HUCKNALL SIXTH FORM CENTRE

POST 16

SCAN ME

Cambridge Nationals

OCR Level 1/Level 2

Engineering Manufacture

YEAR 10

ADVENT TERM

- Assessed homework: Advent term Knowledge
- Measuring and marking out tools
- Fabrication using and tools
- Hand tools and processes
- Saws and files
- Metals assessment
- Metals chemistry: Rust/corrosion
- Alloys: common uses/properties
- Non-ferrous materials: Common uses/properties
- Ferrous materials: Common uses/properties
- Metals
- Fabrication skills
- Properties assessment
- Health & safety
- Sources and forms of materials
- Materials & properties
- Assessed homework: Engineering Manufacture
- Baseline assessment

LENT TERM

- Machines in engineering
- The pillar drill: parts and safe use
- The Forge: Use and safety
- Metals chemistry: Heat treatment
- Assessed homework: Machines in engineering
- Tools and equipment assessment
- Joining methods
- Plastics
- Thermoset plastics: Common uses/properties
- Thermoset plastics: Common uses/properties
- Plastics chemistry: polymerisation
- Manufacturing processes: Plastic forming and moulding
- Assessed homework: Lent term knowledge
- Fabrication using plastics: cutting, shaping and forming
- Plastics assessment
- Composites: Common uses/properties
- Concrete: chemistry, reinforcement and safety
- SMART materials

PENTECOST TERM

- Alternative engineering materials
- Materials revision
- Engineering materials assessment
- Assessed homework: Engineering materials
- Quality control tools
- Quality control and quality assurance
- Mock Exam
- Testing: Destructive and non-destructive
- Manufacturing Trip
- Assessed homework: Pentecost term knowledge
- Developing fabrication skills

YEAR 11

ADVENT TERM

- Risk assessment
- Using manually control machines
- Health and safety
- Measuring and marking out
- Preparing for production assessment
- Tools and equipment
- Using measuring tools for quality control
- Production/manufacturing plans
- Preparing for production
- Presenting production and quality control documents
- Assessed homework: Advent term Knowledge
- Joining methods
- Practical: Manual production assessment
- Assessed homework: Year 10 recap
- Producing Engineering drawing
- Understanding Engineering drawing

LENT TERM

- Using CAD software
- Unit R015 coursework submission
- Scales of production
- Preparing for manufacture
- Principles of CNC machining
- Jigs, templates and gauges
- Principles of CNC assessment
- Setting up CNC machines/Health and safety
- Operating CNC machines
- Assessed homework: CNC knowledge organiser
- Practical: CNC production assessment
- Use of CNC in manufacture
- Robotics
- Assessed homework: managing scaled production
- Developments in engineering
- Additive manufacture
- Unit R016 coursework submission
- Quality control in scaled production

PENTECOST TERM

- External exam unit R014
- Assessed homework: Developments in engineering manufacture
- Revision
- Lean manufacturing
- Inventory management
- Globalisation