

TEACHING PLAN
SBMS COLLEGE, SUALKUCHI
Session: 2018-2019

Department:	Mathematics	Semester	I
Course:	Major	Paper No:	M-104
Credit:	8	Marks:	100(80+20)

Paper:1					
Paper Name: Algebra and Trigonometry					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Relation and Function	C. K. Uzir.	10	8 Hrs	Aug(2-18)
II	Groups, Normal Subgroup etc.	C .K. Uzir.	20	16 Hrs	Aug19-Sept12
III	Complex numbers, Hyperbolic Functions etc.	K. Baishya.	20	20 Hrs	Aug(1-29)
IV	Relation between Roots and coefficients, Cardon's Method etc.	K. Sarma.	10	7 Hrs	Aug(1-14)
V	Matrices	K Sarma.	20	15 Hrs	Aug(15-30)

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Department:	Mathematics	Semester	I
Course:	Major	Paper No:	M-105
Credit:	8	Marks:	100(80+20)

Paper:II					
Paper Name: Calculus					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Successive Differentiation, Euler's Theorem etc.	K. Baishya	20	15Hrs	Aug30-Sept.22
II	Tangent and Normal	K. Baishya	20	16 Hrs	Sept.23-Oct15
III	Special form of Integral	K. Sarma	20	14 Hrs	Aug 14-Sept10
IV	Volume and Surface Area	C. K. Uzir	20	16Hrs	Aug30-Sept.25

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Department:	Mathematics	Semester	I
Course:	General	Paper No:	E-101
Credit:	6	Marks:	75(60+15)

Paper:1

Paper Name: Classical Algebra and Trigonometry

Unit	Course Content	Allotted to	Marks	Hours	Month
I	Inequalities, Cauchy's Theorem etc.	K. Sarma.	10	12 Hrs	Aug(2-25)
II	Sequence and Series	C .K. Uzir.	15	20 Hrs	Aug(2-29)
III	Trigonometry	K. Baishya.	20	25 Hrs	Aug2-Sept.20
IV	Relation between Roots and coefficients.	K. Sarma.	15	15Hrs	Aug26-Sept25

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Department:	Mathematics	Semester	III
Course:	Major	Paper No:	M-304
Credit:	8	Marks:	100(80+20)

Paper:1					
Paper Name: Abstract Algebra					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Homomorphism of groups etc	C. K. Uzir.	20	16Hrs	Aug(2-30)
II	Integral Domain, Vector Space etc.	C .K. Uzir.	20	16 Hrs	Aug(2-30)
III	Inner automorphism, Cauchy's Theorem etc.	K. Sarma	20	16 Hrs	Aug(2-30)
IV	Ring homomorphism, Polynomial ring etc.	K. Baishya	20	16Hrs	Aug(2-30)

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Department:	Mathematics	Semester	III
Course:	Major	Paper No:	M-305
Credit:	8	Marks:	100(80+20)

Paper:II					
Paper Name: Linear Algebra and Vector					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Sum and direct sum of subspaces etc.	C. K. Uzir.	15	12Hrs	Sept(1-25)
II	Linear transformation	C .K. Uzir.	10	10 Hrs	Sept26-Oct10
III	Eigen values, eigenvectors etc.	K. Baishya	15	12 Hrs	Sept(1-20)
IV	Scalar triple product etc.	K. Sarma	10	10Hrs	Sept(1-25)
V	Continuity and derivability	K. Baishya	20	16 Hrs	Sept21-Oct15
VI	Vector Integration	K. Sarma	10	10 Hrs	Sept25-Oct10

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Department:	Mathematics	Semester	III
Course:	General	Paper No:	E-303
Credit:	8	Marks:	100(80+20)

