BANKURA ZILLA SARADAMANI MAHILA MAHAVIDYAPITH
Nutanchati, Opposite Axis Bank, Bankura,
West Bengal, Pin-722101

ACADEMIC AUDIT REPORT
For the Academic year 2018 - 2019

Academic Audit of Department : MATHEMATICS

Period of Audit: 2018-2019

I - COLLEGE PROFILE (To be filled in by the IQAC Co-ordinator)

1	Name of the Department, Website, email and Ph. No.		Department: Mathematics, http://bzsmcollege.org/, E-mail id: sarada_6@yahoo.co.in ; Ph. No.: 03242-251194							
2	Name of the HOD, email & Mob. No.		Haradhan Kundu, email: kundu.haradhan@gmail.com, Mob: 8100243923							
3	Name of the IQAC Coordinator, email & Mob. No.		Dr.Nityananda Patra, nityananda.patra1967@gmail.com Mobile No.: 9474144885							
4	Year of Establishment/ Year of Affiliation		1973/1975							
5	NAAC Grade with Cycle, Accredited Year (if not Accredited Status of Preparations)		Grade A (3.04) Cycle 2 2015							
6	UGC Recognition (2F & 12 B)		YES							
7	Departmental Working Hours (if shift system mention details of both shifts & give reasons for shift system)		10.00 a.m-5.00 p.m (Monday to Saturday)							
8	No. of Posts Sanctioned: Teaching - Non Teaching- Supportive Staff - Other if any -							Teaching	Non Teaching	
			Govt. approved :					1	0	
			Management approved :					-	-	
			Govt. approved Contractual :					-	-	
			Management approved Contractual :					-	-	
			Guest Working:					5	0	
9	Course wise & Year wise Students strength particulars		**No of Students**		**Sem-I**	**Sem-II**	**Sem-III**	**Sem-IV**	**Sem-V**	**Part-II**	**Part-III**
					Bankura University					**Burdwan University**	
			Honours		38	38	39	39			27
			General	**G.E.**	10	10	21	21			06
				Prog.	12	10	00	00			

II - CURRICULAR ASPECTS		**Statement**	**Impression/Recommendation / Remark by Academic Advisors**	**Status**	**Grade**
1	Departmental Annual Curricular Plans	Distribution of syllabus in modules and unitization of syllabus were prepared well before the commencement of classes and executed in a planned and systematic manner. PO, CO & PSO is also formulated (**Annexure I**).	Practical experience on theoretical knowledge be given importance through the introduction of Internship, if possible.	Good	A
2	Departmental Activities and Records of students' and Teachers' participation for the Academic Year 2018 to 2019	Every activity is recorded such as Departmental meetings, Departmental Seminar, Student-Seminar, Class Tests, Meetings of committees related to Parent-Student -Teacher formed by the department etc.	Database on the pass out students for making alumni association more dynamic and productive be made an integral part of the departmental activities every year.	Good	A
3	Add-on Courses completed during Academic Year 2018 to 2019	NIL	At least introduction of some vocational training courses be made compulsory every year to impart practical knowledge.	Poor	C
4	Plan for introduction of new Add-on Courses in Academic Year 2018 to 2019	NIL	Efforts be made for the introduction of some vocational training courses or at least hands on training be made compulsory every year to impart practical knowledge.	Poor	C
5	Coverage of Syllabus (Average Percentage)	More than 90% syllabus is covered for all courses of UG program. Records are kept in the individual Teacher's Diary.	100% coverage of the syllabus should be made mandatory because it will help the advanced students immensely.	Good	A
6	Maintenance of Student Attendance Registers	Day to day attendance is recorded in the Student Attendance Registers.	Poor attendance (i.e. less than 50%) of the students be compulsorily intimated to the parents.	Good	A
7	Feedback forms on Curriculum from students	Feedback is taken and analyzed (**Annexure –II**). Attempts are being made to submit the Feedback online by the students from	Online feedback procedure should be made compulsory.	Satisfactory	B

		the current session. Suggestions and Proposals from students have been carefully analyzed. Some of the demands have been fulfilled by the department in the interest of the students.			

