# B.Sc programme outcome

Students are expected to gain knowledge in theory as well practical aspects in different subject areas which include Mathematics, Physics , Chemistry and Computer science  and to pursue multi and interdisciplinary service career in future.

B.Sc Mathematics programme outcome(programme specific outcome)

On completion of the programme students should have gained in-depth knowledge of theoretical aspects coupled with application of theory to real life problems. Outcome of the programme is to enhance employability and to bridge the gap between the skill requirements of the employer and the competency of the students.

Course specific outcome

| S.No | Sub code | Sub name | Course specific outcome |
|------|----------|----------|-------------------------|
| 1 | 1MM01b | Algebra & analytical geometry - 2d | Knowledge on conics ,proficiency in Cartesian coordinates and polar coordinates, knowledge on equations, matrices and types of series |
| 2 | 1MM02 | Differential Calculus | Knowledge on applications of differentiation. |
| 3 | 1ANM1a | Allied Numerical Analysis I | Knowledge to solve transcedental equations, ode and numerical integration |
| 4 | 2MM03b | Trigonometry &Solid Geometry | Basics concepts in trigonometry and training in 3 dimensional surfaces like plane, sphere cone & cylinder |
| 5 | 2MM04 | Integral Calculus | Applications of integration in finding area, volume etc |
| 6 | 2ANM2a | Allied Numerical Analysis II | Numerical solutions to simultaneous linear equations and ode. |
| 7 | 2MMP1 | Main Practical I | Able to find to summation of various series and matrices |
| 8 | 3MM05a | Differential Equations | Able to construct and solve ode and pde for the given situation. |
| 9 | 3MM06 | Discrete Mathematics | Understand mathematical logic concepts and basic intro on graph theory and group theory |
| 10 | 3ASM1a | Allied Mathematical Statistics I | Knowledge on data collection and statistical methods to be used as a tool in the analysis of problems in nature both physical and human studies. |
| 11 | 4MM07b | Vectors &Fourier Transforms | Knowledge on vector differentiation and integration ,fourier series, transforms and its applications |
| 12 | 4MM08c | Mathematical Analysis I | Deep understanding and in-depth knowledge in the fundamental concepts of the underlying theory to facilitate higher studies and extensive research |
| 13 | 4MM09a | Programming in C | Formulate programs in C Language |
| 14 | 4ASM2a | Allied Mathematical Statistics II | Knowledge on data collection and statistical methods to be used as a tool in the analysis of problems in nature both physical and human studies. |
| 15 | 4ASMPV | Allied Project & Viva | Gain competence in data collection, analysis and interpretation |

| 16 | 4MMP2 | Main Practical II | Knowledge to handle problems in sequence and series,vectors and differential equations |
|----|-------|-------------------|---------------------------------------------------|
| 17 | 4MMP3 | Maing Practical III | Proficiency in drafting programs in C language |
| 18 | 5MM10 | Algebraic structures | Able to understand concepts in algebraic structures like groups and rings |
| 19 | 5MM11c | Mathematical Analysis II | Able to handle sequence of numbers and functions and series. |
| 20 | 5MM12 | Statics | Understand various forces acting on rigid bodies and to compute centre of masses of various objects |
| 21 | 5MM13a | Data Structures & Algorithms | Knowledge in writing mathematical algorithms for employability purpose. |
| 22 | 5EM01a | Number Theory | To give an introduction to elementary number theory to predict the outcome of experiments and to study the relationship between different sorts of numbers. |
| 23 | 5EM02 | Linear Programming | Systematics and analytical approach in decision making and problem solving |
| 24 | 6MM14a | Linear Algebra | Knowledge gained on this course involving algebraic structures like vector spaces and inner product spaces will be helpful for the students to pursues higher studies in mathematics |
| 25 | 6MM15 | Complex Variables | They will be able to understand concept of continuity ,derivative and analyticity and integration of complex functions over contours. |
| 26 | 6MM16 | Dynamics | Knowledge on projectiles and moment of inertia of various objects |
| 27 | 6EM03a | Optimization Techniques | Knowledge on integer programming and inventory control and project scheduling |
| 28 | 6EM04 | Graph Theory | After completing the students will be able to apply concepts of graph in interdisciplinary subjects. |