

MINIMUM CORE SUBJECT AREAS: CIVIL ENGINEERING

AREA	SUBJECTS / DESCRIPTION	RECOMMENDED CONTACT HOURS
A minimum of 2 subjects selected from each area in Group 1, and 4 subjects selected from at least 2 out of 4 areas in Group 2 (30 hours for each subject).		
Group 1: 2 subjects selected from each of the following 2 areas (30 hours for each subject):		
1. Structural Engineering	- structural analysis, steelwork design, concrete design, fire engineering etc.	60
2. Geotechnical Engineering	- soil mechanics, slope engineering, foundation engineering, rock mechanics, engineering geology, soil improvement, waste geotechnics, earthquake geotechnical engineering, soil dynamics etc.	60
Group 2: 4 subjects selected from at least 2 out of the following 4 areas (30 hours for each subject):		
1. Engineering Hydraulics and Hydrology	- open channel hydraulics, fluid mechanics, drainage design, water supply engineering etc.	
2. Environmental Engineering	- wastewater engineering, water and wastewater treatment, air quality management, solid waste management, environmental impact assessment, climate change, air ventilation assessment (AVA), contamination material treatment and disposal etc.	
3. Transportation Engineering	- highway engineering, pavement design, transportation planning, traffic engineering etc.	
4. Project Management	- construction management, financial management for civil engineering projects, construction laws, accounting, environmental control policy, risk management, decision making etc.	
Apart from the above, some basic civil engineering subjects such as Surveying, Computational Methods or Engineering Analysis, are conventional pre-requisite areas that should also be included in the syllabus.		