

Year10 OCR – Engineering Manufacture

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13
Cycle 1	W/C 31/08	07/09/26	14/09	21/09	28/09	05/10	12/10	02/11	09/11	16/11	23/11	30/11	7/12
	Engineering Sectors	Workplace Procedures	Reading Engineering Drawings	Job Cards – Planning	Test piece manufacture	Test piece manufacture	Drawing Skills – Orthographic	Complex 3D shapes – CAD Autodesk	Autodesk - Orthographic	Engineering Processes - Shaping	Engineering Processes - Shaping	Engineering Processes - Shaping	Engineering Processes - Shaping
	Health and Safety at Work Act	Fire Procedures	Symbols used on Engineering Drawings	Tools and Equipment	Test piece manufacture	Quality control	Drawing Skills – Orthographic	Complex 3D shapes – CAD Autodesk	Autodesk - Orthographic	Engineering Processes - Joining	Engineering Processes - Joining	Engineering Processes - Joining	Engineering Processes - Joining
	Hazards and Risks	Manual Handling	PPE at Work Act 1992	Measuring and marking out	Test piece manufacture	Drawing skills - Isometric	Introduction to CAD – Autodesk	Assembled drawing - CAD	Exploded Drawing/ Sectional Views	Engineering Processes -	Engineering Processes -	Engineering Processes -	Engineering Processes -
Cycle 2	W/C 14/12	04/01	11/01	18/01	25/01	01/02	08/02	22/02	01/03	08/03	15/03	22/03	12/04
					Formal Assessment	Formal Assessment							
	R016 Controlled Assessment	R016 Controlled Assessment	R016 Controlled Assessment	R016 Controlled Assessment	R016 Controlled Assessment	R016 Controlled Assessment	R016 Controlled Assessment	R016 Controlled Assessment	Engineering Processes	Forming Processes	Finishing Processes	Metals	Alloys and Composites
	R016 Controlled Assessment	R016 Controlled Assessment	R016 Controlled Assessment	R016 Controlled Assessment	R016 Controlled Assessment	R016 Controlled Assessment	R016 Controlled Assessment	R016 Controlled Assessment	Wasting Processes	Additive Manufacturing	Properties of materials	Polymers	Smart Materials
	R016 Controlled Assessment	R016 Controlled Assessment	R016 Controlled Assessment	R016 Controlled Assessment	R016 Controlled Assessment	R016 Controlled Assessment	R016 Controlled Assessment	R016 Controlled Assessment	Shaping Processes	Joining Processes	Properties Influencing Design	Engineering Ceramics	CAD
Cycle 3	W/C 19/04	26/04	03/05	10/05	17/05	24/05	07/06	14/06	21/06	28/06	05/07	12/07	19/07
							Formal Assessment	Formal Assessment	Formal Assessment	Formal Assessment			
	Interpret engineering drawing	Drawing to British Standards	Plan of Production	Risk Assessments	Manufacturing Processes	Manufacturing Processes	Manufacturing Processes	Year 10 Assessment	Year 10 Assessment	Year 10 Assessment	Manufacturing Processes	Manufacturing Processes	Quality Control
	Autodesk 3D Design	Autodesk Orthographic Drawing	Plan of Production	Manufacturing Processes	Manufacturing Processes	Manufacturing Processes	Manufacturing Processes	Year 10 Assessment	Year 10 Assessment	Year 10 Assessment	Manufacturing Processes	Manufacturing Processes	Quality Control
	Autodesk 3D Design	Plan of Production	Risk Assessments	Manufacturing Processes	Manufacturing Processes	Manufacturing Processes	Manufacturing Processes	Year 10 Assessment	Year 10 Assessment	Year 10 Assessment	Manufacturing Processes	Manufacturing Processes	Evaluation

