



**ST. THOMAS COLLEGE (AUTONOMOUS)**  
THRISSUR, KERALA - 680 001

College with Potential for Excellence  
NIRF INDIA Ranking 2021 : 64<sup>th</sup>

[www.stthomas.ac.in](http://www.stthomas.ac.in)

**PROGRAMME OUTCOMES**  
**PROGRAMME SPECIFIC OUTCOMES**  
**COURSE OUTCOMES**

**B.Voc Data Science**

## OUTCOMES:

At the end of Under Graduate Program at St. Thomas College (Autonomous), a student will have obtained:

PO1	Critical Thinking: Ability to take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives
PO2	Effective Communication: Ability to speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology
PO3	Effective Citizenship: Ability to demonstrate empathetic social concern and equity-centered national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering
PO4	Environment and Sustainability: Ability to understand the issues of environmental contexts and sustainable development
PO5	Ethical Living: Ability to recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them
PO6	Social Interaction: Ability to elicit views of others, mediate disagreements and help reach conclusions in group settings
PO7	Problem Solving and Analytical Skills: Ability to think rationally, analyze situations and solve problems adequately

## **PROGRAM SPECIFIC OUTCOMES:**

At the end of B.Voc Data Science at St. Thomas College (Autonomous), Thrissur, a student will have developed:

PSO1	Understand the basic concepts, fundamental principles and the scientific theories related to Data Science.
PSO2	Ability to absorb and understand the abstract concepts that lead to various advanced theories in Mathematics, Statistics and Computer science.
PSO3	Ability in modelling and solving problems by identifying and employing the appropriate existing theories and methods.
PSO4	Acquire the skills in handling scientific tools towards problem solving and solution analysis.

## **COURSE OUTCOMES:**

### **B.Voc Data Science**

#### **SDC1MT01 : Mathematics for Data Science – I**

At the end of this course, a student will have developed ability to:

CO1	Explain the basic concepts of set theory.
CO2	Understand the term series and sequence of real numbers and to classify them.
CO3	Carry out various tests for the convergence of series.
CO4	To understand and solve the problems on continuity of a real valued function.
CO5	Explain and apply derivative and supporting results.
CO6	Understand the basics of Laplace transform and apply Laplace transform to solve differential equations.

## **B.Voc Data Science**

### **SDC1ST01: Fundamentals of Statistical Data Analysis**

At the end of this course, a student will have developed ability to:

CO1	Understand data and classifications of data.
CO2	Understand and apply tabular and graphical methods for data analysis.
CO3	Explain and apply measures of central tendency.
CO4	Explain and apply measures of dispersion.
CO5	Distinguish between correlation and regression in terms of explaining the relationship between two or more variables.
CO6	Apply the principle of least squares in fitting linear and non-linear curves.

## B.Voc Data Science

### SDC1CS01: Python Programming

At the end of this course, a student will have developed ability to:

CO1	Understand basic constructs in python programming.
CO2	Understand the basic programming structure-List, Dictionary, Tuple, String
CO3	Understand the Control structures and object oriented concepts
CO4	Design and Analyze dataset applying statistical models, visualization and models using various tools
CO5	Understand the visualization methods , packages, statistical packages and other packages for building data models
CO6	Design data analytic model using the packages in python and provide inferences for multi-disciplinary domains

## **B.Voc Data Science**

### **SDC1CS02(P) : Fundamentals of Front End Development - Lab**

At the end of this course, a student will have developed ability to:

CO1	Building Strong expertise to develop front end application using HTML5
CO2	Implement MVC and responsive design to scale well across PC, tablet and Mobile Phone
CO3	Building Strong expertise to develop front end application using CSS3
CO4	Building Strong expertise to develop front end application using JavaScript along with jQuery and AngularJS framework
CO5	To become proficient in Bootstrap concepts
CO6	To develop a web pages based on Bootstrap

## **B.Voc Data Science**

### **SDC1CS03(P) : Python Programming - Lab**

At the end of this course, a student will have developed ability to:

CO1	Apply the concept of Decision making statements, looping constructs , functions for
CO2	solving basic programs
CO3	Analyze the concepts of Lists, tuples and error handling mechanisms
CO4	Evaluate a program incorporating all the python language constructs



## **B.Voc Data Science**

### **SDC1CS04(P) : Technical Writing with LATEX - Lab**

At the end of this course, a student will have developed ability to:

CO1	To create understanding of the LaTeX
CO2	Understand to management of titles, sections and subsection
CO3	To Create basic types of LATEX documents (article, report, letter, book).
CO4	Develop large documents: create complex projects building upon sub- files.

