PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE

GOVERNMENT ARTS COLLEGE(GRADE-I),ARIYALUR 621 713

PROGRAM OUTCOME FOR ALL COURSE B.Sc/M.Sc/M.Phil/Ph.D

Student outcomes describe what students are expected to know and be able to do by the time of graduation. The Computer Science Department's Bachelor of Science, Master of Science, M.Phil and Ph.D program must enable students to attain, by the time of graduation:

COURSE	PROGRAM OUTCOME
B.Sc(CS)	An ability to apply knowledge of computing and mathematics appropriate to the discipline. **PO 1 :** An ability to identify, formulate, and develop solutions to computational challenges. **PO 2 :** An ability to design, implement, and evaluate a computational system to meet desired needs within realistic constraints. **PO 3**: An ability to function effectively on teams to accomplish shared computing design, evaluation, or implementation goals. **PO 4:** An understanding of professional, ethical, legal, security, and social issues and responsibilities for the computing profession. **PO 5:**An ability to communicate and engage effectively with diverse stakeholders.

PROGRAM SPECIFIC OUTCOME FOR B.Sc(COMPUTER SCIENCE)

COURSE	PROGRAM SPECIFIC OUTCOME
B.Sc(CS)	Each graduate student should be able to: **PSO 1**: Design, correctly implement and document solutions to significant computational problems **PSO 2**: Impart an understanding of the basics of our discipline. **PSO 3:** Prepare for continued professional development. **PSO 9**: Develop proficiency in the practice of computing. **PSO 5:** Moulding the students in such a way which will make them having superficial knowledge about everything in computer science and in depth knowledge about core subjects.

PROGRAM COURSE OUTCOME FOR B.Sc(COMPUTER SCIENCE)

There any ways computers are used in life science; usually through either the use of sensors and other hardware that only a computer can understand, or computers' incredible capacity for doing complex analyses quickly

SEMESTER	SUB.CODE	SUBJECT	PROGRAM COURSE OUTCOME
I	16SCCCS1& 16SCCCS1P	PROGRAMMING IN C & LAB	**PCO:** On successful completion of this subject the students have the programming ability in C Language
I	18UGVED	VALUE EDUCATION	**PCO:** Ability to increase capacity to work independently, implement their learning in their practical life, to make their own decisions and develops healthy mind in them.
II	16SCCCS2 & 16SCCCS2P	PROGRAMMING IN C++ & LAB	**PCO:** To inculcate knowledge on Object-oriented programming concepts using C++.
II	16UGCES	ENVIRONMENTAL SCIENCE	**PCO:** To create enthusiastic students and innovative Teachers-Leaders, helps build critical thinking and relationship skills.
III	16SCCCS3 & 16SCCCS3P	PROGRAMMING IN JAVA & LAB	**PCO:** To inculcate knowledge on Java Programming concepts

IV	16SCCCS4 &16SCCCS4P	DATABASE SYSTEMS & LAB	**PCO:** To inculcate knowledge on DBMS Concepts and Programming with SQLSERVER.
IV	16RSBE4:1	PAGE MAKER	**PCO**: To create professional-quality publications for personal or business needs.
V	16SCCCS5	DATA STRUCTURE AND ALGORITHM	**PCO:** To design and implementation of various basic and advanced data structures. To introduce various techniques for representation of the data in the real world. and to develop application using data structures.
V	16SCCCS6	COMPUTER NETWORKS	**PCO:** To inculcate knowledge on Networking concepts and technologies like wireless, broadband and Bluetooth.
V	16SCCCS7 & 16SCCCS5P	DIGITAL ELECTRONICS AND MICROPROCESSOR & LAB	**PCO:** On successful completion of this subject the students should have Knowledge on Digital circuits, Microprocessor architecture, and Interfacing of various components

V	16SMBECS1:1	SOFTWARE ENGINEERING	**PCO:** To introduce software project management and to describe its distinctive characteristics and to discuss project planning and the planning process and show how graphical schedule representations are used by project management and the risk management process
V	16RSBE4:2	CORELDRAW	**PCO:** To inculcate knowledge for creating graphics layouts, illustration, photo editing, web images, print projects, art, typography and more.
V	16RSBE4:3	DREAMVIEWER	**PCO:** Ability to create consistent-looking webpages and opportunity to manage and update websites dynamically and easy to upload using FTP.
V	RUGSDC	SOFT SKILLS DEVELOPMENT	**PCO:** Ability to communicate effectively, improvement of time management, development of leadership skills, development of presentation skills, ability to recognize stress symptoms and develop stress deflecting strategies.

