

REINFORCED CONCRETE DESIGN 1

With Wisdom We Explore

Goals

- To provide the knowledge and understanding of reinforced concrete structures design according to the relevant code of practice.



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Synopsis

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- Reinforced concrete is a composite material made of concrete and steel is widely used to construct the building structures. Plain concrete possesses high compressive strength but little tensile strength. However, steel reinforcement possesses high tensile strength. Therefore, by combining concrete and steel, reinforced concrete attains high utility and versatility. This course introduces students to limit state design for reinforced concrete structures. Scope of study includes introduction to reinforced concrete design, structural analysis, section analysis, serviceability and durability, beam and slab design.

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Learning Outcomes

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- Upon completion of the course, students will be able to:
 - i) Design reinforced concrete beams and slabs according to BS 8110 / BSEN 1992 (EC2).
 - ii) Manipulate structural design processes to complete the assigned project.
 - iii) Report design works which comprise of ideas and problem solving through suitable tools or methods.

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