	2	3	1	3	2	0
		Protection from malicious attacks on your network.	2	0	1	3	1	0
		Develop an understanding of security policies.	3	1	2	3	2	1
22222DSC 36A	Information Security	Deletion and/or guaranteeing malicious elements within a preexisting network.	2	3	1	1	2	2

			Prevents users from unauthorized access to the network.	1	2	3	2	1	1
			Upon completion of the course, the student should be able to	2	1	3	2	1	2
			Analyze various protocols for IoT	2	1	2	1	2	3
22222DSC36B	Internet of Things		Develop web services to access/control IoT devices.	2	1	1	2	2	1
			Design a portable IoT using Raspberry Pi	2	1	3	3	2	2
			Deploy an IoT application and connect to the cloud.	2	3	3	2	2	1
			Analyze applications of IoT in real time scenario	3	1	3	3	2	2
22222DSC36C	M-Marketing		Upon Completion of the course, the students should be able to Business techniques	2	1	3	3	2	3

			Analyze various mobile marketing strategies.	3	3	1	2	1	3
22222SRC37	Societal project (Mini Project)	To understand and implement Automated software testing techniques for Web testing, Performance testing, and GUI testing.	2	2	3	1	2	3	
		To develop, implement, and demonstrate the learning through a project that meet stated specifications.	2	2	1	3		3	
22222SEC41	Human Computer Interaction	Design effective dialog for HCI.	3	1	3	1	3	0	
		Design effective HCI for individuals and persons with disabilities.	2	0	3	2	1	0	
		Assess the importance of user feedback.	1	2	3	3	3	1	
		Explain the HCI implications for designing multimedia/ ecommerce/ e-learning Websites.	2	1	3	2	1	0	
22222SEC42	Software Project Management	An understanding of multimedia development in the business world, and how successful development is contingent on detailed client specifications, user and audience research, and design decisions taken during the planning phase.	2	0	3	1	2	-1	
		An understanding of the content of learning materials available from e-skills UK and how these can be used with learners to develop multimedia products	2	1	3	1	2	0	
		To work with learners to plan and create a multimedia product that includes animation, audio and video	2	3	1	1	3	0	

			An understanding of multimedia development in the business world, and how successful development is contingent on detailed client specifications, user and audience research, and design decisions taken during the planning phase.	1	1	1	3	1	0
	22222SEC43	Big Data		2	1	3	2	3	0
			In Business it helps streamline processes and improve efficiency in terms of organization.						
			It facilitates communication between the system.	3	2	3	2	1	3
	22222PRW44	Project work		3	1	2	1	2	0
			Can be able to develop plans with relevant people to achieve the project's goals.						
			Break work down into tasks and determine handover procedures.	2	3	1	2	1	1
			Identify links and dependencies, and schedule to achieve deliverablehandoverE	1	2	3	1	2	1
	22222PEE	Program Exit Examination		2	1	2	1	3	0
			The exam is supposed to measure the learning outputs of the program as a whole not a individual course.						
			The primary purpose of the exit exams is to assess students' educational achievement in the courses in their major area of program study.	1	2	1	1	2	3

			The exam is supposed to measures the learning outputs of the program as a whole not the individual courses.	3	2	1	1	2	2
--	--	--	---	---	---	---	---	---	---



PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMILNADU

SCHOOL OF ARTS AND SCIENCE
DEPARTMENT OF COMPUTER SCIENCE
MSC CS

PROGRAMME OUTCOMES	
PO1	To communicate computer science concepts, designs, and solutions effectively and professionally;

PO2	To apply knowledge of computing to produce effective designs and solutions for specific problems;
PO3	To identify, analyses, and synthesize scholarly literature relating to the field of computer science;
PO4	To use software development tools, software systems, and modern computing platforms.
PO5	To an understanding of professional, ethical, legal, security and social issues and responsibilities
PO6	To do capable of evaluating personal and professional choices in terms of codes of ethics and ethical theories and understanding the impact of their decisions on themselves, their professions, and on society
PO7	To apply design and development principles in the construction of software systems of varying complexity.
PROGRAM SPECIFIC OUTCOME	
PSO1	➤ Demonstrate understanding of the principles and working of the hardware and software aspects of computer systems.
PSO2	➤ Understanding the structure and development methodologies of software systems. Possess professional skills and knowledge of software design process. Familiarity and practical competence with a broad range of
	Programming language and open source platforms.

