# Bhavan's Vivekananda College
of Science, Humanities and Commerce
Sainikpuri, Secunderabad – 500 094
Autonomous College - Affiliated to Osmania University
Accredited with 'A' grade by NAAC

## B.Sc (MSCs)

### Program Outcomes

**PO1 Knowledge:** Acquire the knowledge with facts and figures related to Mathematics, Physics, Electronics, Computer Science and Statistics and understand the basic concepts, fundamental principles and scientific theories related to various scientific phenomena and their relevance in day-to-day life.

**PO2 Skills:** Acquire the skills in handling scientific instruments & skills of observation and drawing logical inference from scientific experiments.

**PO3 Modern Tool Usage**: Apply appropriate techniques, skills, modern tools and IT tools to practice.

**PO4 Creativity & Analysis:** Think creatively to propose novel ideas in explaining the evidence of data and provide new solutions to the problems and analyse the given scientific data systematically and have the ability to draw conclusion.

**PO5 Communication:** Communicate effectively on problems, issues and solutions with community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

**PO6 Ethics & Environment:** Apply ethical principles and commit to professional ethics and responsibilities and norms in research and the functional areas, understand the issues of environmental context and sustainable development.

**PO7 Individual and Team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

**PO8 Self-directed and Life-long Learning**: Acquire the ability to engage in independent and life-long learning in the broadest context of socio, economic and technological changes.

## Program Specific Outcomes

**PSO1:** Understand the basic concepts, develop problem solving skills, improve logical thinking and develop systematic approach to tackling situations

**PSO2:** Get acquainted with knowledge and skillset and use statistical techniques effectively in broad areas of analytic, scientific, government, financial,health, technical,industries and other sectors.

**PSO3:** Understand and analyse integrated frame work environment and to develop real time applications

## Course Outcomes

**Mathematics:**

| Name of the Course | DIFFERENTIAL EQUATIONS AND GROUP THEORY |
|---|---|
| **Course Code** | MT121 |
| CO1 | Solve differential equations of first order & first degree. |
| CO2 | Apply concepts of differentiation to calculate problems on Total differential equations, Simultaneous Total differential equations and differential equations of first order but not first degree. |
| CO3 | Determine various concepts in Group theory |
| CO4 | Prove the concepts of Group theory |

| Name of the Course | DIFFERENTIAL EQUATIONS AND DIFFERENTIAL CALCULUS |
|---|---|
| **Course Code** | MT221 |
| CO1 | Use analytical methods to find solutions higher order linear differential equations |
| CO2 | Find solutions of non-homogenous higher order linear differential equations. |
| CO3 | Analyze and interpret concepts of differentiation, continuity and derivability. |

| Name of the Course | RING THEORY&PARTIAL DIFFERENTIAL EQUATIONS |
|---|---|
| **Course Code** | MT321 |
| CO1 | Determine various concepts in Ring theory. |
| CO2 | Prove the concepts of Ring theory. |
| CO3 | Solve linear and nonlinear partial differential equations of first order. |
| CO4 | Solve homogeneous and non-homogeneous linear partial differential equations. |

| Name of the Course | Theory of Equations |
|---|---|
| **Course Code** | SEC321 |
| CO1 | By using the concepts learnt the students are expected to solve some of the polynomial equation |

| Name of the Course | REAL ANALYSIS |
|---|---|
| **Course Code** | MT421 |
| CO1 | Determine various concepts in Sequences, Series, Sequences functions, Series of functions and Integration. |
| CO2 | Determine various properties of Sequences, Series, Sequences functions, Series of functions and Integration. |
| CO3 | Prove the concepts of Sequences, Series, Sequences functions, Series of functions and Integration. |
| CO4 | Apply various tests for the convergence of Sequences, Series, Sequences functions, Series of functions and Integrability of functions. |

| Name of the Course | SEC LOGIC AND SETS |
|---|---|
| **Course Code** | SEC421 |
| CO1 | After the completion of the course students appreciate its importance in the development of computer science |

| Name of the Course | LINEAR ALGEBRA |
|---|---|
| **Course Code** | MT521 |
| CO1 | After completion of this course students appreciate its interdisciplinary nature. Learn the concepts of basis and dimension of vector space, express vector spaces in different dimensions, base concept of a vector space and properties of vectors on the base. |
| CO2 | Find row and column space of a matrix, learn some functions defined between vector spaces, learn required conditions for a transformation in order to be a linear transformation, find kernel of a linear transformation, learn the algebraic operations between linear transformations, matrix representation of a linear transformation. |
| CO3 | Learn how to calculate eigenvalues and eigenvectors of a linear transformation, concepts of eigenvalues and eigenvectors of a matrix. |
| CO4 | Students learn Concepts of inner product on vector spaces, find the length of a vector in some vector spaces and the angle between two vectors, explain that two vectors are orthogonal, express that a set is orthogonal and orthonormal. |

| Name of the Course | VECTOR CALCULUS |
|---|---|
| **Course Code** | MT521A |
| CO1 | Students realize the way Vector Calculus is used to address some of the problems of Physics. After learning this course students will learn to define concepts of point and vector and also learn to apply differences and similarities in many fields of Science. |
| CO2 | Apply dot and cross product to determine angles between vectors, orientation of axes, areas of triangles and parallelograms in space, scalar and vector projections |
| CO3 | Calculate directional derivatives and gradients ,and learn concept of a conservative vector field, state and apply theorems that give necessary and sufficient conditions for when a vector field is conservative, definitions of curl and divergence of vector field and describe application Green's Theorem, Gauss Theorem and Stokes' Theorem and compute them. |
| CO4 | Learn applications of these theorems in Physics and Engineering. |

| Name of the Course | SEC NUMBER THEORY |
|---|---|
| **Course Code** | SEC521 |
| CO1 | Students shall be able to understand and analyze the properties of numbers in a broader prospect |

| Name of the Course | GE MATHEMATICAL APTITUDE -I |
|---|---|
| **Course Code** | GE521 |
| CO1 | Students will be benefitted by these concepts to crack competitive examinations |

| Name of the Course | NUMERICAL ANALYSIS |
|---|---|
| **Course Code** | MT621 |
| CO1 | After learning the course students realize the importance of the subject in solving some problems of algebra and calculus, understand the theoretical and practical aspects of the use of numerical analysis. Students will be equipped with the knowledge of finding the roots of algebraic and transcendental equations. |
| CO2 | Students will be equipped with the knowledge of calculating the interpolation, extrapolation values without actually finding the function will learn to and evaluate a derivative at a value using an appropriate numerical method. Proficient in implementing numerical methods for a variety of multidisciplinary applications. Establish the limitations, advantages and disadvantages of numerical analysis. |

| CO3 | Derive numerical methods for interpolation, differentiation, integration and also  solve linear equations. |
| CO4 | Understand common numerical analysis and how they are used to obtain approximate solutions. |

| Name of the Course | SOLID GEOMETRY |
|---|---|
| **Course Code** | MT621A |
| CO1 | After completion of this course students will be able to understand the beautiful interplay between Algebra and Solid Geometry. |
| CO2 | Students will be able to analyze and differentiate the differences in recognizing few types of conics. |
| CO3 | Students will become familiar with different concepts in Analytical Geometry and will    able to solve different properties of various conics. |

| Name of the Course | SEC GRAPH THEORY |
|---|---|
| **Course Code** | SEC621 |
| CO1 | Students can use the concepts of graphs and their properties various fields of Science. |

| Name of the Course | GE MATHEMATICAL APTITUDE -II |
|---|---|
| **Course Code** | GE621 |
| CO1 | Students will be benefitted by these concepts to crack competitive examinations |

**Statistics:**

| Name of the Course | Descriptive Statistics & Probability |
|---|---|
| **Course Code** | ST122 |
| CO1 | Develop skills in presenting quantitative and qualitative data using appropriate diagrams, tabulations and construction of frequency distributions. |
| CO2 | Evaluate and interpret measures of central tendency, spread of data, central  &  Non central moments. |
| CO3 | Utilize basic concepts of probability and theorems in probability including  Bayes' theorem to calculate, interpret and communicate event probabilities. |
| CO4 | Apply key concepts of probability, including discrete and continuous random variables, Probability functions, Generating functions, expectations and variances. |

| Name of the Course | Probability distribution |
|---|---|
| **Course Code** | ST222 |
| CO1 | Able to identify the basic concepts of probability including random variable, probability of an event, Independence and conditional probability for Bivariate Random Variables. |
| CO2 | Learn the principle of several well-known discrete distributions, including Binomial, Poisson, Geometric, Hyper Geometric, Negative Binomial etc. |
| CO3 | Define and calculate the probabilities of the continuous probability distributions |
| CO4 | Determine the continuous probability distribution based on experiment conditions and assumptions (including the exponential, gamma, beta and Cauchy distributions). |

| Name of the Course | Statistical Methods and Inference I |
|---|---|
| **Course Code** | ST322 |
| CO1 | Demonstrate the applicability of analyzing the categorical data. |
| CO2 | Compute and interpret Correlation Analysis, Regression lines and multiple regression analysis with applications. |
| CO3 | Apply point and interval estimation techniques to estimate the population mean, proportion and variance. |
| CO4 | Compute various properties of estimation to deal real life problems |

| Name of the Course | Data Analysis Using with R - I |
|---|---|
| **Course Code** | SE322 |
| CO1 | A foundation for fluency in R programming, and an insight into the capabilities of the language as a productivity tool for data manipulation and statistical analysis. |

| Name of the Course | Statistical Inference II |
|---|---|
| **Course Code** | ST422 |
| CO1 | Apply various estimation and testing procedures to real life problems. |
| CO2 | Acquire techniques to test hypotheses related to population means, proportions and variances under different circumstances. |
| CO3 | Grab the knowledge of inferential statistics and their applications in real-life business Situations. |
| CO4 | Apply distribution free test to deal with real time problems. |

| Name of the Course | Data Analysis Using with R - II |
|---|---|
| **Course Code** | SE422 |
| CO1 | Access online resources for R and import new function packages into the R workspace. Import, review, manipulate and summerize data sets in R |
| CO2 | Explore data - sets to create testable hypotheses and identify appropriate statistical tests. |