** Grade A (Good) / B (Satisfactory) / C (Poor)

III - TEACHING, LEARNING & EVALUATION		**Statement**	**Impression/Recommendation/Remark by Academic Advisors**	**Status**	**Grade**
1	Teaching Diaries & Plans in the Prescribed Formats	The teaching diaries and plans are maintained by all the teachers of the department and those are verified and signed by the Principal.	Well maintained.	Good	A
2	Co-Curricular Activities (Departmental Level)	Students of each year/ semester organized Teachers' Day celebration program every year in the department. They used to participate in the "Physics Quiz" Contest, "Concept Test In Physics" conducted by the Department.	Arrangement of Exhibition at least once a year is recommended.	Good	A
3	Degrees offered	UG programs run by the department.	Job-oriented programmes be introduced, if possible.	Good	A
4	Conduct of Internal Examinations-continuous assessment & Mid-Term Test	Continuous assessment is carried out by the department in the form of Class Test, Mid-term test, Concept Test, Surprise Test, Practical Test and Internal Assessment.	Well maintained and documented.	Good	A
5	Remedial Classes	Remedial classes are conducted for each semester as and when required subject to the availability of time and convenience of student and teachers. Sometimes in the remedial classes, evaluated and assessed answer scripts are shown to the students for their self-assessment and better understanding of the subject.	Assessed answer scripts reflecting the academic improvement of the students be given to the students to show their parents.	Good	A
6	Record of Mentoring of students by teachers	Record of mentoring of students by teachers is maintained by the department. However, mentoring is also provided outside the class .	Performances of the students in all respects be intimated to the parents periodically, if possible.	Good	A
7	Result Analysis for the years 2018 & 2019	Result analysis is done according to result sheet provided by the University **(Annexure-III).** After critical analysis of the results ,the students are advised about how to improve both the theoretical and practical marks.	Final result sheet should be well-circulated through college prospectus, website etc.	Good	A

** Grade A (Good) / B (Satisfactory) / C(Poor)

IV - RESEARCH AND CONSULTANCY		**Statement**	**Impression/Recommendation/Remark by Academic Advisors**	**Status**	**Grade**
1	No. of Research Guides in the Department	Nil	All Departmental teachers be encouraged to complete their Ph.D.	Poor	C
2	No. of Faculty registered for Ph. D (attach details)	Nil	All Departmental teachers be encouraged to complete their Ph.D.	Poor	C
3	Number of Major/Minor/Other Research Projects (attach details)	Major: Nil Minor: Nil Others: Nil	Other funding agencies may be explored.	Poor	C
4	Number of Research Papers Published in Academic year (Internationals/Nationals Journals) (attach details)	National : 0 International: 03 (**Annexure-IV**)	Inadequate.	Satisfactory	B
5	Number of Papers Presented in Academic year 2018 to 2019 (International/National/State Level Conference) (attach details)	International: Nil National : 01 (**Annexure-V**) State Level Conference: Nil	Inadequate.	Satisfactory	B
6	Number of Books Published in Academic year 2018 to 2019 (Single Author/Co Author) (attach details)	As a Single Author – Nil As a Co-Author – Nil	Inadequate.	Satisfactory	B
7	Number of Seminars / Workshops / Training Program Conducted in the Academic year (International / National / State) (attach details)	Nil	Efforts to be made to conduct National/International Seminars	Satisfactory	B
8	Student Seminars/ Workshop/ Exhibition/ Project in the Academic Year (other than University)	06	Arrangement of Exhibition at least once a year is recommended.	Satisfactory	B
9	Record of Consultancy in Academic year 2018 to 2019 (attach details)	Nil	Initiative should be taken by the college to invite various companies for placement, if possible.	Poor	C
10	Record of MOUs in Academic year 2018 to 2029 (attach details)	Initiatives are being taken by the Department to sign MOUs with adjacent institutions of Bankura University for Faculty exchange, Collaborative Seminars.	Initiative should be taken by the college, if possible.	Poor	C

** Grade A (Good) / B (Satisfactory) / C (Poor)

V - EXTENSION ACTIVITIES		**Statement**	**Impression/Recommendation/ Remark by Academic Advisors**	**Status**	**Grade**
1	Record of Subject/Department Related Extension Activities (attach details)	NIL	Initiative may be taken by the Department.	Poor	C
2	Field Visit (attach records)	NIL	Initiative may be taken by the Department.	Poor	C
3	Industry Visit (attach records)	NIL	Initiative may be taken by the Department.	Poor	C
4	Any Other Club (attach records)	NIL	Initiative may be taken by the Department.	Poor	C
5	Any other social service activity undertaken by the students and teachers/students/teachers of the department (attach records)	Awareness camp	Adequate	Good	A

