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**Programme Specification**

**Title of Course: BSc (Hons) Quantity Surveying Consultancy**

 **Degree Apprenticeship**

**Date Specification Produced: July 2018**

**Date Specification Last Revised: March 2019**

This Programme Specification is designed for prospective apprentices, current apprentices, academic staff and potential employers. It provides a concise summary of the main features of the programme and the intended learning outcomes that a typical apprentice might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the teaching, learning and assessment methods, learning outcomes and content of each module can be found in the Course Handbook and Module Descriptors.

*Examples of completed programme specifications can be found on the:*

[KU Programme Specification Archive](http://www.kingston.ac.uk/programme-specifications/)**SECTION 1: GENERAL INFORMATION**

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| **Title:** | **BSc (Hons) Quantity Surveying Consultancy****Degree Apprenticeship** |
| **Awarding Institution:** | Kingston University |
| **Teaching Institution:** | Kingston University |
| **Location:** | Kingston University  |
| **Programme Accredited by:**  | RICS & CIOB |

**SECTION2: THE PROGRAMME**

1. **Programme Introduction**

As defined in “English Apprenticeship: Our Vision 2020”, published in 2015, an apprenticeship is a job with a formal programme of training. This Degree Apprenticeship (DA) programme is designed to provide the underpinning knowledge (K) identified by the approved apprenticeship standard (Chartered Surveyor Degree Standard Ref: ST0331). For apprentices who wish to study Quantity Surveying to Honours Degree level (L6) through this five-year DA programme and aspire to achieve the professional status of Chartered Surveyor, their learning Journey is set out so that they would gain the technical and theoretical knowledge up to the required level (L6). The programme’s content was also reviewed against the relevant DA standards ensuring that it delivers on set skills (S) and professional behaviours (B). This is captured by the mapping of the programme’s modules to the sets of Core/optional knowledge and skills as well as the set of professional behaviours (refer to the mapping document). The academic delivery on this BSc (Hons) qualification is offered through a 1-day a week release which will predominantly account for the required 20% off-the-job training

It is also designed so that the academic team working in partnership with the employer ensure that, in addition to the relevant practical experience gained through the job itself, a specific on-the-job training takes place to develop the technical and professional skills and behaviours much more fully and in line with standards. This is captured by the Stakeholder Commitments Matrix (refer to appendix B in the Academic Liaison & Staff Development document).

The role of the Quantity Surveyor is vital to the construction process and as such Quantity Surveyors have an important role to play in ensuring that developments are completed to time and on budget. Once regarded as experts in cost estimation, the role of the Quantity Surveyor has developed to enable them to provide a full service across the life cycle of a project. We aim that our apprentices will develop a strong sense of the importance of balancing social, economic and environmental concerns such that they can contribute positively towards the creation of a more sustainable society.

In order to be a successful Quantity Surveyor, a sound knowledge of construction is required, as the Quantity Surveyor interprets architects’ drawings and from these they determine the estimated costs of the project. They will normally be engaged throughout the project life cycle, often as the lead project manager and certainly a member of the whole management team responsible for the safe, timely and good quality delivery of the scheme in compliance with the budget. From small schemes, such as a refurbishment of a local office block to the delivery of a major project such as a new airport terminal or other major building/infrastructure project, the Quantity Surveyor is a vital advisor.

In recent years, Quantity Surveyors have also developed an increasingly important role in relation to the whole life costing analysis of buildings. In other words, they now advise building owners not just on the initial capital investment of the construction project but also the total maintenance and running costs over the projected life of the building. In light of the need to combat climate change by reduction of carbon emissions, 50% of which are estimated to come from building construction and use, they offer expertise in how to calculate likely carbon emissions over the whole life-cycle and of course how to reduce carbon through the use of certain materials and building techniques as well as use of IT software.

This BSc (Hons) Quantity Surveying Consultancy Degree Apprenticeship is offered as a 1-day a week five-year L6 degree apprenticeship programme for those taking up quantity surveying related apprenticeship employment with their employers. 30 credits at Level 6 will be delivered via a work-based learning module. The remaining 330 credits will be taught via an intensive one-day a week education programme at Kingston University for each of the five years of the course (See Section E for the programme structure). The degree apprenticeship course has been designed for those wishing to undertake a challenging programme which will enable them to study in depth many aspects of quantity surveying.