VI	16SCCCS8	OPERATING SYSTEMS	**PCO:** Enable the student to get sufficient knowledge on various system resources
VI	16SCCCS9 & 16SCCCS6P	PROGRAMMING IN PHP & LAB	**PCO:** To inculcate knowledge on PHP Programming concepts
VI	16SMBECS2:2	CLOUD COMPUTING	**PCO:** To inculcate knowledge of Cloud concepts.
VI	16SMBECS1P	DOT NET	**PCO:** To inculcate knowledge on Dot Net Programming concepts

PROGRAM OUTCOME FOR M.Sc(COMPUTER SCIENCE)

COURSE	PROGRAM OUTCOME
M.Sc(CS)	An ability to apply knowledge of computing and mathematics appropriate to the discipline. **PO 1 :** An ability to analyze impacts of computing on individuals, organizations, and society. **PO 2 :** Recognition of the need for and ability to engage in continuing professional development. **PO 3:** An ability to use appropriate techniques, skills, and tools necessary for computing practice. **PO 4**: An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computational systems in a way that demonstrates comprehension of the tradeoffs involved in design choices. **PO 5:** An ability to apply design and development principles in the construction of software systems of varying complexity.

PROGRAM SPECIFIC OUTCOME M.Sc(COMPUTER SCIENCE)

COURSE	PROGRAM SPECIFIC OUTCOME
M.Sc(CS)	Each graduate student should be able to: **PSO 1:** An ability to use current techniques, skills and tools for programming practically. **PSO 2:** Capability of the students to apply design and development principles in the construction of software systems. **PSO 3:**Student can develop major projects. **PSO 4:** Enabling the student's practical exposure in the software development field. **PSO 5:** Entrusting student interests in building their career in the field of IT by providing latest technologies like Cloud computing, Dot Net and so on.

PROGRAM COURSE OUTCOME M.Sc(COMPUTER SCIENCE)

SEMESTER	SUBJECT CODE	SUBJECT	PROGRAM COURSE COUTCOME
I	P16CS11	MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE	**PCO 1:**To inculcate knowledge on mathematics and computer science
I	P16CS12 & P16CS15P	WEB TECHNOLOGIES & LAB	**PCO 1:** Enable the student to get knowledge on HTML, XHTML, AJAX,Javascript,HTTP and scripting language.
I	P16CS13	DESIGN AND ANALYSIS OF ALGORITHMS	**PCO 1:** Ability to solve a given problem easily.
I	P16CS14	DISTRIBUTED OPERATING SYSTEMS	**PCO 1:** To understand how the system shared resources used by multiple processes, the process scheduling activity, the communication, synchronization between running process and so on.
II	P16CS21	OOAD & UML	**PCO 1:**Enable the student to get knowledge on graphical language(UML) for OOAD to write a software system's blue print.
II	P16CS22 & P16CS23P	DISTRIBUTED TECHNOLOGIES & LAB	**PCO 1:** To inculcate knowledge on Dot Net Programming concepts and web services.

II	P16CSE1A	ELECTIVE – I MOBILE COMMUNICATION	PCO 1:Ability to understand mobile and wireless devices, to understand telecommunication systems, to understand wireless LAN , to understand mobile IP and wireless protocols.
II	P16CSE2B	ELECTIVE – II ARITIFICIAL INTELLIGENCE	**PCO 1:**Enable the student to understand AI and Heuristic search techniques, to understand Predicate Logic, to representing knowledge using rules and game playing.
III	P16CS31 & P16CS33P	DATAMINING AND WAREHOUSING & LAB	**PCO 1:**Enable the student to get knowledge on data preprocessing, data mining techniques like clustering and association rules, data warehousing and online analytical processing .
III	P16CS32	COMPILER DESIGN	**PCO 1:**To understand design issues of a lexical analyzer and use of Lex tool, to understand design issues of a parser and use of Yacc tool, to understand issues related to memory allocation and to understand and design code generation scheme.

