

PROGRAM STRUCTURE Integrated B. Tech with MBA CIE with PM

COMMON FOR ALL

B. Tech. CIE First Year (Sem I and Sem 2)

Year	Course
I	Induction Program (2-weeks)
	Introductory Calculus
	Basic Infrastructure Physics
	Sustainable Ecosystems
	Foundation of Civil Engineering
	Computer Programming
	Communication I
	Computational mathematics
	Mechanics of Solids
	Engineering Graphics & Design
	Sensor Technologies
	Professional Ethics
	Communication II

B. Tech CIE Second Year (Sem-3 and Sem-4)

Year	Course
II	Applied statistics
	Structural analysis
	Computer aided civil engineering design
	Geomatics & digital mapping
	Fluid Mechanics
	Management Practices
	Entrepreneurship & IPR
	Geotechnical Engineering
	Concrete technology
	Structural engineering
	Water & Wastewater Engineering
	Automation in civil infrastructure
	Industry visits

B. Tech CIE Third Year (Sem-5 and Sem-6)

Year	Course
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III	Industry immersion/ Community outreach# (3-4 weeks)
	Construction project management
	Organizational Behaviour
	Transportation engineering
	Infrastructure planning and appraisal
	Professional Elective I
	Professional Elective II
	Estimating, costing & valuation of infrastructure
	Metro system planning & construction
	Design of concrete structures
	Economics analysis of infrastructure projects
	Professional Elective - III
	Professional Elective - IV
	Industry visits*
B. Tech CIE Fourth Year (Sem-7 and Sem-8)	
Year	Course
IV	Industry Internship (3-4 weeks) / Minor Project#
	Professional Elective – V
	Professional Elective – VI
	Professional Elective – VII
	Professional Elective - VIII
	Major Project in CIE*
EXIT OPTION B.Tech CIE (Hon) and B.Tech CIE with minor in Project Management (4-year)	
B. Tech in CIE (Honors)	
Year	Course
IV	If student earns additional 16-22 credits through MOOC and taught courses are eligible for B.Tech (Honors) in Civil and Infrastructure Engineering
B. Tech in CIE with Minor in Project Management	
Year	Course
IV	Planning, Scheduling and Control of Construction Projects
	Cost Management of Engineering Projects
	Construction Finance and Accounting
	Building information and Modelling for Project Management
	Construction Law and Contract Management
	Major Project in Project Management

EXIT OPTION Integrated BTech with MBA	
Fourth Year (Sem-7 and Sem-8)	
Year	Course
IV	Business development for mega infra projects
	IPR and infrastructure development
	Marketing management
	Business research methods
	Managerial accounting
	Operations management
	Professional Elective I (Management)
	Legal practices of infrastructure
	Operations and supply chain management
	Strategic management
	Corporate finance
	BIM for project management
	Quantitative techniques
	Professional Elective II (Management)
Fifth Year (Sem-9 and Sem-10)	
Year	Course
V	Urban development planning & governance
	Transport policy, economic & management
	Construction law and contract management
	Carbon pricing & infrastructure development
	Quality control & safety management
	Risk & resources management
	Capstone Project