A distinctive feature of the field/course is the integrated curriculum provided at Level 4. The Level 4 modules on this field/course are designed to share learning outcomes with Level 4 modules on other construction and engineering related fields/courses whilst also maintaining certain discrete quantity surveying related learning outcomes. This aims to develop a culture of interdisciplinary and collaborative working which are at the top of the construction industry’s agenda. This further allows apprentices to experience various surveying related disciplines at the start of their course. Shared modules at Levels 5 and 6 give further opportunities for interaction across disciplines and associated group work on real world problems. A feature of the learning and teaching strategy is the focus on active learning sessions.

Throughout the course, apprentices will have the support of a personal tutor who can provide one-to-one guidance and advice on academic matters. The personal tutor will be an academic staff member allocated to each apprentice on their first day at the university. The apprentices are also supported by an employer mentor, a professional quantity surveyor, at the work place who will monitor the progress of the apprentices’ continuing learning at work, especially in achieving the learning outcomes of the work-based module. Reports on the apprentices’ progress by the employer mentor will be conducted through an agreed reporting mechanism and by means of scheduled visits to the work place where progress review meetings would take place. The personal tutor and the employer mentor will meet at least once every teaching block to ensure that the apprentices are progressing as planned and their learning experience at the university and at the work place is also acquiring the broader competencies such as: communication, team working, time and project management, computer literacy and problem solving skills.

Apprentices will be taught by both expert academics and qualified practitioners who continuously feedback the outputs of their research and latest developments into their teaching. Academic staff are also involved with the professional bodies, some as assessors, and provide support for apprentices towards their preparation for entry into the professional bodies (End Point Assessment). The professional development of apprentices on this programme will be continuously recorded and monitored, especially in the last 2 academic years of the degree, where this becomes an integral part of the progress review(s) to meet the mandatory requirements of professional bodies.

1. **Aims of the Field/Course**

The general aim of the course is:

* To equip graduates with the surveying, design, management, business and personal skills required to become professional quantity surveyors, as well as enable them to follow careers in related professional disciplines.

More specific aims of the course are:

* To provide those in relevant employment an opportunity to study a degree in quantity surveying on an apprenticeship day-release basis;
* To produce graduates with a breadth and depth of knowledge and a thorough comprehension of the key aspects of the construction industry within a business perspective;
* To understand and advise on the procurement process and be able to play a key advisory role within the decision making team;
* To develop a critical knowledge of the theory and practice of estimating, cost planning and pricing taking due account of risks and life cycle costs;
* To furnish apprentices with a sound working knowledge of existing and emerging measurement techniques including the ability to measure complex structures, and the role of IT within measurement;
* To allow apprentices to develop analytical skills and an ability to evaluate evidence and assumptions to reach sound judgements and communicate these effectively;
* To provide quantity surveying graduates to the construction industry who have a creative approach to the solution of problems and the requisite technical skills to realise these solutions;
* To furnish graduates with a firm grasp of Sustainability and Health and Safety within the context of their discipline.
* To provide graduates with reflective skills to recognise the need to continually develop themselves in order to exercise their professional judgement.
* To develop the understanding, knowledge and skills to become, after appropriate further practical experience, competent practitioners of quantity surveying.
* To equip apprentices with the research skills required for postgraduate study and the employability skills required for work in the construction and related industries.
1. **Intended Learning Outcomes**

