CHRIST COLLEGE PUNE
DEPARTMENT OF SCIENCE

Programme Outcome

After the successful completion of two-year MSC (CS) Programme, the graduate will be able to:

PO1: Recognize the characteristics of patterns that make it useful to solve real-world problems.

PO2: Process available data using python libraries and predict outcomes using Machine Learning algorithms to solve given problem.

PO3: Able to use specific frameworks as per applications need.

PO4: Design java application using design pattern techniques.

Master of Science (Computer Science)

Semester I

Course Code	Course Title	Course Outcome
CSUT111	**Paradigm of Programming Language**	1. Analyze syntax from semantics 2. Compare programming language designs 3. Criticize their strengths and weaknesses 4. Combine new languages more quickly
CSUT113	**Database Technologies**	1. Distinguish types of NoSQL databases (Document oriented, key Value pairs, Column-oriented and Graph) 2. Evaluate detailed architecture, define objects, load data, query data and performance tune NoSQL databases. 3. Create large volumes of structured, semi-structured, and unstructured data using database technologies.
CSDT114B	**Artificial Intelligence**	1. Examine various types of algorithms in AI. 2. Convey the ideas in AI research & program. 3. Modify numerous applications & huge possibilities in the field of AI that goes Beyond normal human imagination.
CSUT112	**Design and Analysis of Algorithms**	1. Develop the ability to solve complex computational problems using efficient algorithms. 2. Measure various algorithm design paradigms, such as divide and conquer, dynamic programming, greedy algorithms, and backtracking.

Course Code	Course Title	Course Outcome
		3. Predict various data structures and understand how to choose the most appropriate ones for different algorithmic problems.

Semester II

Course Code	Course Title	Course Outcome
CSUT121	**Advanced Operating System**	1. Identify and use UNIX/Linux utilities to create and manage simple file processing operations, organize directory structures with appropriate security, and develop shell scripts to perform more complex tasks. 2. Create processes background and foreground by process fork and signals system calls. 3. Analyze a given problem and apply requisite facets of SHELL programming in order to devise a SHELL script to solve the problem 4. Demonstrates shared memory segments, pipes, message queues and can exercise inter process communication.

CSUT122	Mobile Technologies	1. Understand basic concepts of mobile OS. 2. Deduct simple GUI applications, use built-in widgets and components, work with the database to store data locally, and much more. 3. Demonstrate their understanding of the fundamentals of Android operating systems 4. Explain their skills of using Android software development tools 5. Differentiate between Android OS and Ios 6. Create an Ios user interfaces and application.
CSUT123	Software Project Management	1. Understand different components of IT projects. 2. Apply project Management practices to develop strategies to calculate risk factors, to control the design implementation and evaluation of IT Projects, to launch new products, services and events relative to the needs of stakeholders. 3. Develop project plan, Estimate and adjust Project Variables.
CSDT124	Soft Computing	1. Gain an understanding of the fundamental concepts and principles of soft computing paradigms, including fuzzy logic, neural networks, genetic algorithms, and swarm intelligence.

		2. Explore artificial neural networks, including feedforward and recurrent architectures, and understand their applications in pattern recognition, classification, and regression. 3. Design and analyze fuzzy logic-based control systems for applications in robotics, automation, and process control.

Semester III

Course Code	Course Title	Course Outcome
CSUT231	**Software Architecture and Design Patterns**	1. Recognize major Software Architectural styles, Designs and Frameworks to create reusable and flexible software applications and systems. 2. Comapre the characteristics of patterns that make it useful to solve real-world problems. 3. Apply Software Architectural styles, Design Pattern and Frameworks to create reusable and flexible software applications and systems. 4. Perform software verification and validation using inspections, design and execution of system. 5. Compare case study to take a framework and find patterns in the frames. 6. Design java applications using design pattern techniques.

Course Code	Course Title	Course Outcome
CSUT232	**Machine Learning**	1. Recognize the characteristics of machine learning that make it useful to real-world problems. 2. Process available data using python libraries and predict outcomes using Machine Learning algorithms to solve given problem. 3. Estimate Machine Learning models efficiency using suitable metrics. 4. Design application using machine learning techniques.
CSUT233	**Web Frameworks**	1. Relate with the technology which is used widely in Industry as a part of full stack developer. 2. Develop the web application in Python. 3. Assess what really the asynchronous programming. 4. Build and deploy robust Django Web App. 5. Formulate with Restful web services

Semester IV

Course Code	Course Title	Course Outcome
CSUIT241	**Industrial Training / Institutional Project**	1. Compare real-world industrial or institutional setting, applying theoretical knowledge to practical situations. 2. Develop and enhance a range of professional skills, including problem-solving, communication, teamwork, time management, and adaptability.

		3. Acquire an in-depth understanding of the industry or sector in which the training or project is conducted, including its challenges, trends, and best practices.