## **B.Voc Data Science**

### **SDC2MT02 : Mathematics for Data science II**

At the end of this course, a student will have developed ability to:

CO1	Apply numerical methods to find out solution of algebraic and transcendental equations.
CO2	Explain and apply the concept of finite differences.
CO3	Discuss and apply the concepts and methods for interpolation.
CO4	Describe and apply the methods for numerical differentiation and integration.
CO5	Determine numerical solutions to system of linear equations and compute the eigen values of a matrix.
CO6	Explain and apply methods for solving ordinary differential equations.

## **B.Voc Data Science**

### **SDC2ST02 : Probability & Random Variables**

At the end of this course, a student will have developed ability to:

CO1	Understand the concepts of random experiments and definitions of probability.
CO2	Understand and classical definition of probability.
CO3	Illustrate and apply conditional probability and independence of events.
CO4	Explain and apply Baye's theorem.
CO5	Explain probability function and their properties of continuous and discrete random variables.
CO6	Discuss the properties and applications of mathematical expectation, Chebyshev's inequality and moment generating function.

## B.Voc Data Science

### SDC2CS05 : Database Management System using MySql & MongoDB

At the end of this course, a student will have developed ability to:

CO1	Understand the structure and model of the relational database management systems.
CO2	Understand the concepts of transaction management and SQL, NoSQL databasemodels
CO3	Understand and create database models using MongoDB
CO4	Apply MongoDB operators to retrieve data from document data stores
CO5	Understand and apply concepts of data management indexing techniques for specific applications
CO6	Explain the issues of transaction like concurrency control, recovery and security

## **B.Voc Data Science**

### **SDC2CS06(P) : Data Visualization Using Tableau - Lab**

At the end of this course, a student will have developed ability to:

<b>CO1</b>	Understand the concepts of visualization
<b>CO2</b>	Understand the methods for visualizing data in Tableau
<b>CO3</b>	Apply Visualization methods for different data domains
<b>CO4</b>	Design Interactive Charts based on Data
<b>CO5</b>	Distinguish and Suggest the appropriate data visualization tools for domain specific applications and Design an Interactive data visualization story board for data
<b>CO6</b>	Students will be able to prepare reports using data visualization tools to make a cohesive narrative of the problem under scrutiny and offer guidance based on data insights

## **B.Voc Data Science**

### **SDC2CS07(P) : MySql & MongoDB - Lab**

At the end of this course, a student will have developed ability to:

CO1	Describe basic concepts of database system.
CO2	Design a data model and schemas in RDBMS.
CO3	Be competent in use of Structured Query Language SQL.
CO4	Analyze functional dependencies for designing a robust database
CO5	Implement transactions, concurrency control, and be able to do Database recovery.
CO6	To understand and apply MongoDB (NoSQL) for Data Analysis using CURD and User Management.

## B.Voc Data Science

### SDC2CS08(Pr) : Mini Project

At the end of this course, a student will have developed ability to:

CO1	Enable the Students to undertake short research projects in a team under the direction of members of the faculty
CO2	To impart skills in preparing detailed report describing the project and result
CO3	To enable the students to undertake fabrication work of new experimental set up/devices or develop software packages
CO4	To effectively communicate by making an oral presentation before an evaluation committee

## **B.Voc Data Science**

### **A11 : Basic Mathematics And General Awareness**

At the end of this course, a student will have developed ability to:

CO1	Apply numerical and reasoning skills in competitive examinations.
CO2	Understand some basic concepts of research and its methodologies.
CO3	Bridge the fundamental skills of computers with the present level of knowledge of the students.
CO4	To train and equip the students with the skills of modern banking and insurance.