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| **Programme Learning Outcomes** |
|  | **Knowledge and Understanding**On completion of the course apprentices will be able to: |  | **Intellectual Skills**On completion of the course apprentices will be able to: |  | **Subject Practical Skills**On completion of the course apprentices will be able to: |
| A1 | Demonstrate a sound understanding of professional issues affecting the construction technology and use of resources in residential/commercial structures and infrastructure projects, procurement, cost estimating/control and the construction management process; | B1 | Critically analyse the information and knowledge base within which they are working and be able to challenge ideas rationally and constructively; | C1 | Prepare project appraisals, measure and quantify construction works, produce estimates, cost plans, cost reports to support the design development process and production of project information used in the commercial management of projects.  |
| A2 | Demonstrate in-depth understanding of the various professional roles and parties involved in all stages of the project life cycle and the law relating to land, contracts, tortious liability, conflict avoidance and dispute resolution, matters pertaining to professional practice and ethics and to have developed a critical appreciation of legal matters relating to contract administration; | B2 | Identify practice related problems and prepare logically sound and evidence-based plans for their solutions; | C2 | Use standard industry software packages for estimating, measurement and project management. |
| A3 | Demonstrate knowledge of the role of the Quantity Surveyor in relation to delivering professional consultancy services and understanding client objectives and business strategy as well as regulatory frameworks impacting on the design and construction of buildings; | B3 | Think creatively and seek innovative solutions to problems related to their discipline;  | C3 | Use digital technologies to support interdisciplinary collaborative working in the construction management process. |
| A4 | Develop critical knowledge of the theory and practice of estimating, cost planning and pricing; the role of risk, life-cycle costing and sustainability initiatives and their application in designs which minimize energy and carbon emissions and improve health and well-being.  | B4 | Exercise sound judgement based on appropriate evidence in relation to professional practice problems and research questions; | C4 | Effectively communicate design ideas and options and support the integrated design and construction team by costing value engineered solutions.  |
| A5 | Apply sound working knowledge of existing and emerging measurement techniques including the ability to measure complex structures; and the application of digital media in cost management; | B5 | Recognise the implications of ethics and economic, social and environmental sustainability as well as the impact of development on the environment and apply these principles to their future professional lives. | C5 | Compile pricing and tender documents in relation to designs that deliver inclusive environments. |
| A6 | Relate all their studies to a well-attuned knowledge and holistic understanding of sustainable development. |  |  | C6 | Prepare a case for presentation at a hearing or expert witness setting.  |

In addition to the programme learning outcomes identified overleaf, the programme of study defined in this programme specification will allow apprentices to develop a range of Key Skills as follows:

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| **Key Skills** |
| **Self-awareness Skills** | **Communication Skills** | **Interpersonal Skills** | **Research and Information Literacy Skills** | **Numeracy Skills** | **Management & Leadership Skills** | **Creativity and Problem Solving Skills** |
| Take responsibility for own learning and plan for and record own personal development | Express ideas clearly and unambiguously in writing and the spoken work | Work well with others in a group or team | Search for and select relevant sources of information | Collect data from primary and secondary sources and use appropriate methods to manipulate and analyse this data | Determine the scope of a task (or project) | Apply scientific and other knowledge to analyse and evaluate information and data and to find solutions to problems |
| Recognise own academic strengths and weaknesses, reflect on performance and progress and respond to feedback | Present, challenge and defend ideas and results effectively orally and in writing | Work flexibly and respond to change | Critically evaluate information and use it appropriately | Present and record data in appropriate formats | Identify resources needed to undertake the task (or project) and to schedule and manage the resources | Work with complex ideas and justify judgements made through effective use of evidence |
| Organise self effectively, agreeing and setting realistic targets, accessing support where appropriate and managing time to achieve targets | Actively listen and respond appropriately to ideas of others | Discuss and debate with others and make concession to reach agreement | Apply the ethical and legal requirements in both the access and use of information | Interpret and evaluate data to inform and justify arguments | Evidence ability to successfully complete and evaluate a task (or project), revising the plan where necessary |  |
| Work effectively with limited supervision in unfamiliar contexts |  | Give, accept and respond to constructive feedback | Accurately cite and reference information sources | Be aware of issues of selection, accuracy and uncertainty in the collection and analysis of data | Motivate and direct others to enable an effective contribution from all participants |  |
|  |  | Show sensitivity and respect for diverse values and beliefs | Use software and IT technology as appropriate |  |  |  |

1. **Entry Requirements**

The minimum entry qualifications for the programme are:

From A levels: Three A2 levels at Grade C or higher or their equivalent but the final decision is that of each employer.

Technician

Apprenticeship: Level 3 apprenticeship in a construction or property related discipline

Plus: GCSE (A\*-C on the previous GCSE grading system or 9-4 on the new GCSE grading system) minimum of 5 subjects including English language and Mathematics

Following receipt of the potential apprentice’s application, the University will review the candidate’s application against the published entry requirements to ensure these have been met. Accordingly, the University will advise the Employer if a place on the programme can be offered.

1. **Field/Course Structure**

This programme is offered in apprenticeship day release mode, with weekly one-day release from employment for scheduled learning at the University and continuing learning at the work place and leads to the award of BSc Quantity Surveying Consultancy. The course is completed when apprentices have successfully achieved 330 credits at the University and 30 credits in the work-based module at Level 6.

