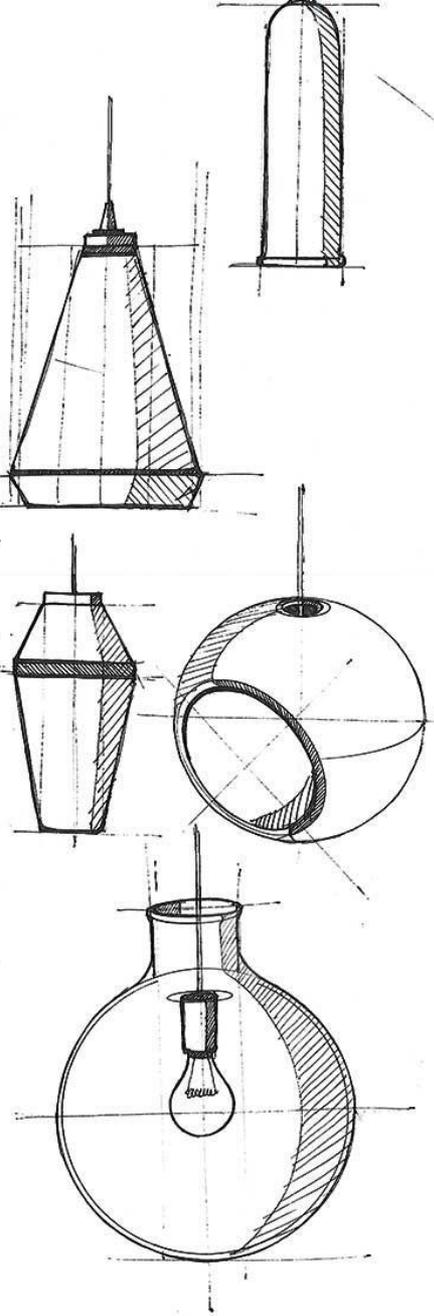


Is Engineering Design the right option for me?

---

Eaton Bank Academy, Congleton.

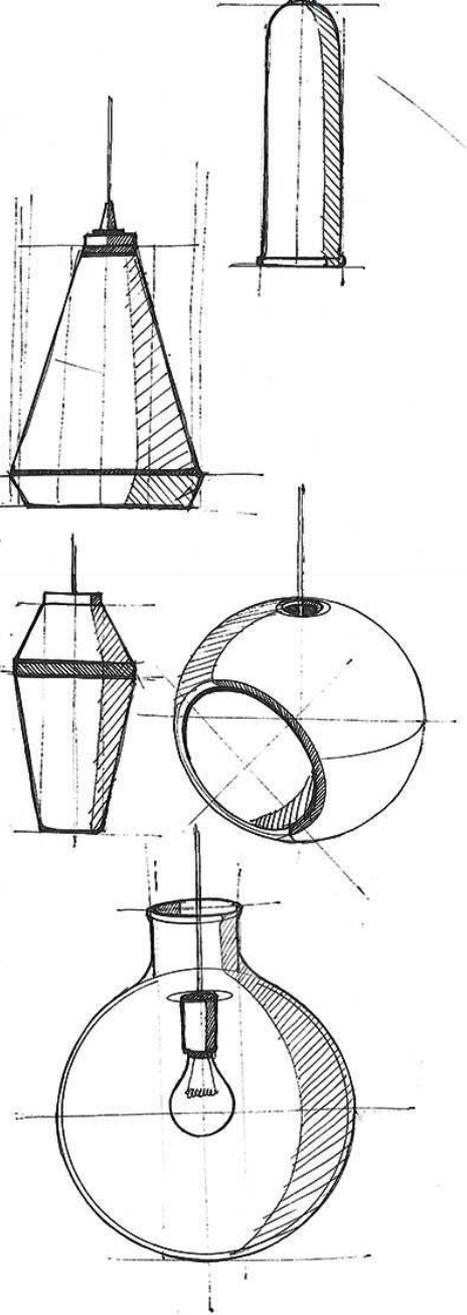


Engineering design is a process used to identify market opportunities and solve problems which contribute to the development of new products and systems.

