

SHRI MATA VAISHNO DEVI UNIVERSITY
SUB POST OFFICE – 182320, J & K
Faculty of Sciences
School of Mathematics

MINUTES OF THE 16TH MEETING OF BOARD OF STUDIES (BOS) OF SCHOOL OF MATHEMATICS (SoM), HELD ON 25th MAY, 2026 IN ROOM NO. D-207.

During the meeting following were present:

S. No.	Name / BoS Participants	Affiliation
1.	Dr. Rakesh Kumar	Chairman, BOS (Associate Professor & Head, SoM)
2.	Prof. Sartaj Ul Hasan	Associate Professor, Department of Mathematics, IIT, Jammu
3.	Prof. Ajay Sharma	Professor, Department of Mathematics, Central University of Jammu
4.	Prof. V. K. Bhat	Professor, SoM
5.	Prof. A. K. Das	Professor, SoM
6.	Dr. Kuldeep Raj	Associate Professor, SoM
7.	Dr. Abhishek Singh	Associate Professor, SoM
8.	Dr. Sandeep Bhogal	Assistant Professor & Member Secretary of BoS, SoM
9.	Dr. Sandeep Sharma	Assistant Professor, SoM
10.	Dr. Sunny Kr. Sharma	Assistant Professor, SoM
11.	Dr. Vivek Kumar	Assistant Professor, SoM
12.	Dr. Sunil Kr. Sharma	Assistant Professor, SoM (On Contract)
13.	Dr. Anu Choudhary	Assistant Professor, SoM (On Contract)
14.	Dr. Rohit Verma	Assistant Professor, SoM (On Contract)
15.	Dr. Sonali Magotra	Assistant Professor, SoM (On Contract)



Welcome and Introduction

The Chairman of the Board of Studies introduced all faculty members of the school to the external member experts. He welcomed all the members to the 16th meeting of Board of Studies and thanked Prof. Ajay Sharma (Online) & Prof. Sartaj Ul Hasan for attending the Board of Studies in spite of their busy schedule.

The agenda of BoS meeting is to consider the item-wise deliberations, as per the following detail:

Item:16.1	To confirm the minutes of the 15th meeting of Board of Studies (BoS), held on 15th of January, 2026. (As no further comments/suggestions received from the members, the house approved the minutes of last meeting of BoS.)
Item:16.2	To discuss / review the list of experts for evaluating UG/PG Projects, and Summer Internship. (The same is Annexed as Annexure-I) List of experts for evaluating UG/PG Projects, and Summer Internship of the School of Mathematics is finalized after thorough discussion.
Item:16.3	To discuss / review the course structure of B. Tech. Mathematics and Computing programme, and to consider the list of courses for Honors specialization in Computational Mathematics and Artificial Intelligence, and for Minor specialization in Computational Mathematics for other Schools' B. Tech programmes. (The same is Annexed as Annexure-II) Thorough discussions were held to review the course structure of B. Tech. Mathematics and Computing programme, and to consider the proposed Honors and Minor specializations with valuable input and insights provided by the external experts and these were approved and recommended to be included in the next meeting of Academic Council.
Item:16.4	To discuss / review the programme structure of Post Graduate Course Curriculum of Mathematics as per NEP 2020 @ SMVDU (The same is Annexed as Annexure-III) The course structure was thoroughly reviewed and a course on Artificial Intelligence/Machine Learning is introduced in Post Graduate Curriculum of Mathematics after valuable inputs from external experts.
Item:16.5	To discuss / review the course structure of existing FYUP (2024) in Mathematics. (The same is Annexed as Annexure-IV) The course structure of the existing FYUP (2024) in Mathematics was discussed in detail, the recommendations of external experts were incorporated. It is approved and recommended to be included in next meeting Academic Council.
Item:16.6	Any other item with the permission of chair.

The Meeting ended with a vote of thanks to the Chair.