** Grade A (Good) / B (Satisfactory) / C (Poor)

Recommendation/Suggestions by Academic Advisors

	Suggestions for improvement/progress of the department	Sheet attached		
			Signatures of Academic Advisor with designation	Seal
	Declaration by the Department	1	(Inspector of Colleges)	Inspector of Colleges (Addl. Charge) Bankura University
		2		
		3		
	Signature of the HOD with date			
	Signature of the Principal with date			

Declaration by the Principal

On behalf of the College Governing Body and as Institutional Head, I will forward the observations by the Academic Advisors to IQAC and also to the Governing Body of the Institution for further necessary action regarding Academic development of the department.

Date:

Signature of Principal
Principal
Bankura Zilla Saradamani Mahila Mahavidyapith

PROGRAM OUTCOMES (POS), PROGRAM SPECIFIC OUTCOMES (PSOS) AND COURSE OUTCOMES (COS) OF MATHEMATICS HONOURS (B. SC.)

FOR THE ACADEMIC SESSION 2018-19.

Vision:

To become a premier center, promoting Mathematics locally and globally

Mission:

To materialize the vision, the Department of Mathematics focuses on the following:

- To provide necessary background
- For producing a meaningful career in Mathematics and related fields
- For acquiring, Mathematical skills and employability skills

Program Outcomes (POs):

Program Name	Program Outcomes	
Mathematics Honours (B. Sc.)	PO.1.	Acquires the ability to understand and analyze the problems.
	PO.2.	Develops the skill to think critically on abstract concepts of Mathematics.
	PO.3.	Acquires the ability to apply independently paving way for life long learning
	PO.4.	Analyses the situation, make a mathematical problem and find its solution.
	PO.5.	Enhances Logical reasoning skills, arithmetic skills, aptitude skills computational skills, computer skill, programming, self confidence for better employability.
	PO.6.	Formulates and develops mathematical arguments in logical manner.
	PO.7.	Provides a systematic understanding of the concepts and theories of mathematical and computing their application in the real world.

Program Specific Outcomes (PSOs):

Program Name	Program Specific Outcomes	
Mathematics Honours (B. Sc.)	PSO.1.	Understands the basic concepts of advanced Mathematics.
	PSO.2.	Develops the problem solving skill.
	PSO.3.	Develop various computational techniques.
	PSO.4.	Realize the idea of modern mathematics through mathematical structures and problems
	PSO.5.	Creates Mathematical Models (along with solution) for various physical needs.
	PSO.6.	Idea of application of mathematics in inter disciplinary matters
	PSO.7.	Develop the computer programming skill for solving various physical problems.

Course Outcomes (COs):

Paper	Subject Area		Outcomes
Paper-C1	Differential and integral calculus	**CO.1.**	Understand the basic concepts of differential calculus and integral calculus, technique of plotting various curves, Applications of differential calculus to geometry, Economics, biology and many other real life examples.
	Analytic geometry	**CO.2.**	Concept of graphs of quadratic in 2D and 3D, classification of quadratic using the discriminant as well as using transformation of coordinate axes. Concept and properties of various well known curves and surfaces.
	Introduction to Differential equation	**CO.3.**	Concept of Differential equation and their solutions, Idea Mathematical Models using differential equations.

Paper	Subject Area		Outcomes
Paper-C2	Number Theory	**CO.4.**	Concept of integers and their properties, Concept of complex number and various complex functions, idea of inequality and various standard inequalities.
	Classical Algebra	**CO.5.**	Idea of algebraic equation and their solving techniques along with root-coefficient relations.
	Introduction to Modern Algebra	**CO.6.**	Developed the concept of set, relation and function
	Introduction to Linear Algebra	**CO.7.**	Solve linear system of equation, idea of linear transformations, inverse of matrices. Idea of vector space, Subspaces and dimension of subspace, idea of Eigenvalues, Eigenvectors.