| Name of the Course | Applied Statistics I |
|---|---|
| Course Code | ST522 |
| CO1 | Understand distinctive features of sampling schemes and its applications in real life. |
| CO2 | Estimate statistics of interest and the sample sizes are determined so that those statistics are estimated with an acceptable sampling error. |
| CO3 | Understand the past behavior and would be helpful for future predictions. |
| CO4 | Determining the direction of production and employment to facilitate future payments and to know changes in the real income of different groups of people at different places and times. |

| Name of the Course | Statistical Quality Control & Reliability |
|---|---|
| Course Code | ST522A |
| CO1 | Demonstrate continuous improvement methodology for eliminating defects in a product, process or service. |
| CO2 | Determine the quality of a batch of products by selecting a specified number for testing. |
| CO3 | Provides organizations tools to improve the capability of their business processes. |
| CO4 | Achieve a better way to balance the cost of failure reduction against the value of the enhancement. |

| Name of the Course | Data Analysis with SPSS - I |
|---|---|
| Course Code | SE522 |
| CO1 | Understand the basic workings of SPSS, and perform basic statistical analysis. |
| CO2 | To perform database management tasks, descriptive statistics and graphics, and basic inferential statistics for comparisons and correlation. |

| Name of the Course | Data Analysis with Excel |
|---|---|
| Course Code | GE522 |
| CO1 | Perform descriptive analysis with Excel, generate graphs and diagrams for data analysis. |
| CO2 | Perform correlations, Simple regressions and multiple regression analysis. |

| Name of the Course | Applied Statistics II |
|---|---|
| **Course Code** | ST622 |
| CO1 | Assess ANOVA for one-way, two –way classification, fixed effect models with equal,  number of observations per cell in real time problems. |
| CO2 | Analyze and interpret the data using Design of Experiments. |
| CO3 | Acknowledge the Vital statistics data uses—they serve as a base for public health, social service, and economic planning and program development and are used to track progress toward health goals. |
| CO4 | Forecast the market which is of importance in the modern business activities. It helps to design the appropriate pricing policy. |

| Name of the Course | Operation Research |
|---|---|
| **Course Code** | ST622A |
| CO1 | Identify and express a decision problem in mathematical form and solve it graphically and by Simplex method |
| CO2 | Explain the relationship between a linear program and its dual, including strong duality and complementary slackness and understand the usage of Sequencing Jobs and Simulation for Solving Business Problems |
| CO3 | Recognize and formulate transportation problems and drive their optimal solution. |
| CO4 | Recognize and formulate Assignment problems and drive their optimal solution. |

| Name of the Course | Data Analysis with SPSS - II |
|---|---|
| **Course Code** | SE622 |
| CO1 | Understand the basic statistical analysis. |
| CO2 | To perform database management tasks, basic inferential statistics for comparisons, correlations, S.Q.C. and simple forecasting techniques. |

| Name of the Course | Data Analysis with SPSS |
|---|---|
| **Course Code** | GE622 |
| CO1 | Understand the basic workings of SPSS, and perform basic statistical analysis. |
| CO2 | To perform database management tasks, descriptive statistics and graphics, and basic inferential statistics for comparisons and correlations. |

**Computer Science:**

| Name of the Course | Programming in 'C' |
|---|---|
| **Course Code** | CS125 |
| CO1 | Write basic programs on their own using C. |
| CO2 | Get equipped to use control statements, decision making and looping statements. |
| CO3 | Use the concepts of arrays, strings and functions |
| CO4 | Use the concepts of structure, unions, pointers and pre-processors |

| Name of the Course | Programming in 'C' Lab |
|---|---|
| **Course Code** | CS125P |
| CO1 | Developing logic skills using control and looping statements |
| CO2 | 'C' concepts implemented with a practical approach(arrays,strings,functions,structure,union,pointers,pre processors) |

| Name of the Course | Programming in 'C++' |
|---|---|
| **Course Code** | CS225 |
| CO1 | Write basic C++ programs on their own |
| CO2 | Get equipped to use the functions and object oriented programming concepts |
| CO3 | Use the concepts of inheritance and polymorphism |
| CO4 | Use the concepts of templates and exception handling |

| Name of the Course | Programming in 'C++' Lab |
|---|---|
| **Course Code** | CS225P |
| CO1 | Developing real time applications using OOP's concepts |
| CO2 | Practical approach is implemented using Inheritance and Polymorphism |

| Name of the Course | Data Structures |
|---|---|
| **Course Code** | CS325 |
| CO1 | Able to write different searching and sorting technique programs |
| CO2 | Able to write programs on stacks, queues, deques, priority queues |
| CO3 | Able to write programs on linked list, doubly linked list |
| CO4 | Able to write programs on Binary Search Tree operations and Tree Traversal techniques |

| Name of the Course | Data Structures Using C++ Lab |
|---|---|
| **Course Code** | CS325P |
| CO1 | Able to write programs for different searching, sorting, stacks, queues, deques and priority queues. |

| | |
|---|---|
| CO2 | Able to write programs on linked list, doubly linked list and Binary Search Tree operations. |

| | |
|---|---|
| **Name of the Course** | PC Maintenance |
| **Course Code** | SE325A |
| CO1 | Students will acquire knowledge about motherboard components & hardware components of the PC and the basic technologies used in networks |
| CO2 | Perform basic assembling and disassembling of the computer and troubleshooting, upgrade of computer operating systems and troubleshoot using system tools and diagnostic software. |

| | |
|---|---|
| **Name of the Course** | Database Management Systems |
| **Course Code** | CS425 |
| CO1 | Acquire knowledge on database concepts. |
| CO2 | Understanding the features of SQL |
| CO3 | Understanding the concept of Database maintenance |
| CO4 | Understand technical and management roles of database administration & data administrator |

| | |
|---|---|
| **Name of the Course** | Database Management Systems Lab |
| **Course Code** | CS425P |
| CO1 | Students will be able to interact with Database using SQL (Lab). |
| CO2 | Students will be able to write simple SQL queries |

| | |
|---|---|
| **Name of the Course** | Libre Office Calc and Libre Office Base |
| **Course Code** | SE425A |
| CO1 | Get knowledge about Spreadsheet formulas and functions & Be familiarized about formatting, linking and protecting worksheets |
| CO2 | Be able to prepare pivot tables, conditional formatting and data validation in Spreadsheet and be able to learn Table creation, Query creation, Form wizard and Report wizard in Base |

| | |
|---|---|
| **Name of the Course** | Programming in Java |
| **Course Code** | CS525 |
| CO1 | Students will learn fundamentals of OOPs, classes, objects. |
| CO2 | Students will learn java programs relating to classes, arrays, strings, interfaces. |
| CO3 | Students will learn java programs relating to the concepts of packages and multithreading. |
| CO4 | Students will learn java programs relating to the concepts of exception handling and applets. |

| Name of the Course | Programming in Java Lab |
|---|---|
| Course Code | CS525P |
| CO1 | To demonstrate looping statements,arrays,oops concepts |
| CO2 | To construct user-defined packages ,threads and applet programs by using exception handling mechanisms. |

| Name of the Course | Software Engineering (Elective-I) |
|---|---|
| Course Code | CS525A |
| CO1 | Students will be capable to analyze Software Engineering and its specifications |
| CO2 | Students will learn designing Architectural styles, object oriented system analysis and its types of designs |
| CO3 | Students will be capable to implement Software development |
| CO4 | Students will learn Software testing and its quality |

| Name of the Course | Software Engineering Lab (Elective-I) |
|---|---|
| Course Code | CS525AP |
| CO1 | Students will be acquiring knowledge about implementing tools and models in software engineering |
| CO2 | Students will be able to design software using different types of UML models |

| Name of the Course | Operating Systems (Elective-II) |
|---|---|
| Course Code | CS525B |
| CO1 | At the end of the course students will be able to paraphrase the basic concepts of Operating Systems and its Structure |
| CO2 | At the end of the course students will be able to  summarize the various Process Management Services of an OS and the problems that could arise due to Synchronization and their respective solutions suggested. |
| CO3 | At the end of the course students will be able to determine the Process Scheduling Algorithm or the Deadlock Handling Method to be used. |
| CO4 | At the end of the course students will be able to Discuss the process of Memory and Virtual Memory Managements. |

| Name of the Course | Operating Systems Lab (Elective-II) |
|---|---|
| Course Code | CS525BP |
| CO1 | Students will be able acquire knowledge on UNIX commands and basic programs using conditional statements |
| CO2 | Students will be able acquire knowledge on UNIX programs using looping statements. |

| Name of the Course | Python |
|---|---|
| Course Code | SE525A |
| CO1 | Acquire Knowledge on python programming features and develop applications using conditional and looping statements |
| CO2 | Develop applications using functions, files and exception handling, list and tuples |

| Name of the Course | Libre Office Calc  (GE-I) |
|---|---|
| Course Code | ----- |
| CO1 | Work with multiple worksheets & workbook Protect data and Import and export from various database applications. |
| CO2 | Analyze data and implement functions, formula and data validation methods |

| Name of the Course | Basics of Python (GE-II) |
|---|---|
| Course Code | ---- |
| CO1 | Acquire Knowledge on python programming features and develop applications using conditional statements. |
| CO2 | Develop applications using looping statements and functions. |

| Name of the Course | Computer Networks |
|---|---|
| Course Code | CS625 |
| CO1 | Students would have learnt fundamental concepts and terminology in networking and seven layers and OSI network model |
| CO2 | Students would have learnt different interfaces along with their functionalities and know about multiplexing techniques(FDM,TDM) and Error Detection Methods and correction methods |
| CO3 | Students would have learnt how data link layer is implemented at Local Area Networks and get familiarized with flow control and error control mechanisms at data link layer |
| CO4 | Students would have learnt Routing Algorithms |

| Name of the Course | Computer Networks Lab |
|---|---|
| Course Code | CS625P |
| CO1 | Students will be able to create basic messaging programs. |
| CO2 | Students will be able to design simple chatting applications |

| Name of the Course | Web Technologies (Elective-I) |
|---|---|
| Course Code | CS625A |
| CO1 | Students will be able to design static web pages |
| CO2 | Students can create web pages using CSS |
| CO3 | Students will be able to design dynamic web program |
| CO4 | Student will be more interaction with web browsers, web servers and case study |

| Name of the Course | Web Technologies Lab (Elective-I) |
|---|---|
| Course Code | CS625AP |
| CO1 | Student will be able to design static web pages using style sheets with more formatting features |
| CO2 | Student will be able to design dynamic web pages using CSS, HTML and Scripting language |

| Name of the Course | GUI Programming using JAVA |
|---|---|
| Course Code | SE625A |
| CO1 | Students will be develop programs using applets and event handling mechanisms in applets |
| CO2 | Students will be develop programs using swing components |

| Name of the Course | .NET |
|---|---|
| Course Code | SE625B |
| CO1 | Students are capable to understand .net platform, application development basics |
| CO2 | Capable to develop Windows form based application with backend connectivity |

| Name of the Course | Multimedia (GE-I) |
|---|---|
| Course Code | ---- |
| CO1 | Students will be able to create, edit and modify simple image files with various extensions. |
| CO2 | Students will be able to implement filter and graphical effects for selected page |

| Name of the Course | E-Commerce (GE-II) |
|---|---|
| Course Code | -------- |
| CO1 | Student will be able to analyse the impact of E-Commerce on Business Models and EDl |
| CO2 | Students will be able to analyze the Risks of Insecure Systems, Risk Management and Online Payment System |

