Course Title:	**Construction Technology II**
Course Code:	**ENBU605**
Descriptor Start Date:	**14/07/2023**
Descriptor End Date:	**18/02/2024**
POINTS:	**15.00**
LEVEL:	**6**
PREREQUISITE/S:	**ENBU502**
COREQUISITE/S:	**None**
RESTRICTION/S:	**None**

LEARNING HOURS

Hours may include lectures, tutorials, online forums, laboratories. Refer to your timetable and course information in Canvas for detailed information.

Total learning hours: 150

PRESCRIPTOR

Construction technology on medium span, and low□rise industrial/commercial buildings. Develops a detailed knowledge of the main materials and structural systems used in buildings, ranging from foundations to roof construction systems. Provides grounding in structural analysis of timber, steel and concrete structures. Indigenous engineering concepts and materials are introduced in the context of Aotearoa New Zealand.

LEARNING OUTCOMES

1. Point out the mechanism of construction through the phases of a medium span low rise industrial/commercial building construction project and across a range of different building types (a, c, d).
2. Distinguish between the functional requirements and the interaction between the principal elements and components of a medium span low rise industrial/ commercial building (a, c, d).
3. Recognise safety, health and welfare requirements to design and construction practice of a medium span low rise industrial/commercial building (a, c, d, f),
4. Demonstrate an understanding of the sustainability and impact of medium span low rise industrial/commercial building construction technology in environmental contexts (d, f, g).
5. Apply the knowledge to communicate effectively and function in a team environment and work cooperatively (i, j, k)
6. Demonstrate the ability to engage in independent and life-long learning in building construction-related processes and technologies by searching, locating, and selecting relevant data from databases and literature (d, l).

CONTENT

- Physical and Environmental Functions of Industrial/Commercial Buildings
- Construction analysis for industrial/ commercial buildings: site investigation procedures and reports; construction site layout and site works
- Concrete, steel and timber frame industrial/ commercial buildings (large scale use of timber structures)
- Structural fire proofing systems for industrial/ commercial buildings
- Foundation systems for industrial/ commercial framed buildings
- Basement Construction including methods for waterproofing of basements
- Ground and Upper Floor construction for industrial/ commercial buildings.
- External wall systems; performance requirements, thermal and moisture movement control, and material solutions for industrial/ commercial buildings.
- Roof construction including beam, girder, truss, space deck, portal roof and long span systems steel, timber and concrete for industrial/ commercial buildings.
- Internal division of spaces and integration of services.

Key to Graduate Capabilities Profile
a. Engineering knowledge
b. Problem analysis
c. Design/development of solutions
d. Investigation
e. Modern tool usage
f. The engineer and society
g. Environment and sustainability
h. Ethics
i. Individual and teamwork
j. Communication
k. Project management and finance
l. Lifelong learning

LEARNING & TEACHING STRATEGIES

Lectures, tutorials, class and group projects and discussions, on-line learning. A blended online and on campus delivery mode is employed to achieve the outcomes of the paper.

ASSESSMENT PLAN

Assessment Event	Weighting %	Learning Outcomes
Mid-semester test	50.00	1-3,5,6
Final exam	50.00	1-5

Grade Map **MAP1**

A+ A A- Pass with Distinction
B+ B B- Pass with Merit
C+ C C- Pass
D Fail

Overall requirement/s to pass the course:

To pass the course, the student needs to achieve a minimum grade of C-.

LEARNING RESOURCES

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For further information, contact: Te Ara Auaha - Faculty of Design & Creative Technologies

Principal Programme: **AK1220, Bachelor of Construction**

Related Programme/s:

Disclaimer: Course descriptors may be amended between teaching periods/semesters