Advanced entry to Level 5 requires academic qualifications deemed equivalent to BSc Level 5 (normally HNC) and the sponsorship of an approved employer in the construction industry.

Intake is normally in September.

**E1. Professional and Statutory Regulatory Bodies**

**E2. Work-based learning**

This BSc programme is designed for those employed within the quantity surveying related industry. There is one work-based module in the programme at Level 6, namely CE6214 Individual Project and Research Methods. This work-based module provides apprentices opportunities to acquire and apply knowledge in the work place while developing professionally.

Apprentices set out to achieve the learning outcomes of the work-based module by writing the learning plan. The learning plan must include an initial assessment of the learning outcomes and the level of competency learners have already achieved, and list the evidence required through planned activities at work to demonstrate that the learning outcomes of the work based element have been achieved. Through the learning plan, apprentices will match the knowledge acquisition in the work place to the learning outcomes for the work-based module.

The assessment of the work-based learning is stated in the module descriptor. It comprises:

• Two assignments designed to assess the demonstration of knowledge and understanding and their advanced application in a quantity surveying related real-world commercial situation,

• An oral presentation at the university.

The benefits of this work-based module are two-fold:

• Apprentices having the opportunity to acquire knowledge and apply that knowledge in complex work place situations,

• Enhancing the University’s engagement with industry.

**E3. Outline Programme Structure**

Please refer to the Course Diagram in the Appendix at the end of this document. Each level is made up of 4 modules each worth 30 credit points. Typically an apprentice must complete 120 credits at each level. All apprentices will be provided with the University regulations and specific additions that are sometimes required for accreditation by outside bodies (e.g. professional or statutory bodies that confer professional accreditation). Full details of each module will be provided in module descriptors and apprentice module guides.

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| **Level 4** (all core) |
| **Compulsory modules** | **Module code** | **Credit****Value** | **Level** | **Teaching Block** |
| Engineering Design and Professional Practice | EG4010 | 30 | 4 | 1&2 |
| Structures, Materials and Construction Methods | EG4020 | 30 | 4 | 1&2 |
| Applied Mathematics and Computing Applications | EG4030 | 30 | 4 | 1&2 |
| Construction Management and Site Investigation | EG4040 | 30 | 4 | 1&2 |

To progress from Level 4 to Level 5, an apprentice should normally have achieved not less than 120 credits at Level 4. However, a PAB may permit an apprentice to progress to Level 5 with 90 credits at Level 4.

Apprentices exiting the field/course at this point who have successfully completed 120 credits are eligible for the award of Certificate of Higher Education in Quantity Surveying.

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| **Level 5** (all core) |
| **Compulsory modules** | **Module code** | **Credit****Value** | **Level** | **Teaching Block** |
| Advanced Measurement | CE5100 | 30 | 5 | 1 & 2 |
| Commercial Construction Technology | CE5104 | 30 | 5 | 1 & 2 |
| Contract Administration | CE5107 | 30 | 5 | 1 & 2 |
| Design Economics & Cost Planning | CE5108 | 30 | 5 | 1 & 2 |

Progression to Level 6 requires an apprentice to have achieved not less than 120 credits at Level 5.

Apprentices exiting the programme at this point who have successfully completed 120 credits at Level 4 and 120 credits at Level 5 are eligible for the award of Diploma of Higher Education in Quantity Surveying.

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| **Level 6** (all core) |
| **Compulsory modules** | **Module code** | **Credit****Value** | **Level** | **Teaching Block** |
| Consultancy | CE6102 | 30 | 6 | 1 & 2 |
| Professional Practice in Context | CE6105 | 30 | 6 | 1 & 2 |
| Project Management | CE6106 | 30 | 6 | 1 & 2 |
| Individual Project and Research Methods  | CE6214\* | 30 | 6 | 1 & 2 |

\* Work-based module

Level 6 requires the completion of all the modules in the three tables immediately above.

1. **Principles of Teaching, Learning and Assessment**

The BSc (Hons) Quantity Surveying Consultancy Degree Apprenticeship has been designed, taking into account the Kingston University Curriculum Design Principles, to help develop apprentices into graduates that are professional, thoughtful, creative, resilient, proactive and globally aware independent, equipping them to be lifelong learners.