Dr. Sandeep Bhoulgal

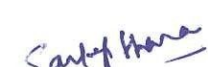
(Member Secretary, BoS)


Dr. Rakesh Kumar

(Chairman, BoS)

List of External Experts for evaluating UG/PG Projects, and Summer Internship

S.No.	Name of External Expert
1.	Prof. Romesh Kumar Department of Mathematics, University of Jammu
2.	Prof. Pawan Kumar Department of Statistics, University of Jammu
3.	Prof. Parmil Kumar Department of Statistics, University of Jammu
4.	Prof. Kamlesh Kumar Department of Mathematics, Central University of Jammu
5.	Prof. Ajay Kumar Sharma Department of Mathematics, Central University of Jammu
6.	Prof. Uday Pratap Singh Department of Mathematics, Central University of Jammu
7.	Dr. Sartaj Ul Hassan Associate Professor, Department of Mathematics, IIT Jammu
8.	Dr. Ajay Kumar Associate Professor, Department of Mathematics, IIT Jammu
9.	Dr Sarika Verma Associate Professor, Department of Mathematics, University of Jammu
10.	Dr Sunil Gupta Principal, Govt. SPMR College of Commerce, Jammu
11.	Dr. Tirth Ram Associate Professor, Department of Mathematics, University of Jammu.








Course Structure for B.Tech. Mathematics & Computing (2026 and onwards)
under NEP 2020
School of Mathematics

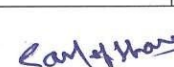
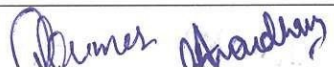
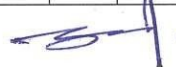
Semester-I

Course Type	Course Code	Course Title	L	T	P/S	Credits
BSC 1	MTL BS101	Engineering Mathematics-I	3	1	0	4
BSC 2	PHL BS101	Engineering Physics	3	0	0	3
BSC 2	PHP BS101	Engineering Physics Lab	0	0	2	1
ESC 1	CSL ES103	Problem Solving using 'C'	3	0	0	3
ESC 1	CSP ES103	Problem Solving using 'C' Lab	0	0	2	1
ESC 2	ECL ES103	Digital Electronics	3	0	0	3
ESC 2	ECP ES103	Digital Electronics Lab	0	0	2	1
SEC 1	MEM SE103	Engineering Graphics with CAD	1	0	2	2
AEC 1 / VAC 1		Ability Enhancement /Value Added Course				2
		Total Credits				20
Semester II						
Course Type	Course Code	Course Title	L	T	P/S	Credits
BSC 3	MTL BS 102	Engineering Mathematics-II	3	1	0	4
BSC 4	BTL BS102	Biology for Engineers	3	0	0	3
DCC 1	CSL DC102	Problem Solving using Python	3	0	0	3
DCC 1	CSP DC102	Problem Solving using Python Lab	0	0	2	1
DCC 2	MTL DC102	Modern Algebra	3	1	0	4
SEC 2	MEM SE102	Engineering Workshop	1	0	2	2
AEC 2		Ability Enhancement Course				2
VAC 2		Value Added course				2
MAC 1	PCN MA102	Universal Human Values-II	2	0	0	0
		Total Credits				21

Second Year						
3 rd Semester						
Course Type	Course Code	Course Title	L	T	P/S	Credits
BSC 5	MTL BS201	Discrete Mathematics	3	0	0	3
ESC 3	ECL ES205	Microprocessor and Interfacing	3	0	0	3
ESC 3	ECP ES205	Microprocessor and Interfacing Lab	0	0	2	1
DCC 3	CSL DC207	Data Structures	3	0	0	3
DCC 3	CSP DC207	Data Structures Lab	0	0	2	1
DCC 4	MTL DC203	Integral Transforms and Complex Analysis	3	1	0	4
DCC 5	MTL DC205	Probability & Statistics	3	1	0	4
SEC 3		Skill Enhancement Course 3				2
PR	CSI PR203	Summer Internship - I				1
VAC 3		Value Added Course	2	0	0	2
		Total Credits				24
4 th Semester						
Course Type	Course Code	Course Title	L	T	P/S	Credits
DCC 6	CSL DC214	Algorithm Design & Analysis	3	1	0	4
DCC 7	MTL DC202	Real Analysis	3	1	0	4
DCC 8	CSL DC212	Theory of Computation	3	1	0	4
DCC 9	CSL DC208	Computer Organization & Architecture	3	1	0	4
DCC 10	MTL DC204	Linear Algebra and Applications	3	1	0	4
VAC 4		Value Added Course	2	0	0	2
		Total Credits				22

Third Year						
5 th Semester						
Course Type	Course Code	Course Title	L	T	P/S	Credits
DCC 11	CSL DC307	Operating System	3	0	0	3
DCC 11	CSP DC307	Operating System Lab	0	0	2	1
DCC 12	MTL DC301	Number Theory	3	1	0	4
DCC 13	MTL DC303	Stochastic Processes	3	1	0	4
DEC 1		School Elective -I	3	0/1	2/0	4



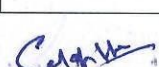
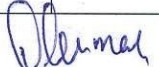