---

This course is aimed at learners who wish to study the processes involved in designing new products and the requirements of a design specification. Through research and practical activities, learners will understand how market requirements and opportunities inform client briefs and will use practical skills such as drawing, computer modelling and model making to communicate design ideas.

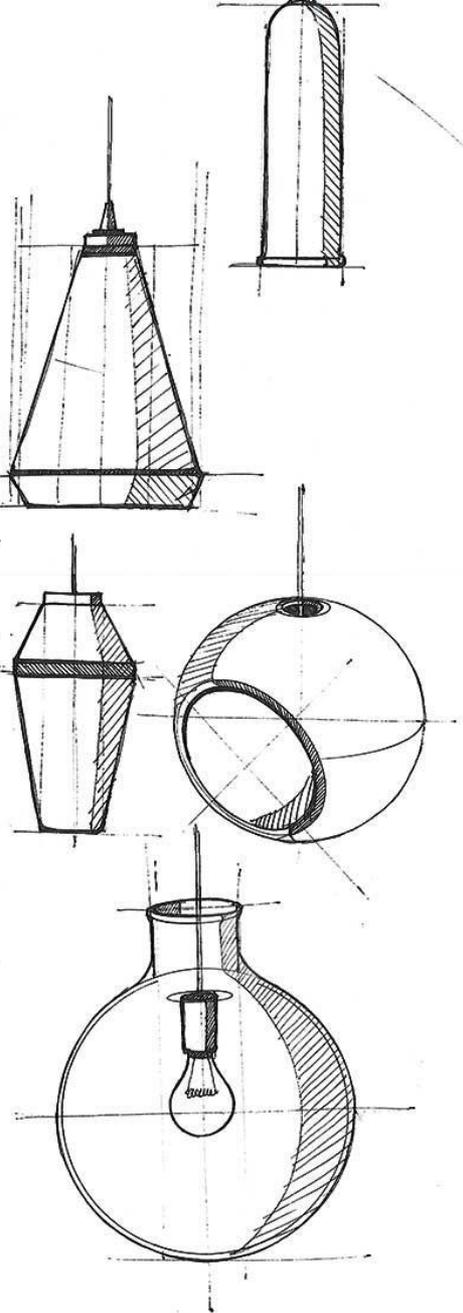
## What is Engineering Design?



# What is a Cambridge National?

---

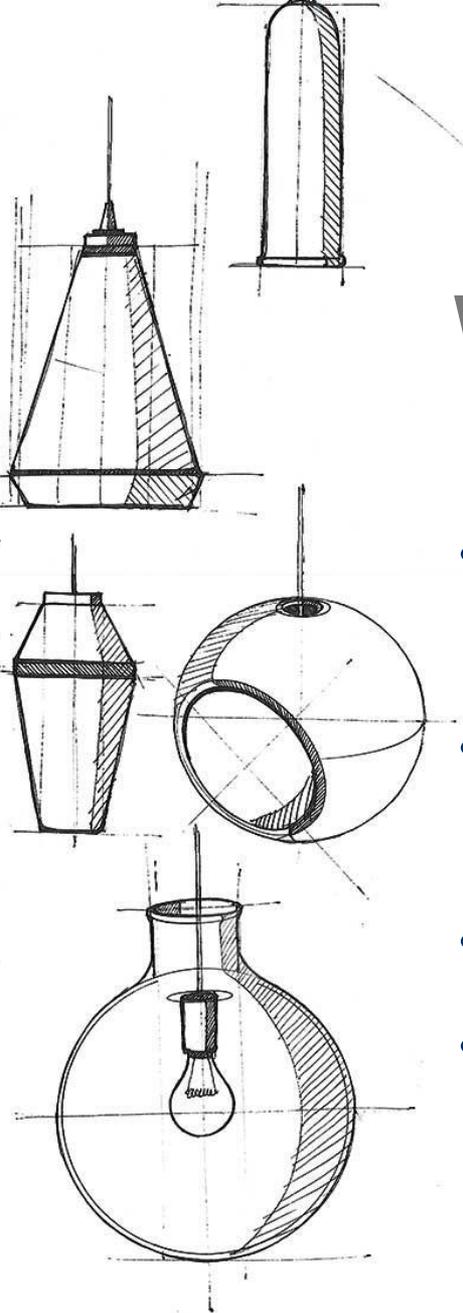
The Cambridge Nationals in Engineering Design encourage learners to communicate with a client to develop a viable and innovative product. Learners will apply skills to produce a prototype in the form of a model and test design ideas to inform further product development. Through reflection learners evaluate the prototype, making a comparable outcome against specification points, and assess possible, practical solutions and improvements to their prototype design.



