

Department of Information Technology, IIT-Allahabad
M. Tech. (IT) with Specialization in Software Engineering and
Automation

(With effect from July 2026)

Total Credit : 64

Lecture-L: 1 Credit = 1 hr/ week

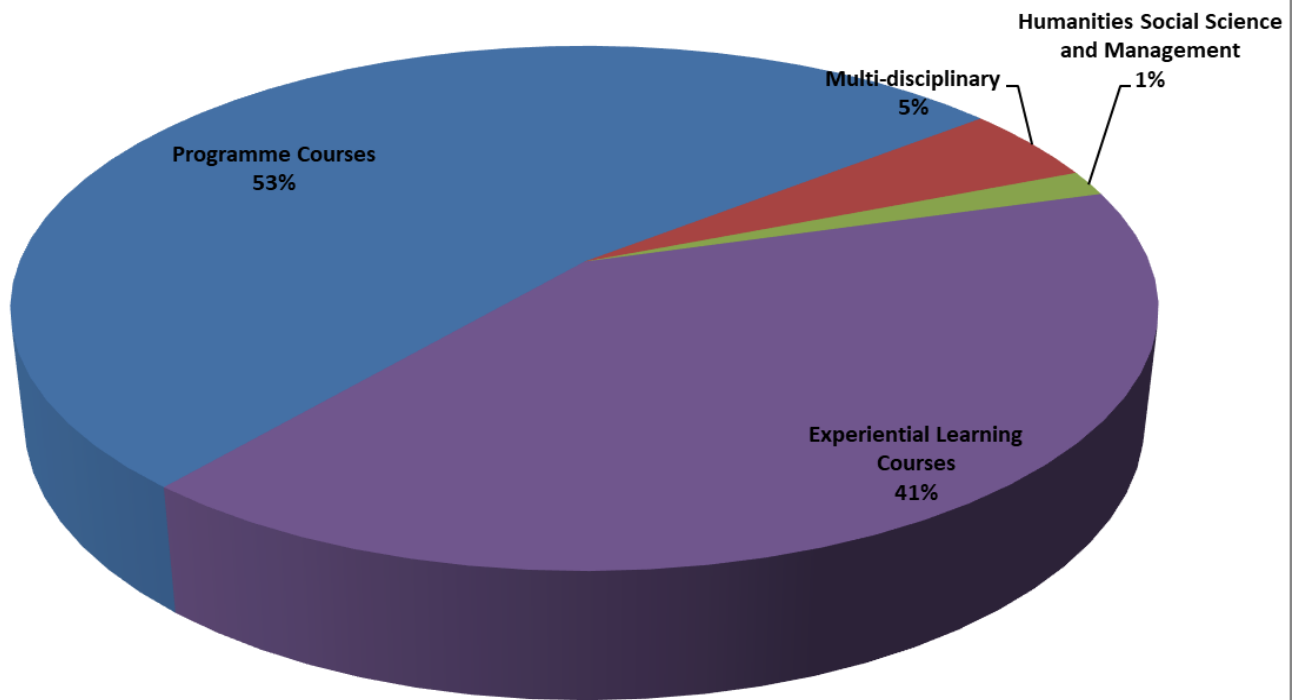
Practical-P: 1 Credit = 2 hr/week

Tutorial-T: 1 Credit = 1hr/week

Self Study-S: 1 Credit= 1 hr/week

Semester		I	II	III	IV	Total Credit
Basic Science Course	BSC/ESC	--	--	--	--	0
Engineering Science Course		--	--	--	--	0
Programme Core Course (PCC)	Programme Courses	16	8	4	--	28
Programme Elective Course (PEC)			3	3		6
Open/School Elective (OEC/SE) other than particular program	Multi-disciplinary	--	--	3	--	3
Multidisciplinary Minor (MD M)		--	--	--	--	0
Vocational and Skill Enhancement Course (VSEC)	Skill Courses	--	--	--	--	0
Ability Enhancement Course (AEC-01)	Humanities Social Science and Management	--	--	--	--	0
Indian Language (AEC-02)		--	--	--	--	0
Entrepreneurship/Economics/ Management Courses		--	--	--	--	0
Indian Knowledge System (IKS)		--	--	--	--	0
Value Education Course (VEC)		--	1	--	--	1
Research Methodology (RM)	Experiential Learning Courses	--	--	--	--	0
Internship		--	--	--	--	0
Project/AI Tool for Research/Dissertation/Thesis		3	3	5	15	26
Community Engagement Activity (CEA)/Field Project		--	--	--	--	0
Co-curricular & Extracurricular Activities (CCA)	Liberal Learning Course	--	--	--	--	0
Total Credits (One Major, One Minor degree)		19	15	15	15	64

Credit Distribution



First Semester

Sl. No.	Course Name	Code	Type	Credit	Hours
					L-T-P-S
1.	Mathematics for IT		PCC	4	3-0-2-0
2.	Programming Practices	IT502	PCC	4	2-0-4-0
3.	Machine Learning	IT503	PCC	4	3-0-2-0
4.	Advanced Software Engineering	IT510	PCC	4	3-0-2-0
5.	AI Tools for Research	IT504	ELC	3	0-1-4-0
6.	<u>Research Methodology & IPR</u> (only for Dual MTech-PhD)	IT505	ELC	2	2-0-0-0
Total Semester Credit:				19/21	11-1-14-0 13-1-14-0 26 Hrs./week 28 Hrs./week

Second Semester

Sl. No.	Course Name	Code	Type	Credit	Hours
					L-T-P-S
1.	Software Design and Architecture	IT521	PCC	4	3-0-2-0
2.	DevOps Tools and Practices	IT522	PCC	4	3-0-2-0
3.	Elective - 1		PEC	3	3-0-0-0
4.	Dissertation-I	IT550	ELC	3	0-0-6-0
5.	HSMC-1		HSMC (VEC)	1	1-0-0-0
6.	<u>Independent Study</u> # (only for Dual MTech-PhD)	IT551*	PEC	3	0-0-0-3
Total Semester Credit:				15/18	10-0-10-0 10-0-10-3 20 Hrs./week 23Hrs./week

Exit: After successful completion of one year (first two semesters), students may get **PG Diploma**. They need to earn 6 credits additional, in summer, before exit.

Dual M.Tech-Ph.D : After the end of II Semester the M.Tech-PhD student moves into the Ph.D part of the Degree and will be henceforth governed by the Ph.D ordinance.

Area Specific Depth of research domain advised by the Supervisor

Grade Card ** Topic of study”

Third Semester

	Course Name	Code	Type	Credit	Hours
					L-T-P-S
1.	Software Testing and Automation	IT605	PCC	4	3-0-2-0
2.	Elective-2		PEC	3	3-0-0-0
3.	Elective - 3 (MOOC Course based on Thesis Theme advised by Supervisor from NPTEL/SWAYAM)		OEC	3	0-0-0-3
4.	Dissertation-II	IT650	ELC	5	0-0-10-0
Cumulative of 35 Credits +Total Semester Credit:				15	6-0-12-3 21 Hrs./week

Fourth Semester

	Course Name	Code	Type	Credit	Hours
					L-T-P-S
1.	Thesis	IT651	ELC	15	0-2-26-0
Cumulative of 51 Credits +Total Semester Credit:				15	0-2-26--0 28 Hrs./week
Cumulative Degree Credits				64	