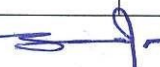



DEC 2 / GEC 1		School Elective –II/ Generic Elective I	3	0/1	2/0	4
PR	CSI PR303	Summer Internship - II				1
DCC	CSD PR301	Project work 1	0	0	4	2
		Total Credits				23
DEC/GEC (Additional)		For Earning Honors/minor Specialization				4
DEC/GEC (Additional)		For Earning Honors/minor Specialization				4
6th Semester						
Course Type	Course Code	Course Title	L	T	P/S	Credits
DCC 14	CSL DC310	Machine Learning	3	0	0	3
DCC 14	CSP DC310	Machine Learning Lab	0	0	2	1
DCC 15	CSL DC308	Data Base Management System	3	0	0	3
DCC 15	CSP DC308	Data Base Management System Lab	0	0	2	1
DEC 3		School Elective – III	3	1/0	0/2	4
DEC 4 / GEC 2		School Elective –IV/ Generic Elective II	3	1/0	0/2	4
AEC		Management Course/ Entrepreneurship/Economy	3	0	0	3
DCC	CSD PR304	Project Work –II				2
MAC 2	PCN MA302	Indian Knowledge System	2	0	0	0
		Total Credits				21
DEC/GEC (Additional)		For Earning Honors/minor Specialization				4
DEC/GEC (Additional)		For Earning Honors/minor Specialization				4

Fourth Year						
7th Semester						
Course Type	Course Code	Course Title	L	T	P/S	Credits
DCC 16	MTL DC401	Optimization Techniques	3	1	0	4
DEC 5		School Elective – V	3	1/0	0/2	4
DEC 6 / GEC 3		School Elective –VI/ Generic Elective III	3	1/0	0/2	4
PR	CSI PR403	Summer Internship – III				2
DCC/PR	CSD PR403	Project Work –III				4
		Total Credits				18
DEC/GEC (Additional)		For Earning Honors/minor Specialization				4
DEC/GEC (Additional)		For Earning Honors/minor Specialization				4
8th Semester						
Course Type	Course Code	Course Title	L	T	P/S	Credits









DCC/PR	CSD PR404 / CSI PR404	Major Project / Internship (Industrial or In-house Project)				10
		Total Credits				10

List of School Electives Courses

S. No.	Subject Code	Subject	Elective No.
1.	MTL DE 301	Operations Research	SEC- 1
2.	CSL DE 327	Object Oriented programming	
3.	MTL DE 303	Complex Analysis	
4.	CSL DE 329	Computer Networks	SEC - 2
5.	CSL DE 331	Software Engineering	
6.	CSL DE 333	Artificial Intelligence	
7.	MTL DE 305	Partial Differential Equations	SEC- 3
8.	CSL DE 324	Computer Graphics	
9.	CSL DE 326	Web Technology	
10.	CSLDE 328	Cluster & Grid Computing	SEC - 4
11.	CSL DE 330	Big Data Analytics	
12.	MTL DE 302	Statistical Inference	
13.	CSL DE 332	Data Warehousing & Data Mining	SEC - 5
14.	CSL DE 334	Compiler Design	
15.	CSL DE 336	Wireless & Mobile Computing	
16.	CSL DE 338	Multimedia System	SEC- 6
17.	MTL DE 304	Topology	
18.	MTL DE 401	Matrix Computation	
19.	MTL DE 403	Modern Applied Algebra	SEC- 6
20.	MTL DE 405	Dynamical Systems	
21.	MTL DE 407	Functional Analysis	
22.	CSL DE 417	Immersive Computing	SEC- 6
23.	MTL DE 409	Information Theory & Coding	
24.	MTL DE 411	Finite element methods	
25.	MTL DE 413	Game Theory	SEC- 6
26.	MTL DE 415	Differential Geometry	

****Open Elective Courses to be offered by other Schools.**

Basket of Courses for B. Tech. Mathematics and Computing (2024 onwards) Honors Specialization in Computational Mathematics and Artificial Intelligence

Course Type	Semester	Course Code	Course Title	L	T	P/S	Credits
DEC	V	MTL DE301	Numerical Methods for Computing	3	1	0	4
DEC	V	MTL DE303	Econometrics	3	1	0	4
DEC	V	CSM DE311	Data Visualization	3	0	2	4
DEC	V	CSL DE315	Cloud Computing	3	1	0	4
DEC	VI	MTL DE 302	Graph Theory for Engineering Applications	3	1	0	4
DEC	VI	MTL DE304	Financial Mathematics	3	1	0	4