Paper:1					
Paper Name: Calculus-Methods and applications					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Properties of Continuous functions etc.	K. Sarma.	10	7 Hrs	Aug(2-15)
II	Rolle's etc.	K. Sarma.	10	7 Hrs	Aug(16-29)
III	Limit and Continuity etc.	C K Uzir	10	8 Hrs	Aug(2-16)
IV	Curvature of plane curves etc.	C. K.Uzir	10	8Hrs	Aug(16-29)
V	Reduction formula	C. K. Uzir	10	8 Hrs	Aug30-Sept. 20
VI	Quadrature of plane areas	C. K. Uzir	5	6 Hrs	Sept(21-30)
VII	Differential equation of first order and first degree	K. Baishya	10	10 Hrs	Aug(2-15)
VIII	Linear differential equation	K.Baishya	10	10 Hrs	Aug16-Sept.3
IX	Application of differential equation	K. Baishya	5	7Hrs	Sept(4-16)

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Department:	Mathematics	Semester	V
Course:	Major	Paper No:	M-501
Credit:	6	Marks:	75(60+15)

Paper:1					
Paper Name: Real and Complex Analysis					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Limit and Continuity etc.	K. Baishya	12	10 Hrs	Aug(2-15)
II	Reimann Integral, etc	K. Baishya	12	10 Hrs	Aug(16-29)
III	Improper Integral etc.	K. Baishya.	12	12 Hrs	Aug30-Sept.20
IV	C-R equations etc.	K. Baishya	12	15Hrs	Sept 21-Oct3
V	Conformal mappings etc.	K. Baishya	12	15 Hrs	Oct4-Nov 5

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Department:	Mathematics	Semester	V
Course:	Major	Paper No:	M-502
Credit:	6	Marks:	75(60+15)

Paper:II					
Paper Name: Topology					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Cantor intersection theorem etc.	K. Sarma.	20	16 Hrs	Aug(2-25)
II	Baire's category theorem, etc	K. Sarma	10	10 Hrs	Aug26-Sept10
III	Compactness etc.	K. Sarma	10	12 Hrs	Sept11-Sept.25
IV	Topological spaces etc.	K. Sarma	10	10Hrs	Sept 26-Oct16
V	Normed linear spaces etc etc.	K. Sarma	10	15 Hrs	Oct17-Nov 10

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Department:	Mathematics	Semester	V
Course:	Major	Paper No:	M-503
Credit:	6	Marks:	75(60+15)

Paper:III

Paper Name: Spherical Trigonometry and Astronomy

Unit	Course Content	Allotted to	Marks	Hours	Month
I	Spherical Triangle etc.	K. Sarma.	15	12 Hrs	Aug20-Sept.10
II	Celestial sphere etc	K. Sarma	15	15Hrs	Sept(11-30)
III	Planetary Motion etc.	K. Sarma	15	12Hrs	Oct(1-25)
IV	Eclipses etc.	K. Sarma	15	16 Hrs	Oct26-Nov15

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Department:	Mathematics	Semester	V
Course:	Major	Paper No:	M-504
Credit:	6	Marks:	75(60+15)

Paper:1V Paper Name: Rigid Dynamics					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Moments and products of inertia	K. Baishya	15	14 Hrs	Aug20-Sept.12
II	D' Alembert's principle etc	K. Baishya	15	15Hrs	Sept(13-30)
III	Motion about a fixed axis	K. Baishya	10	12Hrs	Oct(1-25)
IV	Impulsive Forces	K. Baishya	10	14Hrs	Oct26-Nov10
V	Lagrange's equations	K. Baishya	10	12 Hrs	Nov(11-22)

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Department:	Mathematics	Semester	V
Course:	Major	Paper No:	M-505
Credit:	6	Marks:	75(60+15)

Paper :V Paper Name: Probability					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Random experiment etc	C. K. Uzir	15	14 Hrs	Aug(2-20)
II	Random variable etc	C. K. Uzir	15	15Hrs	Aug 21-Sept. 6
III	Mathematical expectation etc	C. K. Uzir	15	14Hrs	Sept (7-20)
IV	Probability distributions	C. K. Uzir	15	14Hrs	Sept21-Oct 5

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Department:	Mathematics	Semester	V
Course:	Major	Paper No:	M-506
Credit:	6	Marks:	75(60+15)

