

4Y B.Sc. (Honours) (Major in Mathematics) (2025 Pattern)

Minutes of the PAC Meeting held on 09.12.2024

Date: 9th December, 2024

Time: 01.45 pm to 03.15 pm

The PAC Meeting for 4 Year B.Sc. (Honours) (Major in Mathematics) {2025 Pattern} programme as per NEP 2020 of **School of Sciences** was held online on **Monday, 09-12-2024 at 01.45 PM**, school meeting hall. Following members and invitees were present,

SN	Name of PAC Members	Designation
1.	Dr. Chetana Kamlaskar	(Chairperson) and Member
2.	Prof. Dr. J. N. Chaudhari	Member
3.	Prof. Dr. V. R. Nikam	Member
4.	Ms. Tejaswi Kadam	Academic Coordinator (Mathematics Programme) and Invitee
5.	Dr. Jagruti Chavan	Invitee
6.	Dr. Dnyaneshwar Bhusanur	Invitee
7.	Mr. Ravindra Bharsat	Invitee
8.	Ms. Minakshi Kadel	Invitee
9.	Dr. Bharat More	Invitee

Following members could not attend the meeting due to their other engagements.

01	Dr. Sunanda More	Member
02	Prof. Dr. Bhausaheb S. Desale	Member

Dr. Chetana Kamlaskar, Director of the School of Sciences and Chairperson of the PAC, first welcomed the PAC members and introduced the purpose of the meeting. During the meeting, the following items were discussed for the collective decision on the proposed content of each course in the 4 Year B.Sc. (Honours) (Major in Mathematics) {2025 Pattern} programme.

SN	Details of Items	Resolution										
1	Agenda Item 1: To finalize and approve the credit distribution and detailed syllabus for the proposed Minor courses and VSC courses in the Mathematics discipline at semester 01 to 06, as per NEP2020 guidelines and their evaluation pattern.	The PAC members unanimously finalized and approved the credit distribution and proposed detailed syllabus with evaluation pattern for, 1) All Minor courses at semester 02 to 06 in the Mathematics discipline, for the learners other than Mathematics Major, in accordance with NEP2020 guidelines. A few suggestions regarding course content were also provided as follows:										
		<table><tr><th>Sem</th><th>As per Suggestion by PAC</th></tr><tr><td>II</td><td>MINMAT101: Foundation of Mathematics PAC members suggested replacing unit 02-01 “Abstract Algebra Basics” with “Complex Numbers” to ensure the course level remains appropriate.</td></tr><tr><td>IV</td><td>MINMAT203: Applied Linear Algebra It has been recommended to consolidate Unit 01-01 "Matrices" with Unit 01-02 "Inverse of a Matrix," due to their complementary nature. Furthermore, it is advised that the unit on "Groups and Subgroups" be introduced prior to the discussion of vector spaces and subspaces to enhance understanding of the material.</td></tr><tr><td>V</td><td>MINMAT301: Introductory Differential Equations To improve the content of this course, it is recommended to expand the existing unit (Instead of single unit) that focuses on Linear Differential Equations with Constant Coefficients only. Additionally, the units covering Laplace Transforms, Nonlinear Differential Equations, and Stability Analysis should be removed to avoid complexity of the course content.</td></tr><tr><td>VI</td><td>MINMAT303: Numerical Methods PAC members recommended separating the unit on Numerical Differentiation and Integration into two distinct units: Numerical Differentiation and Numerical Integration. They also suggested reducing the syllabus content and removing topics related to</td></tr></table>	Sem	As per Suggestion by PAC	II	MINMAT101: Foundation of Mathematics PAC members suggested replacing unit 02-01 “Abstract Algebra Basics” with “Complex Numbers” to ensure the course level remains appropriate.	IV	MINMAT203: Applied Linear Algebra It has been recommended to consolidate Unit 01-01 "Matrices" with Unit 01-02 "Inverse of a Matrix," due to their complementary nature. Furthermore, it is advised that the unit on "Groups and Subgroups" be introduced prior to the discussion of vector spaces and subspaces to enhance understanding of the material.	V	MINMAT301: Introductory Differential Equations To improve the content of this course, it is recommended to expand the existing unit (Instead of single unit) that focuses on Linear Differential Equations with Constant Coefficients only. Additionally, the units covering Laplace Transforms, Nonlinear Differential Equations, and Stability Analysis should be removed to avoid complexity of the course content.	VI	MINMAT303: Numerical Methods PAC members recommended separating the unit on Numerical Differentiation and Integration into two distinct units: Numerical Differentiation and Numerical Integration. They also suggested reducing the syllabus content and removing topics related to
		Sem	As per Suggestion by PAC									
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V	MINMAT301: Introductory Differential Equations To improve the content of this course, it is recommended to expand the existing unit (Instead of single unit) that focuses on Linear Differential Equations with Constant Coefficients only. Additionally, the units covering Laplace Transforms, Nonlinear Differential Equations, and Stability Analysis should be removed to avoid complexity of the course content.											
VI	MINMAT303: Numerical Methods PAC members recommended separating the unit on Numerical Differentiation and Integration into two distinct units: Numerical Differentiation and Numerical Integration. They also suggested reducing the syllabus content and removing topics related to											

		boundary value problems, partial differential equations, eigenvalues, and eigenvectors to ensure the course remains at an appropriate level.
		2) VSC courses at semester 01 and 05 related to Major in Mathematics
	Action Taken: The credit distribution and syllabus of Minor courses and VSC courses has been updated following the discussion in the PAC meeting. Refer Appendix I & II for updated syllabus.	
2	Agenda Item 4: Identification of Writers/ Editors for SLM development task	The PAC members unanimously gave their consent for the writing/editing of the Self Learning Material (SLM) development for the proposed courses. They also agreed to recommend experts for the new courses, in due course of time. It was also resolved to authorize the Director of this School to enrich and update the list of writers/editors for the Self Learning Material (SLM) development task from time to time as per the University Policy decisions/norms.