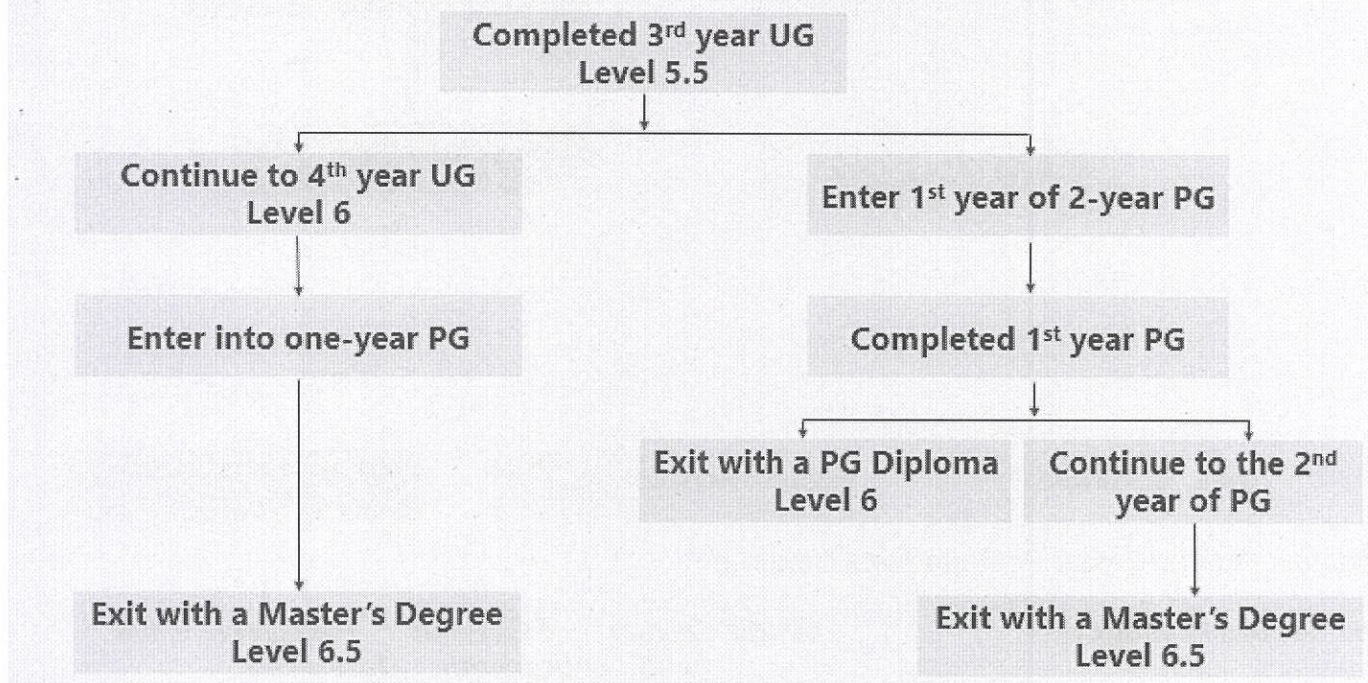
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DEC	VI	CSL DE320	High Performance Computing	3	1	0	4
DEC	VI	CSM DE310	Internet of Things	3	0	2	4
DEC	VII	MTL DE401	Coding Theory with Applications	3	1	0	4
DEC	VII	MTL DE403	Advanced Partial Differential Equations	3	1	0	4
DEC	VII	CSL DE401	Nature Inspired Algorithms	3	1	0	4
DEC	VII	CSL DE413	Natural Language Processing	3	1	0	4

Basket of Courses for Minor Specialization in Computational Mathematics (for B. Tech. Programmes of other Schools)

Note: From semester V onwards, each student opting for minor specialization in Computational Mathematics has to choose two courses from this basket in each semester.