Paper :VI Paper Name: Optimization Theory					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Partitioning of matrices etc	C. K. Uzir	10	10 Hrs	Aug(20-30)
II	General linear programming problems etc	C. K. Uzir	10	10Hrs	Sept.(1-15)
III	Basic feasible solution	C. K. Uzir	20	16Hrs	Sept (16-30)
IV	Linear programming problem	C. K. Uzir	10	12Hrs	Oct(1-25)
V	The Transportation problem	C. K. Uzir	10	12 Hrs	Oct26-Nov 15

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Department:	Mathematics	Semester	V
Course:	General	Paper No:	E503
Credit:	8	Marks:	100(80+20)

Paper :I Paper Name: Statics and Dynamics					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Parallel forces	K. Sarma.	10	10 Hrs	Aug(2-14)
II	Centre of gravity	K. Sarma	10	10Hrs	Aug(15-27)
III	Friction	K. Sarma	10	10Hrs	Aug28- Sept16
IV	Machines	K. Sarma	10	12Hrs	Sept(17-30)
V	Components of velocity and acceleration	K. Baishya	8	10Hrs	Aug (2-15)
VI	Rectilinear Motion	K. Baishya	8	8 Hrs	Aug(16-30)
VII	Simple Harmonic Motion	K. Baishya	5	6 Hrs	Sept(1-10)
VIII	Motion of Projectile	K. Baishya	6	10 Hrs	Sept(11-30)
IX	Impulse	K. Baishya	8	14 Hrs	Oct(1-15)
X	Impact of elastic bodies	K. Baishya	5	8 Hrs	Oct(16-30)

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Department:	Mathematics	Semester	V
Course:	General	Paper No:	E504
Credit:	8	Marks:	100(80+20)

Paper : I I		Paper Name: Numerical Method and Spherical Astronomy			
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Finite Difference Operator	C. K. Uzir	10	12Hrs	Aug(2-18)
II	Interpolation	C.K.Uzir	10	12Hrs	Aug(18-30)
III	Roots of Algebraic and transcendental equation	C.K. Uzir	10	14Hrs	Sept(1-30)
IV	Spherical triangle, its properties	K. Sarma	10	12Hrs	Sept(17-30)
V	Celestial Sphere	K. Sarma	10	10Hrs	Oct (1-15)
VI	Altitude of a body on the meridian	K. Sarma	10	12Hrs	Oct(16-30)
VII	Planetary Motion	K. Baishya	10	14Hrs	Sept(1-25)
VIII	Parallex	K. Baishya	10	10 Hrs	Sept 26-Oct 25

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Department:	Mathematics	Semester	II
Course:	Major	Paper No:	M-204
Credit:	8	Marks:	100(80+20)

Paper:1					
Paper Name : Co-Ordinate Geometry					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Transformation of coordinate axes	K Sarma	15	20Hrs	Feb.(2-28)
II	Parabola, parametric coordinates etc.	K Baishya	25	28 Hrs	Feb.2- March 10
III	Plane , Straight line	C. K. Uzir	15	18 Hrs	Feb.(1-28)
IV	Sphere, Cylinder etc.	C. K. Uzir	25	28Hrs	March(1-30)

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Department:	Mathematics	Semester	II
Course:	Major	Paper No:	M-205
Credit:	8	Marks:	100(80+20)

Paper:II					
Paper Name : Differential Equation					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Origin of ordinary differential equation	K.Baishya	15	18Hrs	Feb.(2-28)
II	Linear ordinary differential equation	K.Baishya	15	15 Hrs	March 1-18
III	2 nd Order linear differential equation	K.Baishya	15	16 Hrs	March19- April8
IV	Total differential equation	K.Baishya	15	14Hrs	April(9-25)
V	Partial Differential Equation	K.Baishya	20	25 Hrs	April26- May15

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Department:	Mathematics	Semester	II
Course:	General	Paper No:	E-201
Credit:	6	Marks:	75(60+15)

Paper:1					
Paper Name : Abstract Algebra and Matrices					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Group Theory	C. K. Uzir	20	20Hrs	Feb.(2-28)
II	Ring Theory	K.Baishya	20	20Hrs	March 1-25
III	Matrices	K.Sarma	20	20 Hrs	March19- April8

