Course Information

The WJEC GCE in Design and Technology offers a unique opportunity in the curriculum for learners to identify and solve real problems by designing and making products or systems. Design and technology is an inspiring, rigorous and practical subject. This course encourages learners to use creativity and imagination when applying iterative design processes to develop and modify designs, and to design and make prototypes that solve real world problems, considering their own and others’ needs, wants, aspirations and values. As learners need to demonstrate expertise in specialist areas, three subject endorsements are available (engineering design, fashion and textiles, and product design), linked to design disciplines that reflect possible higher education routes and industry.

<table>
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<tr>
<th>Task</th>
<th>Weighting</th>
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<tr>
<td>Unit 1 Written exam 2hrs.</td>
<td>50% of overall AS grade 80 marks</td>
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<tr>
<td>Unit 2 Design and make task</td>
<td>50% of overall AS grade 80 marks</td>
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<td>Non-exam assessment: approximately 40 hours</td>
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NEA guidance

- There will be NO SET FORMAT for the NEA
- Candidates / centres will need to adopt a successful approach
- Informal ‘sketchbook’ and Formal ‘portfolio’
- We cannot provide too much structure – this is against the Regulatory Protocol.
- Informal sketchbook to cater for an iterative approach to design and development
- Multiple starting points for project work
- Think – test – reflect
- Trialling and evaluating / reward risk

‘Iterative design is a design methodology based on a cyclic process of prototyping, testing, analysing, and refining a product or process. Based on the results of testing the most recent iteration of a design, changes and refinements are made’.
NEA Information

What will the NEA task Look like?

• Formal Presentation Folio
• Informal Sketchpad Folio
• A fully functioning Final Prototype
• Supporting models, prototypes, tests and iterations.

Where do I start?
Assessment criteria (a)

• Analyse the context (mind mapping)
• Focus on user requirements
• Evaluate existing products
• Research new materials / processes / techniques
• Focus on the problem
• Look at designers / other practitioners

• The design context must be analysed critically.
• There will be a number of possible design tasks identified.
• Detailed and relevant research will be evident
• Consider the needs and wants of users
• Analysis of existing products
• Research into past / present professionals

Link to WJEC resources for theory work and guidance on the NEA
https://adnoddau.cbac.co.uk/Pages/ResourceSingle.aspx?rIid=2647
**INFORMAL Sketchpad**

- Identifying and investigating design possibilities.
- Generating and Developing Design Ideas.

**Practical outcomes**

- Final Prototype (Fully functioning high quality product)
- Any supporting practical pieces including models, jigs, formers, patterns, tests, trials, iterations.

**FORMAL Presentation Folio**

- Final Brief and Specification
- Final Prototype – Pictorial details
- Final Prototype – Technical details
- Final Prototype – Production details
- Sequence of Production
- Evaluation of Final Prototype
- Modifications and further developments
- Photographs of Final Prototype
Resources

Books
Don Norman. Emotional Design: Why we love(or hate) everyday things
Victor Papanek. Design for the real world. PDF Copy

Online course
Ellen MacArthur Foundation (Cychwyn Mai 7)

PODCASTS
Design Matters by Debbie Millman
https://www.designmattersmedia.com/designmatters

Material Matters with Grant Gibson
https://podcasts.apple.com/gb/podcast/material-matters-with-grant-gibson/id1450375359

Cautionary Tales by Tim Harford
http://timharford.com/articles/cautionarytales/
Resources

YOUTUBE
Jude Pullen (Channel). Bangor Uni Lockdown Lectures
https://www.youtube.com/user/JudePullen/videos

Colorblind. Nike's Tinker Hatfield on designing Air Jordans,
https://www.youtube.com/watch?v=7iFkDrf3UKo&t=21s

Better by Design – Shopping Trolley
https://www.youtube.com/watch?v=VhAtgJ3KRj8

Better by Design - Razor
https://www.youtube.com/watch?v=xi13S2SBpcM

Better by Design – Bra
https://www.channel4.com/programmes/better-by-design/episode-guide/

Producttank (Channel)
https://www.youtube.com/channel/UCxyQKi7ipjA3Cz-VQyYanNQ

DesignDojo (Channel)
https://www.youtube.com/channel/UCxG9KEz4-ebUGCca0RUeK9Q
Resources

TED TALKS

Ross Lovegrove. Organic design, inspired by nature
https://www.ted.com/talks/ross_lovegrove_organic_design_inspired_by_nature

Richard Seymour. How Beauty Feels
https://www.ted.com/talks/richard_seymour_how_beauty_feels

Don Norman. 3 ways good design makes you happy
https://www.ted.com/talks/don_norman_3_ways_good_design_makes_you_happy

Yves Behar. Designing objects that tell stories
https://www.ted.com/talks/yves_behar_designing_objects_that_tell_stories

David Kelley. Human-centered design
https://www.ted.com/talks/david_kelley_human_centered_design

David Kelley. How to build your creative confidence
https://www.ted.com/talks/david_kelley_how_to_build_your_creative_confidence?referrer=playlist-kickstart_your_creativity

Philippe Starck. Design and destiny
https://www.ted.com/talks/philippe_starck_design_and_destiny
Inspirations

- Sustainability – Youtube – Andrew Marr – Megacities
- Sustainability - http://inspirationgreen.org/plastic-bottle-homes.html
- Sustaiability - http://www.treehugger.com/
- Fancy - http://www.thefancy.com/ - Brilliant for ideas – Also an iPhone app
- Design Milk - http://design-milk.com/
- Zite magazine app - http://www.zite.com/
- Odechair - http://odechair.com/
- Architizer - http://www.architizer.com/en_us/ - Also an iPhone app
- Engadget - http://www.engadget.com/ - Also an iPhone app
- TED - http://www.ted.com/ - Also an iPhone app
- Design inspiration – Cool hunting – iPad/iPhone app
- Design inspiration - http://thedesigninspiration.com/
- Design inspiration - http://designspiration.net/
1. The design contexts must be **analysed critically**. Therefore analyse 3 design contexts (produce 3 mind maps, 1 on each context).

2. **Identify 2 possible design tasks** (briefs) for each design context (6 in total, 2 for each context).

3. **Detailed and relevant research** will be evident. The research needs to be relevant to the design brief you are going to explore further.

4. Who is the **client** going to be? Consider the **needs and wants of users**.

5. **Analysis of existing products** (x4) – use the acronym ACCESSFM.

6. Research into past / present professionals. They need to be relevant to your design brief.

**Pob lwc**