## Course Matrix

| Name of the Program: BSC MSCS | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: Differential Equations and Group theory | | | | | | | Course Code: MT 121 | | | |
| Semester: I | | | | | | | Year:1 | | | |
| Academic Year:17-18 | | | | | | | Batch: 2017-20 | | | |

| COs/POs | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 1 | 2 | 2 | 1 | 1 | 2 | 3 | 3 | 2 | 3 |
| CO2 | 3 | 1 | 1 | 2 | 2 | 2 | 1 | 2 | 3 | 2 | 3 |
| CO3 | 3 | 2 | 1 | 2 | 3 | 1 | 1 | 2 | 3 | 3 | 3 |
| CO4 | 3 | 2 | 2 | 2 | 3 | 1 | 2 | 2 | 3 | 3 | 3 |
| | 3 | 1.5 | 1.5 | 2 | 2.25 | 1.25 | 1.5 | 2.25 | 3 | 2.5 | 3 |

| Name of the Program: BSC MSCS | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: Differential Equations and Group theory | | | | | | | Course Code: MT 121P | | | |
| Semester: I | | | | | | | Year:1 | | | |
| Academic Year:17-18 | | | | | | | Batch: 2017-20 | | | |

| COs/POs | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 1 | 2 | 2 | 1 | 1 | 2 | 3 | 3 | 3 | 3 |
| CO2 | 3 | 1 | 1 | 2 | 2 | 2 | 1 | 2 | 3 | 3 | 3 |
| CO3 | 3 | 2 | 1 | 2 | 3 | 1 | 1 | 2 | 3 | 3 | 3 |
| CO4 | 3 | 2 | 2 | 2 | 3 | 1 | 2 | 2 | 3 | 3 | 3 |
| | 3 | 1.5 | 1.5 | 2 | 2.25 | 1.25 | 1.5 | 2.25 | 3 | 3 | 3 |

| Name of the Program: BSC MSCS | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: Differential Equations and Differential Calculus | | | | | | | Course Code: MT 221 | | | |
| Semester: II | | | | | | | Year:1 | | | |
| Academic Year:17-18 | | | | | | | Batch: 2017-20 | | | |

| COs/POs | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 1 | 2 | 2 | 1 | 1 | 2 | 3 | 3 | 2 | 3 |
| CO2 | 3 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 3 | 2 | 3 |
| CO3 | 3 | 1 | 1 | 2 | 3 | 1 | 1 | 2 | 3 | 3 | 3 |
| CO4 | 3 | 2 | 2 | 2 | 3 | 1 | 2 | 2 | 3 | 3 | 3 |
| | 3 | 1.5 | 1.5 | 2 | 2.25 | 1.25 | 1.5 | 2.25 | 3 | 2.5 | 3 |

| Name of the Program: BSC MSCS | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: Differential Equations and Differential Calculus | | | | | | | | Course Code: MT 221P | | |
| Semester: II | | | | | | | | Year:1 | | |
| Academic Year:17-18 | | | | | | | | Batch: 2017-20 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 1 | 2 | 2 | 1 | 1 | 2 | 3 | 3 | 3 | 3 |
| CO2 | 3 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 3 | 3 | 3 |
| CO3 | 3 | 1 | 1 | 2 | 3 | 1 | 1 | 2 | 3 | 3 | 3 |
| CO4 | 3 | 2 | 2 | 2 | 3 | 1 | 2 | 2 | 3 | 3 | 3 |
| | 3 | 1.5 | 1.5 | 2 | 2.25 | 1.25 | 1.5 | 2.25 | 3 | 3 | 3 |

| Name of the Program: MSCs | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: RING THEORY&PARTIAL DIFFERENTIAL EQUATIONS | | | | | | | | Course Code: MT 321 | | |
| Semester: III | | | | | | | | Year: II | | |
| Academic Year:2018-2019 | | | | | | | | Batch:2017-2020 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 2 | 1 | 2 | 1 | _ | 1 | 3 | 3 | 1 | 1 |
| CO2 | 3 | 3 | 1 | 3 | 2 | 1 | 2 | 3 | 3 | 1 | 3 |
| CO3 | 3 | 2 | 1 | 2 | 1 | 1 | 2 | 3 | 3 | 2 | 2 |
| CO4 | 3 | 2 | 1 | 2 | 1 | 1 | 3 | 3 | 3 | 2 | 2 |
| | 3 | 2.25 | 1 | 2.25 | 1.25 | 1 | 2 | 3 | 3 | 1.5 | 2 |

| Name of the Program: MSCs | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: RING THEORY&PARTIAL DIFFERENTIAL EQUATIONS | | | | | | | | Course Code: MT 321P | | |
| Semester: III | | | | | | | | Year: II | | |
| Academic Year:2018-2019 | | | | | | | | Batch:2017-2020 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 2 | 1 | 2 | 1 | 0 | 1 | 3 | 3 | 1 | 1 |
| CO2 | 3 | 3 | 1 | 3 | 2 | 1 | 2 | 3 | 3 | 1 | 3 |
| CO3 | 3 | 2 | 1 | 2 | 1 | 1 | 2 | 3 | 3 | 2 | 2 |
| CO4 | 3 | 2 | 1 | 2 | 1 | 1 | 3 | 3 | 3 | 2 | 2 |
| | 3 | 2.25 | 1 | 2.25 | 1.25 | 1 | 2 | 3 | 3 | 1.5 | 2 |

| Name of the Program: BSC MSCS | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: THEORY OF EQUATIONS | | | | | | | | Course Code: SEC 321 | | |
| Semester: III | | | | | | | | Year: II | | |
| Academic Year:18-19 | | | | | | | | Batch: 2017-20 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 2 | 3 |

| Name of the Program: MSCs | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: REAL ANALYSIS | | | | | Course Code:MT421 | | | | | |
| Semester: IV | | | | | Year: II | | | | | |
| Academic Year:2018-2019 | | | | | Batch:2017-2020 | | | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 0 | 1 |
| CO2 | 3 | 1 | 1 | 2 | 1 | 1 | 2 | 3 | 3 | 0 | 1 |
| CO3 | 3 | 1 | 1 | 2 | 1 | 2 | 2 | 3 | 3 | 1 | 3 |
| CO4 | 3 | 1 | 1 | 2 | 1 | 2 | 2 | 3 | 3 | 0 | 2 |
| | 3 | 1 | 1 | 1.75 | 1 | 1.5 | 1.75 | 3 | 3 | 1 | 1.75 |

| Name of the Program: MSCs | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: REAL ANALYSIS | | | | | Course Code:MT421P | | | | | |
| Semester: IV | | | | | Year: II | | | | | |
| Academic Year:2018-2019 | | | | | Batch:2017-2020 | | | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 0 | 1 |
| CO2 | 3 | 1 | 1 | 2 | 1 | 1 | 2 | 3 | 3 | 0 | 1 |
| CO3 | 3 | 1 | 1 | 2 | 1 | 2 | 2 | 3 | 3 | 1 | 3 |
| CO4 | 3 | 1 | 1 | 2 | 1 | 2 | 2 | 3 | 3 | 0 | 2 |
| | 3 | 1 | 1 | 1.75 | 1 | 1.5 | 1.75 | 3 | 3 | 1 | 1.75 |

| Name of the Program: BSC MSCS | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: LOGIC AND SETS | | | | | Course Code: SEC 421 | | | | | |
| Semester: IV | | | | | Year: II | | | | | |
| Academic Year:18-19 | | | | | Batch: 2017-20 | | | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 1 | 1 | 2 | 1 | 1 | 1 | 3 | 3 | 2 | 3 |

| Name of the Program: MSCs | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: LINEAR ALGEBRA | | | | | Course Code:MT521 | | | | | |
| Semester: V | | | | | Year: III | | | | | |
| Academic Year:2019-2020 | | | | | Batch:2017-2020 | | | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 1 | 1 | 1 | 1 | 0 | 1 | 3 | 3 | 1 | 3 |
| CO2 | 3 | 2 | 1 | 2 | 1 | 0 | 2 | 3 | 3 | 2 | 3 |
| CO3 | 3 | 3 | 2 | 2 | 1 | 1 | 2 | 3 | 3 | 2 | 3 |
| CO4 | 3 | 1 | 1 | 1 | 1 | 0 | 1 | 3 | 3 | 1 | 2 |
| | 3 | 1.75 | 1.25 | 1.5 | 1 | 1 | 1.5 | 3 | 3 | 1.5 | 2.75 |


| Name of the Program: MSCs | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: LINEAR ALGEBRA | | | | | Course Code:MT521P | | | | | |
| Semester: V | | | | | Year: III | | | | | |
| Academic Year:2019-2020 | | | | | Batch:2017-2020 | | | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 1 | 1 | 1 | 1 | 0 | 1 | 3 | 3 | 1 | 3 |
| CO2 | 3 | 2 | 1 | 2 | 1 | 0 | 2 | 3 | 3 | 2 | 3 |
| CO3 | 3 | 3 | 2 | 2 | 1 | 1 | 2 | 3 | 3 | 2 | 3 |
| CO4 | 3 | 1 | 1 | 1 | 1 | 0 | 1 | 3 | 3 | 1 | 2 |
| | 3 | 1.75 | 1.25 | 1.5 | 1 | 1 | 1.5 | 3 | 3 | 1.5 | 2.75 |