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Department:	Mathematics	Semester	IV
Course:	Major	Paper No:	M-404
Credit:	8	Marks:	100(80+20)

Paper:1					
Paper Name : Real Analysis					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Real number system	C. K. Uzir	20	20Hrs	Feb.(2-28)
II	Infinite Series	C.K.Uzir	20	20Hrs	March 1-25
III	Limit and Continuity of a function of single variable	K Baishya	15	15Hrs	Feb(2-28)
IV	Derivability	K. Sarma	20	25 Hrs	Feb10- March15

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Department:	Mathematics	Semester	IV
Course:	Major	Paper No:	M-405
Credit:	8	Marks:	100(80+20)

Paper:II					
Paper Name : Mechanics					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Parallel forces	K. Sarma	20	20Hrs	Feb.18- March12
II	Centre of gravity	K Baishya	10	10Hrs	March 1-25
III	Principle of virtual work	K.Sarma	10	10Hrs	March(13-25)
IV	Stable and unstable equilibrium	K.Sarma	10	10 Hrs	March25- April 14
V	Velocity components	K. Baishya	10	10	March26- April 8
VI	Motion in resisting medium	K. Baishya	10	10	April 9-28
VII	Central Orbit	K.Baishya	10	10	April29- May5

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Department:	Mathematics	Semester	IV
Course:	General	Paper No:	E-403
Credit:	8	Marks:	100(80+20)

Paper:1					
Paper Name : Coordinate Geometry and Vector Analysis					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Transformation of coordinate axes	K. Sarma	08	8 Hrs	Feb.(2-14)
II	Circle,Tangent and Normal	K Sarma	7	8 Hrs	Feb(15-22)
III	Ellipse	K.Sarma	10	12Hrs	Feb23-March15
IV	Pair of Straight line, Polar equations of Straight line	K. Baishya	10	12 Hrs	Feb.(2-18)
V	Plane, shortest distance	C K Uzir	10	12	Feb(2-14)
VI	Sphere, Circle in three dimension	C.K.Uzir	5	8	Feb(15-28)
VII	Cone and Cylinder	C.K.Uzir	10	10	March(2-25)
VIII	Scalar triple product	K Baishya	10	14	Feb19-March4
IX	Vector point function, divergence , curl etc	K. Baishya	10	18	March(4-30)

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Department:	Mathematics	Semester	VI
Course:	Major	Paper No:	M-601
Credit:	6	Marks:	75(60+15)

Paper:1					
Paper Name : Hydrostatics					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Pressure equation, rotating fluids	K Baishya	15	20Hrs	Feb (2-18)
II	Fluid pressure, resultant pressure on curved surface	K Baishya	15	18Hrs	Feb 15- March 4
III	Equilibrium of a floating body	K Baishya	15	20 Hrs	March15- April 5
IV	Gas law, connective equilibrium	K Baishya	15	18Hrs	April (6-28)

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Department:	Mathematics	Semester	VI
Course:	Major	Paper No:	M-602
Credit:	6	Marks:	75(60+15)

Paper:1I					
Paper Name : Numerical Analysis					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Normalized floating point	K Sarma	10	12 Hrs	Feb (2-14)
II	Calculus of finite difference	K Sarma	20	22 Hrs	Feb 15- March 10

III	Numerical differentiation	K Sarma	20	22Hrs	March10-April 5
IV	Solution of Polynomial equation	K Srama	10	12Hrs	April (6-22)

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Department:	Mathematics	Semester	VI
Course:	Major	Paper No:	M-603
Credit:	6	Marks:	75(60+15)

Paper:III					
Paper Name : Computer Programming					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Brief introduction	S. Sarma	10	12 Hrs	Feb (2-14)
II	Elementary data types	S. Sarma	10	12 Hrs	Feb (15-28)
III	Conditional Statement	K Baishya	10	12Hrs	March10-April 5
IV	Function	S. Srama	10	12Hrs	March(1-20)
V	Practical	K. Baishya	20	222 Hrs	April(6-30)

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Department:	Mathematics	Semester	VI
Course:	Major	Paper No:	M-604
Credit:	6	Marks:	75(60+15)