## **B.Voc Data Science**

### **A12 : Professional Business Skills**

At the end of this course, a student will have developed ability to:

CO1	Able to become a professional by acquiring various soft skills needed for business success
CO2	Explore the world of e-learning and also the various consequences of Cyber space and crimes.
CO3	Application of data analysis and the role of artificial intelligence in e-business.
CO4	Apply the skills of digital marketing and e-commerce

## **B.Voc Data Science**

### **GEC3MT01 : Mathematics for Data Science – III**

At the end of this course, a student will have developed ability to:

CO1	Explain basic concepts of matrix algebra, determinants and their application to system of linear equations, verification and proof of Cayley Hamilton theorem.
CO2	Solve linear equations using Cramer's rule and matrix inverse method.
CO3	Carry out differentiation of one function with respect to another function.
CO4	Understand the meaning of derivative and to use it to find maxima and minima of a function.
CO5	Understand and apply the concept of partial differentiation.
CO6	Explain and apply the concept of integration.

## B.Voc Data Science

### SDC3ST03 : Optimization Techniques

At the end of this course, a student will have developed ability to:

CO1	Explain the fundamentals of linear programming problem and solve LPP using simplex and graphical methods.
CO2	Explain Primal-Dual relationship and solving them using dual-simplex method.
CO3	Discuss and solve transportation problems.
CO4	Discuss and solve assignment problems.
CO5	Describe and solve network and decision theory problems.
CO6	Illustrate Two person zero sum games and solve by graphical and LPP method.

## B.Voc Data Science

### SDC3ST04 : Probability Distributions

At the end of this course, a student will have developed ability to:

CO1	Understand the idea of expectations and there by obtaining the moments
CO2	Discuss the definitions and properties of moment generating function and characteristic function.
CO3	Describe the shape of frequency curve and compute the conditional mean and variance using mathematical expectation.
CO4	Determine the nature of relationship and the independence of bi-variate random variables using mathematical expectation.
CO5	Explain standard discrete probability distributions and their properties.
CO6	Explain standard continuous probability distributions and their properties

## **B.Voc Data Science**

### **SDC3CS09 : Artificial Intelligence**

At the end of this course, a student will have developed ability to:

CO1	Develop a basic understanding of AI building blocks presented in intelligent agents.
CO2	Choose an appropriate problem solving method and knowledge representation technique.
CO3	Analyze the strength and weaknesses of AI approaches to knowledge-intensive problem solving.
CO4	Ability to design models for reasoning with uncertainty as well as the use of unreliable information.
CO5	Design and develop the AI applications in real world scenario.

## **B.Voc Data Science**

### **SDC3ST05(P) : Statistical Data Analysis Using SPSS & Excel – Lab**

At the end of this course, a student will have developed ability to:

CO1	Develop efficiency with specific sets of skills through repetitive reinforcement.
CO2	Assess the document for accuracy, readability, and appearance.
CO3	Use critical thinking and problem solving skills in designing the spreadsheets for various business problems.
CO4	Proofread for accuracy in the entry of data and creation of formulas.
CO5	To be able to perform a wide range of data management tasks in SPSS application
CO6	Understand the basic workings of SPSS, and perform basic statistical analyses.
CO7	To perform database management tasks, descriptive statistics and graphics, and basic inferential statistics for comparisons and correlations.
CO8	To perform data checking and create simple tables and charts.

## **B.Voc Data Science**

### **SDC3CS10(P) : Java Programming - Lab**

At the end of this course, a student will have developed ability to:

CO1	Understand the concepts of OOPs
CO2	Interpret the basic control structures and data types in Java
CO3	Implement classes and objects, packages and interfaces
CO4	Familiarize Streams, Threads and Exceptions
CO5	Design GUI Applications using AWT

## **B.Voc Data Science**

### **SDC3CS11(P) : Advanced Python Programming - Lab**

At the end of this course, a student will have developed ability to:

CO1	Understand and create maps and websites in Django
CO2	Handle Django models, REST framework, AJAX and DjangojQuery for creating websites and its other applications.
CO3	Identify Django template system
CO4	Learn the required processes to function class inheritance that helps in reusability
CO5	Indexing and slicing of data in python.



## **B.Voc Data Science**

### **A13 : Entrepreneurship Development**

At the end of this course, a student will have developed ability to:

CO1	Able to understand the nature of entrepreneurship and the financial assistance and guidance from the government.
CO2	Confirm an entrepreneurial business idea
CO3	Explore entrepreneurial leadership and management style.
CO4	Confidence in Setting up of Industrial unit.