| Name of the Program: BSC MECS | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: VECTORS CALCULUS | | | | | Course Code:MT521 A | | | | | |
| Semester: V | | | | | Year: III | | | | | |
| Academic Year:19-20 | | | | | Batch: 2017-20 | | | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 1 | 2 | 2 | 1 | 1 | 2 | 1 | 3 | 2 | 3 |
| CO2 | 3 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 3 | 2 | 3 |
| CO3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 2 | 3 |
| CO4 | 3 | 2 | 2 | 2 | 1 | 1 | 2 | 3 | 3 | 2 | 3 |
| | 3 | 1.5 | 1.5 | 1.75 | 1.25 | 1.25 | 1.5 | 2 | 3 | 2 | 3 |

| Name of the Program: BSC MSCS | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Name of the Course: VECTORS CALCULUS** | | | | | | **Course Code:MT521 AP** | | | | |
| **Semester: V** | | | | | | **Year: III** | | | | |
| **Academic Year:19-20** | | | | | | **Batch: 2017-20** | | | | |
| | | Program Outcomes | | | | | | | Program Specific Outcomes | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 1 | 2 | 2 | 1 | 1 | 2 | 1 | 3 | 3 | 3 |
| CO2 | 3 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 3 | 3 | 3 |
| CO3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 3 | 3 |
| CO4 | 3 | 2 | 2 | 2 | 1 | 1 | 2 | 3 | 3 | 3 | 3 |
| | 3 | 1.5 | 1.5 | 1.75 | 1.25 | 1.25 | 1.5 | 2 | 3 | 3 | 3 |

| Name of the Program: BSC MSCS | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Name of the Course: NUMBER THEORY** | | | | | | **Course Code: SEC 521** | | | | |
| **Semester: V** | | | | | | **Year: III** | | | | |
| **Academic Year:19-20** | | | | | | **Batch: 2017-20** | | | | |
| | | Program Outcomes | | | | | | | Program Specific Outcomes | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 3 | 3 | 2 | 3 |

| Name of the Program: BSC MSCS | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Name of the Course: GENERIC ELECTIVE -I** | | | | | | **Course Code: GE 521** | | | | |
| **Semester: V** | | | | | | **Year: III** | | | | |
| **Academic Year:19-20** | | | | | | **Batch: 2017-20** | | | | |
| | | Program Outcomes | | | | | | | Program Specific Outcomes | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 2 | 3 | 2 | 1 | 1 | 1 | 3 | 3 | 2 | 3 |

| Name of the Program: BSC MSCS | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Name of the Course: NUMERICAL ANALYSIS** | | | | | | **Course Code: MT 621** | | | | |
| **Semester: VI** | | | | | | **Year: III** | | | | |
| **Academic Year:19-20** | | | | | | **Batch: 2017-20** | | | | |
| | | Program Outcomes | | | | | | | Program Specific Outcomes | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 2 | 2 | 2 | 1 | 1 | 2 | 1 | 3 | 2 | 3 |
| CO2 | 3 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 3 |
| CO3 | 3 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 2 | 3 |
| CO4 | 3 | 2 | 2 | 2 | 1 | 1 | 2 | 3 | 3 | 2 | 3 |
| | 3 | 2 | 1.5 | 1.75 | 1.25 | 1.25 | 2 | 2 | 3 | 2 | 3 |

| | Name of the Program: BSC MS CS | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|

| Name of the Course: NUMERICAL ANALYSIS | | | | | | | Course Code: MT 621P | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Semester: VI** | | | | | | | **Year: III** | | | | |
| **Academic Year:19-20** | | | | | | | **Batch: 2017-20** | | | | |
| | | Program Outcomes | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 2 | 2 | 2 | 1 | 1 | 2 | 1 | 3 | 3 | 3 |
| CO2 | 3 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 |
| CO3 | 3 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 3 |
| CO4 | 3 | 2 | 2 | 2 | 1 | 1 | 2 | 3 | 3 | 3 | 3 |
| | 3 | 2 | 1.5 | 1.75 | 1.25 | 1.25 | 2 | 2 | 3 | 3 | 3 |

| Name of the Program: MSCs | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Name of the Course: SOLID GEOMETRY** | | | | | | | **Course Code:MT621/A** | | | | |
| **Semester: VI** | | | | | | | **Year: III** | | | | |
| **Academic Year:2019-2020** | | | | | | | **Batch:2017-2020** | | | | |
| | | Program Outcomes | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 1 | 1 | 3 | 1 | 1 | 2 | 3 | 3 | 1 | 2 |
| CO2 | 3 | 2 | 1 | 3 | 1 | 1 | 2 | 3 | 3 | 1 | 2 |
| CO3 | 3 | 2 | 1 | 3 | 1 | 1 | 2 | 3 | 3 | 1 | 2 |
| | 3 | 1.67 | 1 | 3 | 1 | 1 | 2 | 3 | 3 | 1 | 2 |

| Name of the Program: MSCs | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Name of the Course: SOLID GEOMETRY** | | | | | | | **Course Code:MT621/AP** | | | | |
| **Semester: VI** | | | | | | | **Year: III** | | | | |
| **Academic Year:2019-2020** | | | | | | | **Batch:2017-2020** | | | | |
| | | Program Outcomes | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 1 | 1 | 3 | 1 | 1 | 2 | 3 | 3 | 1 | 2 |
| CO2 | 3 | 2 | 1 | 3 | 1 | 1 | 2 | 3 | 3 | 1 | 2 |
| CO3 | 3 | 2 | 1 | 3 | 1 | 1 | 2 | 3 | 3 | 1 | 2 |
| | 3 | 1.67 | 1 | 3 | 1 | 1 | 2 | 3 | 3 | 1 | 2 |

| Name of the Program: BSC MSCS | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Name of the Course: GRAPH THEORY** | | | | | | | **Course Code: SEC 621** | | | | |
| **Semester: VI** | | | | | | | **Year: III** | | | | |
| **Academic Year:19-20** | | | | | | | **Batch: 2017-20** | | | | |
| | | Program Outcomes | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 3 | 2 | 3 |

| Name of the Program: BSC MSCS | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: GENERIC ELECTIVE -II | | | | | | Course Code: GE 621 | | | | |
| Semester: VI | | | | | | Year: III | | | | |
| Academic Year:19-20 | | | | | | Batch: 2017-20 | | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 1 | 3 | 2 | 2 | 1 | 1 | 3 | 3 | 2 | 3 |

| Name of the Program: B.Sc (CS) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: Programming in 'C' | | | | | | Course Code: CS125 | | | | |
| Semester: I | | | | | | Year: I | | | | |
| Academic Year: 2017-18 | | | | | | Batch: 2017-20 | | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 2 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 |
| CO2 | 3 | 3 | 2 | 2 | 1 | 1 | 1 | 2 | 2 | 1 | 3 |
| CO3 | 3 | 3 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 3 |
| CO4 | 3 | 3 | 3 | 2 | 1 | 2 | 2 | 3 | 2 | 2 | 3 |

| Name of the Program: B.Sc (CS) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: Programming in 'C' Lab | | | | | | Course Code: CS125P | | | | |
| Semester: I | | | | | | Year: I | | | | |
| Academic Year: 2017-18 | | | | | | Batch: 2017-20 | | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 2 | 2 | 1 | 2 | 2 | 3 | 2 | 2 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 1 | 3 | 2 | 3 | 1 | 2 | 3 |

| Name of the Program: B.Sc (CS) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: Programming in C++ | | | | | | Course Code: CS225 | | | | |
| Semester: II | | | | | | Year: I | | | | |
| Academic Year: 2017-18 | | | | | | Batch: 2017-20 | | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 2 | 1 | 2 | 0 | 1 | 1 | 2 | 2 | 2 | 0 | 2 |
| CO2 | 3 | 2 | 2 | 2 | 1 | 1 | 2 | 3 | 2 | 0 | 2 |
| CO3 | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 3 | 0 | 0 | 3 |
| CO4 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 0 | 0 | 2 |

| Name of the Program: B.Sc (CS) | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Name of the Course:  Programming in C++ Lab | | | | | Course Code: CS225P | | | | | |
| Semester: II | | | | | Year: I | | | | | |
| Academic Year: 2017-18 | | | | | Batch: 2017-20 | | | | | |
| | Program Outcomes | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 2 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 3 |
| CO2 | 3 | 3 | 2 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 3 |

| Name of the Program: B.Sc (CS) | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Name of the Course:  Data Structures | | | | | Course Code: CS325 | | | | | |
| Semester: III | | | | | Year: II | | | | | |
| Academic Year: 2018-19 | | | | | Batch: 2017-20 | | | | | |
| | Program Outcomes | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 3 |
| CO3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 3 |
| CO4 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 3 |

| Name of the Program: B.Sc (CS) | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Name of the Course:  Data Structures Using C++ Lab | | | | | Course Code: CS325P | | | | | |
| Semester: III | | | | | Year: II | | | | | |
| Academic Year: 2018-19 | | | | | Batch: 2017-20 | | | | | |
| | Program Outcomes | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 3 |

| Name of the Program: B.Sc (CS) | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Name of the Course: PC Maintenance | | | | | Course Code: SE325A | | | | | |
| Semester: III | | | | | Year: II | | | | | |
| Academic Year: 2018-19 | | | | | Batch: 2017-20 | | | | | |
| | Program Outcomes | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 2 | 3 | 3 | 2 | 1 | 2 | 3 | 0 | 2 | 3 |
| CO2 | 3 | 3 | 2 | 3 | 2 | 1 | 2 | 3 | 0 | 2 | 3 |

**Name of the Program: B.Sc (CS)**

**Name of the Course: Database Management Systems**  **Course Code: CS425**

**Semester: IV**  **Year: II**

**Academic Year: 2018-19**  **Batch: 2017-20**

| COs/POs | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
|  | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 2 | 1 | 3 | 2 | 2 | 3 | 3 | 1 | 1 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 1 | 1 | 3 |
| CO3 | 3 | 2 | 1 | 2 | 1 | 2 | 3 | 2 | 2 | 1 | 3 |
| CO4 | 3 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 2 | 1 | 3 |

**Name of the Program: B.Sc (CS)**

**Name of the Course: Database Management Systems Lab**  **Course Code: CS425P**

**Semester: IV**  **Year: II**

**Academic Year: 2018-19**  **Batch: 2017-20**

| COs/POs | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
|  | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 0 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 0 | 3 |

