M.TECH (WORKING PROFESSIONAL)
COMPUTER SCIENCE AND ENGINEERING

SCHEME OF STUDIES

Semester-wise Course Structure

Semester I

Course Code	Course Title	Type	Periods	Credits
PWCS-101	Data Structures & Algorithm Design	Theory	4	4
PWRM-102	Research Methodology & IPR	Theory	4	4
PWCS-103	Data Structures Lab	Practical	4	2
PWCS-104	Programming Paradigms Lab	Practical	4	2
PWCS-105	Technical Seminar I (Literature Review)	Seminar	4	2
PWCS-106	Mini Project I (Problem Identification)	Project	4	2
PWCS-10X	Elective I	Elective	4	4
TOTAL	**Theory: 12 | Practical/Project: 16**		28	**20**

Semester II

Course Code	Course Title	Type	Periods	Credits
PWCS-201	Machine Learning & AI	Theory	4	4
PWCS-202	Advanced Database Systems	Theory	4	4
PWCS-203	Machine Learning Lab (Python/Scikit)	Practical	4	2
PWCS-204	Database & Cloud Lab	Practical	4	2
PWCS-205	Technical Seminar II (State-of-the-Art Review)	Seminar	4	2
PWCS-206	Mini Project II (Design & Prototype)	Project	8	4
PWCS-20X	Elective II	Elective	4	4
TOTAL	**Theory: 12 | Practical/Project: 18**		32	**22**

Semester III

Course Code	Course Title	Type	Periods	Credits
PWCS-301	Advanced Computer Networks & Security	Theory	4	4
PWCS-302	Network & Security Lab	Practical	4	2
PWCS-303	Industry Internship	Practical	8	4
PWCS-304	Seminar III (Thesis Proposal Presentation)	Seminar	4	2
PWCS-305	Pre Thesis / Dissertation	Thesis	8	4
PWCS-30X	Elective III	Elective	4	4
TOTAL	**Theory: 8 | Practical/Project: 24**		32	**20**

Semester IV

Course Code	Course Title	Type	Periods	Credits
PWCS-401	Thesis / Dissertation	Thesis	24	12
PWCS-402	Seminar IV (Final Presentation)	Seminar	16	8
TOTAL	**Theory: 0 | Practical/Project: 40**			**20**

List of Elective Courses

Elective	Course Code	Course Title	Domain	Offered In
I	PWCS-108	Internet of Things (IoT) & Embedded Systems	Embedded / IoT	Sem I
I	PWCS-109	Cloud Computing & Virtualization	Cloud Technology	Sem I
I	PWCS-110	Advanced Computer Vision	AI / Vision	Sem I
II	PWCS-208	Deep Learning & Neural Networks	AI / ML	Sem II
II	PWCS-209	Blockchain Technology & Applications	Distributed Systems	Sem II
II	PWCS-210	Big Data Analytics & Hadoop Ecosystem	Data Engineering	Sem II

Elective	Course Code	Course Title	Domain	Offered In
III	PWCS-307	Natural Language Processing	AI / NLP	Sem III
III	PWCS-308	Cyber Security & Ethical Hacking	Security	Sem III
III	PWCS-309	Distributed Systems & Edge Computing	Systems	Sem III
	PWCS-	Quantum Computing Fundamentals	Emerging Technology	
	PWCS-	DevOps, MLOps & Agile Development	Software Engineering	
	PWCS-	Augmented Reality & Human-Computer Interaction	HCI / AR	