# What skills would I develop?

---

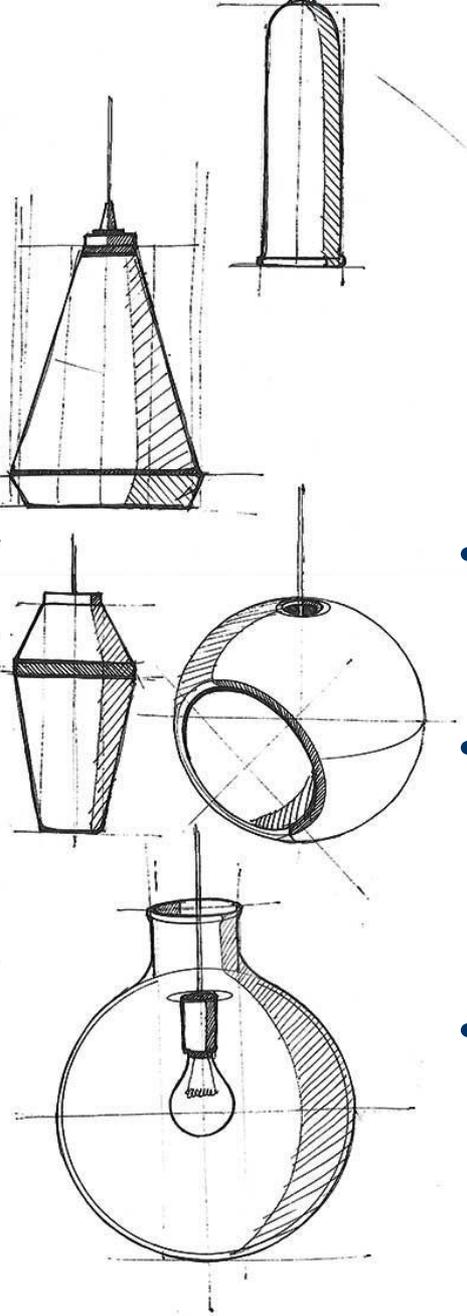
- Sketching skills
- Presentation and portfolio work
- You will develop a range of computer skills in order to produce both 2D and 3D designs
- Learning through project work will help you to be organised and manage time and deadlines successfully
- You will work with various modelling materials to produce final outcome pieces
- Skills in exploring existing products and the way in which they are made