Paper:1V					
Paper Name : Discrete Mathematics					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Divisibility Theory	C.K. Uzir	10	12 Hrs	Feb (2-14)
II	Fermat's Little theorem	C.K. Uzir	10	12 Hrs	Feb (15-28)
III	Diophantine equation	C.K. Uzir	10	12Hrs	March10-April 5
IV	Number theoretic function	C.K. Uzir	10	12Hrs	April(6-13)
V	Boolean algebra	C.K. Uzir	10	12 Hrs	April(14-30)
VI	Disjunctive normal form	C.K. Uzir	10	10	May(1-12)

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Department:	Mathematics	Semester	VI
Course:	Major	Paper No:	M-605
Credit:	6	Marks:	75(60+15)

Paper:V					
Paper Name : Graph and Combinatorics					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Elementary combinatorics	C.K. Uzir	20	22 Hrs	Feb (14-28)
II	Varticies of Graphs	C.K. Uzir	10	12 Hrs	March(1-14)
III	Block,Trees	C.K. Uzir	10	12Hrs	March15-April 2
IV	Connectivity and line connectivity	C.K. Uzir	10	12Hrs	April(2-12)

V	Hamiltonian graphs	C.K. Uzir	10	12 Hrs	April(14-30)
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Department:	Mathematics	Semester	VI
Course:	Major	Paper No:	M-606(Project Paper)
Credit:	6	Marks:	75

PROJECT

Unit	Course Content	Allotted to (Student Name)	Marks
I	A Study of Divisibility theory	K. Sarma (Danda Pani Das)	75
II	A Study of Divisibility theory	K. Sarma (Dhanjit Boro)	75
III	Fundamental Theorem of Homomorphism	K. Baishya (Ikbal Hussain)	75
IV	Representation of Real Numbers and Operations	C.K.Uzir(Jyotirmoy Das)	75
V	Fundamental Theorem of Homomorphism	K. Baishya (Kaushik Kalita)	75
VI	Representation of Real Numbers and Operations	C.K.Uzir (Pranjit Bezbaruah)	75
VII	Graphs and its Representations	K. Baishya (Sanjib Deka)	75
VIII	Graphs and its Representations	K. Baishya (Simanta Das)	75
IX	A Study Of Sub graphs and Complements	C .K. Uzir (Archana Nath)	75
X	A Study Of Sub graphs and Complements	C .K. Uzir (Monika Kumari Singh)	75

XI	A Study Of Sub graphs and Complements	C .K. Uzir (Preeti Kalita)	75
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Department:	Mathematics	Semester	VI
Course:	General	Paper No:	E-603
Credit:	6	Marks:	100(80+20)

Paper:I					
Paper Name : Linear Algebra and Complex Analysis					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Definition and example of Vector space	C.K Uzir	10	12 Hrs	Feb (2-14)
II	Finite and Infinite dimensional vector space	C.K.Uzir	10	12 Hrs	March(15-28)
III	Linear mapping	C.K.Uzir	10	12Hrs	March29- April 12
IV	Rank of Matrix	C.K.Uzir	10	12Hrs	April(13-30)
V	Eigen values, eigenvectors, Cayley-Hamilton Theorem	K.Baishya	10	12Hrs	Feb(14-28)
VI	Complex variable, Cauchy-Riemann equations	K. Baishya	15	18 Hrs	March (1-25)
VII	Rectifiable curves, Cauchy Integral Formula	K.Baishya	15	15 Hrs	March26- April 25

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Department:	Mathematics	Semester	VI
Course:	General	Paper No:	E-604
Credit:	6	Marks:	100(80+20)

Paper :II					
Paper Name : Advanced Calculus					
Unit	Course Content	Allotted to	Marks	Hours	Month
I	Metric Space, Complete Metric Space	K Sarma	20	22 Hrs	Feb 14- March 4
II	Riemann Integral	K. Sarma	20	22 Hrs	March(5-30)
III	Improper integrals	C K Uzir	20	18Hrs	March15- April 2
IV	Double and triple Integrals	K. Baishya	20	18Hrs	March18- April10