## **B.Voc Data Science**

### **A14 : Public health, Sanitation & Safety**

At the end of this course, a student will have developed ability to:

CO1	Identify the diseases associated with occupation
CO2	Identify the hazard in industrial area and propose preventive measures
CO3	Manage safety in industries and propose safety measures and PPE
CO4	Demonstrate the hygiene and sanitation procedures
	Demonstrate the microorganism responsible for the disease and their control

## B.Voc Data Science

### GEC4ST01 : Statistical Simulation Techniques

At the end of this course, a student will have developed ability to:

CO1	Explain pseudorandom number generation and apply random numbers to evaluate integrals.
CO2	Discuss and apply the method for generating random numbers from discrete distributions.
CO3	Explain and apply the method for generating random numbers from continuous distributions.
CO4	Understand the techniques for generating random vectors from discrete and continuous distributions.
CO5	Recall multivariate normal distribution and generate normal random vectors by copulas.

## **B.Voc Data Science**

### **SDC4ST06 : Statistical Inference**

At the end of this course, a student will have developed ability to:

CO1	Understand the idea of estimation and there by obtaining the best estimates.
CO2	Understand and apply analysis of variance and related post hoc tests.
CO3	Understand the concept of analysis of covariance with a single observation per cell.
CO4	Understand the basic principles of experimentation
CO5	Compare and contrast complete block designs.
CO6	Apply factorial designs and discuss the basics of incomplete block designs.

## B.Voc Data Science

### SDC4ST07 : Applied Multivariate Techniques

At the end of this course, a student will have developed ability to:

CO1	Understand the probability functions and their properties of multivariate random variable.
CO2	Compute the MLE estimates of the parameters of multivariate normal distribution and determine their sampling distributions.
CO3	Examine the significance difference of population means of several independent and depended populations.
CO4	Discuss and apply profile analysis and canonical correlation.
CO5	Describe and apply methods for dimension reduction.
CO6	Explain and apply classification techniques and cluster analysis.

## **B.Voc Data Science**

### **SDC4CS12 : Big Data Frame works and Tools**

At the end of this course, a student will have developed ability to:

CO1	Understand distributed, MapReduce Processing architectures
CO2	Configure and setup MapReduce Processing architectures Ecosystem – Hadoop, Spark , Pig and Hive
CO3	Understand and write MapReduce program using Pig and Hive, SPARK
CO4	Critically Analyze dataset using Pig , Hive and SPARK and suggest MapReduce Programming models based on domains specific applications
CO5	Design and setup a Big Data Analytics Ecosystem for specific Business scenarios

## B.Voc Data Science

### SDC4CS13(P) : Big Data and Marketing Research - Lab

At the end of this course, a student will have developed ability to:

CO1	Understand distributed, MapReduce Processing architectures
CO2	Configure and setup MapReduce Processing architectures Ecosystem – Hadoop, Spark , Pig and Hive
CO3	Understand and write MapReduce program using Pig and Hive, SPARK
CO4	Critically Analyze dataset using Pig , Hive and SPARK and suggest MapReduce Programming models based on domains specific applications
CO5	Design and setup a Big Data Analytics Ecosystem for specific Business scenarios.
CO6	Analyse the confluence of marketing, operations, and human resources in real-time delivery.
CO7	Demonstrate cognitive knowledge of the skills required in conducting online research and research on online markets, as well as in identifying, assessing and selecting digital market opportunities.
CO8	Explain emerging trends in digital marketing and critically assess the use of digital marketing tools by applying relevant marketing theories and frameworks.

## B.Voc Data Science

### SDC4CS14(P) : Advanced Mobile Programming - Lab

At the end of this course, a student will have developed ability to:

CO1	Understand the difference between Stateful and Stateless Widgets and when they should each be used.
CO2	Understand how callbacks can be used detect user interaction in button widgets.
CO3	Understand the declarative style of UI programming and how Flutter widgets react to state changes.
CO4	Learn to import dart libraries to incorporate additional functionality.
CO5	Learn about how variables, data types and functions work in Dart.
CO6	Build flexible layouts using the Flutter Expanded widget.
CO7	Understand the relationship between setState(), State objects and Stateful Widgets.



