Curriculum Delivery for the 1st Semester
Subject : Mathematics (Major)
Session: 2025-2026

Semester – I			
Name of the teacher	**Subject**	**Subject**	**Clas ses**
Md. Meezanur Rahaman	SEC-T- I Unit 1 & II	**Unit – I:** ●Introduction, propositions, truth table, negation, conjunction and disjunction. Implications, biconditional propositions, converse, contrapositive and inverse propositions and precedence of logical operators. ●Propositional equivalence, Logical equivalences. ●Predicates and quantifiers: Introduction, quantifiers, binding variables and negations. **Unit – II:** •Definition, examples and basic properties of ordered sets, maps between ordered sets, duality principle. ●Lattices as ordered sets, lattices as algebraic structures, sublattices, products and homomorphisms.	25
Dr. Sarifuddin	Major CC-T-1 & SEC–T-1	**Unit -III:** Transformation of coordinate axes, pair of straight line, reflection properties of conics, rotation of axes and second-degree equations, classification of conics using the discriminant, polar equations of conics. **Unit-III:** Boolean algebras, Boolean polynomials, minimal and maximal forms of Boolean polynomials.	20
Babulal Tudu	Major CC-T-I	**Unit-III:** Straight lines in 3D, sphere, cylindrical surfaces. central conicoids, paraboloids, plane sections of conicoids, generating lines, classification of quadrics, illustrations of graphing standard quadric surfaces like cone, ellipsoid	20
Ariful Islam	Major CC-T-I	**Unit – I:** ●Hyperbolic functions and its derivative, higher order derivatives, Leibnitz rule and its applications to problems of type $eax+b$ sinx, $eax+bcosx$, $(ax + b)nsinx$, $(ax + b)ncosx$. ●Pedal equations. ●Curvature, radius of curvature, centre of curvature, circle of curvature ●Asymptotes	20

		●Envelopes. ●Singular points, concavity and inflection points. ●Curve tracing in Cartesian coordinates, tracing in polar coordinates of standard curves. ●L'Hospital's rule, applications in business, economics and life sciences.	
Gaurab Mitra	Major CC-T-I	**Unit –II:** ● Reduction formulae, derivations and illustrations of reduction formulae of the type $\int sinnxdx$, $\int cosnxdx$, $\int tannxdx$, $\int secnxdx$, ∫(log x)ndx , $\int sinnxcosmxdx$. ● Parametric equations, parameterizing a curve, arc length of a curve, arc length of parametric curves, area under a curve, area and volume of surface of revolution, techniques of sketching conics.	20
Bilkis Khatun	Major CC-T-1 & SEC – T-1	**Unit-I:** ●Hyperbolic functions and its derivative, higher order derivatives, Leibnitz rule and its applications to problems of type $e^{\wedge}$(ax+b)sinx, $e^{\wedge}(ax$+b)$cosx$, (ax + b)^$nsinx$, (ax + b)^$ncosx$. **Unit-III:** •Definition, examples and properties of modular and distributive lattices, Boolean algebras, Boolean polynomials, minimal and maximal forms of Boolean polynomials. ● Quinn-McCluskey method, Karnaugh diagrams, logic gates, switching circuits and applications of switching circuits.	18