**Name of the Program: B.Sc (CS)**

**Name of the Course: Libre Office Calc and Libre Office Base**  **Course Code: SE425A**

**Semester: IV**  **Year: II**

**Academic Year: 2018-19**  **Batch: 2017-20**

| COs/POs | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
|  | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 2 | 1 | 2 | 2 | 1 | 0 | 2 | 3 | 2 | 2 | 3 |
| CO2 | 2 | 1 | 2 | 2 | 1 | 0 | 2 | 3 | 2 | 2 | 3 |

**Name of the Program: B.Sc (CS)**

**Name of the Course: Programming in Java**  **Course Code: CS525**

**Semester: V**  **Year: III**

**Academic Year: 2019-20**  **Batch: 2017-20**

| COs/POs | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
|  | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 1 | 1 | 2 |
| CO2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 3 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| CO3 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 3 |
| CO4 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 1 | 3 |

**Name of the Program: B.Sc (CS)**

| Name of the Course: Programming in Java Lab | | | | | | Course Code: CS525P | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Semester: V | | | | | | Year: III | | | | |
| Academic Year: 2019-20 | | | | | | Batch: 2017-20 | | | | |

| COs/POs | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 3 |
| CO2 | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 3 |

**Name of the Program: B.Sc (CS)**

| Name of the Course: Operating Systems (Elective-II) | | | | | | Course Code: CS525A | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Semester: V | | | | | | Year: III | | | | |
| Academic Year: 2019-20 | | | | | | Batch: 2017-20 | | | | |

| COs/POs | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 3 | 0 | 1 | 2 |
| CO2 | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 1 | 3 |
| CO3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 2 |
| CO4 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 0 | 1 | 2 |

**Name of the Program: B.Sc (CS)**

| Name of the Course: Operating Systems Lab (Elective-II) | | | | | | Course Code: CS525AP | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Semester: V | | | | | | Year: III | | | | |
| Academic Year: 2019-20 | | | | | | Batch: 2017-20 | | | | |

| COs/POs | Program Outcomes | | | | | | | | | Program Specific Outcomes | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 2 | 2 | 2 | 2 | 1 | - | 1 | 2 | 2 | 0 | 2 |
| CO2 | 2 | 3 | 2 | 2 | 2 | 1 | 2 | 3 | 2 | 0 | 2 |

**Name of the Program: B.Sc (CS)**

| Name of the Course: Python | | | | | | Course Code: SE525A | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Semester: V | | | | | | Year: III | | | | |
| Academic Year: 2019-20 | | | | | | Batch: 2017-20 | | | | |

| COs/POs | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| CO1 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 |
| | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 |

**Name of the Program: B.Sc (CS)**

| **Name of the Course:  Libre Office Calc (GE - I)** | | | | | | **Course Code:** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semester: V** | | | | | | **Year: III** | | | | |
| **Academic Year: 2019-20** | | | | | | **Batch: 2017-20** | | | | |
| | Program Outcomes | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 2 | 1 | 2 | 2 | 1 | 0 | 2 | 3 | 2 | 2 | 3 |
| CO2 | 2 | 1 | 2 | 2 | 1 | 0 | 2 | 3 | 2 | 2 | 3 |

**Name of the Program: B.Sc (CS)**

| **Name of the Course:  Basics of Python  (GE-II)** | | | | | | **Course Code:** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semester: V** | | | | | | **Year: III** | | | | |
| **Academic Year: 2019-20** | | | | | | **Batch: 2017-20** | | | | |
| | Program Outcomes | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 |

**Name of the Program: B.Sc (CS)**

| **Name of the Course:   Computer Networks** | | | | | | **Course Code: CS625** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semester: VI** | | | | | | **Year: III** | | | | |
| **Academic Year: 2019-20** | | | | | | **Batch: 2017-20** | | | | |
| | Program Outcomes | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 3 |
| CO2 | 3 | 2 | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 1 |
| CO3 | 3 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 2 | 2 | 2 |
| CO4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |

**Name of the Program: B.Sc (CS)**

| **Name of the Course:   Computer Networks Lab** | **Course Code: CS625P** |
|---|---|
| **Semester: VI** | **Year: III** |
| **Academic Year: 2019-20** | **Batch: 2017-20** |

| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| CO1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 |
| CO2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 |

**Name of the Program: B.Sc (CS)**

**Name of the Course:   Web Technologies (Elective-I)**   **Course Code: CS625A**

**Semester: VI**   **Year: III**

**Academic Year: 2019-20**   **Batch: 2017-20**

| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| CO1 | 3 | 3 | 2 | 3 | 1 | 1 | 2 | 3 | 0 | 0 | 2 |
| CO2 | 3 | 3 | 2 | 3 | 2 | 1 | 3 | 3 | 0 | 0 | 3 |
| CO3 | 3 | 3 | 2 | 3 | 2 | 1 | 3 | 3 | 2 | 0 | 3 |
| CO4 | 3 | 2 | 3 | 2 | 2 | 1 | 2 | 2 | 0 | 0 | 3 |

**Name of the Program: B.Sc (CS)**

**Name of the Course:  Web Technologies Lab (Elective-I)**   **Course Code: CS625AP**

**Semester: VI**   **Year: III**

**Academic Year: 2019-20**   **Batch: 2017-20**

| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| CO1 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 1 | 0 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 0 | 0 | 3 |

**Name of the Program: B.Sc (CS)**

**Name of the Course:  GUI Programming using JAVA**   **Course Code: SE625A**

**Semester: VI**   **Year: III**

**Academic Year: 2019-20**   **Batch: 2017-20**

| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| CO1 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 3 |

**Name of the Program: B.Sc (CS)**

**Name of the Course:  .NET**   **Course Code: SE625B**

**Semester: VI**   **Year: III**

| Academic Year: 2019-20 | | | | | | | | Batch: 2017-20 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 1 | 2 | 3 | 2 | 2 | 1 | 2 | 2 | 1 | 0 | 2 |
| CO2 | 2 | 2 | 3 | 3 | 2 | 1 | 2 | 2 | 1 | 0 | 3 |

| Name of the Program: B.Sc (CS) | |
|---|---|
| Name of the Course: Multimedia (GE - I) | Course Code: |
| Semester: VI | Year: III |
| Academic Year: 2019-20 | Batch: 2017-20 |

| COs/POs | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 3 |
| CO2 | 2 | 3 | 2 | 3 | 1 | 1 | 3 | 3 | 1 | 1 | 3 |

| Name of the Program: B.Sc (CS) | |
|---|---|
| Name of the Course: E-Commerce  (GE-II) | Course Code: |
| Semester: VI | Year: III |
| Academic Year: 2019-20 | Batch: 2017-20 |

| COs/POs | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 0 | 0 | 1 |
| CO2 | 2 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 0 | 0 | 2 |

| Name of the Program: B. Sc(MSCs) | |
|---|---|
| Name of the Course: Descriptive Statistics and Probability | Course Code: ST122 |
| Semester: I | Year: I |
| Academic Year: 2017-18 | Batch: 2017-2020 |

| COs/POs | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 2 | 3 | 1 | 1 | 3 | 3 | 2 | 3 | 2 |
| CO2 | 3 | 3 | 2 | 3 | 1 | 1 | 3 | 3 | 3 | 3 | 2 |
| CO3 | 3 | 3 | 1 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 2 |
| CO4 | 3 | 3 | 2 | 2 | 2 | 1 | 1 | 2 | 3 | 3 | 2 |

| Name of the Program: B. Sc(MSCs) |
|---|

| | Name of the Course: Descriptive Statistics and Probability | | | | | | | | Course Code: ST122P | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Semester: I | | | | | | | | Year: I | | |
| | Academic Year: 2017-18 | | | | | | | | Batch: 2017-2020 | | |
| COs/POs | Program Outcomes | | | | | | | | | Program Specific Outcomes | | |
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 3 | 2 | 1 | 1 | 2 | 3 | 2 | 3 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 1 | 1 | 2 | 3 | 2 | 3 | 3 |

**Name of the Program: B. Sc(MSCs)**

| | Name of the Course: Probability Distributions | | | | | | | | Course Code: ST222 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Semester: II | | | | | | | | Year: I | | |
| | Academic Year: 2017-18 | | | | | | | | Batch: 2017-2020 | | |
| COs/POs | Program Outcomes | | | | | | | | | Program Specific Outcomes | | |
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 2 | 1 | 2 | 1 | 1 | 2 | 2 | 3 | 3 | 2 |
| CO2 | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 2 |
| CO3 | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 2 |
| CO4 | 3 | 3 | 2 | 3 | 2 | 1 | 2 | 3 | 3 | 3 | 2 |

**Name of the Program: B. Sc(MSCs)**

| | Name of the Course: Probability Distributions | | | | | | | | Course Code: ST222P | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Semester: II | | | | | | | | Year: I | | |
| | Academic Year: 2017-18 | | | | | | | | Batch: 2017-2020 | | |
| COs/POs | Program Outcomes | | | | | | | | | Program Specific Outcomes | | |
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 2 | 3 | 2 | 1 | 2 | 3 | 3 | 3 | 3 |
| CO2 | 3 | 3 | 2 | 3 | 2 | 1 | 2 | 3 | 3 | 3 | 3 |
| CO3 | 3 | 3 | 2 | 3 | 2 | 1 | 2 | 3 | 3 | 3 | 3 |

