

Maulana Azad College
Department of Mathematics

Teaching / Lesson Plan 2020-21, Undergraduate Mathematics (Hons. & General) under CBCS, 2018

| Semester | Period of Semester | Tentative Dates of University Exam* (*Follow the latest notification by CU) | Name of the Faculty | Course Code | Paper Name | Brief Description of the Topics | No. of Lectures | | |
|----------------|---------------------|--|---------------------------|--------------------------------------|--------------------------------------|---------------------------------|-------------------------|---|----|
| Sem-1 (CC1) | July' 20 – Dec.' 20 | Follow the latest notification by CU | Dr. Nanda Das | CC1-(TH+TU) | Calculus, Geometry & Vector Analysis | Unit-1: Calculus | 25+5 | | |
| | | | Dr. Kartik Chandra Basak | | | Unit-2: Geometry-2D | 10 | | |
| Sem-1 (CC2) | | | Dr. Babli Saha | CC2-(TH+TU) | | Algebra | Unit-2: Geometry-3D | 20 | |
| | | | Dr. Somnath Bandyopadhyay | | | | Unit-3: Vector Analysis | 15 | |
| Sem-1 (GE1) | | | July' 20 – Dec.' 20 | Follow the latest notification by CU | Dr. Somnath Bandyopadhyay | GE1-(TH+TU) | Mathematics-GE1 | Unit-1: Complex Number, Theory of Equation, Inequality, Linear difference Equation. | 30 |
| | | | | | Dr. Babli Saha | | | Unit-3: Matrix Algebra, Solution of System of Linear Equations. | 15 |
| | | | | | Dr. Kartik Chandra Basak | | | Unit-2: Relation, Mapping and Integers. | 30 |
| | | | | | Dr. Nanda Das | | | Unit-1: Algebra-I | 10 |
| Sem-2 (CC3) | Jan' 21-June' 21 | Follow the latest notification by CU | Dr. Somnath Bandyopadhyay | CC3-(TH+TU) | Real Analysis | Unit-1: Real Numbers | 30 | | |
| Sem-2 (CC4) | | | Dr. Babli Saha | CC4-(TH+TU) | Group Theory-I | Unit-2: Real Sequence | 30 | | |
| | | | | | | Unit-3: Infinite Series | 10+5 | | |
| Sem-2 (GE2) | | | Jan' 21-June' 21 | Follow the latest notification by CU | Dr. Babli Saha | GE2-(TH+TU) | Mathematics GE2 | Unit-1: Group & Subgroup | 30 |
| | | | | | Dr. Kartik Chandra Basak | | | Unit-2: Cyclic Group | 25 |
| | | | | | Dr. Nanda Das | | | Unit-3: Normal Subgroup | 20 |
| | | | | | Dr. Somnath Bandyopadhyay | | | Unit-1: Differential Calculus-II | 15 |
| | | | | | | | | Unit-2: Differential Equation-II | 10 |
| | | | | | | Unit-3: Vector Algebra | 10 | | |
| | | | | | | Unit-4: Discrete Mathematics | 25 | | |

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|---------------------------|---------------------|--------------------------------------|---|---|---|--|---|
| Sem-3 (CC5) | July' 20 - Dec.' 20 | Follow the latest notification by CU | Dr. Somnath Bandyopadhyay | CC3-(TH+TU) | Theory of Real Functions | Unit-1: Limit and Continuity of functions | 40 |
| | | | Dr. Babli Saha | | | Unit-2: Differentiability of Functions | 35 |
| Sem-3 (CC6) | | | Dr. Somnath Bandyopadhyay | CC4-(TH+TU) | Ring Theory & Linear Algebra-I | Unit-1: Ring Theory | 35 |
| | | | Dr. Babli Saha | | | Unit-2: Linear Algebra | 40 |
| Sem-3 (CC-7) | | | Dr. K. C. Basak | CC6-(TH+TU) | ODE & Multivariate Calculus-I | Unit-1: Ordinary Differential Equation | 40 |
| | | | Dr. Nanda Das | | | Unit-2: Multivariate Calculus-I | 35 |
| Sem-3 (SEC-A1) | | | Dr. Nanda Das | SEC-A1-TH | C-Programming Language | History of Computer, Constants, Variables & Data type of C-Program, Decision making and Branching, Control Statements, Array, User defined functions, Library functions. | 30 |
| Sem-3 (GE-3) | | | GE3-(TH+TU) | Mathematics-GE3 | Dr. Babli Saha | Unit-1: Integral Calculus | 10 |
| | | | | | Dr. K.C. Basak | Unit-2: Numerical Methods | 25 |
| | | | | | Dr. Somnath Bandyopadhyay | Unit-3: Linear Programming (Theory) | 10 |
| | Dr. Nanda Das | Unit-3: Linear Programming (Theory) | | | 15 | | |
| Sem-4 (CC8) | Jan' 21- Jun' 21 | Follow the latest notification by CU | Dr. Somnath Bandyopadhyay | CC8-(TH+TU) | Riemann Integration and Series of Functions | Unit-1: Riemann Integration | 35 |
| | | | Dr. Babli Saha | | | Unit-3: Power Series | 5 |
| Sem-4 (CC9) | | | Dr. K.C. Basak | CC9-(TH+TU) | PDE & Multivariate Calculus-II | Unit-2: Improper Integral | 10 |
| | | | Dr. Nanda Das | | | Unit-3: Sequence of Functions, Series of Functions and Fourier Series. | 25 |
| Sem-4 (CC10) | | | Dr. Kartik Chandra Basak | CC10-(TH+TU) | Mechanics | Unit-1: Partial Differential Equation. | 40 |
| | | | Dr. Nanda Das | | | Unit-2: Multivariate Calculus-II | 35 |
| | | | | Unit-3: Kinematics of a Particle, Newton Laws of motion and Law of gravitation. | | 20 | |
| | | | Unit-4: Problems in particle dynamics, Planar motion of a particle, Motion of a particle in 3D. | 20 | | | |
| Sem-4 (SEC-B) | | | Dr. Kartik Chandra Basak | SEC-B-TH | Scientific Computing with Sage Math. | Unit-1: Coplanar forces, Force system in space, Friction | 15 |
| | | | Sem-4 (GE4) | Dr. Babli Saha | GE4-(TH+TU) | Mathematics GE4 | Unit-2: Virtual work, Stability of equilibrium. |
| Dr. Somnath Bandyopadhyay | GE4-(TH+TU) | Mathematics GE4 | | Unit-5: Many particles system | 10 | | |
| Dr. Nanda Das | GE4-(TH+TU) | Mathematics GE4 | | Numeric Computation, Plotting of functions, Programming and Applications. | 30 | | |
| D. K. C. Basak | GE4-(TH+TU) | Mathematics GE4 | | Unit-1: Algebra-II (Vector Space) | 10 | | |
| | | | | Unit-1: Algebra-II (Group Theory, Ring and Field) | 10 | | |
| | | | | Unit-2: Computer Science and Programming. | 15 | | |
| | | | | Unit-3: Probability and Statistics | 25 | | |

