

OCR Engineering Design. Course Overview:

- In year 10 we study the coursework component **R039 = 30% of the overall Grade**
- In year 11 we study the coursework component **R040 = 30% of the overall Grade**
- In year 11 we sit the final exam in May 2026 **R038 = 40% of the overall Grade**

Year 10 Key Dates 2024 to 25:

- **21 February** – June 2025 entry deadline
- **9 March** – January 2025 series entry withdrawal and amendments deadline for Cambridge Nationals and Extended Project
- **15 May** – June 2025 series centre-assessed marks submission deadline

Hr	WK	Activity	Content	Notes:
	09/09	Task Lamp Critique		
	16/09	Task Lamp Critique		
	23/09	Task Lamp Critique		
	30/09	Launch of Ro39		
	07/10	Moodboard	Range of 25 images that relate to a range of users and needs	
	14/10	Secondary Analysis	ACCESSFM	
	21/10	Evaluation	Q: What has been learned and how will you utilise this information when designing products	DO NOW creative starters linked to Brief
Half Term				
	04/11	Design Idea Generation <input type="checkbox"/> 2D/3D sketches <input type="checkbox"/> Thick/thin lines <input type="checkbox"/> Texture <input type="checkbox"/> Tone <input type="checkbox"/> Shading	32 initial Ideas 1. explain key features 2. functions, 3. dimensions 4. materials	Ensure the design ideas meet the brief Rendering techniques Annotation and labelling techniques: <i>Modelling examples of sketches/ rendering/ pen and line work/ annotation</i>
	11/11	Design Idea Generation	Annotation and communication techniques	Annotate the design ideas against the specification *Completion for Homework
Idea Generation Deadline: 14th November 2024				
	18/11	Idea Evaluation: <i>Design Image</i> <i>Why do they like the design</i> <i>Positive feedback (5 points)</i> <i>Constructive Feedback (5 points)</i> <i>Evaluation of content and choice of idea</i>	Client feedback for 5 design ideas. Positive and constructive feedback	Fully evaluate the user responses

Idea Evaluation Deadline: 21st November 2024

25/11	Development of Design Idea	Range of developmental sketches explaining all aspects of the product Completion for Homework	
02/12	Development of Design Idea	Front Side Plan views. Ergonomic details/ exploded views/ construction details.	Freehand Sketching and Google Modelling
09/12	1500+ word evaluation	Evaluation of product against the examiners specification	Teacher: Injection molding
16/12	1500+ word evaluation	Use of exemplar resources/models. Teacher led discussions and prompts	

Design and Evaluation Deadline: 19^h December 2024

Christmas Break

06/01	3 rd Angle Orthographic Drawing	Technical drawing lesson Layout Line details Symbols	Technical Drawing Revision Guide 2d Design V2
13/01	Isometric Drawing <ul style="list-style-type: none"> • Create borderline and Orthographic symbols • Use isometric grid to support drawing. Sharp Pencil 	Technical drawing lesson Use of isometric grid Layout paper Rendering techniques	Technical Drawing Revision Guide
20/01	Cross sectional Drawing	Technical drawing lesson Isometric Rendering techniques	Technical Drawing Revision Guide
27/01	Assembly Drawing <ul style="list-style-type: none"> • Individual Part drawings • Exploded View • Cross sectional Views • Parts Lists • Dimensioning 	Parts List	Model Exemplar

Technical Drawing Deadline: 30th January 2025

03/02	CAD Drawing & Making Diary – 3d form <ul style="list-style-type: none"> • Google Sketch up • Tools • Dimensioning • Rendering 	CAD model of a design proposal	Modelled exemplars
10/02	CAD Drawing & Making Diary – 3d form	CAD model of a design proposal	Modelled exemplars

Half Term – Intervention & Support

	24/02	CAD Drawing & Making Diary – 3d form	CAD model of a design proposal	Modelled exemplars
	03/03	CAD Drawing & Making Diary – 3d form	CAD model of a design proposal	Modelled exemplars
	10/03	CAD Modelling Mated Parts with Making Diary	CAD assemblies of components	Modelled exemplars
	17/03	CAD Modelling Mated Parts with Making Diary	CAD assemblies of components	Modelled exemplars
	24/03	CAD Modelling Mated Parts with Making Diary	CAD assemblies of components	Modelled exemplars
	31/03	CAD Modelling Mated Parts with Making Diary	CAD assemblies of components	<ul style="list-style-type: none"> Injection Molding Plastics Construction techniques Stock Components Ergonomic grips Specification points Volume

FINAL COURSEWORK DEADLINE: 31st March 2025

	07/04	Refinement		Moderation and feedback
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Easter Break – Intervention & Support

	28/04	Refinement		Moderation and feedback
	06/05	Refinement		Exam Entry
	12/05	STeAM Mini Make Projects (R038)		Examiner Submission 15/05/2025
	19/05	STeAM Mini Make Projects (R038)		

Half Term

	02/06	STeAM Mini Make Projects (R038)		
	09/06	STeAM Mini Make Projects (R038)		
	16/06	STeAM Mini Make Projects (R038)		
	23/06	STeAM Mini Make Projects (R038)		
	30/06	Trial Practical Exam	Jointing Processes	
	07/07	Trial Practical Exam	Jointing Processes	
	14/07	Trial Practical Exam	Jointing Processes	

Summer Break