**Name of the Program: B. Sc(MSCs)**

| | Name of the Course: Statistical Methods and Inference-I | | | | | | | | Course Code: ST322 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Semester: III | | | | | | | | Year: II | | |
| | Academic Year: 2018-19 | | | | | | | | Batch: 2017-2020 | | |
| COs/POs | Program Outcomes | | | | | | | | | Program Specific Outcomes | | |
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 1 | 3 | 2 | 1 | 2 | 3 | 3 | 3 | 2 |
| CO2 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 2 |
| CO3 | 3 | 2 | 2 | 2 | 2 | 1 | 2 | 3 | 3 | 3 | 1 |
| CO4 | 3 | 2 | 2 | 2 | 2 | 1 | 2 | 3 | 3 | 3 | 1 |

| Name of the Program: B. Sc(MSCs) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: Statistical Methods and Inference-I | | | | | | Course Code: ST322P | | | | |
| Semester: III | | | | | | Year: II | | | | |
| Academic Year: 2018-19 | | | | | | Batch: 2017-2020 | | | | |
| COs/POs | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 2 | 2 | 1 | 1 | 2 | 3 | 3 | 3 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 3 |

| Name of the Program: B. Sc(MSCs) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: Statistical Inference-II | | | | | | Course Code: ST422 | | | | |
| Semester: IV | | | | | | Year: II | | | | |
| Academic Year: 2018-19 | | | | | | Batch: 2017-2020 | | | | |
| COs/POs | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 2 | 1 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 1 |
| CO2 | 3 | 3 | 1 | 3 | 2 | 1 | 3 | 3 | 3 | 3 | 2 |
| CO3 | 3 | 3 | 2 | 3 | 2 | 1 | 3 | 3 | 3 | 3 | 2 |
| CO4 | 3 | 3 | 2 | 3 | 2 | 1 | 3 | 3 | 3 | 3 | 1 |

| Name of the Program: B. Sc(MSCs) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: Statistical Inference-II | | | | | | Course Code: ST422P | | | | |
| Semester: IV | | | | | | Year: II | | | | |
| Academic Year: 2018-19 | | | | | | Batch: 2017-2020 | | | | |
| COs/POs | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 |
| CO2 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 |
| CO3 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 |

| | Name of the Program: B. Sc(MSCs) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Name of the Course: Applied Statistics-I | | | | | Course Code: ST522 | | | | |
| | Semester: V | | | | | Year: III | | | | |
| | Academic Year: 2019-20 | | | | | Batch: 2017-2020 | | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 1 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 2 |
| CO2 | 3 | 3 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 2 |
| CO3 | 3 | 3 | 2 | 3 | 2 | 1 | 2 | 3 | 3 | 3 | 2 |
| CO4 | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 2 |

| | Name of the Program: B. Sc(MSCs) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Name of the Course: Applied Statistics-I | | | | | Course Code: ST522P | | | | |
| | Semester: V | | | | | Year: III | | | | |
| | Academic Year: 2019-20 | | | | | Batch: 2017-2020 | | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 2 | 2 | 2 | 2 | 1 | 2 | 3 | 3 | 3 | 1 |
| CO2 | 3 | 2 | 2 | 2 | 2 | 1 | 2 | 3 | 3 | 3 | 1 |
| CO3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 |
| CO4 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 2 |

| | Name of the Program: B. Sc(MSCs) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Name of the Course: Statistical quality Control and Reliability | | | | | Course Code: ST522A | | | | |
| | Semester: V | | | | | Year: III | | | | |
| | Academic Year: 2019-20 | | | | | Batch: 2017-2020 | | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 2 | 3 | 1 | 2 | 3 | 3 | 3 | 3 | 1 |
| CO2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 1 |
| CO3 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 2 |
| CO4 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 2 |

| | Name of the Program: B. Sc(MSCs) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Name of the Course: Statistical quality Control and Reliability | | | | | | | Course Code: ST522AP | | | |
| | Semester: V | | | | | | | Year: III | | | |
| | Academic Year: 2019-20 | | | | | | | Batch: 2017-2020 | | | |
| | | Program Outcomes | | | | | | | | Program Specific Outcomes | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 |
| CO2 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 2 |
| CO3 | 3 | 3 | 2 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 |

| | Name of the Program: B. Sc(MSCs) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Name of the Course: Applied Statistics-II | | | | | | | Course Code: ST622 | | | |
| | Semester: VI | | | | | | | Year: III | | | |
| | Academic Year: 2019-20 | | | | | | | Batch: 2017-2020 | | | |
| | | Program Outcomes | | | | | | | | Program Specific Outcomes | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 1 |
| CO2 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 1 |
| CO3 | 3 | 3 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 1 |
| CO4 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 1 |

| | Name of the Program: B. Sc(MSCs) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Name of the Course: Applied Statistics-II | | | | | | | Course Code: ST622P | | | |
| | Semester: VI | | | | | | | Year: III | | | |
| | Academic Year: 2019-20 | | | | | | | Batch: 2017-2020 | | | |
| | | Program Outcomes | | | | | | | | Program Specific Outcomes | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 3 | 3 | 2 | 1 | 3 | 3 | 3 | 3 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 |
| CO3 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 3 |
| CO4 | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 |

| Name of the Program: B. Sc(MSCs) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: Operations Research | | | | | | Course Code: ST622A | | | | |
| Semester: VI | | | | | | Year: III | | | | |
| Academic Year: 2019-20 | | | | | | Batch: 2017-2020 | | | | |
| | Program Outcomes | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 2 |
| CO2 | 3 | 3 | 2 | 3 | 2 | 1 | 3 | 3 | 3 | 3 | 2 |
| CO3 | 3 | 3 | 2 | 3 | 1 | 1 | 3 | 3 | 3 | 3 | 2 |
| CO4 | 3 | 3 | 2 | 3 | 1 | 1 | 3 | 3 | 3 | 3 | 2 |

| Name of the Program: B. Sc(MSCs) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: Operations Research | | | | | | Course Code: ST622AP | | | | |
| Semester: VI | | | | | | Year: III | | | | |
| Academic Year: 2019-20 | | | | | | Batch: 2017-2020 | | | | |
| | Program Outcomes | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 |
| CO2 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 |
| CO3 | 3 | 3 | 2 | 3 | 1 | 2 | 3 | 3 | 3 | 3 | 3 |
| CO4 | 3 | 3 | 2 | 3 | 1 | 2 | 3 | 3 | 3 | 3 | 3 |

| Name of the Program: B. Sc(MSCs) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: Data Analysis with R -I | | | | | | Course Code: SE322 | | | | |
| Semester: III | | | | | | Year: II | | | | |
| Academic Year: 2018-19 | | | | | | Batch: 2017-2020 | | | | |
| | Program Outcomes | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 1 | 3 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 3 |

| Name of the Program: B. Sc(MSCs) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: Data Analysis with R -II | | | | | | Course Code: SE422 | | | | |
| Semester: IV | | | | | | Year: II | | | | |
| Academic Year: 2018-19 | | | | | | Batch: 2017-2020 | | | | |
| | Program Outcomes | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 |

| Name of the Program: B. Sc(MSCs) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: Data Analysis with SPSS -I | | | | | | Course Code: SE522 | | | | |
| Semester: V | | | | | | Year: III | | | | |
| Academic Year: 2019-20 | | | | | | Batch: 2017-2020 | | | | |
| | Program Outcomes | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 2 | 1 | 2 | 2 | 3 | 3 | 1 | 3 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 1 | 3 | 3 |

| Name of the Program: B. Sc(MSCs) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: Data Analysis with SPSS -II | | | | | | Course Code: SE622 | | | | |
| Semester: VI | | | | | | Year: III | | | | |
| Academic Year: 2019-20 | | | | | | Batch: 2017-2020 | | | | |
| | Program Outcomes | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 3 |

| Name of the Program: B. Sc(MSCs) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Course: Data Analysis with MS Excel | | | | | | Course Code: GE522 | | | | |
| Semester: V | | | | | | Year: III | | | | |
| Academic Year: 2019-20 | | | | | | Batch: 2017-2020 | | | | |
| | Program Outcomes | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 2 | 1 | 2 | 2 | 3 | 3 | 2 | 3 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 3 |

| | Name of the Program: B. Sc(MSCs) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Name of the Course: Data Analysis with SPSS** | | | | | | **Course Code: GE622** | | | | |
| | **Semester: VI** | | | | | | **Year: III** | | | | |
| | **Academic Year: 2019-20** | | | | | | **Batch: 2017-2020** | | | | |
| | **Program Outcomes** | | | | | | | | **Program Specific Outcomes** | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 1 | 3 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 1 | 3 | 3 |