Paper	Subject Area		Outcomes
Paper-C3	Real numbers	**CO.8.**	Concept of real numbers and real line, algebraic and analytic properties of real numbers and real line, idea of open and closed set along with their properties.
	Real sequences	**CO.9.**	Idea of sequence of real numbers and their convergence. (Realize the convergency of sequences through computer demonstration)
	Series of real numbers	**CO.10.**	Idea of series of real numbers and their convergence along with various convergency test. (Realize the convergency of series through computer demonstration)

Paper	Subject Area		Outcomes
Paper-C4	Ordinary Differential equations	**CO.11.**	Existence and uniqueness of solution of a differential equation, Concept of Wronskin, Solution of linear differential equation using various techniques.
	System of linear differential equations	**CO.12.**	Systems of linear differential equations and their solution using various technique, Phase plane analysis
	Vector Analysis	**CO.13.**	Idea of various vector operations along with their geometric meaning, Concept of limits, continuity and differentiability of vector valued functions and their applications

Paper	Subject Area		Outcomes
Paper-C5	Limit, continuity and differentiability	**CO.14.**	Realize the definition of limit, continuity and differentiability using (ε-δ)-definition as well as geometric point of view, properties of limit of a function and continuous functions.
	Mean Value theorem	**CO.15.**	Properties of differentiable function and various mean value theorem, Expansion of function and its applications.
	Metric space	**CO.16.**	Idea and example (realistic and abstract) of metric spaces, Concept of open and closed sets of metric spaces and their properties along with their realization through their geometric representations.

Paper	Subject Area		Outcomes
Paper-C6	Introduction to group theory	**CO.17.**	Developed the idea of symmetry of various objects, Realize the symmetries as transformation (especially as bijection), Understanding of symmetric group, dihedral group and quaternion group, Understand the concept of group form various physical group.
	General properties of groups	**CO.18.**	Idea and realization of abstract definition of group and the individual group axioms. To familiar with general properties of group and their applications
	Permutation and permutation groups	**CO.19.**	Idea of permutation and properties of permutation, representation of various groups in terms of permutations.
	cyclic groups	**CO.20.**	Idea of cyclic groups and cyclic subgroups and their realization through graph.
	Cosets, normal subgroup	**CO.21.**	Ideas of cosets, quotient group and their application, Concept of normal subgroup from different point of view, Lagrange theorem and its converse results and their application
	Homomorphism	**CO.22.**	Idea of homormorphism and isomorphisms to better understanding of structures of various groups. Results on isomorphism theorems.

Paper	Subject Area		Outcomes
Paper-C7	Errors in numerical methods	**CO.23.**	Idea of errors occurs in numerical calculation, grow the technique of solving a problem, i.e., algorithms and convergence problems in this methods.
	Solution of transcendental or polynomial equations	**CO.24.**	Developed the concept various technical methods of finding roots of a transcendental or polynomial equations (also from geometric viewpoint). Understand these methods from analytic point of view (along with rate of convergence and error estimation).
	solving system of linear algebraic equations	**CO.25.**	Idea and mechanical technique (along with their convergence) of solving system of linear algebraic equations
	Finite differences and interpolation	**CO.26.**	Developed the idea and the application of finite differences. Understand the concept of interpolation (equi-spaced and unequi-spaced). Learn about various interpolation method form analytic and application viewpoint.
	Numerical differentiation	**CO.27.**	Learn some techniques of differentiation based on interpolation.
	Numerical Integration	**CO.28.**	Learn various techniques of numerical Integration: development of the techniques from various directions, geometric representation, error estimation and applications.
	Eigenvalues and least square polynomial approximation	**CO.29.**	Idea of numerical method for finding eigenvalues and eigenvectors (Power method). Idea of least square polynomial approximation of various data.
	Numerical solution of ODE	**CO.30.**	Make the concept of numerical solution technique of Ordinary Differential Equations: mechanical idea, geometry and application.

Paper	Subject Area		Outcomes
Paper-C7	Commuter aided numerical practical C-Programming language	**CO.31.**	Developed the computer programming skill.
		CO.32.	Better understanding of solving various numerical methods from their algorithms, flowcharts and programs.
		CO.33.	Grow the idea and understanding of C-language
		CO.34.	Solve many more problems on various numerical methods using computer (by writing programs in C-language)

Paper	Subject Area		Outcomes
Paper-SEC1	Computer Language	**CO.35.**	Developed the concept of programming languages.
	Basic of c-Language	**CO.36.**	Systematic study of the c-language
	Sub-program	**CO.37.**	Understanding the programs and subprograms in c
	Some c-programs	**CO.38.**	Developed the writing capacity of various programs in c