## What would I do in lessons?

---

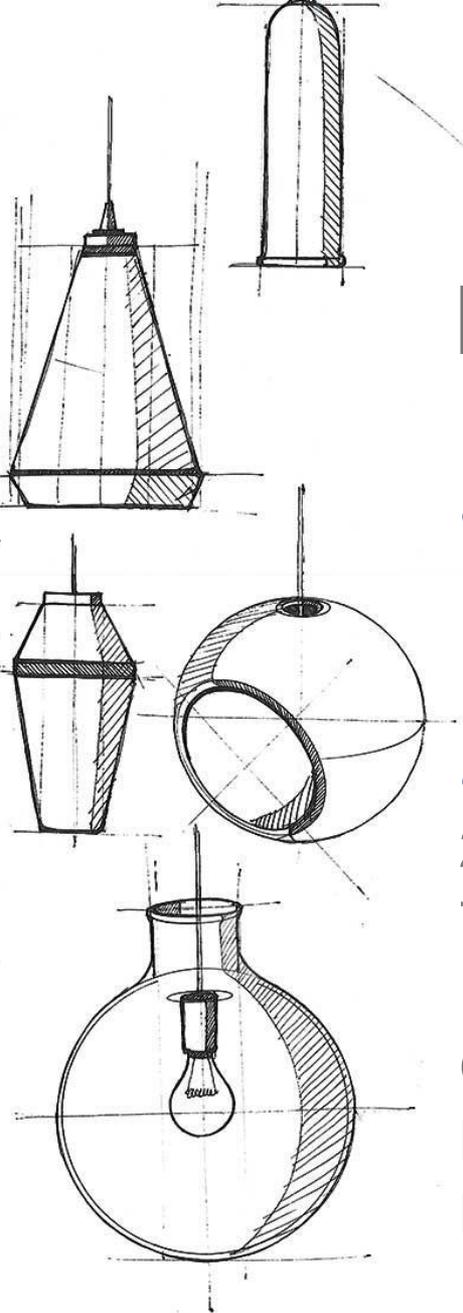
- Lessons will focus on preparing for the exam or working on assignments
- Practical lessons will be carried out for the suitable assignments.
- Year 9- Skills development year.
- Year 10 and 11- Coursework and examination prep.



## What would I do at home?

---

- Homework will be set every two weeks.
- Some work may need to be finished from lessons or revision set, in preparation for tests or exams.
- Regular after school sessions will be offered to support your progress.



# How would I be assessed?

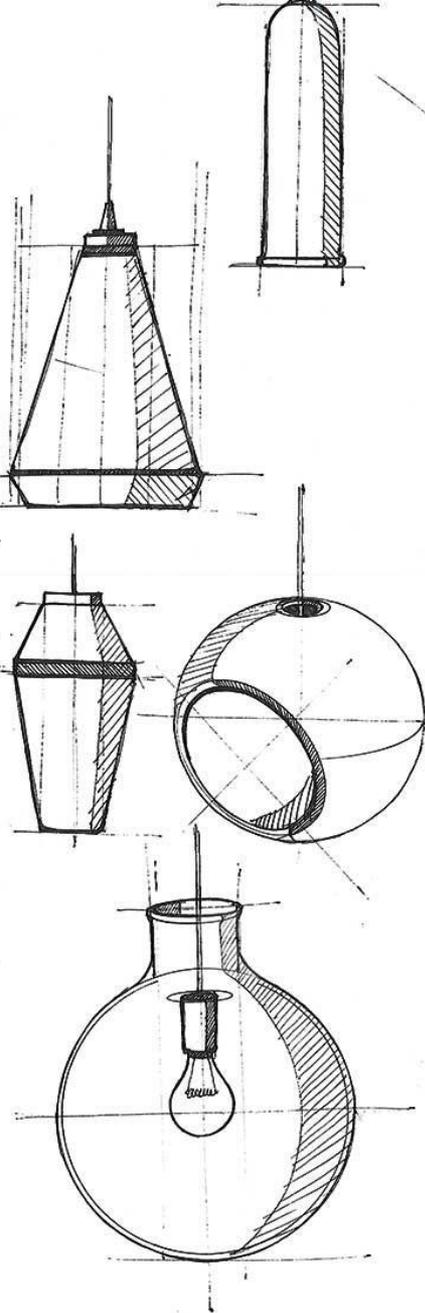
---

- During the course?  
Tasks will be completed in class and at home, through practical activities and practice test paper tasks.
- At the end of the course?  
25%- 1 Hours Written exam (60 marks)  
75%- Coursework assignments

