

Life Cycle Design for Sustainable Structures

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Program:

Module 1: Life cycle approach to structural design: codes, recommendations, assessment methods and tools, sustainability indicators

Module 2: Sustainable construction materials: recycled and industrial aggregates, supplementary cementing materials, novel binders and geopolymers, recycled and slag concretes

Module 3: Novel construction methods: prefabrication, automation, 3D printing

Module 4: Maintenance of structures: inspection protocols, damage and deterioration

Module 5: Durability assessment

Module 6: Establishment of a Quality Control (QC) Plan and Retrofitting scheduling

Case-study and examples will be provided during the course.

References:

Slides and notes from the course.

Examination and grading:

Work group with oral discussion. Grading: EXCELLENT, VERY GOOD, GOOD, PASS, FAIL.

Other course details:

Duration: 24 hours.