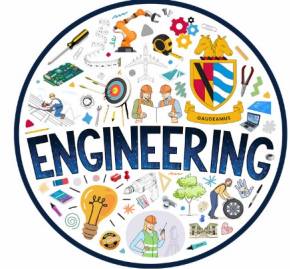




Cambridge National in Engineering Design

Engineering design is a systematic approach employed to discover market opportunities and address challenges, ultimately leading to the creation of new products and systems. This qualification is intended for learners who are interested in exploring the processes involved in designing innovative engineered products and understanding the necessary design specifications.



Overview

Through research and hands-on activities, learners will grasp how market demands and opportunities shape client briefs, while also conveying design concepts through practical skills like drawing, computer modelling, and model-making.

Students will engage in two coursework units and one final exam, with each unit contributing a third of their overall grade. The coursework units encompass various engineering topics, offering students a diverse array of opportunities and experiences to equip them for a future in engineering and design.

Unit Breakdown

Principles of Engineering Design (*Examination Unit*)

- Students will explore various design strategies, particularly iterative design, and understand the stages involved. They'll learn to create design briefs and specifications, considering manufacturing factors. Key skills include engineering drawing techniques for effective design communication and evaluation methods, including modelling.

Communicating Design (*Coursework Unit 1*)

- students will enhance sketching and industrial drawing skills using standard conventions like dimensioning and line types. They will gain proficiency in CAD software to produce precise 2D and 3D designs.

Design, Evaluation and Modelling (*Coursework Unit 2*)

- In the design, evaluation, and modelling unit, students will learn to create and test models for prototypes. They'll improve virtual modelling skills with CAD software and develop physical prototypes using modeling materials.

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