III	P16CSE3B	ELECTIVE – III ADVANCED COMPUTER ARCHITECTURE	**PCO 1:** To inculcate knowledge on parallel computer models, processor and memory hierarchy, multiprocessor and multicomputer and software parallel programming.
III	P16CSE4A	ELECTIVE – IV NETWORK SECURITY	**PCO 1:** Ability to understand the protection of information that is shared between computer on the network
IV	P16CS41	CLOUD COMPUTING	**PCO 1:** Enable the students to understand the concepts and technologies associated with cloud computing
IV	P16CS42	WIRELESS SENSOR NETWORKS	**PCO 1:** On successful completion of the course the students should have understanding wireless sensor nodes and tools.
IV	P16CS43P	OPEN SOURCE LAB	**PCO 1:**To understand fundamental concept of Internet, Javascript, XML, JSP and ASP.

IV	P16CSE5A	ELECTIVE – V BIG DATA ANALYTICS	**PCO 1:** To inculcate knowledge on big data analytics and Hadoop for analytics.
IV	P16CSPW	PROJECT	PCO 1: The student can get the knowledge to prepare the document, to implement tools for the specific problem and learn the industrial need programs for their placement.

PROGRAM OUTCOME FOR ALL COURSE M.Phil(COMPUTER SCIENCE)

COURSE	PROGRAM OUTCOME
M.Phil(CS)	Enable students to develop their capabilities to: **PO 1 :** Engage in critical and intellectual enquiry **PO 2 :** Demonstrate a thorough knowledge of research methodologies and techniques at an advanced level **PO 3:** Conduct innovative , high impact and leading edge research **PO 4:** Provide novel solutions to complex problems **PO 5:** Demonstrate adherence to personal and professional ethics

PROGRAM SPECIFIC OUTCOME FOR M.Phil(COMPUTER SCIENCE)

COURSE	PROGRAM SPECIFIC OUTCOME
M.Phil(CS)	Each scholar should be able to **PSO 1:** Able to apply the knowledge gained during the course of the program from Mathematics, Basic Computing, Basic Sciences and Social Sciences in general and all computer science courses in particular to identify, formulate and solve real life complex problems faced in industries and/or during research work with due consideration for the public health and safety, in the context of cultural, societal, and environmental situations. **PSO 2:** Able to provide socially acceptable technical solutions to complex computer science problems with the application of modern and appropriate techniques for sustainable development relevant to professional practice. **PSO 3:** Able to apply the knowledge of ethical and management principles required to work in a team as well as to lead a team. **PSO 4:** Able to comprehend and write effective project reports in multidisciplinary environment in the context of changing technologies.

PROGRAM COURSE OUTCOME FOR M.Phil(COMPUTER SCIENCE)

SEMESTER	SUB.CODE	SUBJECT	PROGRAM COURSE OUTCOME
I	M18CS1	RESEARCH METHODOLOGY	**PCO 1:**To understand the types of research and thesis writing **PCO 2:** To learn to use tools related to research in computer science **PCO 3:** To learn to calculate the computing time of algorithm **PCO 4:** To learn formal language of computer science **PCO 5:** To learn and use probability and to understand the concepts of logic and natural deduction system
I	M18CS2	ADVANCED TOPICS IN COMPUTER SCIENCE	**PCO 1:** To understand the basic ideas of data science **PCO 2:** To understand the cloud computing as an emerge area of public and scientific use **PCO 3:** To learn and apply of the ideas of virtualization and its various use **PCO 4:** To appreciate IOT as a fast growing paradigm on Research in computer science **PCO 5**:To understand the basics of machine learning and its application and to understand the use of cryptography

I	M18TLS3	TEACHING AND LEARNING SKILLS	**PCO 1:** Acquaint different parts of computer system and their functions **PCO 2:** Develop skills of ICT and its role in teaching , learning and research **PCO 3:** Understand the terms of communication technology and computer mediated teaching and develop multimedia /e-content in their respective subject **PCO 4:** Understand the communication process through web **PCO 5:** Acquire the knowledge of instructional technology and its applications
I	M18CS4	PAPER ON TOPIC OF RESEARCH – BIG DATA	**PCO 1**: Understanding of basic idea of data science and capacity to analyze big data sets. **PCO 2:** Ability to understand the distributed computing using Hadoop **PCO 3:** Understanding the NOSQL database **PCO 4:** To understand the cloud computing as an emerge area of public and scientific use **PCO 5:** Ability to understand the data mining techniques

II		DISSERTATION & VIVA-VOCE	**PCO 1:** To enhance a wide range of skills, including, project planning, project management, market analysis, time management, and possibly, skill to communicate managers and/or customers in real business world **PCO 2:** Present research to the people **PCO 3:** To improve subject knowledge **PCO 4:** Improve analytics and cognitive abilities **PCO 5:** Getting better at the academic writing