

## **Engineering Design: OCR Cambridge National**

| <b><u>Level</u></b>        | <b><u>Board</u></b> | <b><u>Subject</u></b> | <b><u>Module</u></b> | <b><u>Assessment Type</u></b> | <b><u>Length</u></b> |
|----------------------------|---------------------|-----------------------|----------------------|-------------------------------|----------------------|
| Cambridge National Level 2 | OCR                 | Engineering Design    | R105                 | Exam                          | 1 hour               |
|                            |                     |                       | R106                 | Coursework                    | 10-12hrs             |
|                            |                     |                       | R107                 |                               |                      |

## **Specific strategies**

- **Spaced learning** (little and often).
- **Flash cards** with key terms and key questions.
- **Exam questions** in various ways: open book, closed book, read question, find/review information, complete timed question and timed closed book.
- **Mind maps.**
- **FOR ALL – use mark schemes** to assess and improve: will be provided on Google Classroom.

## **Revision areas**

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Ensure you use the resources available on the Google Classroom to cover each of the Learning Outcomes in the exam. All revision focus need to be on the remaining exam module R105.

**LO1: Understand the design cycle and the relationship between design briefs and design specifications.**

- The design cycle: identify and design phases.
- The design cycle: optimise and validation phases.  
[https://www.youtube.com/watch?v=g0aasZ9\\_rDo](https://www.youtube.com/watch?v=g0aasZ9_rDo)
- Identifying design needs: design briefs.

**LO2: Understand the requirements of design specifications for the development of a new product.**

- Design.
- Product requirements.

- Manufacturing considerations: materials and supply.
- Manufacturing considerations: ease of manufacture.  
[https://youtu.be/CHS\\_9G7KwXE](https://youtu.be/CHS_9G7KwXE)
- Manufacturing considerations: scale, reliability, safety and sustainability.  
<https://youtu.be/Y-TNpedZzmY>
- Production costs.
- Regulations and safeguards  
<https://www.youtube.com/watch?v=IXyB1Zj-DFo&t=10s>

**LO3: Know about the wider influences on the design of new products.**

- Market, Legislation and design.
- Inspirational design and new materials technology.
- Life Cycle Analysis. [https://youtu.be/2NgaW8a\\_22I](https://youtu.be/2NgaW8a_22I)
- Environmental pressures

## **Study guides/ websites**

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- Exam Success Video <https://www.youtube.com/watch?v=K-eULeIEzmU>
- Google Classroom
- Revision website
- BBC Bitesize
- Course specification