Sem	Course code	Course title	CO's	PO1	PO2	PO3	PO4	PO5	PO6
				I	22220SEC11	J2EE programming	Understand the format and use of objects.	3	1

		Understand basic input/output methods and their use.	2	0	3	2	1	0
		Understand development of JAVA applets vs. JAVA applications.	1	2	3	3	3	1
22220SEC12	Relational Data Base Management System	Design a database using ER diagrams and map ER into Relations and normalize the relations.	2	1	3	2	1	0
		Acquire the knowledge of query evaluation to monitor the performance of the DBMS.	2	0	3	1	2	0
		Identify what students will know and be able to do if they master the material.	2	3	1	2	1	1
		Identify what students will know and be able to do if they master the material.	2	1	2	1	3	0
22212SEC13	Discrete Mathematics	The common 2-year sequence works well for many disciplines.	1	2	1	1	2	3
		Topics can be introduced ""just-in-time"" for many disciplines.	3	2	1	1	2	2
		Ability study of mathematical structures that are countable or otherwise distinct and separable.	1	2	3	1	2	1

			Examples of structures that are discrete are combinations, graphs, and logical statements. Discrete structures can be finite or infinite.	2	0	1	3	1	1
22220SEC14L	J2EE programming Lab	The students able to Design and develop GUI applications using Abstract Windowing Toolkit (AWT)	2	3	2	2	3	1	
		Programmer training by creating standardized, reusable modular components and by enabling the tier to handle many aspects of programming automatically.	1	2	3	1	2	1	
		Swing and Event Handling	2	1	2	1	3	0	
		Web applications and Designing	1	2	1	1	2	3	
		Enterprise based applications for business logic	3	2	1	1	2	2	
22220SEC15L	RDBMS Lab	Can Declare and enforce integrity constraints on a database using a state-of-the-art.	1	2	3	1	2	1	

			Programming PL/SQL including stored Procedures.	2	0	1	3	1	1
22220DSC16A	WAP and XML	Analyze processor Performance improvement using instruction level parallelism.	2	3	2	2	3	1	
		Learn the function of each element of a memory hierarchy.	3	0	3	3	2	3	
		Articulate design issues in the development of processor or other components that satisfy design requirements and objectives.	2	1	2	3	1	3	
		Analyze processor Performance improvement using instruction level parallelism	3	2	1	1	1	0	
		22220DSC16B	Advanced Computer Architecture	Analyze processor Performance improvement using instruction level parallelism.	2	0	1	1	2
Study various data transfer techniques in digital computer.	2	3		1	1	3	1		
Develop basic skills of secure network architecture and explain the theory behind the security of different cryptographic algorithms.	2	1		1	3	1	0		

			Describe common network vulnerabilities and attacks, defense mechanisms against network attacks, and cryptographic protection mechanisms.	1	2	2	2	3	0
22220SEC21	Python Programming		To implement the python programming features in practical applications	2	3	1	1	3	1
			To implement Python programs with conditionals and loops	2	1	1	3	1	0
			Represent compound data using Python lists, tuples, dictionaries, turtles, Files and modules	1	2	2	2	3	0
			Use functions for structuring Python programs.	3	2	1	2	1	1
22220SEC22	Cryptography & Network Security		Develop basic skills of secure network architecture and explain the theory behind the security of different cryptographic algorithms.	2	1	3	1	3	1
			Describe common network vulnerabilities and attacks, defense mechanisms against network attacks, and cryptographic protection mechanisms.	2	1	1	3	1	0