Paper	Subject Area		Outcomes
Paper-V	Analysis-III	**CO.39.**	Understanding the concept of convergence sequence ,limit superior, limit inferior and application of Bolzano-Weierstrass theorem, Heine-Borel theorem
		CO.40.	Some useful application of Comparison test, Ratio test, Cauchy's root test and Leibnitz's test
		CO.41.	Study the concept of sequence and series of functions and their convergence along with their geometrical interpretation.
		CO.42.	Understand the convergence, interpretation and application of Fourier series and power series.
		CO.43.	Study the calculus of function of several variables from both analytic and geometric point of view along with applications.
		CO.44.	Understand the concept of differentiation under integral sign and their application.
	Complex Analysis	**CO.45.**	Make the basic understanding on complex numbers, various complex functions along with their geometric and topological aspects
		CO.46.	Understand the concept of limit, continuity, differentiability and analyticity of complex function
		CO.47.	Study power series and its properties
		CO.48.	Understand the concept of Möbius transformations and related problems
	Metric spaces	**CO.49.**	Understand the concept of metric metric space through various examples and their geometric realization and conception.
		CO.50.	concept of some elementary object of a metric space charges open ball closed ball open set set limit point along with their properties and examples
		CO.51.	Concept of sequence Cauchy sequence and convergence on metric space and study the concept of completeness of a metric space along with some example and their geometric realization.
		CO.52.	Understand the concept of continuity on a metric space along with some examples and various applications
		CO.53.	Study the concept of compactness and its analytical importance along with various examples
		CO.54.	Understand various type of compactness and their interrelations and equivalence on a metric space.

Paper	Subject Area		Outcomes
Paper-VI	Elements of Continuum Mechanics	**CO.55.**	Study the idea of continuum mechanics, idea of strain and stress, viscosity along with their physical realizations
	Classical Dynamics	**CO.56.**	Enlighten on various ideas and concepts of classical dynamics, such as inertial frame, absolute time, Galilean transformation etc.
	Dynamics of a system of particles	**CO.57.**	Understand the basic concept of system of particle and various related terms, such as linear momentum kinetic energy etc.
	Dynamics of a rigid body	**CO.58.**	Understand the concept of moment of inertia and product of inertia radius of gyration etc. along with some techniques of finding such quantities for various well known objects.
		CO.59.	Study the two dimensional motion of various rigid bodies under various restrictions and constraints.
	Statics	**CO.60.**	Revisit on concept of physical quantities, such as concurrent forces parallel forces moment of force etc.
		CO.61.	Study the equilibrium of a system, stability of equilibrium and various test regarding stability
	Hydrostatics	**CO.62.**	Understand the basic concept of fluid and fluid pressure and its elementary properties.
		CO.63.	Analyze the stability and equilibrium of a fluid under various conditions
		CO.64.	Study the various properties and related problem of gases.

Paper	Subject Area		Outcomes
Paper-VII	Probability	**CO.65.**	Introduction to probability theory along with the classical notion as well as modern notion. Idea of probability space and random variable.
		CO.66.	Notion of probability distribution (from geometric view point also) along with examples especially discrete or continuous as well as mixed distribution. Study the idea of distribution function probability mass function probability density function along with their various properties Study some important probability distributions
		CO.67.	Grow the concept of multidimensional probability distribution along with examples and related distribution function density function and mass functions Concept of marginal distribution and conditional distribution from physical and geometrical point of view.
		CO.68.	Introduction to probability expectation variance and various other characteristic related to a probability distribution. Study the concept of probability expectation of a multidimensional distribution and related characteristics
		CO.69.	Study Chebyshev's inequality large number of central limit theorem.
	Statistics	**CO.70.**	Study the basic concept of statistics and various characteristics of a statistical sample. Study sample population parameter estimation and testing a hypothesis of a statistical data.
	Operation Research	**CO.71.**	Study the basic concept of linear programming problem along with its solution using graphical method.
		CO.72.	Study the concept of simplex method and its various applications to solve a LPP. Study other techniques of solving LPP such as two phase method, Big-M method.
		CO.73.	Concept of dual problem of an LPP along with its economic interpretation and relation with the primal problem.
		CO.74.	Study the transportation problem and assignment problem along with their mathematical formation and various technique of solving
	Game theory	**CO.75.**	Study the concept of game theory along with various technique of solving.