Post Graduate Course Curriculum as per NEP 2020 @ SMVDU

Progression from UG to PG**Programme of Study and the corresponding qualification levels**

First year UG programme – Level 4.5

Second Year UG Programme – Level 5

Third Year UG Programme – Level 5.5

Fourth Year UG Programme – Level 6

First year of Two Year PG Programme – Level 6

Second Year of Two Year PG Programme – Level 6.5

One year of PG Programme after 4 Year UG – Level 6.5

First year of Two Year PG Programme after 4 Year UG – Level 6.5

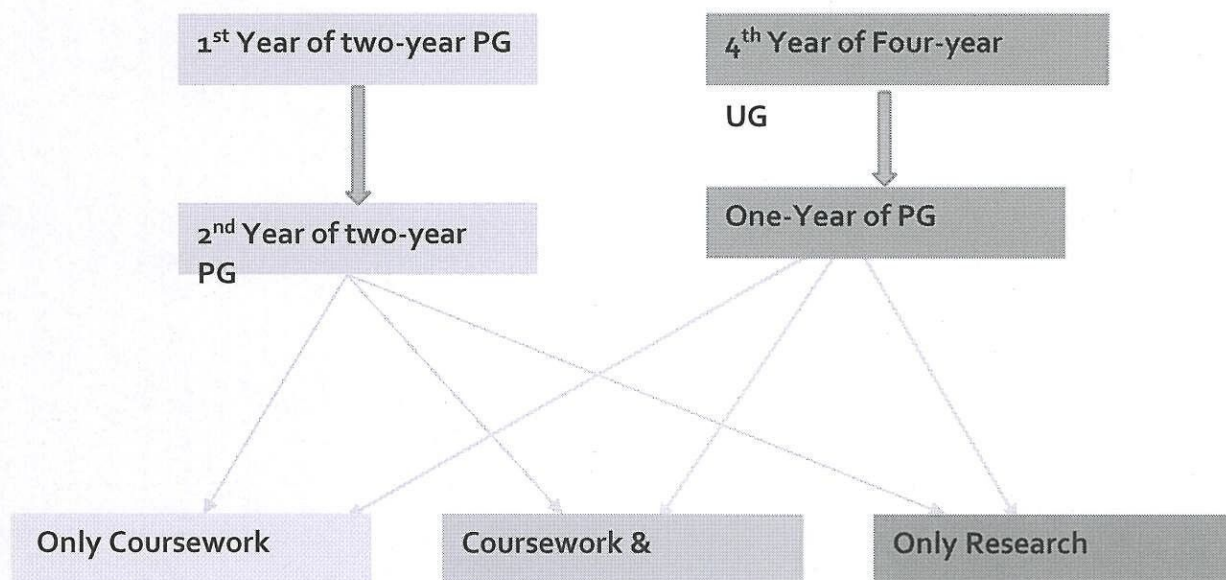
Second year of Two Year PG Programme after 4 Year UG – Level 7

Postgraduate Curricular Framework 2025 (based on NEP 2020)

LEVEL - 6

LEVEL – 6.5

Research



Credit Distribution Plan for 2-year Post-graduate Program

S.No.	Course Category	Credit Per Course	2-year PG with course work	2-year PG with Coursework + Research	2-year PG with Research
1.	Discipline-Specific Core (DSC)	4	40	32	24
2.	Discipline Specific Elective	4	40	24	16
3.	Research thesis/project/Patent/Intensive Research Work	----	-----	24	40
Total Credits			80	80	80

Credit Distribution Plan for 1-Year Post-graduate Program

S.No.	Course Category	Credit Course	Per1 year PG with course work	1 year PG with Corse work + Research	1 year PG with Research
1.	Discipline-Specific Core (DSC)	4	16	8	-----
2.	Discipline-Specific Elective	4	24	8	-----
3.	Research thesis/project/Patent/Intensive Research Work	----	-----	24	40
Total Credits			40	40	40

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1st Year of PG curriculum structure for 2-year PG Programme (3+2)

1st Semester

Sr.	Course Category	Category	Course Code	Course Title	L-T-P	C
1	Discipline-Specific Core (DSC)	DSC-1	MTL DC601	Basic Research Methodology for Beginners	4-0-0	4
		DSC-2	MTL DC603	Abstract Algebra	4-0-0	4
		DSC-3	MTL DE601	Topology	4-0-0	4
2	Discipline Specific Elective (DSE)	DSE-1	x	x	4-0-0	4
		DSE-2	x	x	4-0-0	4
		Total Credits				20

Discipline Specific Elective (DSE-1)			
MTL DC605	Advanced Real Analysis	4-0-0	4
MTL DE 607	Decision Theory	4-0-0	4
Discipline Specific Elective (DSE-2)			
MTL DE605	Numerical Methods	4-0-0	4
MTL DE603	Advanced Calculus and Special Functions	4-0-0	4