	22220SEC23	Software Engineering	Graduates of the program are expected to demonstrate the problem	1	2	1	2	3	0
			An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	3	2	3	2	1	3
			To Explain methods of capturing, specifying, visualizing and analyzing software requirements.	2	3	1	1	1	2
	22220SEC24L	Python Programming Lab	Able to determine the methods to create and manipulate Python programs.	2	1	3	2	1	1
			By utilizing the data structures like lists, dictionaries, tupelos and sets.	2	0	1	2	3	0
			Identify the commonly used operations involving file systems and regular expressions	2	1	2	3	1	1
			Duck typing and huge standard library	2	1	2	3	1	0
			Presence of third-party modules.	2	1	1	3		3

22220SEC25L	UNIX Lab	To introduce Basic Unix general purpose Commands	1	2	2	2	3	1
		To learn C programming in Unix editor environment.	2	2	3	2	2	1
		To learn shell script and sed concepts.	1	1	1	3	1	2
22220DSC26A	Artificial Intelligence	To impart basic proficiency in representing difficult real life problems in a state space representation so as to solve them using AI techniques like searching and game playing	2	0	2	3	1	1
		To introduce advanced topics of AI such as planning, Bayes networks,	2	1	3	1	1	0
		Analyze and formalize the problem as a state space, graph, design heuristics and select amongst different search or game based techniques to solve them.	2	0	1	3	1	1
		Develop intelligent algorithms for constraint satisfaction problems and also design intelligent systems for Game Playing	2	1	2	2	3	1

	22220DSC26B -	Distributed Operating System	To understand the main components of an OS & their functions.	2	1	1	1	2	3
			To study the process management and scheduling.	3	2	1	1	2	1
			To understand various issues in Inter Process Communication (IPC) and the role of OS in IPC.	3	2	1	1	2	1
	22220SEC31	Open Source programming	Develop open source programming products which are normally free to download, although it does incur running costs such as storage and computing power.	2	3	1	1	1	0
			Even those rare paid-for open source products still tend to be far cheaper than closed source alternatives	2	1	2	3	1	0
			Understand process of executing a PHP-based script on a webserver.	2	1	3	2	3	0
			Be able to develop a form containing several fields and be able to process the data provided on the form by a user in a PHP-based script.	2	1	2	2	2	3
			Understand basic PHP syntax for variable use, and standard language constructs, such as conditionals and loops	3	1	3	2	2	2

	22220SEC32	.Net Programming	To Demonstrate advanced knowledge of networking understands the key protocols which support the Internet.	3	2	3	3	2	3
			Be familiar with several common programming interfaces for network communication.	2	2	3	2	3	3
	22220SEC33L	Open Source programming Lab	These students able to develop efficient open source programmers for rapidly developing network world	3	2	3	2	3	3
	22220SEC34L	.Net Programming Lab	The students are able to develop programs using C# based on object oriented concepts	3	2	2	2	3	3
			Write the ROBUST, EXTENSIBLE and EFFICIENT programs by using c# code and ASP.Net	2	3	1	2	1	3
			Create dynamic web pages for further development.	2	1	3	1	2	0
			It provides re-usability.	1	1	2	2	3	0
	22220DSC35A	Real Time Operating Systems	Ability to estimate if a system takes distributed system characteristic into account in a reasonable way.	2	1	1	2	2	3
			Knowing the basic structures (e.g. client-server) and knowing the existing middleware frameworks.	3	0	2	3	2	
			Ability to estimate framework suitability for different applications.	1	2	2	2	1	3

			Ability to implement a simple distributed software laboratory work with socket and RMI interfaces.	2	0	3	2	2	2
22220DSC35B	Wireless Communication Network		These students able to understand and develop wireless communication and its infrastructure. Understand design considerations for wireless communication networks	2	2	1	2	2	1
			Understand the fundamentals of wireless networks.	2	1	3	2	2	2
			Learn and analyze the different wireless technologies.	3	1	2	1	1	0
			These students able to understand and develop wireless communication and its infrastructure.	1	2	3	1	1	0
222ENOEC	Writing for the Media		To understand and implement Automated software testing techniques for Web testing, Performance testing, and GUI testing.	2	0	3	2	2	0
			To develop, implement, and demonstrate the learning through a project that meet stated specifications.	2	3	1	2	1	1
222MAOEC			Design effective dialog for HCI.	2	1	2	3	2	0

