Department of Mathematics
Guru Jambheshwar University of Science and Technology, Hisar (Haryana)
Scheme for M.Sc. Mathematics (UTD and Affiliated Colleges) under NEP-2020
w.e.f. Session 2025-26

Semester	Type	Course code	Course title	Credits	Internal Marks	External Marks	Total Marks	Exam Duration Hrs.
I	DSC	U25MAT101T	Abstract Algebra -I	4	30	70	100	3
	DSC	U25MAT102T	Real Analysis	4	30	70	100	3
	DSC	U25MAT103T	Ordinary Differential Equations-I	4	30	70	100	3
	DSC	U25MAT104T	Complex Analysis-I	4	30	70	100	3
	DEC (choose any one)	U25MAT111T	Classical Mechanics	4	30	70	100	3
		U25MAT112T	Dynamical Systems		30	70	100	3
		U25MAT113T	Combinatorics		30	70	100	3
	PC	U25MAT105P	Mathematical Computing Lab: MATLAB-I	2	15	35	50	3
	VAC		To be opted from the Pool	2	15	35	50	2
	Total Credits			**24**				
II	DSC	U25MAT201T	Abstract Algebra -II	4	30	70	100	3
	DSC	U25MAT202T	Lebesgue Measure and Integration	4	30	70	100	3
	DSC	U25MAT203T	Ordinary Differential Equations-II	4	30	70	100	3
	DSC	U25MAT204T	Complex Analysis-II	4	30	70	100	3
	DEC (choose any one)	U25MAT211T	Applied Mathematical Methods	4	30	70	100	3
		U25MAT212T	Advanced Numerical Methods		30	70	100	3
		U25MAT213T	Fuzzy Set Theory		30	70	100	3
	PC	U25MAT205P	Mathematical Computing Lab : MATLAB-II	2	15	35	50	3
	Seminar	U25MAT201S	Seminar	2	15	35	50	2
	Internship	U25MAT201I	Internship	4			100	
	Total Credits			**28**				

Internship of 4 credits of 4 weeks (120 Hrs.) duration after 2nd semester is mandatory for each student either for enhancing the employability or for developing research aptitude

Students exiting after First year Post Graduate Diploma in Science/ Mathematics with total Credits	52

Abbreviations:

DSC	Discipline Specific Courses,	SEC	Skill Enhancement Course
DEC	Discipline Elective Courses (DEC)	EEC	Employability and Entrepreneurship Skill Courses
PC	Practicum Courses	VOC	Vocational Course
OEC	Open Elective courses	VAC	Value Added Course

Note:

* An option of **DEC** can be offered for **a group of minimum 10 students.**

For seminar course of 2 credits, the Chairperson/Principal will assign the faculty to the students **in groups of minimum 20 students**. The teaching hours/workload of the seminar course will be 2 hours per week for each group.

Semester	Type	Course code	Course title	Credits	Internal Marks	External Marks	Total Marks	Exam Duration Hrs.
III	DSC	U25MAT301T	Topology	4	30	70	100	3
	DSC	U25MAT302T	Partial Differential Equations	4	30	70	100	3
	DSC	U25MAT303T	Mechanics of Solids-I	4	30	70	100	3
	DSC	U25MAT304T	Fluid Mechanics	4	30	70	100	3
	DEC (choose any one)	U25MAT311T	Analytic Number Theory	4	30	70	100	3
		U25MAT312T	Advanced Discrete Mathematics		30	70	100	3
		U25MAT313T	Difference Equations		30	70	100	3
	PC	U25MAT305P	Symbolic computation with Mathematica- Lab	2	15	35	50	2
	OEC		**To be opted from the Pool of other Dept.**	2	15	35	50	2
	Total Credits			**24**				
IV (Option A)	DSC	U25MAT401T	Integral Equations	4	30	70	100	3
	DSC	U25MAT402T	Functional Analysis	4	30	70	100	3
	DSC	U25MAT403T	Mechanics of Solids-II	4	30	70	100	3
	DSC	U25MAT404T	Advanced Fluid Mechanics	4	30	70	100	3
	DEC (choose any one)	U25MAT411T	Differential Geometry	4	30	70	100	3
		U25MAT412T	Algebraic Coding Theory		30	70	100	3
		U25MAT413T	Rough Set Theory		30	70	100	3
	PC	U25MAT405P	Scientific Documentation with LaTex	2	15	35	50	2
	SEC		**To be opted from the Pool**	2	15	35	50	2
	Total Credits			**24**				
IV (Option B)	DSC	U25MAT401T	Integral Equations	4	30	70	100	3
	DSC	U25MAT406T	Continuum Mechanics	4	30	70	100	3
	DEC (choose any one)	U25MAT414T	Normed and Hilbert Spaces	2	15	35	50	2
		U25MAT415T	Machine Learning		15	35	50	2
		U25MAT416T	Mathematical Biology		15	35	50	2
		U25MAT417T	Computational Fluid Dynamics		15	35	50	2
		U25MAT418T	Seismology and Thermo-elasticity		15	35	50	2
	EEC		**To be opted from the Pool**	2	15	35	50	2
		U25MAT401D	**Dissertation/Project work**	**12**				
	Total Credits			**24**				

Note:

** An option of **DEC** can be offered for **a group of minimum 10 students**.*

*# For seminar course of 2 credits, the Chairperson/Principal will assign the faculty to the students **in groups of minimum 20 students**. The teaching hours/workload of the seminar course will be 2 hours per week for each group.*

VAC/ OEC/ SEC/ EEC
Offered by the Department of Mathematics

Semester	Type	Course code	Course title	Credits	Internal Marks	External Marks	Total Marks	Exam Duration Hrs.
I	VAC	U25VAC122T	Applications of Vedic Mathematics OR Courses can be chosen from the MOOC/NPTEL/ SWAYAM	2	15	35	50	2
III	OEC	U25OEC322T	Mathematical Methods	2	15	35	50	2
IV (Option A)	SEC (choose any one)	U25SEC422T(i)	Finite Elements Methods	2	15	35	50	2
		U25SEC422T(ii)	Mathematical Modeling		15	35	50	2
		U25SEC422T(iii)	Cryptography		15	35	50	2
		U25SEC422T(iv)	Computational Mathematics		15	35	50	2
IV (Option B)	EEC	U25EEC422T	Deep learning and Artificial Intelligence	2	15	35	50	2
			Courses from the MOOC/NPTEL/ SWAYAM		15	35	50	2

Abbreviations

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PC	*Practicum Courses*	*VOC*	*Vocational Course*
OEC	*Open Elective courses*	*VAC*	*Value Added Course*

Note:

** An option of DEC can be offered for **a group of minimum 10 students.***

*# For seminar course of 2 credits, the Chairperson/Principal will assign the faculty to the students **in groups of minimum 20 students**. The teaching hours/workload of the seminar course will be 2 hours per week for each group.*