The programme provides opportunities for apprentices to develop and demonstrate knowledge and understanding specific to the subject, key skills and graduate attributes in the following areas. The programme outcomes are referenced to the Institute for Apprenticeships Chartered Surveyor (Degree) Standard (ST0331), the QAA subject benchmarks for Land, Construction, Real Estate and Surveying (2016) and the Framework for Higher Education Qualifications in England, Wales and Northern Ireland (2008).

Alongside studying technical and professional subjects, apprentices will have their entry level communication skills developed further though all different levels of the degree apprenticeship programme. Teaching staff will demonstrate a full range of communication skills for the apprentices to emulate. Apprentices will be given opportunities during interactive in-class sessions to practice these skills. Within this context, communication skills will encompass professional report/essay writing, oral presentations supported by visual means, time management and appropriate academic referencing.

Assessment and coursework marking schemes in particular, will reward the quality, clarity, cogency, structure, professional presentation standards and overall effectiveness of the communication. Feedforward will provide apprentices with direction and guidance utilising good practice examples for apprentices to follow. Feedback will clearly point out areas where apprentices need to achieve further improvements in relation to their communication skills development.

Witten assessments will typically evolve from a few hundred words at Level 4 to a few thousand at Level 6. The rationale for this is so that apprentices are set assessments appropriate to the development of their communication skills. These will enable apprentices to progressively practice, demonstrate and enhance their communication skills through more advanced applications and be supported in this process through the steps outlined above.  Oral presentations will typically be 10 minutes followed by a questions and answers session to match the requirements of the professional bodies.

Apprentices will be directed towards the SEC Academic Success Centre (SASC), where apprentices can obtain help on a range of academic skills from writing reports, note-taking, exam revision, referencing, programming and mathematical skills. SASC provides assistance and advice on draft assignments prior to hand-in to the teaching staff. Personal tutors will also utilise one-to-one tutorial sessions to maintain oversight of the apprentices’ communication skills development, provide time for reflection and self-assessment and support apprentices to develop an improvement plan.

**Overarching principles**

All apprentices on the programme are working towards a professional career in which they must be able to exercise judgement, communicate with clients and the public and throughout take an ethical approach to all that they do; we also encourage them through the design and execution of the curriculum to be both knowledgeable in terms of how sustainability principles apply to their own field but also develop a responsible attitude towards the role that built environment professionals can play in helping to manage resources in ways which promote environmental sustainability, good governance, respect for people, well-being and the pursuit of economic goals. Sustainability is woven into the fabric of each module and underpins the teaching and learning approaches used in order to achieve deep and holistic learning of sustainability concepts, principles and values.

The role of teaching and assessment is to underpin apprentice learning and throughout the programme, the strategy is to engage apprentices with a wide range of activities that enable them to develop the knowledge and skills that they will need as practitioners alongside their knowledge base. The apprentice should, as far as practicable, be empowered to take control of their learning but be supported strongly through the process. It follows that as the apprentice progresses through the levels the emphasis will shift from teacher-led learning to apprentice-led learning though lectures will continue to feature at all levels of the programme. In delivering on this principle, much of the teaching related to knowledge and understanding will be focused on simulated real life study and projects in which apprentices will be led through the materials and required to develop their skills through the tasks set.

Field trips and site visits are key components of the strategy. Although apprentices will have the work-based element of learning, field trips and site visits with other learners will provide additional benefits. They will provide the apprentices a chance to get up close to the construction and management of a variety of projects in new environments. Furthermore, field trips and site visits will enhance the apprentice’s experience, by helping them develop investigation and teambuilding skills, and reinforcing their social, personal and emotional development.

**Development of Independent learning through the course**

The learning, teaching and assessment strategy of the course is aimed at supporting progression in curriculum content and skills development through the levels of study. At Level 4, there is clear structure and guidance for apprentices’ learning with an emphasis on the acquisition of fundamental knowledge and skills e.g. Mathematics and IT in **EG4030** **Applied Mathematics and Computing Applications**, practical skills in **EG4040** **Construction Management and Site Investigation** and the initial development of key employability skills. This provides a solid foundation for apprentices to undertake a deeper study of quantity surveying at Level 6. At Level 5, there will be an increased expectation of independent study, supported by a reduced emphasis on the use of lectures. At level 6 apprentices will be expected to take greater ownership of their independent study with academics taking on more of a supervisory role of apprentice independent study, this is exemplified in the individual and group project modules **CE6102** **Consultancy** and **CE6214 Individual Project and Research Methods.**

