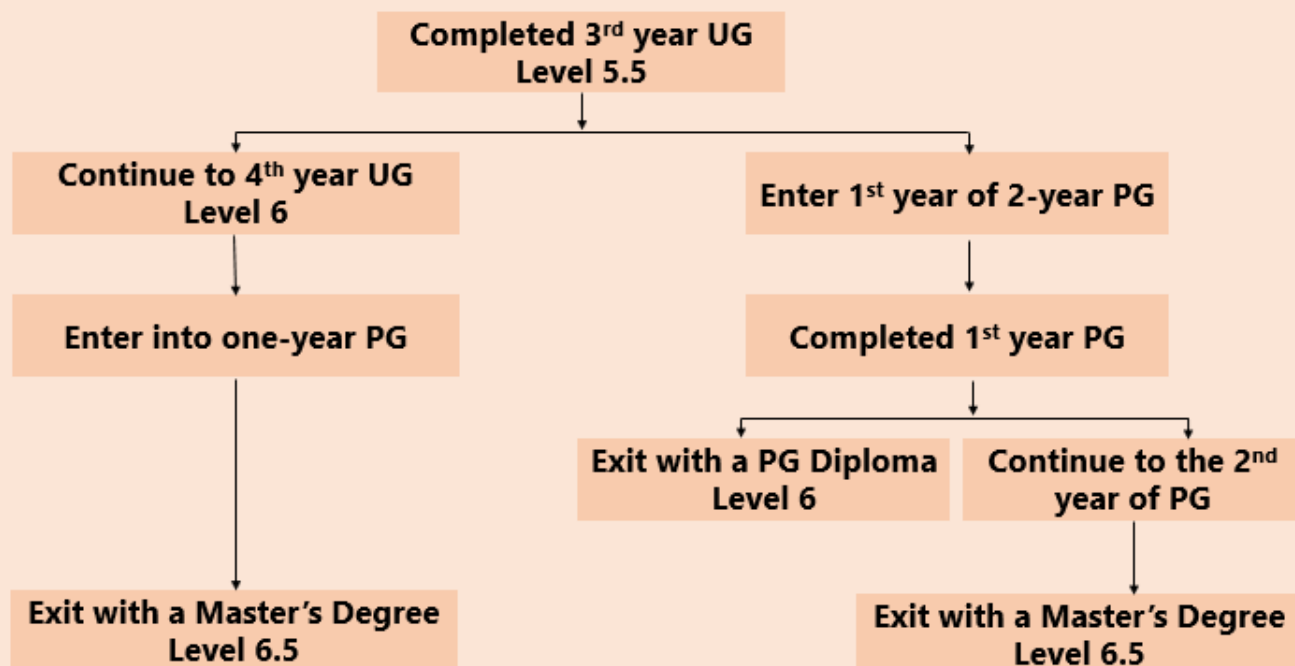


Progression from UG to PG



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

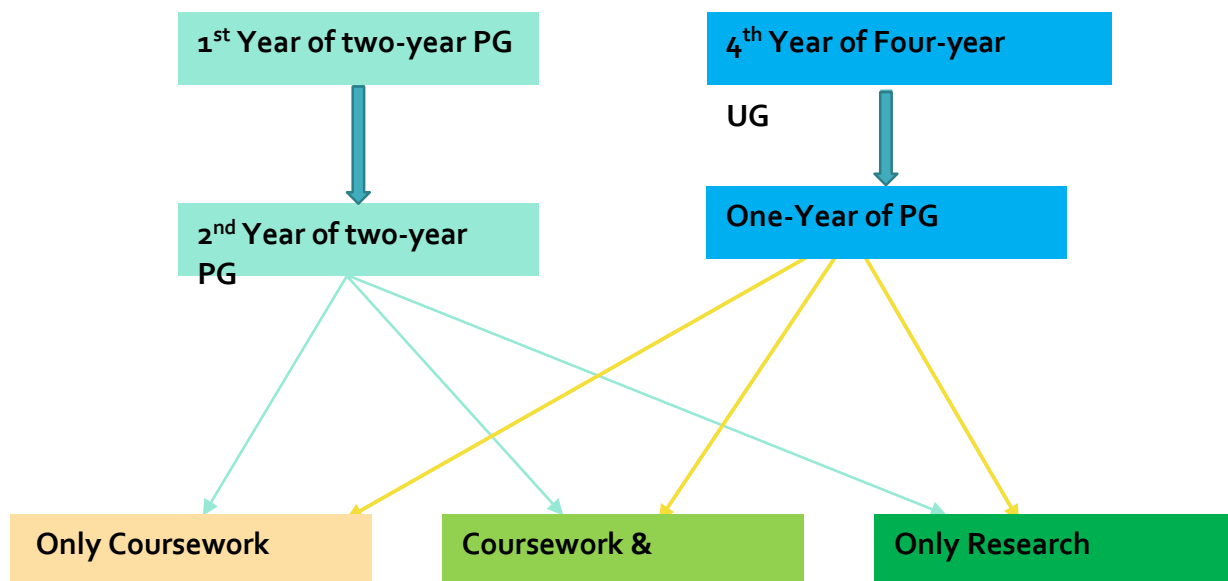
Second year of Two Year PG Programme after 4 Year UG – Level 7

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 course work + 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 Per Course	1 year PG with course work	1 year PG with Course 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

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 DC605	Advanced Real Analysis	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 DE601	Topology	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	

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 Core (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
MTL MI512	Advanced Functional Analysis	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

	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.