2nd Semester

1 DSC in Semester I to be offered on Research Methodology.

Sr.	Course Category	Category	Course Code	Course Title	L-T-P	C
1	Discipline-Specific Core (DSC)	DSC-4	MTL DC602	Complex Analysis	4-0-0	4
		DSC-5	MTL DC604	Advanced Linear Algebra	4-0-0	4
		DSC-6	MTL DC606	Differential and Integral Equations	4-0-0	4
2	Discipline Specific Elective (DSE)	DSE-3	x	x	4-0-0	4
		DSE-4	x	x	4-0-0	4
		Total Credits				20

Discipline Specific Elective (DSE-3)			
MTL DE602	Functional Analysis	4-0-0	4
MTL DE608	Econometrics	4-0-0	4
Discipline Specific Elective (DSE-4)			
MTL DE606	Advanced Topics in Algebra	4-0-0	4
MTL DE604	Numerical Solution of Ordinary and Partial Differential Equations	4-0-0	4

could be offered in Semester I

Curricular Structure of 2nd Year of PG for Two-year PG Programme (3+2)
OR
 One-year PG Programme after completion of a Four-Year UG Programme (4+1)

Structure 1 (Level 6.5): PG Curricular Structure with only coursework

3rd Semester

Sr.	Course Category	Category	Course Code	Course Title	L-T-P	C
1	Discipline-Specific (DSC)	DSC-7	MTL DC701	Coding Theory	4-0-0	4
		DSC-8	MTL DC703	Calculus of Variations and Mechanics	4-0-0	4
2	Discipline Specific Elective (DSE)	DSE-5	x	x	4-0-0	4
		DSE-6	x	x	4-0-0	4
		DSE-7	x	x	4-0-0	4
		Total Credits				20

Discipline Specific Elective (DSE-5)			
MTL DE701	Optimization Techniques	4-0-0	4
MTL DE703	Survey Sampling	4-0-0	4
Discipline Specific Elective (DSE-6)			
MTL DE705	Commutative Algebra	4-0-0	4
MTL DE707	Stochastic Processes	4-0-0	4
Discipline Specific Elective (DSE-7)			
MTL DE709	Theory of Reliability	4-0-0	4
MTL DE711	Biomathematics	4-0-0	4











4th Semester

Sr.	Course Category	Category	Course Code	Course Title	L-T-P	C
1	Discipline-Specific Core (DSC)	DSC-9	MTL DC702	Differential Geometry	4-0-0	4
		DSC-10	MTL DC704	Modern Applied Algebra	4-0-0	4
2	Discipline Specific Elective (DSE)	DSE-8	x	x	x	4
		DSE-9	x	x	x	4
		DSE-10				4
		Total Credits				20.0

Discipline Specific Elective (DSE-8)			
MTL DE702	Algebraic Number Theory	4-0-0	4
MTL DE708	Fluid Mechanics	4-0-0	4
Discipline Specific Elective (DSE-9)			
MTL DE706	Queuing Theory	4-0-0	4
MTL DE710	Measure Theory	4-0-0	4
Discipline Specific Elective (DSE-10)			
MTL DE704	Statistical Inference	4-0-0	4
MTL DE712	Advanced Topics in Topology	4-0-0	4

Structure 2 (Level 6.5): PG Curricular Structure with coursework and Research

3rd Semester

Sr.	Course Category	Category	Course Code	Course Title	L-T-P	C
1	Discipline Specific Elective (DSE)	DSC-7	MTL DC701	Coding Theory	4-0-0	4
		DSC-8	MTL DC703	Calculus of Variations and Mechanics	4-0-0	4
2	Research thesis/project/Patent	Project-1	MTR PR701	x	x	12
		Total Credits				20

4th Semester

Sr.	Course Category	Category	Course Code	Course Title	L-T-P	C
1	Discipline Specific Elective (DSE)	DSE-5	x	x	x	4
		DSE-6	x	x	x	4
2	Research thesis/project/Patent	Project-2	MTR PR702	x	x	12
		Total Credits				20.0

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Discipline Specific Elective (DSE-5)			
MTL DE701	Optimization Techniques	4-0-0	4
MTL DE703	Survey Sampling	4-0-0	4
Discipline Specific Elective (DSE-6)			
MTL DE705	Commutative Algebra	4-0-0	4
MTL DE707	Stochastic Processes	4-0-0	4
MTL DE 709	AI/Machine Learning for Mathematics	4-0-0	4

Structure 3 (Level 6.5): PG Curricular Structure with Research

3rd Semester

Sr.	Course Category	Category	Course Code	Course Title	L-T-P	C
1	Research thesis/project/Patent	Project-1	MTR PR701	x	x	20
		Total Credits				20

4th Semester

Sr.	Course Category	Category	Course Code	Course Title	L-T-P	C
1.	Research thesis/project/Patent	Project-2	MTR PR702	x	x	20
		Total Credits				20.0

NOTE: The Research thesis/project/Patent chosen should be an original work and **not a repetition of work done in the 4th Year of the UG programme.** It may be an extension of the work done in the 4th Year of the UG programme.

