

Department of Information Technology (in-house)
Syllabus for M. Tech. in Information Technology (Data Science)
(Effective from academic session 2019-20)

Curriculum Structure
M. Tech Sem-I.

Course Code	Subject	Scheme Of Studies Per Week			Credits
		L	T	P	
PGIT(DS)101	Program Core I-Mathematical foundations of Computer Science	3	0	0	3
PGIT(DS)102	Program Core II-Advanced Data Structures	3	0	0	3
PGIT(DS)103A/B/C	Program Elective I- Data Science/ Distributed Systems/Data Preparation and Analysis	3	0	0	3
PGIT(DS)104A/B/C	Program Elective II- Recommender Systems / Machine Learning/ Data Visualization	3	0	0	3
PGIT(DS)105	Research Methodology and IPR	2	0	0	2
PGIT(DS)106A/B/C/D	Audit Course	2	0	0	0
PGIT(DS)192	Laboratory 1 (Advanced Data Structures)	0	0	4	2
PGIT(DS)193A/B/C/D	Laboratory 2 (Based on Elective1)	0	0	4	2
PGIT(DS)194A/B/C/D	Laboratory 3 (Based on Elective 2)	0	0	4	2
Total Credits: 20					

M. Tech Sem- II

Course Code	Subject	Scheme Of Studies Per Week			Credits
		L	T	P	
PGIT(DS)201	Program Core III – Advanced Computer Architecture	3	0	0	3
PGIT(DS)202	Program Core IV – Advanced Database	3	0	0	3
PGIT(DS)203A/B	Program Elective III – Big Data Analytics/ Data Warehouse and Data Mining	3	0	0	3
PGIT(DS)204A/B/C	Program Elective IV – Data Security/ Web Analytics and Development/ Knowledge Discovery	3	0	0	3
PGIT(DS)205	Audit Course	2	0	0	0
PGIT(DS)291	Advanced Computer Architecture Lab	0	0	4	2
PGIT(DS)292	Advanced Database Lab	0	0	4	2
PGIT(DS)293A/B/C	Big Data Analytics lab/ Data Warehouse and Data Mining lab	0	0	4	2
PGIT(DS)293	Term Paper with Seminar	0	0	4	2
Total Credits: 20					

***Students be encouraged to go to Industrial Training/Internship for at least 2-3 months during semester break.**

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M. Tech Sem*- III

Course Code	Subject	Scheme of Studies Periods Per Week			Credits
		L	T	P	
PGIT(DS)301A/B/C	Program Elective V – GPU Computing/ Cloud Computing/ Distributed Databases	3	0	0	03
PGIT(DS)302A/B/C/ D/E/F	Open Elective Business Analytics Industrial Safety Operations Research Cost Management of Engineering Projects Composite Materials Waste to Energy	3	0	0	03
PGIT(DS)393	Dissertation-I /Industrial Project	0	0	20	10
Total Credits 16					

***Students going for Industrial Project/Thesis will complete these courses through MOOCs.**

M. Tech Sem-IV

Course Code	Subject	Scheme of Studies Per Week			Credits
		L	T	P	
PGIT(DS)491	Dissertation II	0	0	32	16
Total Credits: 16					

The program offers several elective courses, focusing on different aspects of Data Science. A student can choose to do any course from given program elective set.

Audit course 1 & 2

1. English for Research Paper Writing
2. Disaster Management
3. Sanskrit for Technical Knowledge
4. Value Education
5. Constitution of India
6. Pedagogy Studies
7. Stress Management by Yoga
8. Personality Development through Life Enlightenment Skills.