## Grades Awarded

Level 2- Pass, Merit, Distinction or Distinction\*

Level 1- Pass, Merit or Distinction



# Assignments

---

**Exam- Unit R105: Design briefs, design specifications and user requirements - 25%**

**Unit R106: Product analysis and research- 25%**

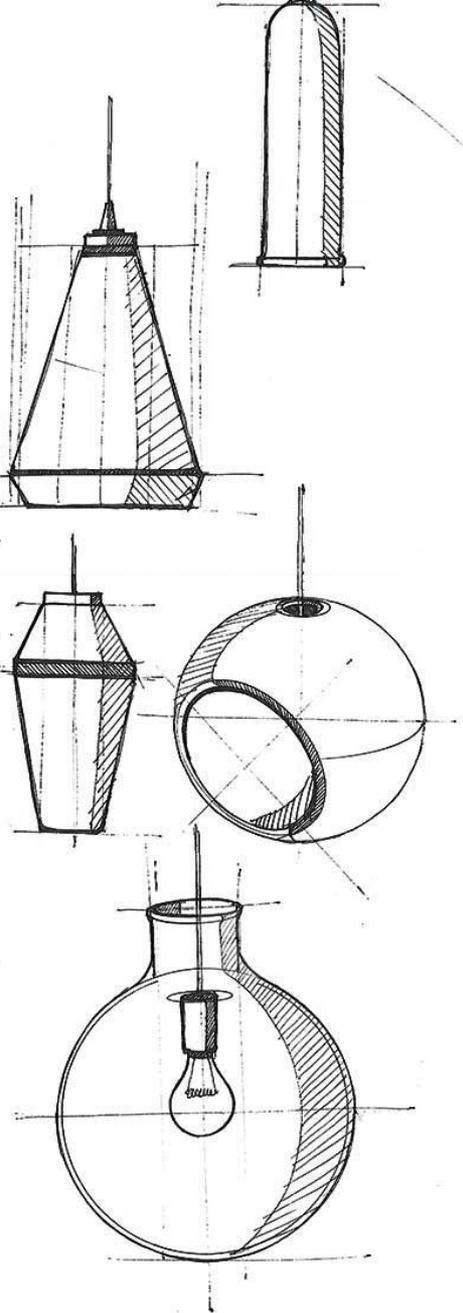
In this unit you will carry out effective product analysis. You will research existing solutions and assess the development of engineered products. You will consider what makes a good product sell by analysing existing solutions.

**Unit R107: Developing and presenting engineering designs - 25%**

In this unit you will develop techniques to generate, communicate and develop ideas using hand rendering and computer-based presentation techniques including computer aided design software. You will gain skills in annotation and labelling techniques, such as showing key features, functions, dimensions, materials, construction/manufacture methods.

**Unit R108: 3D design realisation**

In this unit you will apply practical skills to produce a prototype product in the form of a model and test design ideas in a practical context, to inform further development. You will then evaluate the prototype making a comparison of the outcome against the product specification and evaluate potential improvements in design such as features, function, materials, aesthetics and ergonomics and make suggestions on improvements to the final product.



