Heathcote School and Science College

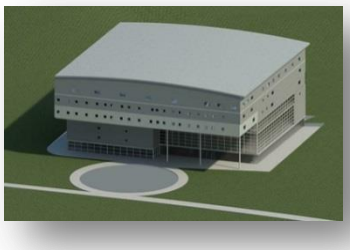
Design, Engineer, Construct

Transition Guide 2018 - 2019

TLM Level 3 Qualifications in Designing, Engineering and Constructing a Sustainable Built Environment (QCF)

The qualifications at Level 3 have two assessment components.

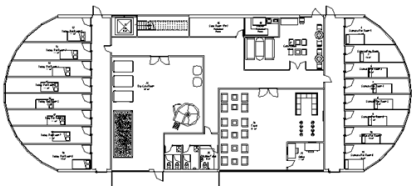
1. Coursework assessed in terms of competence in practical areas where knowledge and understanding can be applied in real and motivating contexts.
2. An externally set and externally marked examination to assess knowledge and understanding that underpins user competence.



The qualifications are unit based. The Award consists of one unit, the Certificate consists of three units and the Diploma requires 5 units. Each unit has a credit value in the Qualifications and Credit Framework (QCF) and is expected to be supported with 60 Guided Learning Hours.

50 credits is needed for the Diploma equating to 300 Guided Learning Hours, 30 credits for the Certificate equating to 180 GLH and 12 Credits for the Award equating to 60 GLH. 50 credits is one third of the core credit required for the Modern Baccalaureate at Advanced Level.

The overarching aim is to enable learners to broaden their understanding of technical and professional procedures so they are better equipped decision makers in a technological age. Those seeking careers in a digital built environment will have an appropriate grounding in collaboration and BIM techniques to enable them to make rational decisions about their progression routes into employment in this sector.



Subordinate aims include:

- Developing the knowledge and skills needed for employment.
- Gaining practical experience needed to underpin lifelong learning.
- Increasing the knowledge needed to transfer skills and understanding between contexts.
- Reinforcement of learning in the core subjects of English, mathematics and science.
- Developing practical skills in creativity and problem solving in technological contexts of personal interest.
- Developing an understanding of their place in the community and society.
- Developing safe, secure and responsible attitudes to working with other people.
- Developing the skills for working collaboratively with IT.
- Developing knowledge in the field of critical evaluation and feedback.

Opportunities are provided to support real skills, the great majority of which will be assessed directly in coursework in valid contexts. Through a range of sections, for the Certificate and Diploma, students will carry out a major project based on a real and significant construction project. A range of appropriate tasks follow the journey of the building including:

- Understanding sustainability and sustainable design.
- Aesthetic considerations.
- Working with clients and promoting community cohesion.
- Building Information Modelling skills.
- Architectural skills in schematic and design development.
- Building services engineering.
- Energy efficiency and post occupancy behaviour.
- Land surveying and site engineering.
- Landscape design.
- Planning constraints.
- Facilities management.
- Sustainable procurement and resource efficiency.
- Applied construction mathematics.

Assessment

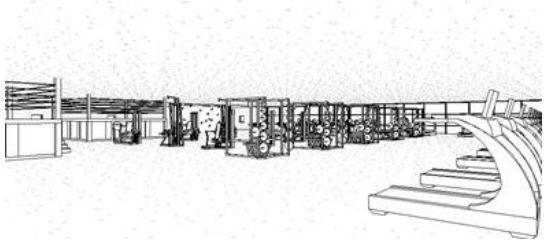
Evidence has to be provided against the unit assessment criteria from practical tasks related to the learners' everyday work. This is likely to be from specialist lessons supported by a subject specialist but links with A-levels and other equivalent subjects, for example from maths, science, computing art and design and other relevant subjects are to be encouraged.

The central project within the curriculum is to shadow a substantial and recent real building project, following industry standard commercial practices, and suggesting improvements that could be made to the real project. This includes the use of Building Information Modelling techniques using industry standard software and provides young learners with a range of progressive skills which are in high demand in a wide range of technical careers in the built environment. There is an obvious progression from Level 2 to Level 3 where learners will be expected to tackle academically more challenging questions requiring analysis and quantitative skills. The outcomes for individuals in terms of the broad level descriptors allied to the assessment criteria, verified by the teacher/assessor and externally moderated by TLM will determine the final outcome.

Examination

There are two classes of objectives. AO1, AO2, AO3 are generic assessment objectives:

- AO1 - Recall, select and communicate knowledge and understanding.
- AO2 - Apply knowledge and understanding through analysis, reasoned judgements and drawing conclusions.



- AO3 - Practical and technical skills related to applying

Coursework
Level 3 Designing, Engineering and Constructing a Sustainable Built Environment

Unit 1: Defining a Sustainable Construction Project - 12 credits (60 GLH)
Unit 2: Developing a Sustainable Construction Project - 10 credits (60 GLH)
Unit 3: Support Design, Structural and Services aspects of Sustainability - 8 credits (60 GLH)
Unit 4: Lifecycle and Financial Planning for a Sustainable Construction Project - 10 credits (60 GLH)
Unit 5: Evaluating and Documenting a Sustainable Construction Project - 10 credits (60 GLH)