

Sustainable Construction (20 credits)

This module aims to provide the student with an understanding of the environmental and resource implications of construction activity within the context of sustainable development. It considers the theoretical and methodological basis of approaches designed to quantify the impacts associated with choices made at different stages of the construction life cycle, as well as tools designed to evaluate relative environmental and sustainability performance. The module comprises the following subjects:

Introduction to sustainable construction; Economic decision-making and the value of the environment; Life cycle management approaches; Climate change and the impact on the built environment; Building design and architecture; Urban planning and sustainable communities; Geotechnical engineering; Waste management; Energy; Water management/recycling; and Structural engineering.

In order to accommodate the 6-month industrially-based individual research project completed by materials science students this semester 1 module is not included. Instead the two semester two modules Nuclear Materials and Materials for Sustainable Environmental Technologies have been included.