Outcomes expected of Research thesis/project/Patent in the 2nd Year of PG Programmes Semester III

The following **four** outcomes must be achieved by the end of the III Semester:

Research Problem Identification

Review of literature

Research design formulation

Commencement of experimentation, fieldwork, or similar tasks

Semester IV

The following **three** outcomes must be achieved by the end of the IV Semester:

Completion of experimentation/ fieldwork

Submission of dissertation

Research output in the form of **any one** of the following –

Prototype or product development/ patent

Publication/Presentation of research work in National/International Conference/conference proceedings

Publication in a reputed journal such as Scopus-indexed journals or other similar quality journals

Book or Book Chapter in a publication by a reputed publisher.

Any other scholastic work as recommended by the School Research Committee and approved by the competent authority.

Note:

The detailed Curriculum to be prepared as per the Graduate Attributes of PG Programme available in the UGC document “Curriculum & Credit Framework for Postgraduate Programs”

(https://www.ugc.gov.in/pdfnews/4682468_Curriculum-and-Credit-Framework-for-Postgraduate-Programmes.pdf)

Courses on AI/Machine Learning, entrepreneurship, and cutting-edge technologies as applicable to the relevant discipline to be included in the course structure under DSC/DSE course categories.

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COURSE STRUCTURE AS PER NEP 2020**Integrated B. Sc.- M. Sc. &
FYUP in Mathematics from 2024 onwards****Semester-I**

Broad Category of Course	Course Code	Course Title	L-T-P	Credits
Major	MTL MD101	Differential Calculus	4-0-0	4
Minor	XXX MI XXX	Choose one from the pool of Courses from allied schools	4-0-0	4
Multidisciplinary	XXX MU XXX		3-0-0	3
Ability Enhancement Course	XXX AE XXX		3-0-0	3
Skill Enhancement course	XXX SE XXX		2-0-0/ 1-0-2	2
Value added course-1	XXX VA XXX		2-0-0	2
Value added course-2	XXX VA XXX		2-0-0	2
		Total Credits	20-0-0/ 19-0-1	20

Minor

Broad Category of Course	Course Code	Course Title	L-T-P	Credits
Minor	MTL MI101	Elements of Discrete Mathematics	4-0-0	4

Multidisciplinary Courses from Mathematics for other Departments/Disciplines:

Broad Category of Course	Course Code	Course Title	L-T-P	Credits
Multidisciplinary	MTL MU101	Fundamentals of Calculus and applications	3-0-0	3

Semester-II

Broad Category of Course	Course Code	Course Title	L-T-P	Credits
Major	MTL MD102	Integral Calculus	4-0-0	4
Minor	XXX MI XXX	Choose one from the pool of Courses from allied schools	4-0-0	4
Multidisciplinary	XXX MU XXX		3-0-0	3
Ability Enhancement Course	XXX AE XXX		3-0-0/ 2-1-0	3
Skill Enhancement course	XXX SE XXX		2-0-0/ 1-0-2	2
Value added course-3	XXX VA XXX		2-0-0	2

Value added course-4	XXX VA XXX		2-0-0	2
		Total Credits	20-0-0/ 18-1-1	20

Minor

Broad Category of Course	Course Code	Course Title	L-T-P	Credits
Minor	MTL MI102	Analytical Geometry of 3-D and Trigonometry	4-0-0	4

Multidisciplinary Courses from Mathematics for other Departments/Disciplines:

Broad Category of Course	Course Code	Course Title	L-T-P	Credits
Multidisciplinary	MTL MU102	Probability & Statistics with Applications	3-0-0	3

Semester-III

Broad Category of Course	Course Code	Course Title	L-T-P	Credits
Major	MTL MD201	Fundamentals of Algebra	4-0-0	4
Major	MTL MD203	Real Analysis-I	4-0-0	4
Minor/ DSE-1	MTL MI201	Computer Programming	3-0-0	3
	MTM MI201	Computer Programming Lab	0-0-2	1
Multidisciplinary	XXX MU XXX		3-0-0	3
Ability Enhancement Course	XXX AE XXX		3-0-0	3
Skill Enhancement course	XXX SE XXX		2-0-0/ 1-0-2	2
		Total Credits	20-0-0/ 19-0-1	20