		Applicable Mathematics Techniques	Design effective HCI for individuals and persons with disabilities.	1	2	1	2	3	0
			Assess the importance of user feedback.	2	1	3	2	2	0
	222PHOEC	Bio-medical Instrumentation	Explain the HCI implications for designing multimedia/ ecommerce/ e-learning Websites.	2	3	1	3	2	0
			Analyze processor Performance improvement using instruction level parallelism.	2	0	1	3	1	0
			Learn the function of each element of a memory hierarchy.	3	1	2	3	2	1
	222CHOE	Green Chemistry	Study various data transfer techniques in digital computer.	2	3	1	1	2	2
			Articulate design issues in the development of processor or other components that satisfy design requirements and objectives.	1	2	3	2	1	1
			Develop basic skills of secure network architecture and explain the theory behind the security of different cryptographic algorithms.	2	1	3	2	1	2

			Describe common network vulnerabilities and attacks, defense mechanisms against network attacks, and cryptographic protection mechanisms.	2	1	2	1	2	3
222BCOEC	Herbal Medicines			2	1	1	2	2	1
		Compare various Cryptographic Techniques		2	1	3	3	2	2
		Design Secure applications		2	3	3	2	2	1
		Attain the capability to represent various real life problem domains using logic based techniques and use this to perform inference or planning.		3	1	3	3	2	2
		Formulate and solve problems with uncertain information using Bayesian approaches.		2	1	3	3	2	3
222CMOEC	Financial Service		To understand the main components of an OS & their functions.	2	1	3	3	2	3
			To study the process management and scheduling.	3	3	1	2	1	3

	IV 22220SEC41	Software Testing	To understand and implement Automated software testing techniques for Web testing, Performance testing, and GUI testing.	2	2	3	1	2	3
			To develop, implement, and demonstrate the learning through a project that meet stated specifications.	2	2	1	3		3
	22220SEC42	Human Computer Interaction	Design effective dialog for HCI.	3	1	3	1	3	0
			Design effective HCI for individuals and persons with disabilities.	2	0	3	2	1	0
			Assess the importance of user feedback.	1	2	3	3	3	1
			Explain the HCI implications for designing multimedia/ ecommerce/ e-learning Websites.	2	1	3	2	1	0
	22220DSC43A	Multimedia and its application	An understanding of multimedia development in the business world, and how successful development is contingent on detailed client specifications, user and audience research, and design decisions taken during the planning phase.	2	0	3	1	2	-1
			An understanding of the content of learning materials available from e-skills UK and how these can be used with learners to develop multimedia products	2	1	3	1	2	0
			To work with learners to plan and create a multimedia product that includes animation, audio and video	2	3	1	1	3	0
			An understanding of multimedia development in the business world, and how successful development is contingent on detailed client specifications, user and audience research, and design decisions taken during the planning phase.	1	1	1	3	1	0

22220DSC43B	Middleware Technology	In Business it helps streamline processes and improve efficiency in terms of organization.	2	1	3	2	3	0
		It facilitates communication between the system.	3	2	3	2	1	3
22220PRW44	Project work	Can be able to develop plans with relevant people to achieve the project's goals.	3	1	2	1	2	0
		Break work down into tasks and determine handover procedures.	2	3	1	2	1	1
		Identify links and dependencies, and schedule to achieve deliverablehandoverE	1	2	3	1	2	1
22220PEE	Programme Exit Examination	The exam is supposed to measure the learning outputs of the program as a whole not a individual course.	2	1	2	1	3	0
		The primary purpose of the exit exams is to assess students' educational achievement in the courses in their major area of program study.	1	2	1	1	2	3
		The exam is supposed to measures the learning outputs of the program as a whole not the individual courses.	3	2	1	1	2	2