Paper	Subject Area		Outcomes
Paper-VIII	Numerical Analysis	**CO.76.**	Idea of errors occurs in numerical calculation, grow the technique of solving a problem, i.e., algorithms and convergence problems in this methods.
		CO.77.	Developed the concept various technical methods of finding roots of a transcendental or polynomial equations (also from geometric viewpoint). Understand these methods from analytic point of view (along with rate of convergence and error estimation).
		CO.78.	Idea and mechanical technique (along with their convergence) of solving system of linear algebraic equations
		CO.79.	Developed the idea and the application of finite differences. Understand the concept of interpolation (equi-spaced and unequi-spaced). Learn about various interpolation method form analytic and application viewpoint.
		CO.80.	Learn some techniques of differentiation based on interpolation.
		CO.81.	Learn various techniques of numerical Integration: development of the techniques from various directions, geometric representation, error estimation and applications.
		CO.82.	Idea of numerical method for finding eigenvalues and eigenvectors (Power method). Idea of least square polynomial approximation of various data.
		CO.83.	Make the concept of numerical solution technique of Ordinary Differential Equations: mechanical idea, geometry and application.
	Computer programming	**CO.84.**	Concept of positional number systems and related problems
		CO.85.	Developed the concept of programming languages.
		CO.86.	Grow the idea and understanding of C-language and systematic study of the c-language
		CO.87.	Solve many mathematical problems using computer (by writing programs in C-language)

Paper	Subject Area		Outcomes
Paper-IX	Computer added numerical methods: practical	**CO.88.**	Developed the computer programming skill.
		CO.89.	Better understanding of solving various numerical methods from their algorithms, flowcharts and programs.
		CO.90.	Developed the writing capacity of various programs in c