**Program Targets**

| | Semester | Course | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| 1 | 1 | En | 0.25 | 0 | 0 | 0.5 | 3 | 2.5 | 3 | 3 | 1.5 | 0 | 0 |
| 2 | 1 | SL | 0 | 0 | 0 | 0.37 | 3 | 1.44 | 2.87 | 2.75 | 0.375 | 0 | 0.18 |
| 3 | 1 | EVS | 1 | 1 | 1.5 | 2 | 1 | 3 | 2 | 2.5 | 2 | 0 | 2 |
| 4 | 1 | M | 3 | 1.5 | 1.5 | 2 | 2.25 | 1.25 | 1.5 | 2.25 | 3 | 3 | 3 |
| 5 | 1 | M P | 3 | 1.5 | 1.5 | 2 | 2.25 | 1.25 | 1.5 | 2.25 | 3 | 3 | 3 |
| 6 | 1 | Stat | 3 | 3 | 1.75 | 2.75 | 1.5 | 1.25 | 2.25 | 2.75 | 2.75 | 3 | 2 |
| 7 | 1 | Stat P | 3 | 3 | 3 | 2.5 | 1 | 1 | 2 | 3 | 2 | 3 | 3 |
| 8 | 1 | Cs | 2.75 | 2.5 | 2 | 2 | 1 | 1.67 | 1.5 | 2 | 2 | 1.67 | 3 |
| 9 | 1 | Cs P | 3 | 3 | 2.5 | 2.5 | 1 | 2.5 | 2 | 3 | 1.5 | 2 | 3 |
| 10 | 2 | En | 0.5 | 0 | 0 | 0.25 | 3 | 2.75 | 3 | 3 | 1.25 | 0 | 0 |
| 11 | 2 | SL | 0.06 | 0 | 0 | 0.25 | 3 | 1.5 | 2.87 | 2.75 | 1.18 | 0 | 0 |
| 12 | 2 | GS | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 0 | 2 |
| 13 | 2 | M | 3 | 1.5 | 1.5 | 2 | 2.25 | 1.25 | 1.5 | 2.25 | 3 | 3 | 3 |
| 14 | 2 | M P | 3 | 1.5 | 1.5 | 2 | 2.25 | 1.25 | 1.5 | 2.25 | 3 | 3 | 3 |
| 15 | 2 | Stat | 3 | 2.75 | 1.75 | 2.75 | 1.75 | 1.5 | 2 | 2.75 | 3 | 3 | 2 |
| 16 | 2 | Stat P | 3 | 3 | 2 | 3 | 2 | 1 | 2 | 3 | 3 | 3 | 3 |
| 17 | 2 | Cs | 2.25 | 1.5 | 1.75 | 1.67 | 1 | 1 | 1.75 | 2.5 | 2 | 0 | 2.25 |
| 18 | 2 | Cs P | 3 | 3 | 2 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 3 |
| 19 | 3 | En | 0 | 0 | 0 | 0.8 | 3 | 2 | 3 | 3 | 1.2 | 0 | 0 |
| 20 | 3 | SL | 0 | 0 | 0 | 0 | 3 | 1.25 | 2.87 | 2.75 | 0.37 | 0 | 0.06 |
| 21 | 3 | M | 3 | 2.25 | 1 | 2.25 | 1.25 | 1 | 2 | 3 | 3 | 1.5 | 2 |
| 22 | 3 | M P | 3 | 2.25 | 1 | 2.25 | 1.25 | 1 | 2 | 3 | 3 | 1.5 | 2 |
| 23 | 3 | SEC | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 3 |
| 24 | 3 | Stat | 3 | 2.5 | 1.75 | 2.5 | 2 | 1.25 | 2.25 | 3 | 3 | 3 | 1.5 |
| 25 | 3 | Stat P | 3 | 3 | 2.5 | 2.5 | 1.5 | 1.5 | 2 | 3 | 3 | 3 | 3 |
| 26 | 3 | SEC | 3 | 3 | 2.5 | 2.5 | 2 | 2 | 2.5 | 3 | 1.5 | 3 | 3 |
| 27 | 3 | Cs | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 0 | 3 |
| 28 | 3 | Cs P | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 3 |
| 29 | 3 | SEC | 3 | 2.5 | 2.5 | 3 | 2 | 1 | 2 | 3 | 0 | 2 | 3 |
| 30 | 4 | En | 0 | 0 | 0 | 0.2 | 3 | 2.2 | 3 | 3 | 0.6 | 0 | 0 |
| 31 | 4 | SL | 0 | 0 | 0 | 0.05 | 3 | 1.25 | 2.87 | 2.75 | 0.6 | 0 | 0 |
| 32 | 4 | M | 3 | 1 | 1 | 1.75 | 1 | 1.5 | 1.75 | 3 | 3 | 1.5 | 1.75 |
| 33 | 4 | M P | 3 | 1 | 1 | 1.75 | 1 | 1.5 | 1.75 | 3 | 3 | 1.5 | 1.75 |
| 34 | 4 | SEC | 3 | 1 | 1 | 2 | 1 | 1 | 1 | 3 | 3 | 2 | 3 |
| 35 | 4 | Stat | 3 | 2.75 | 1.5 | 2.75 | 2 | 1.25 | 2.75 | 3 | 2.75 | 3 | 1.5 |
| 36 | 4 | Stat P | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 |
| 37 | 4 | SEC | 3 | 3 | 2.5 | 2.5 | 2 | 2 | 2.5 | 3 | 2.5 | 3 | 3 |
| 38 | 4 | Cs | 3 | 2 | 1.5 | 2.5 | 1.75 | 2 | 2.75 | 2.75 | 1.5 | 1 | 3 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | 4 | Cs P | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 0 | 3 |
| 40 | 4 | SEC | 2 | 1 | 2 | 2 | 1 | 0 | 2 | 3 | 2 | 2 | 3 |
| 41 | 5 | M | 3 | 1.75 | 1.25 | 1.5 | 1 | 1 | 1.5 | 3 | 3 | 2.75 | 2.75 |
| 42 | 5 | M P | 3 | 1.75 | 1.25 | 1.5 | 1 | 1 | 1.5 | 3 | 3 | 2.75 | 2.75 |
| 43 | 5 | M | 3 | 1.5 | 1.5 | 1.75 | 1.25 | 1.25 | 1.5 | 2 | 3 | 3 | 3 |
| 44 | 5 | M P | 3 | 1.5 | 1.5 | 1.75 | 1.25 | 1.25 | 1.5 | 2 | 3 | 3 | 3 |
| 45 | 5 | SEC | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 3 | 3 | 3 | 3 |
| 46 | 5 | GE | 3 | 2 | 3 | 2 | 1 | 1 | 1 | 3 | 3 | 3 | 3 |
| 47 | 5 | Stat | 3 | 3 | 1.5 | 2.5 | 2 | 1.75 | 2 | 3 | 2.75 | 3 | 2 |
| 48 | 5 | Stat P | 3 | 2.5 | 2.5 | 2.5 | 2.5 | 1.5 | 2.5 | 3 | 3 | 3 | 1.75 |
| 49 | 5 | Stat | 3 | 2.75 | 2 | 2.25 | 1.75 | 2 | 2.75 | 3 | 2.25 | 3 | 1.5 |
| 50 | 5 | Stat P | 3 | 2.67 | 2.33 | 3 | 2.33 | 1.67 | 3 | 3 | 3 | 3 | 2.67 |
| 51 | 5 | SEC | 3 | 3 | 2.5 | 2 | 2 | 2 | 3 | 3 | 1 | 3 | 3 |
| 52 | 5 | GE | 3 | 3 | 2.5 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 3 |
| 53 | 5 | Cs | 2.75 | 2.75 | 2.75 | 2.75 | 2 | 2 | 2.25 | 2.5 | 1.75 | 1 | 2.75 |
| 54 | 5 | Cs P | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 3 |
| 55 | 5 | Cs | 2.5 | 2.5 | 1.75 | 2.25 | 2.25 | 1.5 | 1.75 | 2.5 | 1.5 | 0 | 2.25 |
| 56 | 5 | Cs P | 2 | 2.5 | 2 | 2 | 1.5 | 0 | 1.5 | 2.5 | 2 | 0 | 2 |
| 57 | 5 | SEC | 2.5 | 2 | 2.5 | 2.5 | 2 | 2 | 2 | 2.5 | 2 | 2 | 3 |
| 58 | 5 | GE | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 |
| 59 | 6 | M | 3 | 2 | 1.5 | 1.75 | 1.25 | 1.25 | 2 | 2 | 3 | 3 | 3 |
| 60 | 6 | M P | 3 | 2 | 1.33 | 1.67 | 1.33 | 1.33 | 2 | 2.33 | 3 | 3 | 3 |
| 61 | 6 | M | 3 | 1.67 | 1 | 3 | 1 | 1 | 2 | 3 | 3 | 1 | 2 |
| 62 | 6 | M P | 3 | 1.67 | 1 | 3 | 1 | 1 | 2 | 3 | 3 | 1 | 2 |
| 63 | 6 | SEC | 3 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 3 | 3 | 3 |
| 64 | 6 | GE | 3 | 1 | 3 | 2 | 2 | 1 | 1 | 3 | 3 | 3 | 3 |
| 65 | 6 | Stat | 3 | 3 | 1.75 | 2.5 | 2 | 2 | 2.5 | 3 | 3 | 3 | 1 |
| 66 | 6 | Stat P | 3 | 2.75 | 2.5 | 3 | 2.25 | 1.75 | 2.5 | 3 | 3 | 3 | 2.75 |
| 67 | 6 | Stat | 3 | 3 | 2 | 3 | 1.5 | 1.25 | 3 | 3 | 3 | 3 | 2 |
| 68 | 6 | Stat P | 3 | 3 | 2 | 3 | 1.5 | 2 | 3 | 3 | 3 | 3 | 3 |
| 69 | 6 | SEC | 3 | 3 | 2.5 | 2.5 | 2 | 2 | 3 | 3 | 2 | 3 | 3 |
| 70 | 6 | GE | 3 | 3 | 2.5 | 2.5 | 2 | 2 | 3 | 3 | 1 | 3 | 3 |
| 71 | 6 | Cs | 3 | 2 | 2 | 1.5 | 1.5 | 1.5 | 1.25 | 1.75 | 2 | 1.5 | 2 |
| 72 | 6 | Cs P | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 3 |
| 73 | 6 | Cs | 3 | 2.75 | 2.25 | 2.75 | 1.75 | 1 | 2.5 | 2.75 | 2 | 0 | 2.75 |
| 74 | 6 | Cs P | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 1 | 0 | 3 |
| 75 | 6 | SEC | 2.25 | 2.5 | 3 | 2.75 | 2 | 0 | 2 | 2 | 1.5 | 1 | 2.75 |
| 76 | 6 | GE | 2 | 1.75 | 1.75 | 2.25 | 1.25 | 0 | 1.75 | 2.25 | 1 | 1 | 2.25 |
| **Total** | | | 192.81 | 154.25 | 131.92 | 158.26 | 138.17 | 112.81 | 160.5 | 203.33 | 168.34 | 141.67 | 177.92 |
| **Program Outcome Targets** | | | 2.54 | 2.03 | 1.73 | 2.08 | 1.82 | 1.48 | 2.12 | 2.67 | 2.21 | 1.86 | 2.34 |

