



## IIT Mandi

### Proposal for a New Course

**Course number** : CE-202  
**Course Name** : Introduction to Civil Engineering  
**Credit Distribution** : 1-0-0-1  
**Intended for** : UG Core  
**Prerequisite** : NA  
**Mutual Exclusion** : None

---

#### 1. Preamble:

India is rapidly marching towards modern and sustainable infrastructure. In view of this before embarking on the journey of a prestigious Civil Engineering career, it is important for the students to have a bird-eye view of the entire Civil Engineering domain that includes structural engineering, geotechnical engineering, transportation engineering, geoinformatics, geosciences, hydrology and water engineering, and environmental engineering.

#### 2. Course Modules with quantitative lecture hours:

**Module 1:** A brief history of civil engineering, a brief introduction to different sub-branches of civil engineering, mega structure documentary show, a brief overview of the role and responsibilities of a civil engineer and the types of projects they work on. A brief discussion on civil engineering ethics. [2 hrs]

**Module 2:** In this module, one faculty (based on the internal discussion) from each of the following domain will come and talk on past, present, and future of research, industry and technological innovations in their domain (one hour each): (i) Structural Engineering, (ii) Geotechnical Engineering, (iii) Transportation Engineering, (iv) Geoinformatics and Survey, (v) Earth Sciences, (vi) Water and Hydrology Engineering, (vii) Environmental Engineering. [7 hrs]

**Module 3:** A visit to all the existing civil engineering laboratories of IIT Mandi including the construction activities going on in IIT Mandi. A discussion on recent advancement in Civil Engineering and role of AI/ ML and IOT etc. in Modern Civil Engineering. [3 hrs]

**Module 4:** A field visit or an external expert talk as per the availability. A panel discussion on various career opportunities for Civil Engineering graduates. [2 hrs]

**3. Text book: NA**

**4. References: NA**

**5. Similarity with the existing courses: NA**

**6. Justification of new course proposal if cumulative similarity content is >30%: NA**