CO-PO Matrix

	PO.1.	PO.2.	PO.3.	PO.4.	PO.5.	PO.6.	PO.7.
CO.1.			✓				
CO.2.			✓				
CO.3.	✓						
CO.4.	✓				✓		
CO.5.	✓						
CO.6.	✓						
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CO.8.	✓						
CO.9.	✓						
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CO.11.						✓	
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CO.30.						✓	
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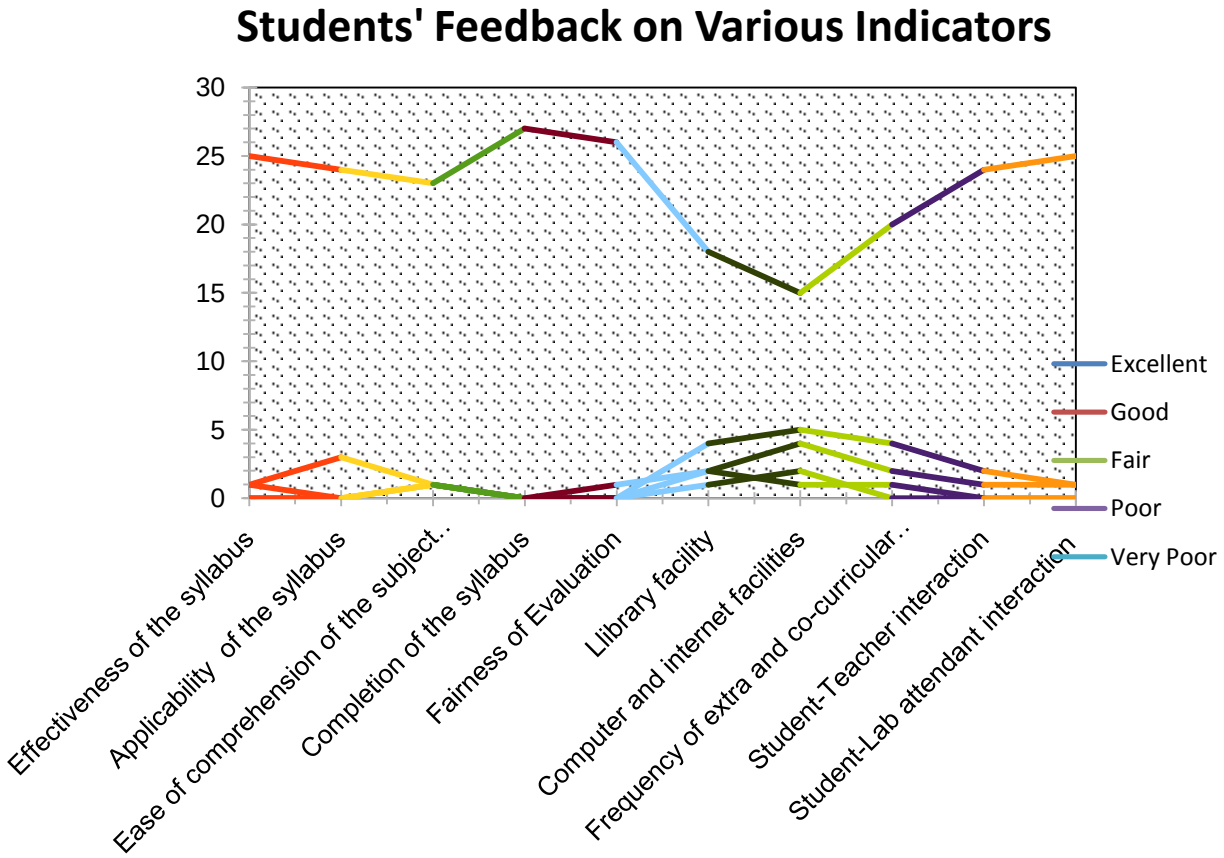
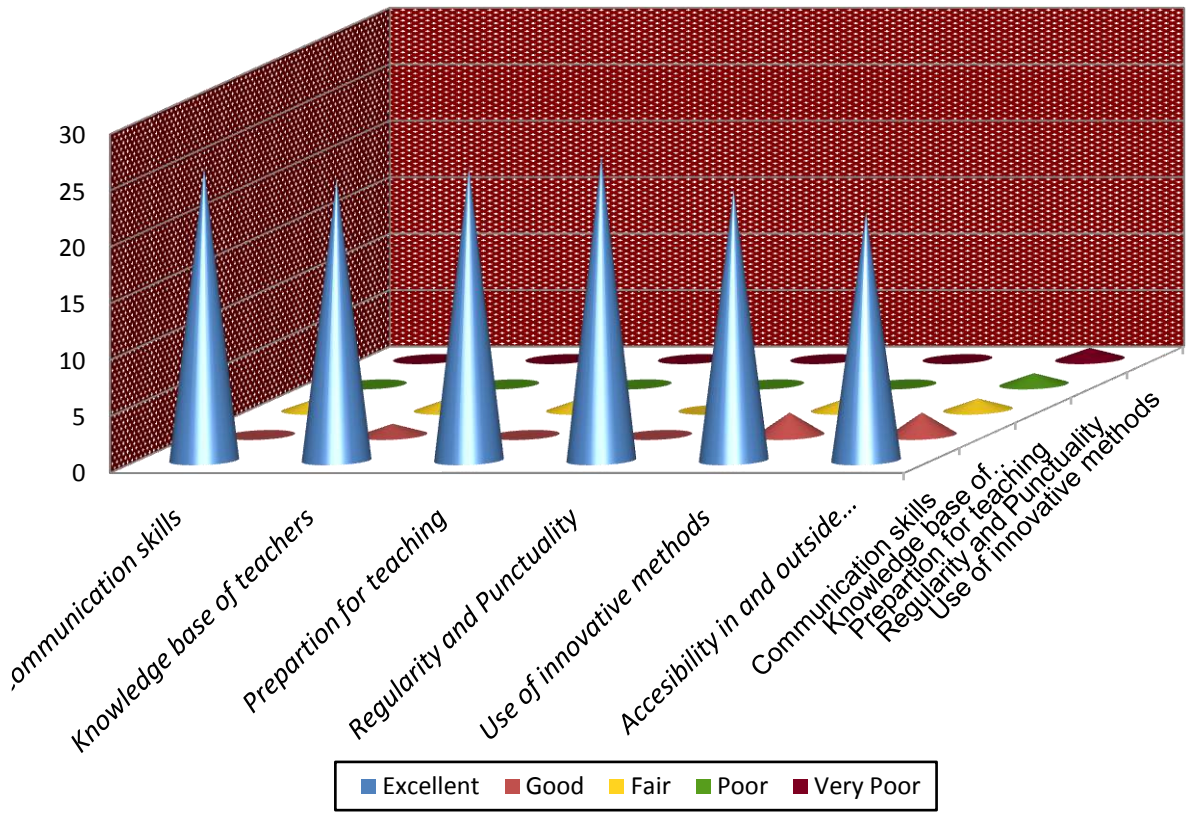
CO.86.			✓				
CO.87.			✓				
CO.88.			✓				
CO.89.			✓				
CO.90.			✓				