**Program Attainments**

| | Semester | Course | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| 1 | 1 | En | 0.25 | 0 | 0 | 0.5 | 3 | 2.5 | 3 | 3 | 1.5 | 0 | 0 |
| 2 | 1 | SL | 0 | 0 | 0 | 0.37 | 3 | 1.44 | 2.87 | 2.75 | 0.37 | 0 | 0.19 |
| 3 | 1 | M | 3 | 1.5 | 1.5 | 2 | 2.25 | 1.25 | 1.5 | 2.25 | 3 | 3 | 3 |
| 4 | 1 | Mp | 3 | 1.5 | 1.5 | 2 | 2.25 | 1.25 | 1.5 | 2.25 | 3 | 3 | 3 |
| 5 | 1 | Stat | 3 | 3 | 1.75 | 2.75 | 1.5 | 1.25 | 2.25 | 2.75 | 2.75 | 3 | 2 |
| 6 | 1 | Stat P | 3 | 3 | 3 | 2.5 | 1 | 1 | 2 | 3 | 2 | 3 | 3 |
| 7 | 1 | Cs | 1.83 | 1.67 | 1.33 | 1.33 | 0.67 | 1.11 | 1 | 1.33 | 1.33 | 1.11 | 2 |
| 8 | 1 | Cs P | 3 | 3 | 2.5 | 2.5 | 1 | 2.5 | 2 | 3 | 1.5 | 2 | 3 |
| 9 | 1 | EVS | 0.67 | 0.67 | 1 | 1.33 | 0.67 | 2 | 1.33 | 1.67 | 1.33 | 0 | 1.33 |
| 10 | 2 | En | 0.5 | 0 | 0 | 0.25 | 3 | 2.75 | 3 | 3 | 1.25 | 0 | 0 |
| 11 | 2 | SL | 0.06 | 0 | 0 | 0.25 | 3 | 1.5 | 2.87 | 2.75 | 1.18 | 0 | 0 |
| 12 | 2 | M | 3 | 1.5 | 1.5 | 2 | 2.25 | 1.25 | 1.5 | 2.25 | 3 | 3 | 3 |
| 13 | 2 | M P | 3 | 1.5 | 1.5 | 2 | 2.25 | 1.25 | 1.5 | 2.25 | 3 | 3 | 3 |
| 14 | 2 | Stat | 3 | 2.75 | 1.75 | 2.75 | 1.75 | 1.5 | 2 | 2.75 | 3 | 3 | 2 |
| 15 | 2 | Stat P | 3 | 3 | 2 | 3 | 2 | 1 | 2 | 3 | 3 | 3 | 3 |
| 16 | 2 | Cs | 2.25 | 1.5 | 1.75 | 1.67 | 1 | 1 | 1.75 | 2.5 | 2 | 0 | 2.25 |
| 17 | 2 | Cs P | 3 | 3 | 2 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 3 |
| 18 | 2 | GS | 0 | 0 | 0 | 0.67 | 1.33 | 1.33 | 1.33 | 1.33 | 1.33 | 0 | 1.33 |
| 19 | 3 | En | 0 | 0 | 0 | 0.8 | 3 | 2 | 3 | 3 | 1.2 | 0 | 0 |
| 20 | 3 | SL | 0 | 0 | 0 | 0 | 3 | 1.25 | 2.87 | 2.75 | 0.375 | 0 | 0.06 |
| 21 | 3 | M | 3 | 2.25 | 1 | 2.25 | 1.25 | 1 | 2 | 3 | 3 | 1.5 | 2 |
| 22 | 3 | M P | 3 | 2.25 | 1 | 2.25 | 1.25 | 1 | 2 | 3 | 3 | 1.5 | 2 |
| 23 | 3 | SEC | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 3 |
| 24 | 3 | Stat | 3 | 2.5 | 1.75 | 2.5 | 2 | 1.25 | 2.25 | 3 | 3 | 3 | 1.5 |
| 25 | 3 | Stat P | 3 | 3 | 2.5 | 2.5 | 1.5 | 1.5 | 2 | 3 | 3 | 3 | 3 |
| 26 | 3 | SEC | 3 | 3 | 2.5 | 2.5 | 2 | 2 | 2.5 | 3 | 1.5 | 3 | 3 |
| 27 | 3 | Cs | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 0 | 3 |
| 28 | 3 | Cs P | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 3 |
| 29 | 3 | SEC | 3 | 2.5 | 2.5 | 3 | 2 | 1 | 2 | 3 | 0 | 2 | 3 |
| 30 | 4 | En | 0 | 0 | 0 | 0.2 | 3 | 2.2 | 3 | 3 | 0.6 | 0 | 0 |
| 31 | 4 | SL | 0 | 0 | 0 | 0.05 | 3 | 1.25 | 2.87 | 2.75 | 0.6 | 0 | 0 |
| 32 | 4 | M | 3 | 1 | 1 | 1.75 | 1 | 1.5 | 1.75 | 3 | 3 | 1.5 | 1.75 |
| 33 | 4 | M P | 3 | 1 | 1 | 1.75 | 1 | 1.5 | 1.75 | 3 | 3 | 1.5 | 1.75 |
| 34 | 4 | SEC | 3 | 1 | 1 | 2 | 1 | 1 | 1 | 3 | 3 | 2 | 3 |
| 35 | 4 | Stat | 3 | 2.75 | 1.5 | 2.75 | 2 | 1.25 | 2.75 | 3 | 2.75 | 3 | 1.5 |
| 36 | 4 | Stat P | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 |
| 37 | 4 | SEC | 3 | 3 | 2.5 | 2.5 | 2 | 2 | 2.5 | 3 | 2.5 | 3 | 3 |
| 38 | 4 | Cs | 3 | 2 | 1.5 | 2.5 | 1.75 | 2 | 2.75 | 2.75 | 1.5 | 1 | 3 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | 4 | Cs P | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 0 | 3 |
| 40 | 4 | SEC | 2 | 1 | 2 | 2 | 1 | 0 | 2 | 3 | 2 | 2 | 3 |
| 41 | 5 | M | 3 | 1.75 | 1.25 | 1.5 | 1 | 1 | 1.5 | 3 | 3 | 2.75 | 2.75 |
| 42 | 5 | M P | 3 | 1.75 | 1.25 | 1.5 | 1 | 1 | 1.5 | 3 | 3 | 2.75 | 2.75 |
| 43 | 5 | M | 3 | 1.5 | 1.5 | 1.75 | 1.25 | 1.25 | 1.5 | 2 | 3 | 3 | 3 |
| 44 | 5 | M P | 3 | 1.5 | 1.5 | 1.75 | 1.25 | 1.25 | 1.5 | 2 | 3 | 3 | 3 |
| 45 | 5 | SEC | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 3 | 3 | 3 | 3 |
| 46 | 5 | GE | 3 | 2 | 3 | 2 | 1 | 1 | 1 | 3 | 3 | 3 | 3 |
| 47 | 5 | Stat | 3 | 3 | 1.5 | 2.5 | 2 | 1.75 | 2 | 3 | 2.75 | 3 | 2 |
| 48 | 5 | Stat P | 3 | 2.5 | 2.5 | 2.5 | 2.5 | 1.5 | 2.5 | 3 | 3 | 3 | 1.75 |
| 49 | 5 | Stat | 3 | 2.75 | 2 | 2.25 | 1.75 | 2 | 2.75 | 3 | 2.25 | 3 | 1.5 |
| 50 | 5 | Stat P | 3 | 2.67 | 2.33 | 3 | 2.33 | 1.67 | 3 | 3 | 3 | 3 | 2.67 |
| 51 | 5 | SEC | 3 | 3 | 2.5 | 2 | 2 | 2 | 3 | 3 | 1 | 3 | 3 |
| 52 | 5 | GE | 3 | 3 | 2.5 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 3 |
| 53 | 5 | Cs | 2.75 | 2.75 | 2.75 | 2.75 | 2 | 2 | 2.25 | 2.5 | 1.75 | 1 | 2.75 |
| 54 | 5 | Cs P | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 3 |
| 55 | 5 | Cs | 2.5 | 2.5 | 1.75 | 2.25 | 2.25 | 1.5 | 1.75 | 2.5 | 1.5 | 0 | 2.25 |
| 56 | 5 | Cs P | 2 | 2.5 | 2 | 2 | 1.5 | 0 | 1.5 | 2.5 | 2 | 0 | 2 |
| 57 | 5 | SEC | 2.5 | 2 | 2.5 | 2.5 | 2 | 2 | 2 | 2.5 | 2 | 2 | 3 |
| 58 | 5 | GE | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 |
| 59 | 6 | M | 3 | 2 | 1.5 | 1.75 | 1.25 | 1.25 | 2 | 2 | 3 | 3 | 3 |
| 60 | 6 | M P | 3 | 2 | 1.33 | 1.67 | 1.33 | 1.33 | 2 | 2.33 | 3 | 3 | 3 |
| 61 | 6 | M | 3 | 1.67 | 1 | 3 | 1 | 1 | 2 | 3 | 3 | 1 | 2 |
| 62 | 6 | M P | 3 | 1.67 | 1 | 3 | 1 | 1 | 2 | 3 | 3 | 1 | 2 |
| 63 | 6 | SEC | 3 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 3 | 3 | 3 |
| 64 | 6 | GE | 3 | 1 | 3 | 2 | 2 | 1 | 1 | 3 | 3 | 3 | 3 |
| 65 | 6 | Stat | 3 | 3 | 1.75 | 2.5 | 2 | 2 | 2.5 | 3 | 3 | 3 | 1 |
| 66 | 6 | Stat P | 3 | 2.75 | 2.5 | 3 | 2.25 | 1.75 | 2.5 | 3 | 3 | 3 | 2.75 |
| 67 | 6 | Stat | 3 | 3 | 2 | 3 | 1.5 | 1.25 | 3 | 3 | 3 | 3 | 2 |
| 68 | 6 | Stat P | 3 | 3 | 2 | 3 | 1.5 | 2 | 3 | 3 | 3 | 3 | 3 |
| 69 | 6 | SEC | 3 | 3 | 2.5 | 2.5 | 2 | 2 | 3 | 3 | 2 | 3 | 3 |
| 70 | 6 | GE | 3 | 3 | 2.5 | 2.5 | 2 | 2 | 3 | 3 | 1 | 3 | 3 |
| 71 | 6 | Cs | 3 | 2 | 2 | 1.5 | 1.5 | 1.5 | 1.25 | 1.75 | 2 | 1.5 | 2 |
| 72 | 6 | Cs P | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 3 |
| 73 | 6 | Cs | 3 | 2.75 | 2.25 | 2.75 | 1.75 | 1 | 2.5 | 2.75 | 2 | 0 | 2.75 |
| 74 | 6 | Cs P | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 1 | 0 | 3 |
| 75 | 6 | SEC | 2.25 | 2.5 | 3 | 2.75 | 2 | 0 | 2 | 2 | 1.5 | 1 | 2.75 |
| 76 | 6 | GE | 2 | 1.75 | 1.75 | 2.25 | 1.25 | 0 | 1.75 | 2.25 | 1 | 1 | 2.25 |
| **Total** | | | **191.56** | **153.08** | **130.75** | **156.59** | **136.83** | **110.58** | **158.66** | **201.16** | **166.33** | **141.11** | **175.58** |
| **Program Outcome Attainment** | | | **2.52** | **2.01** | **1.72** | **2.06** | **1.80** | **1.45** | **2.08** | **2.65** | **2.18** | **1.86** | **2.31** |

Gap

| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| **Program outcome Target** | 2.54 | 2.03 | 1.73 | 2.08 | 1.82 | 1.48 | 2.12 | 2.67 | 2.21 | 1.86 | 2.34 |
| **Program Outcome Attainment** | 2.52 | 2.01 | 1.72 | 2.06 | 1.80 | 1.45 | 2.08 | 2.65 | 2.18 | 1.86 | 2.31 |
| **Gap** | 0.02 | 0.02 | 0.01 | 0.02 | 0.02 | 0.03 | 0.04 | 0.02 | 0.03 | 0.00 | 0.03 |