

Post Graduate & Research Department of Computer Science

Programme / Degree: M.Phil (Computer Science)

(Learning Outcome/ Acquisition)

Course Outcomes

Paper – I: Research Methodology

Subject Code: MSIC101

- CO1** To acquire knowledge on the meaning and purpose of Research, essentials of Scientific Methods, Types of Research and Research design.
- CO2** To Understand the Steps in research – Selection and formulation of research problem, review, setting up of objectives, definition of concepts, formulation of Hypothesis, Construction of tools, field work and collection of data.
- CO3** To acquire knowledge on the concepts used in research – facts and data, reliability, precision, bias and validity, variables, parameters, axioms, postulates and premises, models, theory and hypothesis.
- CO4** To understand the formulation of hypothesis, types and sources of hypothesis, testing of hypothesis and errors in testing.
- CO5** To understand the techniques of sampling, sampling errors, sample size, sampling methods and their application, testing the appropriateness of a sample.
- CO6** To acquire knowledge on Principles and methods of collection of data- Primary and secondary data, observation, interview, questionnaire, pre-test and pilot study, reliability testing, validating a questionnaire, Statistical Analysis and statistical tools.

Paper – II: Advanced concepts in Computer Science

Subject Code: MSIC102

Upon the completion of the course, the student should be able to

- CO1** Impart knowledge on the some of the advance topics such as parallel database architecture, parallel systems, distributed database system.
- CO2** Use and apply current technical concepts and practices in data structures.

- CO3** Analyzing complex real-world problems and devise efficient computer-based solutions.
- CO4** Applying methods and tools to design, implement, test, document, and maintain a computer-based system.
- CO5** Use and apply current technical concepts and practices in core computing and information technologies and analyze the local and global impact of computing on individuals, organizations, and society.

Elective – I: Internet of Things (IoT)

Upon the completion of the course, the student should be able to

- CO1** Design a portable IoT using Arduino/ equivalent boards and relevant protocols.
- CO2** Develop web services to access/control IoT devices.
- CO3** Deploy an IoT application and connect to the cloud.
- CO4** Analyze applications of IoT in real time scenario.

Elective – II: Artificial Intelligence and Machine Learning

Upon the completion of the course, the student should be able to

- CO1** Understanding the application fields of Artificial Intelligence.
- CO2** Understanding basic machine learning algorithms.
- CO3** Building classification systems that can be applied to text and images.
- CO4** Develop the python programs for machine learning concepts.

Elective – III: Computer Vision and Digital Image Processing

Upon the completion of the course, the student should be able to

- CO1** Understand the basics of computer images.
- CO2** Gain the knowledge about image enhancement techniques.
- CO3** Understand the image restoration techniques and methods.
- CO4** Understand the image compression and segmentation techniques.
- CO5** Implement all the above concepts using MATLAB /SCILAB

ELECTIVE – IV: Big Data Analytics

Upon the completion of the course, the student should be able

- CO1** To understand Big Data platform and qualities.
- CO2** To know about analytic process and tools.
- CO3** Understand modelling about Regression and Bayesian.
- CO4** To clarify fuzzy logic models and stochastic search methods.
- CO5** To understand stream data model and architecture.
- CO6** To know about real time analytic platform applications.
- CO7** To handle large data sets in main memory.
- CO8** To understand clustering techniques and methods.
- CO9** To clarify the concepts of Hadoop Distributed File system.
- CO10** To understand analytics on emerging trends and technologies.

Dissertation and Viva - voce

Upon the completion of the course, the student should be able to

- CO1** Know about the real time development of software systems.
- CO2** Understand the entire life cycle of a software product.
- CO3** Know about the various development models and testing strategies involved in the software development.
- CO4** Gain a hands on experience on software product development.