Meeting ends with vote of thanks by **Dr. Chetana Kamlaskar**.

Thanks...



(Dr. Chetana Kamlaskar) Chairperson,
PAC B.Sc. (Mathematics)

APPENDIX I: Credit Distribution: Mathematics: Major, Minor, OE, VSC and IKS Courses

Level	Sem	Major				Minor	OE		VSC, SEC (VSEC)		AEC, VEC, IKS		OJT, FP, CEP, CC, RP		Cum. Cr. / Sem	
		Mandatory		Electives												
4.5	I	MAT101: Fundamentals of Mathematics (T)	4	-		-	OE101: Mathematics for Competitive Exam- I (T)	2	VSC101: Introduction to GeoGebra (TW)	2	AEC101: English Communication - I (T)	2	CC101: Photography Techniques & Bird Watching (TW)	2	22	
		MAT102: Basics of Statistics (P)	2				OE102: Logical Reasoning and Data Interpretation (T)	2	SEC101: Basic Instrumentation Skills (TW)	2	VEC101: Environmental Education - I (T)	2				
	II	MAT103: Calculus (T)	4	-		MINMAT101: Foundation of Mathematics (T)	2	OE103: Mathematics for Competitive Exam- II (T)	2	VSC102: Programming in Python (TW)	2	AEC102: English Communication-II (T)				2
		MAT104: Practical Based on MAT103 (P)	2				OE104: Statistics for Research (T)	2	MAT106/SEC102: MS-Excel with AI (TW)	2	VEC102: Environmental Education – II (T)	2				
Cum. Cr.		12		00		02		08		08		10		04		44
5.0	III	MAT201: Calculus of Several Variables(T)	4	-		MINMAT201: Fundamentals of Calculus (T)	2	OE201: Mathematics for Finance (T)	2	VSC201: R Programming (P)	2	AEC201: Modern Indian Language - I (T)	2	MAT204: Field Project	2	22
		MAT202: Vedic Mathematics (IKS) (T)	2			MINMAT202: Practical Based on MINMAT201 (P)	2							CC201: Applied Arts (TW)	2	
		MAT203: Coordinate Geometry (P)	2													
	IV	MAT 205: Linear Algebra (T)	4			MINMAT203: Applied Linear Algebra (T)	2	OE202: Basics of Actuarial Science (T)	2	SEC201: Intellectual Property Rights (T)	2	AEC202: Modern Indian Language - II(T)	2	CEP201: Bee Keeping (TW)	2	22
		MAT 206: Complex Variables (T)	2			MINMAT204: Practical Based on MINMAT203 (P)	2							CC202: Astronomy for Beginners (TW)	2	
		MAT207: Practical Based on MATXXX & MATXXX (P)	2													
Cum. Cr.		28		00		10		12		12		14		12		88

Level	Sem	Major				Minor	OE		VSC, SEC (VSEC)	AEC, VEC, IKS		OJT, FP, CEP, CC, RP	Cum . Cr. / Sem			
		Mandatory		Electives												
5.5	V	MAT301: Differential Equations (T)	4	MAT304: Graph Theory (T) OR MAT305: Dynamical Systems (T) OR MAT306: Analytical Geometry (T)	4	MINMAT301: Introductory Differential Equations(T)	2	-	-	VSC301: LaTeX (P)	2	-	-	MAT307: Field Project OR CEP301: Awareness of Sustainable Development Goals	2	22
		MAT302: Real Analysis (T)	2			MINMAT302: Practical Based on MINMAT301 (P)	2									
		MAT303: Programming in MATLAB (P)	4													
	VI	MATXXX: Metric Spaces (T)	4	MAT311: LPP and Game Theory (T) OR MAT312: Lattice Theory & Boolean Algebra (T) OR MAT313: Numerical Analysis (T)	4	MINMAT303: Numerical Methods (T)	2	-	-	-	-	-	-	MAT315: On Job Training	4	22
		MAT309: Group Theory (T)	2			MINMAT304: Practical Based on MINMAT303 (P)	2									
		MAT 310: Mathematical Modelling(P)	4													
Cum. Cr.		48		08		18		12		14		14		18		132

Level	Sem	Major				Minor		OE		VSC, SEC (VSEC)		AEC, VEC, IKS		OJT, FP, CEP,CC, RP		Cum. Cr. / Sem		
		Mandatory		Electives														
6.0	VII	MAT401: Real Analysis (T)		4	MAT406: Operations Research (T) OR MAT407: Numerical Analysis (T)		4	RES405: Research Methodology (T)		4	-	-	-	-	2	22		
		MAT402: Abstract Algebra (T)		4														
		MAT403: Ordinary Differential Equations (T)		2														
		MAT404: Programming in C and Scilab(P)		4														
	VIII	MAT409: Topology (T)		4	MAT415: Number Theory (T) OR MAT416: Field Theory (T)		4	-						MAT413: OJT	4	22		
		MAT410: Linear Algebra (T)		4														
		MAT411: Partial Differential Equations (T)		2														
		MAT412: LaTeX and Programming in SageMath(P)		4														
Cum. Cr.		76			16			22		12		14		14		22		176

APPENDIX II:

SYLLABUS OF MINOR AND VSC COURSES FROM MATHEMATICS

Refer the syllabus file attached with this mail separately