Module guides set out clear expectations for guided independent learning. Apprentices will be directed to reading to prepare for individual topics or sessions and also to problem sets or exercises to consolidate and test their learning. This will be introduced at Level 4. The Virtual Learning Environment (VLE) at Kingston will support learning throughout the course through a variety of Technology Enhanced Learning (TEL) objects such videos, screencasts, on-line MCQs, discussion boards and interactive teaching packages. It will also deliver teaching material such as lecture notes/presentations, problems sets and worked examples. This helps support an inclusive approach as apprenticescan access learning material at their convenience and work through it at their own pace with the opportunity to pause and rewind as they wish.

**Integrated first year and interdisciplinary collaboration**.

All quantity surveying, building and construction management undergraduate apprentices at Kingston University take a common set of four (30 credit) modules at Level 4. The opportunity to study and work with apprentices from different disciplines is a distinct feature of the course at Kingston University. In **EG4010** **Engineering Design and Professional Practice** apprentices will be introduced to the principles and importance of group work. Project-based learning (PjBL) is introduced in this module and requires interdisciplinary teams to design, build and present solutions to small scale challenges. The outputs of these will be part of the summative assessment. Interdisciplinary group work will be further developed at Level 5. At this level, apprentices work on more real life problems. At Level 6, apprentices consolidate their group working skills when undertaking projects in their own surveying discipline, applying the knowledge learned in earlier years.

**Work-based learning**

There are 30 credits of work-based learning at Level 6. Apprentices are expected to achieve all the learning outcomes through the application of knowledge in projects at the work place under the guidance of the Employer Mentor supplemented by sessions at the University. Academic tutorials are provided regularly where lecturers provide direction and guidance on the design of the apprentices’ projects and the application of research methodology and execution. Apprentices will have access to all materials delivered within the equivalent University-based module, which are uploaded to the University’s virtual learning environment. **Focus on active learning and enhancing apprentice engagement**

A feature of the learning, teaching and assessment strategy in the School of Engineering is that many instructional lectures have been replaced by collaborative, problem solving or enquiry-based learning workshops and tutorials. These require apprentices to prepare for, and participate in, the classroom activities, rather than passively listening to the lecturer. Apprentices are expected to engage with the guided learning to prepare for these guided sessions and consolidate their learning after the session. These interactive sessions also provide apprentices with opportunities for peer learning, group work and presentation practice. In these sessions, the lecturer facilitates learning by supporting apprentices creating their own knowledge and understanding. Lecturers may also introduce and summarise key concepts with short mini-lectures.

Project based Learning (PjBL) is introduced in **EG4010** **Engineering Design and Professional Practice** and developed further in **CE5100** **Advanced Measurement and CE6102 Consultancy**. These collaborative activities encourage apprentices to draw on their own set of experiences and cultural backgrounds when tackling real world challenges. The flipped classroom approach is introduced at Level 4. Where the curriculum (lecture content) of a small topic is delivered via on-line materials (screencasts, videos or study packs) and then developed and applied in workshops. At Level 5 modules have a more substantial flipped classroom approach.

Active and collaborative learning is also incorporated in lectures which may have question-and-answer sessions, brief apprentice discussions, clicker activities integrated into the lecture. These methods ensure that valuable contact time is focussed on the application and critical analysis of knowledge and the development of key skills such as problem solving, communication, and group-work.

The high percentage use of active learning sessions in the teaching hours is aimed at improving apprentice engagement, creativity, confidence and self-reliance. The course endeavours to further secure apprentice engagement by making apprentices feel part of a community and increasing their sense of belonging which is supports to improved retention and progression. This is achieved by providing opportunities to interact with staff and apprentices both socially and academically. In addition, to the active learning sessions and group work, this is facilitated through: the Personal Tutoring Scheme (PTS), field work, industrial visits, extra-curricular seminars, research internships, course representative system, apprentice ambassador work, peer mentoring, and outreach opportunities etc.

