

## **Details of Specialization Courses (Disciplinary)**

**Construction Management:** Construction Management is a specialization required most at construction sites. A Civil Engineering graduate who aspires to make his career in construction industry should opt for this specialization. As the construction industry is modernizing day by day, new technologies and automation is need of the hour. This specialization will equip students with modern day construction practices.

Sr. No.	For Construction Management		Semester	Contact Hours				Credits
	Course code	Course Title		L	T	P	Total	
1	CE351	Sustainable Construction	Third	3	-	-	3	3
2	CE352	Construction Planning and Control	Fourth	3	-	-	3	3
3	CE353	Construction Safety and Health	Fifth	3	-	-	3	3
4	CE354	Advances In Construction Materials	Sixth	3	-	-	3	3
5	CE355	Value Engineering	Seventh	3	-	-	3	3
6	CE356	Construction Financial Management	Seventh	3	-	-	3	3
7	CE401	Project Oriented Practice	Eight	-	-	-	4	2
			TOTAL				22	20

**Structural Engineering:** Students who aspire to make their careers in Structural Design should opt for this specialisation. This specialization will equip students with required skills to design structures other than general buildings. With more and more research in construction materials our structures are getting bigger and taller. These structures are subjected to various loads other than Dead Load and Live Load. This specialization will also be helpful for students who want pursue higher studies in the field of Structural Engineering.

S.No.	Course Code	Course Title	Semester	Contact Hours				Credit
				L	T	P	Total	
1	CE361	Concrete Technology	Third	3	-	-	3	3
2	CE402	Concrete Technology Lab	Third	-	-	2	2	1
3	CE362	Numerical Techniques in Civil Engineering	Fourth	3	-	-	3	3
4	CE363	Health Monitoring of Structures	Fifth	3	-	-	3	3
5	CE403	Structural Health Monitoring Lab	Fifth					1
6	CE364	Special Reinforced Concrete Structures	Sixth	3	-	-	3	3
7	CE365	Structural Design and Detailing	Seventh	3	-	-	3	3
8	CE366	Earthquake Engineering	Eighth	3	-	-	3	3
			Total				22	20

**Quantity Surveying:** Quantity Surveying is a specialization required most for project planning and execution. A Civil Engineering graduate who aspires to make his career in construction industry should opt for this specialization. Specialization in Quantity Surveying emphasizes on the Economic, Legal, Financial and Managerial techniques of the construction process for the student to obtain an in-depth knowledge in these sectors. This specialization will equip students with modern day project planning and management.

Sr. No.	For Quantity Surveying		Semester	Contact Hours				Credits
	Course code	Course Title		L	T	P	Total	
1	CE371	Building Planning and Drawing	Third	2	1	-	3	3
2	CE372	Estimation of Buildings and Roads	Fourth	3	-	-	3	3
3	CE373	Quantity Surveying of Bridges and Hydraulic Structures	Fifth	3	-	-	3	3
4	CE374	Construction Contracts and Laws	Sixth	3	-	-	3	3
5	CE375	Quality Assurance & Quality Control	Seventh	3	-	-	3	3
6	CE356	Construction Financial Management	Seventh	3	-	-	3	3
7	CE401	Project Oriented Practice	Eight	-	-	-	4	2
			TOTAL				22	20

# Department of Civil Engineering

## Micro-Specializations

S. No.	Name of Micro Specialization	Head Course (s)			Elective Courses		
		Course Name	Semester	Credits	Course Name	Semester	Credits
1	Transportation Engineering	Surveying and Surveying Lab	III	3 +1 = 4	Traffic Engineering	V	3
					Airport and Railway Engineering	VI	3
					Intelligent Transportation System	VII	3
					Highway Construction, Maintenance and Management	VIII	3
2	Structural Engineering	Structural Analysis – I	IV	4	Advanced Concrete Technology	V	3
					Structural Analysis -2	VI	3
					Sensing Technologies and SHM	VII	3
					Earthquake Resistant Structures	VIII	3