Year11 – Engineering Manufacture

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13
Cycle 1	W/C 31/08	07/09/26	14/09	21/09	28/09	05/10	12/10	02/11	09/11	16/11	23/11	30/11	7/12
								Formal Assessment	Formal Assessment	Formal Assessment			
	Introduction	R015 Controlled Assessment	R015 Controlled Assessment	R015 Controlled Assessment	R015 Controlled Assessment	R015 Controlled Assessment	R015 Controlled Assessment	R016 Controlled Assessment	R015 Controlled Assessment	Engineering Processes	Forming Processes	Finishing Processes	Metals
	Health and Safety at Work Act	R015 Controlled Assessment	R015 Controlled Assessment	R015 Controlled Assessment	R015 Controlled Assessment	R015 Controlled Assessment	R015 Controlled Assessment	R015 Controlled Assessment	R015 Controlled Assessment	Wasting Processes	Additive Manufacturing	Properties of materials	Polymers
	PPE at Work Act 1992	R015 Controlled Assessment	R015 Controlled Assessment	R015 Controlled Assessment	R015 Controlled Assessment	R015 Controlled Assessment	R015 Controlled Assessment	R015 Controlled Assessment	R015 Controlled Assessment	Shaping Processes	Joining Processes	Properties Influencing Design	Engineering Ceramics
Cycle 2	W/C 14/12	04/01	11/01	18/01	25/01	01/02	08/02	22/02	01/03	08/03	15/03	22/03	12/04
								Formal Assessment	Formal Assessment				
	Alloys and Composites	Third Angle Orthographic Drawing	Inventory Management Systems	Revisit types of manufacturing processes	Revisit types of shaping processes (sand casting, die casting, injection moulding, powder metallurgy)	Revisit types of joining processes (brazing, welding, riveting, mechanical fastenings)	Revisit properties influencing manufacture (malleability, machinability, cost, sustainability)	Revisit types of engineering materials (ceramics and composites)	Revisit scale of manufacture (jigs, templates, moulds, level of automation, CAM)	Revisit lean manufacturing (TIMWOOD categories of waste)	RAG rating areas of exam unit	Targeted revision based on individual RAG ratings	Brain trainer/flash card revision sessions
	Smart Materials	Scales of Manufacture	Lean Manufacturing	Revisit types of wasting processes (sawing, shearing, drilling, filing)	Revisit types of forming processes (forging, press forming, strip heating, vacuum forming, moulding of composites)	Revisit types of finishing processes (painting, powder coating)	Revisit types of engineering materials (ferrous and non-ferrous metals)	Revisit types of engineering materials (smart materials)	Revisit quality systems (quality assurance, quality control)	Revisit Globalisation (transport, international standards, employment opportunities and conditions)	Targeted revision based on individual RAG ratings	Targeted revision based on individual RAG ratings	Brain trainer/flash card revision sessions

	CAD	Quality Systems	Globalisation	Revisit types of wasting processes (threading routing, laser cutting, turning, milling)	Revisit additive manufacture	Revisit mechanical properties of materials (strength, elasticity, ductility, hardness)	Revisit types of engineering materials (thermoforming, thermosetting polymers)	Revisit orthographic third angle projection drawings	Revisit inventory management (JIT, MRP)	Revisit Globalisation (cost, sustainability, economic, social, ethical, environmental implications)	Targeted revision based on individual RAG ratings	Targeted revision based on individual RAG ratings	Brain trainer/flash card revision sessions
Cycle 3	W/C 19/04	26/04	03/05	10/05	17/05	24/05	07/06	14/06	21/06	28/06	05/07	12/07	19/07
	Past paper assessment	Targeted revision based on RAG ratings and past paper	R014 quizzing Section 1	R014 quizzing Section 2	Practice exam questions Section 2	Past papers/exam paper question booklet							
	Review past paper + flash cards	Targeted revision based on RAG ratings and past paper	R014 quizzing Section 2	Structuring extended exam questions	Practice exam questions Section 3	Past papers/exam paper question booklet							
	Review past paper + flash cards	Targeted revision based on RAG ratings and past paper	R014 quizzing Section 2	Practice exam questions Section 1	Practice exam questions Section 4	Past papers/exam paper question booklet							