## **B.Voc Data Science**

### **SDC4CS15(P) : Industrial Visit & Mini Project**

At the end of this course, a student will have developed ability to:

CO1	To identify and define problems in the area of Data Science
CO2	Opportunity to get the senior functional experts / supervisors to explain about company functions.
CO3	Company tour to understand the end- to-end process at all levels.
CO4	Opportunity to have a face to face session with technical or administrative experts of the organization to ask questions and clarify doubts.
CO5	Opportunity to understand the company policies in terms of production, quality, and service management.
CO6	Make Students Aware with Industry Practices.

## **B.Voc Data Science**

### **GEC5ST03 : Design of Experiments**

At the end of this course, a student will have developed ability to:

CO1	Understand the idea of estimation and there by obtaining the best estimates.
CO2	Understand and apply analysis of variance and related post hoc tests.
CO3	Understand the concept of analysis of covariance with a single observation per cell.
CO4	Understand the basic principles of experimentation
CO5	Compare and contrast complete block designs.

## B.Voc Data Science

### SDC5ST08 : Stochastic Modeling

At the end of this course, a student will have developed ability to:

CO1	Understand the fundamentals of linear regression and estimate the parameters involved in linear regression.
CO2	Examine the significance of the parameters involved in linear regression and check the validity of model assumptions.
CO3	Construct multiple linear regression model, estimate its parameters and test their significance.
CO4	Discuss the significance and applications of dummy variables in linear regression models.
CO5	Explain the testing for Multicollinearity and Homoscedasticity.
CO6	Understand the fundamentals of linear regression and estimate the parameters involved in linear regression.

## **B.Voc Data Science**

### **SDC5CS16 : Data Mining Techniques**

At the end of this course, a student will have developed ability to:

CO1	Understand data mining tools and techniques for various domains
CO2	Apply various data mining, text mining and web mining algorithms for real time applications
CO3	Analyze unsupervised and supervised algorithms for real world applications
CO4	Illustrate the mining techniques like association, classification and clustering on datasets
CO5	Compare various approaches of data mining algorithms

## **B.Voc Data Science**

### **SDC5CS17 : Machine Learning and Data Analytics**

At the end of this course, a student will have developed ability to:

CO1	Understand the concepts of machine learning
CO2	Understand the theoretical concepts of probabilistic and linear methods
CO3	Understand and distinguish Supervised, Unsupervised and semi supervised learning
CO4	Apply Supervised, Unsupervised and semi supervised algorithms for a specific problem
CO5	Design a Machine Learning models to predict in domain specific applications

## **B.Voc Data Science**

### **SDC5CS18(P) : AI and Machine Learning - Lab**

At the end of this course, a student will have developed ability to:

CO1	Apply Supervised, Unsupervised and semi supervised algorithms for a specific problem
CO2	Design a Machine Learning models to predict in domain specific applications
CO3	Apply the basic principles, models, and algorithms of AI to recognize, model, and solve problems in the analysis and design of information systems.
CO4	Analyze the structures and algorithms of a selection of techniques related to searching, reasoning, machine learning, and language processing.

## **B.Voc Data Science**

### **SDC5ST09(P) : Statistical Data Analysis Using SAS – Lab**

At the end of this course, a student will have developed ability to:

CO1	Understand and use the fundamentals of the SAS programming language
CO2	Access different types of data (SAS, Excel, or text), then explore and prepare the data
CO3	Analyze and report on data and export results to common formats (HTML, PDF, Excel)
CO4	Apply SAS programming principles in practical examples

## B.Voc Data Science

### SDC5ST10(P) : R Programming – Lab

At the end of this course, a student will have developed ability to:

CO1	Understand the basic programming structure of R– Data frame, Matrix, List, Packages and Functions
CO2	Understand various visualization models and gather insights and inference of the datasets
CO3	Apply statistical functions, Central tendency measure, Range, Variance, Standard Deviation to perform Diagnostic Analytics
CO4	Understand data distribution of data and perform Regression and Anova to predict the insights



## **B.Voc Data Science**

### **SDC6CS19 : Term Paper**

At the end of this course, a student will have developed ability to:

CO1	To introduce the student to the techniques of literature survey.
CO2	To acquaint him/her with the process of presenting his/her work through seminars and technical reports.

