

# **FEM103 Construction Technology**

**Level:** 1

**Credit Units:** 5 Credit Units

**Language:** ENGLISH

**Presentation Pattern:** EVERY SEMESTER

## **Synopsis:**

FEM103 Construction Technology provides students an insight into building components and construction methods. Topics include structural systems, architectural components and finishes, construction sequence and building erection. The type of structural system and architectural components selected, be it vertical or horizontal members, influences operation and maintainability, particularly during building upgrading. Architectural finishes vary in their durability and cost to maintain. For construction, the student will appreciate how a building is put together or erected and why sequence can cause problems if the functionality of a component is not considered.

## **Topics:**

- Function, Performance and Environmental Impact of Buildings
- Structural Systems
- Substructure and Superstructure
- Site Analysis and Set-Up
- Groundwork and Foundations
- Floors
- Walls
- Roofs
- Facade
- Windows and Doors
- Stairs and Ramps
- Surface Finishes

## **Learning Outcome:**

- State the purpose, function and performance expected of buildings
- Describe the structural behaviors of different structural elements of buildings
- Demonstrate understanding of the general functional requirements and the different types of main building components such as building foundations, floors, walls, roofs, windows, doors, stairs, ramps and surface finishes
- Identify and describe the different materials used and construction approaches used for the different types of building components
- Discuss the environmental impact of buildings and their construction processes and how they can potentially be mitigated
- Discuss how the material selection and construction of different building elements and surface finishes influence maintenance and operations of the buildings
- Discuss the potential performance and maintenance issues related to the design and construction of different building components
- Demonstrate understanding of the local regulatory approval and risk management processes to be adopted for the construction of buildings

**Assessment Strategies:**

<b>Continuous Assessment Component</b>	<b>Weightage (%)</b>
TUTOR-MARKED ASSIGNMENT	10
PRE-CLASS QUIZ	2
TUTOR-MARKED ASSIGNMENT	14
PRE-CLASS QUIZ	2
PRE-CLASS QUIZ	2
<b>Sub-Total</b>	<b>30</b>

<b>Examinable Component</b>	<b>Weightage (%)</b>
Written Exam	70
<b>Sub-Total</b>	<b>70</b>

**Weightage Total** **100**