**AQA Foundation Technical Level in Engineering**

The Engineering Design course is an AQA Technical qualification equal to one A Level. The course is relatively new and Reigate is the largest centre in the country running this qualification. It should be emphasised that the course is primarily concerned with engineering design and should not be confused with a sheet metal working or tool making type of course. Students taking the course would normally expect to progress to Engineering Science or similar types of degree and often combine this course with subjects such as Applied Science, Maths and Physics. The course typically has three groups in each academic year.

Here link is the specification:

<https://filestore.aqa.org.uk/resources/engineering/specifications/AQA-TVQ01018-TVQ01019-SP-2016.PDF>

Most of the teaching takes place is a classroom/lab with access to a workshop where needed for the production and manufacturing unit.

The course has four units:

1. Materials Technology & Science (external exam)
2. Mechanical Systems (external assignment)
3. Engineering Design (internal project)
4. Production & Manufacturing (externally set and internally assessed)

**1 Materials Technology & Science**

This is examined by external written examination. This unit looks at the properties of materials, energy transfer and electronics. The exam is similar in many respects to a typical A Level Product Design paper.

Here is a link to an example test paper:

<https://filestore.aqa.org.uk/resources/engineering/AQA-TVQENG1-SAM.PDF>

**2 Mechanical Systems**

This is an externally set and marked assignment. The sample assignment is for the construction of a robotic arm. At the College this would involve some workshop activity to produce the larger components of the arm plus classroom/lab work to complete the electrical and mechanical parts of the arm with Lego/Meccano. Students are not expected to manufacture all of the components from scratch, most of the work would be carried out using kits of parts.

Here is a link to the sample assignment:

<https://filestore.aqa.org.uk/resources/engineering/AQA-TVQENG2-SEA.PDF>

**3 Engineering Design**

This is an internally centre set and assessed project intended to allow students to develop their CAD skills. The classroom is equipped with highly specified computers to allow students to use products such as AutoDesk. Projects might include the design of a racing car steering wheel or a modular building.

**4 Production & Manufacturing**

This is externally set and internally assessed. The current project is for students to design and manufacture some of the components used in a wind turbine such as the mounting system, blades or nacelle.

If you would like to discuss the content of this qualification further, please contact the College (01737 221118 or enquiries@reigate.ac.uk) and direct your query for the attention of Chris Whelan.