GCSE Engineering



Final marking/re vision for exam

Exam

NEA preliminary marking and generalised feedback

Demonstrate and apply knowledge: The student will independently work through the stages of the non-exam assessment. The assessment covers all 6 sections that have been taught in the course and gives students an opportunity to demonstrate their level of skill and understanding. The assessment is internally marked and moderated and then the exam board will moderate then selected folders. The NEA counts as 40% of the marks and this will combine with the exam mark to provide student their final qualification grade 1 to 9.



Demonstrate skills and techniques: Practical Activity – NEA prototype

NEA preliminary marking and generalised feedback

Mock exam



Demonstrate and apply knowledge: Microcontrollers and programming

Demonstrate and apply knowledge: Orthographic and isometric drawina

Demonstrate and apply knowledge: Controlled assessment sections

Microcontroller design and manufacture

Demonstrate skills and techniques: Microcontroller circuits, design and production

Revision topics for mock exam **Demonstrate** and apply knowledge: Material Properties.

Mock Exam



Demonstrate and apply knowledge: Tools and

knowledge and techniques: Plan, set up and produce 3d prototype lighting product

Demonstrate and apply

equipment for working with wood and plastics.

Demonstrate and apply knowledge: injection moulding and casting

Card modelling Demonstrate and apply knowledge: 2d cad drawings, standard conventions and dimensions.

Production planning

Demonstrate

and apply

knowledge:

Circuit wizard

Demonstrate skills and techniques: CAD / CAM Activity - Onshape, 2D design, laser cutter, circuit design and 3d Printers

Demonstrate and apply knowledge: Properties of 3d printing materials.

Demonstrate and apply knowledge: Slicer Software / Industrial applications.

Demonstrate and apply knowledge: Properties of copper and heat treatment processes.

Mini NEA based on lighting problem

and building circuits.

Demonstrate skills and Demonstrate skills and techniques: Practical Activity – Electronics. Astable circuits, 555 timer

techniques: Circuit design and circuit PCB production

Practical assessment and astable circuits

Exam questions mini assessment

Demonstrate and apply knowledge: Properties of metals including steel, aluminium and copper.

Demonstrate and apply knowledge: Properties of materials

3D printing and 3D design using Onshape

and tools that can be used. Safety, ppe and abrasives.

Demonstrate and apply

knowledge: Working with metals

Demonstrate skills and techniques: Practical Activity - Bottle Opener,

> Course expectations, requirements & ongoing assessment procedures.

Demonstrate and apply

Health

and

safety

knowledge: Mini project, problem solving, modelling and 3D drawing/design

Demonstrate and apply

knowledge: Energy, renewables and non-renewables

EMi