

SPECIFIC COURSE OUTCOMES:

| Sem | Paper Code | Paper Name | Specific Course outcomes |
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| Sem-I | MATDSCT 1.1 | Algebra-I & Calculus-I | Students will get the knowledge to solve the System of Linear Equations such as * Finding unknown age. * Finding unknown angles in geometry. * For calculation of speed, distance or time. * Problems based on force and pressure. |
| Sem-II | MATDSCT 2.1 | Algebra-II & Calculus-II | <ul style="list-style-type: none"> • Group theory has applications in physics, chemistry, and computer science, and even puzzles like Rubik's Cube can be represented using group theory. • Integrals to determine the shape of building constructions or length of power cable required to connect the two substations etc. |
| Sem-III | MATDSCT 3.1 | Ordinary Differential Equations & Real Analysis-I | <ul style="list-style-type: none"> • Ordinary Differential Equations are used to calculate the movement or flow of electricity, motion of an object to and fro like a pendulum, to explain thermodynamics concepts. • Sequence & Series help us to predict, evaluate and monitor the outcome of a situation or event and help us a lot in decision making problems. |
| Sem-IV | MATDSCT 4.1 | Partial Differential Equations & Integral transforms | <ul style="list-style-type: none"> • Partial Differential Equations are used to mathematically formulate, and thus aid the solution of, physical and other problems involving functions of several variables, such as the propagation of heat or sound, fluid flow, elasticity, electrostatics, electrodynamics, thermodynamics, etc |
| Sem-V | BMSEC5C | Linear Algebra (SEC) | <ul style="list-style-type: none"> • Linear Algebra is used to calculate the speed, distance, or time. |
| Sem-V & VI | BMDSE5CT | Numerical Analysis (DSE) | <ul style="list-style-type: none"> • Numerical Analysis is needed to solve engineering problems that lead to equations that cannot be solved analytically with simple formulas. For example the solutions of large systems of algebraic equations, evaluation of integrals and solution of differential equations. |
| Sem-V | BMSEC5B | Laplace Transform (SEC) | <ul style="list-style-type: none"> • The concepts of Laplace Transforms are applied in the area of science and technology such as Electric circuit analysis, Communication engineering, Control engineering and Nuclear physics etc. |
| Sem-V & VI | | Graph Theory | <ul style="list-style-type: none"> • Graph theory and probability make it possible to guarantee a reliable service, for example by finding diversions when a particular connection is busy. All roads and motorways also form a large network, which is used by navigation services like Google Maps when working out the shortest route between two given points. |

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| Sem-VI | BMSEC6B | Fourier Series & Fouries Transforms (SEC) | <ul style="list-style-type: none">• The Fourier series Fourier Transform has many such applications in electrical engineering, vibration analysis, acoustics, optics, signal processing, image processing, quantum mechanics, econometrics, shell theory, etc. |
| Sem-VI | BMSEC6D | Vector Calculus (SEC) | <ul style="list-style-type: none">• Vector Calculus is used extensively in physics and engineering, especially in the description of electromagnetic fields, gravitational fields, and fluid flow. |