Minor/ DSE-1			
Course Code	Course Name	L-T-P **	Credits
MTL MI201	Computer Programming	3-0-0	3
MTM MI201	Computer Programming Lab	0-0-2	1
MTL MI203	Theory of Reliability	4-0-0	4

Multidisciplinary Courses from Mathematics for other Departments/Disciplines:

Broad Category of Course	Course Code	Course Title	L-T-P	Credits
Multidisciplinary	MTL MU201	Discrete Structures with Applications	3-0-0	3

Semester-IV

Broad Category of Course	Course Code	Course Title	L-T-P	Credits
Major	MTL MD202	Real Analysis-II	4-0-0	4
Major	MTL MD204	Probability and Statistics	3-0-0	3
	MTM MD204	Probability and Statistics Lab	0-0-2	1
Major	MTL MD206	Vector Calculus	4-0-0	4
Major	MTL MD208	Fundamentals of Complex Variables	4-0-0	4
Minor/ DSE-2				
		Total Credits	19-0-2	20

Minor/ DSE-2			
Course Code	Course Name	L-T-P **	Credits
MTL MI202	Set Theory	4-0-0	4
MTL MI204	Information Theory	4-0-0	4
MTL MI206	Biomathematics	4-0-0	4

Semester-V

Broad Category of Course	Course Code	Course Title	L-T-P	Credits
Major	MTL MD301	Multivariable Calculus	4-0-0	4
Major	MTL MD303	Linear Algebra	4-0-0	4
Major	MTL MD305	Ordinary Differential Equations	4-0-0	4
Minor/ DSE-3				
IAPC	MTIPR301	Summer Internship		2
Skill Enhancement course	XXX SE XXX		2-0-0/ 1-0-2	2
		Total Credits		20

Minor/ DSE-3			
Course Code	Course Name	L-T-P **	Credits
MTL MI301	Integral Transforms	4-0-0	4
MTL MI303	Decision Theory	4-0-0	4
MTL MI305	Econometrics	4-0-0	4
MTL MI307	Fuzzy Logic and Applications	4-0-0	4

Semester-VI

Broad Category of Course	Course Code	Course Title	L-T-P	Credits
Major	MTL MD302	Metric Spaces	4-0-0	4
Major	MTL MD304	Number Theory & Cryptography	4-0-0	4
Major	MTL MD306	Partial Differential Equations	4-0-0	4
Major	MTL MD308	Graph Theory	4-0-0	4
Minor/ DSE-4				
		Total Credits	20-0-0	20

Minor/ DSE-4			
Course Code	Course Name	L-T-P **	Credits
MTL MI302	Linear Programming and Game Theory	4-0-0	4
MTL MI304	Financial Mathematics	4-0-0	4

Semester-VII

Broad Category of Course	Course Code	Course Title	L-T-P	Credits
Major	MTL MD401	Abstract Algebra	4-0-0	4
Major	MTL MD403	Advanced Real Analysis	4-0-0	4
Major	MTL MD405	Topology	4-0-0	4
Major	MTL MD407	Basic Research Methodology for Beginners	4-0-0	4
Minor/ DSE-5				
		Total Credits	20-0-0	20

Minor/ DSE-5			
Course Code	Course Name	L-T-P **	Credits
MTL MI401	Advanced Calculus and Special Functions	4-0-0	4
MTL MI403	Numerical Methods	4-0-0	4

Semester-VIII

Broad Category of Course	Course Code	Course Title	L-T-P	Credits
Major	MTL MD402	Complex Analysis	4-0-0	4
Major	MTL MD404	Advanced Linear Algebra	4-0-0	4

Major	MTL MD406	Differential and Integral Equations	4-0-0	4
Major	MTL MD408	Functional Analysis	4-0-0	4
Minor/ DSE-6				
		Total Credits	20-0-0	20

OR

Broad Category of Course	Course Code	Course Title	L-T-P	Credits
Major	MTL MD408	Functional Analysis	4-0-0	4
Minor/ DSE-6				
Research Project/Dissertation	MTD PR402		12-0-0	12
		Total Credits	20-0-0	20

Minor/ DSE-6			
Course Code	Course Name	L-T-P **	Credits
MTL MI402	Numerical Solution of Ordinary and Partial Differential Equations	4-0-0	4
MTL MI404	Advanced topics in Algebra	4-0-0	4

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