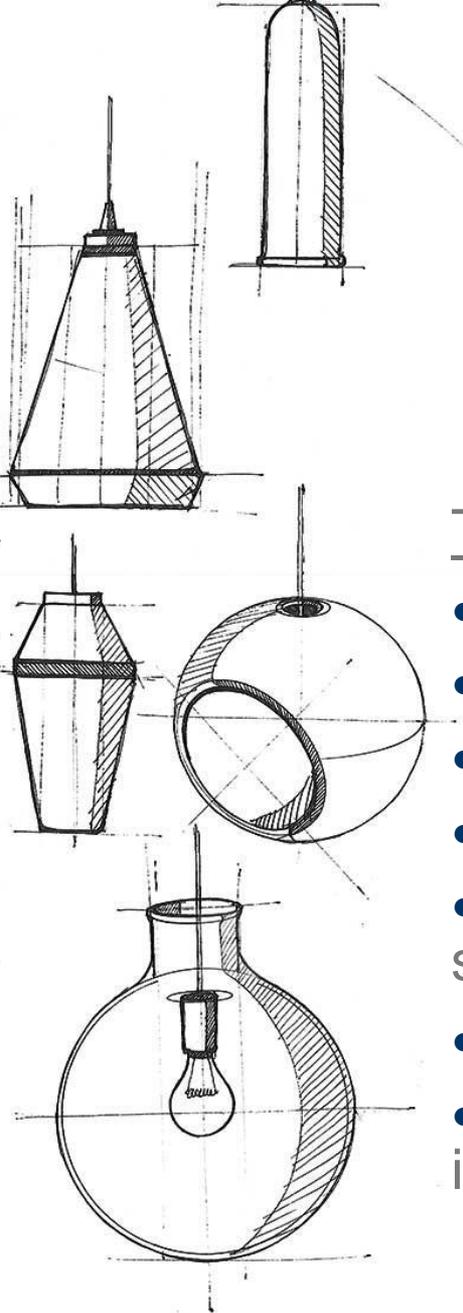
# What could I do at the end of this course?

---

This course prepares you for:

- Further study at A-level or Level 3 courses,
- Other college courses such as Design/Engineering or an apprenticeship
- Careers/working in a wide range of fields including Design/Engineering/Teaching/Architecture/Branding.

This course is also valuable because it develops important skills such as creativity, presentation, problem solving, research skills, visual awareness and communication skills.

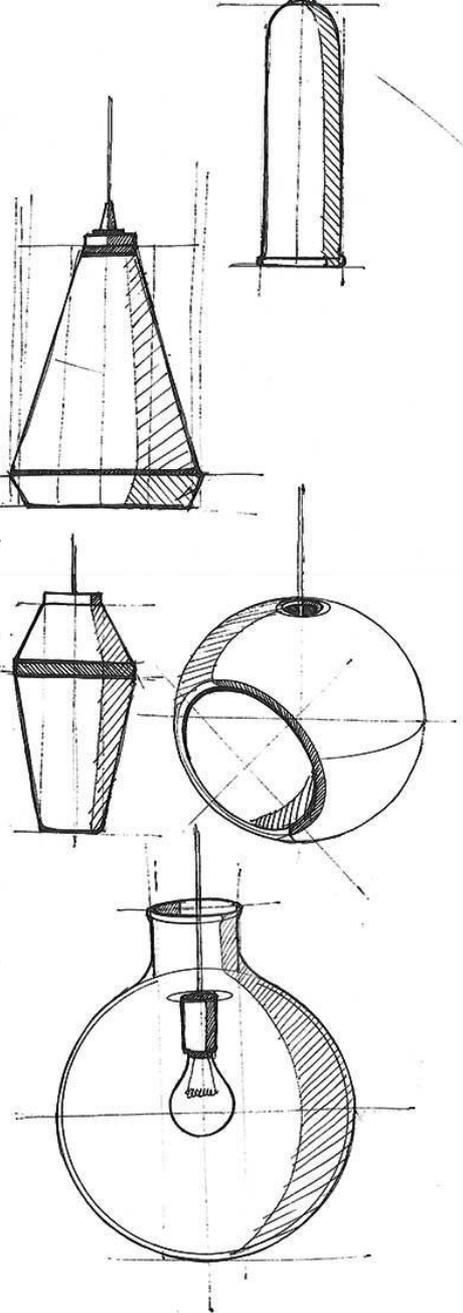


# Is this the right option for me?

---

This course will suit students who

- Enjoyed D&T in year 7 and 8
- Enjoy linking practical learning to theory
- Are creative
- Are organised
- Can work with focus and concentration and with some degree of independence.
- Would like to follow a career in this area.
- Enjoy analysing existing products and sketching ideas



# Is this the right option for me?

---

How do I decide? For all courses, ask yourself:

- Would I enjoy this?
- Would I be good at this?
- Would it help me get to where I want to be?

# Key deadlines

---