## **B.Voc Data Science**

### **SDC6CS20(Pr) : Internship and Project**

At the end of this course, a student will have developed ability to:

CO1	To give a practical exposure to the process of software development lifecycle.
CO2	Identification of practices that make a difference in terms of Belonging and Intimacy
CO3	Integrated data set related to retention and methodology for continued analysis
CO4	Identified, clarified and/or confirmed professional direction as it relates to your academic studies and future career path;
CO5	Demonstrated awareness of community and/or organizational issues;
CO6	Linked academic theory to practice in your discipline;
CO7	Applied your knowledge, skills, experience to a work environment;

## **B.Voc Data Science**

### **GEC5CS01A : Introduction to Cloud Computing and IOT**

At the end of this course, a student will have developed ability to:

CO1	To learn the fundamentals of distributed systems
CO2	To understand and use the cloud services and AWS
CO3	To understand and perform virtualization
CO4	To create, configure and manage virtual machines
CO5	To learn the importance of smart objects and smart environment
CO6	To understand and use the microcontroller and various sensors
CO7	To create programs using Arduino IDE and extract data
CO8	To perform WiFi data communications, remote data storage in cloud, and handle the data using web applications

## **B.Voc Data Science**

### **GEC5CS01B : Social Media Mining**

At the end of this course, a student will have developed ability to:

CO1	Understand the concepts of Graph Models, social communities
CO2	Understand the network models and measures to evaluate information
CO3	Understand and apply algorithms to model data using graph and network structures and recommendations
CO4	Brief on algorithms on social data diffusion and apply for various domains
CO5	Distinguish and Suggest the appropriate algorithms for domain specific applications for data modelling and information diffusion, Evaluate the algorithms for metrics

## **B.Voc Data Science**

### **GEC5CS01C : Sentiment Analysis**

At the end of this course, a student will have developed ability to:

CO1	Introduction to sentiment analysis and its applications
CO2	Understand Sentiment analysis using supervised and unsupervised learning
CO3	Discuss the challenges in sentiment analysis classification
CO4	Create different types of opinion summary from the given data sources
CO5	Understand the aspect oriented sentiment analysis
CO6	Identifying opinion quality, author intention and fake opinions

## **B.Voc Data Science**

### **GEC5CS01D : Evolutionary Computing**

At the end of this course, a student will have developed ability to:

CO1	Develop knowledge of evolutionary computation methodologies in the context of modern heuristic methods
CO2	Gain experience in matching various evolutionary computation methods and algorithms for particular classes of problems
CO3	Understand Single objective and Multi-objective optimization problems
CO4	Solve optimization problems using suitable algorithms
CO5	Develop evolutionary algorithms for real-world applications

## B.Voc Data Science

### GEC5ST02A : Categorical Data Analysis

At the end of this course, a student will have developed ability to:

CO1	Understand inference for a single proportion and analyse data summarised in contingency tables.
CO2	Describe the use of general terminology, notation and concepts in the theory, methods and applications of Categorical Data Analysis.
CO3	Apply in a rigorous way various aspects of inference for log-linear models and for logistic regression, Poisson regression and logit models.
CO4	Analyze categorised Time-to-event Data.
CO5	Able to combine summary statistics from multiple studies in a meta- analysis, assess the presence of publication bias and estimate heterogeneity between studies.

## **B.Voc Data Science**

### **GEC5ST02B : Biostatistics and Survival Analysis**

At the end of this course, a student will have developed ability to:

CO1	Understand the concepts and statistical tools used in Biostatistics.
CO2	Effectively apply these tools on solving the biological problems occurring in real life.
CO3	Analyze the given biostatistical data as per the objectives of the problem.
CO4	Interpret the outcomes of the analyses meaningfully.
CO5	Create research problems of his own and able to proceed with them.



## **B.Voc Data Science**

### **GEC5ST02C : Population Studies, Actuarial Science and Vital Statistics**

At the end of this course, a student will have developed ability to:

CO1	To impart basic concepts in population studies, actuarial science and vital statistics
CO2	To prepare students to take up a career in Actuarial Practice

## **B.Voc Data Science**

### **GEC5ST02D : Statistical Computing**

At the end of this course, a student will have developed ability to:

CO1	Write computer-code in R to represent data with use of conventional graphs.
CO2	To prepare students to take up a career in Actuarial Practice
CO3	Summarize, and interpret information from small to very large data sets
CO4	Combine, transform, and manipulate data sets