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| Sem-5 (CC11) | July'20 – Dec.'20 | Follow the latest notification by CU | Dr. Kartik Chandra Basak | CC11-(TH+TU) | Probability & Statistics | Unit-1: Basic theory, Distribution-I, Expectation-I. | 20 |
| | | | Dr. Nanda Das | | | Unit-2: Distribution-II, Expectation-II. | 15+5 |
| | | | | | | Unit-3: Convergence in Probability. | 5 |
| | | | | | | Unit-4: Sampling Distribution, Estimation of Parameters. | 15 |
| | | | | | | Unit-5: Statistical Hypothesis. | 15 |
| Sem-5 (CC12) | | | Dr. Somnath Bandyopadhyay | CC12-(TH+TU) | Group Theory-II & Linear Algebra-II | Unit-1: Group Theory | 35 |
| | | | Dr. Babli Saha | | | Unit-2: Linear Algebra | 40 |
| Sem-5 (DSE-A1) | | | Dr. Nanda Das | DSE-A1 (TH+TU) | Bio Mathematics | Unit-1: Math. Biology and Modelling process. | 25 |
| | | | | | | Unit-2: Activator and Inhibitor system model. | 30 |
| | | | | | | Unit-3: Discrete models. | 15+5 |
| Sem-5 (DSE-B1) | | | Dr. Babli Saha | DSE-B1 (TH+TU) | Linear Programming & Game Theory | Unit-1: Formulation and Basic theory of LPP. | 15 |
| | | | Dr. Somnath Bandyopadhyay | | | Unit-2: Simplex method, Two-phase method. | 20 |
| | | | | | | Unit-3: Duality Theory and applications. | 10 |
| | | | | | | Unit-4: Transportation and Assignment problems and Game Theory. | 30 |
| Sem-6 (CC13) | Jan'21- Jun'21 | Follow the latest notification by CU | Dr. Somnath Bandyopadhyay | CC13-(TH+TU) | Metric Space & Complex Analysis | Unit-1: Metric Space | 40 |
| | | | Dr. Babli Saha | | | Unit-2: Complex Analysis | 35 |
| Sem-6 (CC14) | | | Dr. Kartik Chandra Basak | CC14-(TH) | Numerical Methods | Unit-1: Error & Numerical Algorithms | 5 |
| | | | | | | Unit-2: Approximation and Interpolation | 15 |
| | | | | | | Unit-3: Differentiation and Integration. | 10 |
| | | | Dr. Nanda Das | CC14-P | | Unit-4: Solution of Transcendental Equations. | 10 |
| | | | | | | Unit-5: Solution of linear system of equations. | 10 |
| | | | | | | Unit-6: Solution of ODE | 5 |
| | | Using C Programming (Computer Lab) | 20 | | | | |
| Sem-6 (DSE-A2) | | | Dr. Nanda Das | DSE-A2 | Fluid Statics & Elementary Fluid Dynamics | Unit-1: Introduction and Fundamental Concepts. | 20 |
| | | | Dr. Kartik Chandra Basak | | | Unit-2: Hydrostatics and Gas | 25 |
| | | | | | | Unit-3: Kinematics of Fluid | 15 |
| | | | | | | Unit-4: Conservation Equations. | 15 |
| Sem-6 (DSE-B2) | | | Dr. Somnath Bandyopadhyay | DSE-B2 | Point Set Topology | Unit-1: Topological Space, basis up to isometry and metric invariants. | 35 |
| | | | | | | Unit-2: First Countability, etc. up to Heine's continuity criterion. | 15 |
| | | | Dr. Babli Saha | | | Unit-3: Connected Spaces, etc. up to Bolzano- Weiertrass property of metric space X. | 25 |

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