Students' Feedback (2018-19)
No. of Responses

Questions	Excellent	Good	Fair	Poor	Very Poor	
Effectiveness of the syllabus	25	1	1	0	0	27
Applicability of the syllabus	24	3	0	0	0	27
Ease of comprehension of the subject thought	23	1	1	1	1	27
Completion of the syllabus	27	0	0	0	0	27
Fairness of Evaluation	26	0	1	0	0	27
Llibrary facility	18	4	2	2	1	27
Computer and internet facilities	15	5	4	1	2	27
Frequency of extra and co-curricular activities	20	4	2	1	0	27
Student-Teacher interaction	24	2	1	0	0	27
Student-Lab attendant interaction	25	1	1	0	0	27
On Teachers						
Communication skills	26	0	1	0	0	27
Knowledge base of teachers	25	1	1	0	0	27
Prepartion for teaching	26	0	1	0	0	27
Regularity and Punctuality	27	0	0	0	0	27
Use of innovative methods	24	2	1	0	0	27
Accesibility in and outside the class	22	2	1	1	1	27


Students' Feedback on Various Indicators
30
25
20
15
10
5
0
Effectiveness of the syllabus
Applicability of the syllabus
Ease of comprehension of the subject..
Completion of the syllabus
Fairness of Evaluation
Library facility
Computer and internet facilities
Frequency of extra and co-curricular..
Student-Teacher interaction
Student-Lab attendant interaction
Excellent
Good
Fair
Poor
Very Poor

Students' Feedback on Teachers



Annexure-III

Result Analysis

Department of Mathematics

Result (2018-19)

Session	Student Appear	Student Passed	Division/Class	
2018-19	10	08	1st	04
			2^{nd}	04

Meeting of the faculty members of the Department of Mathematics is held today, 18.07.2019 at 2 PM to discuss about the analysis of result of final examination of 2016 and it is resolved that:

1. Updated information regarding the subject should be provided in the class hours.
2. Some special classes apart from the regular classes should be taken in certain week.
3. Students should be inspired to take online classes for better knowledge and perfection.
4. Smart classes should be taken in every week.
5. Analyze the previous year's questions and follow the question pattern accordingly the preparation should be started and thoroughly practice more and more question answers.
6. Library hours should be increased and every week a certain time for library reading season should be allotted.
7. The number of reference books, journals, and magazines and text books should be increased in the library.
8. Interdisciplinary classes should be arranged for betterment of their knowledge.
9. Practice more and more at home and for any doubt arises, doubt clearing classes should be arranged.

Meeting ends to the thanks of the chair.

ANNEXURE- IV

List of the Research paper published in academic year 2018-19

Faculty name :HARADHAN KUNDU

International Journal					
Authors Name	**Paper Name**	**Journal Name**	**Volume and pages**	**Publisher**	**Impact Factor**
A. A. Shaikh, **H. Kundu** and M. Ali	On warped product super generalized recurrent manifolds	Scientific Annals of the AlexandruIoanCuza University of Iaşi (New Series	64(1), 85-99	The Publishing House of the AlexandruIoanCuza University	0.414
A.A. Shaikh, I. Roy and**H. Kundu**	On the existence of a generalized class of recurrent manifolds	Scientific Annals of the AlexandruIoanCuza University of Iaşi (New Series	64(2), 233-251	The Publishing House of the AlexandruIoanCuza University	0.414
A.A. Shaikh and **H. Kundu**	On generalized Roter type manifolds	Kragujevac J. Math.	43 (3), 471-493	Faculty of Science, University of Kragujevac, Kragujevac, Serbia	--

ANNEXURE- V

List of the papers presented in academic year 2018-19

Faculty name :Haradhan Kundu

Papers Presented at National Seminar			
Name of the seminar	**Paper name**	**Organizer**	**Date**
Recent trends in Mathematical Sciences **(RTMS-2019)**	Some curvature restricted geometric structures for projective curvature tensor	Department of Mathematics, Burdwan University	February 06-07, 2018