**Development of professional employability skills**

The progressive development of a range of key professional employability skills is another feature of the course as exemplified in teamwork/groupwork discussed above. Regarding communication skills, at Level 4, the focus is on writing individual practical reports **EG4020** **Structures, Materials and Construction Methods** using a standard format and style, and encouraging apprentices to orally communicate the outcomes of small group exercises in the active learning teaching sessions in **EG4010** **Engineering Design and Professional Practice.** At Level 5, apprentices will be required to produce a substantial written group report and present their individual findings in **CE5108** **Design Economics & Cost Planning**. To help the development of these skills apprentices will be encouraged to submit a draft of a report to the Support for Academic Success Centre for feedback. At Level 6, in the **CE6214 Individual Project and Research Methods** module, apprentices will be taught how to synthesise and critically review information from a variety of sources and report this and their research results in a formal research report and an oral presentation.

To complement the development of professional employability skills within the curriculum, personal tutors will encourage apprentices to engage in a range of extra-curricular activities such as apprentice representation, sports and recreation,  society membership,  volunteering , apprentice ambassadorship, leadership and mentoring; cultural and creative activities;  academic and professional collaboration; enterprise activity; KU Talent events and opportunities. Activity in these areas is recognised by the university’s Kingston Award Scheme. KU Talent offers a range of events, including Careers Uncovered fairs, which include employers coming to campus to promote graduate opportunities. On Spotlight on Engineering and Construction networking activities, employers and alumni are invited on campus to talk about career pathways.

**Hands-on Practical work**

Hands-on practical experience in workshops and laboratories is fundamental in developing practical skills as well as enhancing data collection and analysis skills. Apprentices will have the opportunity to work in laboratories and workshops in several of their modules. Practical work is closely related to the taught content to provide context for the theoretical work. At Level 4, apprentices are introduced to basic structures and construction engineering materials and how these perform under testing conditions in **EG4020** **Structures, Materials and Construction Methods**.At Level 5, the focus is on the application of quantity surveying practice, specifically the quantification of construction work using project information from real world examples in **CE5100** **Advanced Measurement**. Additionally, by carrying out site and building inspection and surveys in field work undertaken in **CE5107** **Contract Administration**. At Level 6, apprentices are expected to provide reasoned advice to clients in simulated hearing/expert witness sessions in **CE6105** **Professional Practice in Context** as well as select and apply requisite practical skills in **CE6214** **Individual Project and Research Methods**.

**Research-informed Teaching**

Our approach to research-informed teaching is one that places apprentices at the heart of constructing new knowledge. It seeks to transform apprentices from passive recipients of information to active self-motivated independent learners and researchers who are enabled to challenge existing knowledge bases and partake in the creation and dissemination of new knowledge that furthers and advances scholarship and professional practice within their discipline. There are varied manifestations of research-informed teaching in the course taking several forms of experiential learning achieved through in-class problem-based learning, field work and laboratory work.

These create opportunities for apprentices to investigate and critique theory and its application and share their reflective findings with other staff and apprentices. Research-informed teaching is also achieved through research undertaken by academic staff teaching on the course, which in turn informs the design of learning activities as well as collaborative research projects involving staff and apprentices which often result in publishable research outputs.

The majority of the course team are either construction and/or surveying research active or are involved in industry related professional activities, through KTPs or have other direct involvement with the industry. These activities played a major part in informing the course design and content, as did the direct input from industry through the activities of the School Industrial Advisory Board. Most of the teaching staff are also actively involved in the various Research Centres and/or Research Groups of the Faculty, or may be following interest areas of their own. Staff research is undertaken amongst other areas into Building Information Modelling (BIM), construction delays and cost overruns, sustainable construction methods and materials, building control and other regulatory compliance policies and systems. For instance, in **CE5107** **Contract Administration** apprentices are taught how the use of appropriate contracts can minimize time and cost overruns whilst in **CE6106** **Project Management** they learn project control procedures for bringing projects back on track.

Apprentices are encouraged to develop their own research skills which are a fundamental part of the curriculum throughout all levels of the programme. They are often encouraged, through project work, to work with research active staff on elements of live projects, and these research skills enable apprentices to determine, distinguish and present appropriate evidence in an argument, which is of great value to employers.

Academic staff are also engaged widely with the research and development of ideas in teaching and learning in Higher Education and into wider pedagogic issues which they then feed through to support learning in lectures and other forms of apprentice engagement with the programme, both formal and extra-curricular. As parts of pedagogic research computing resources in fundamental subjects such as and cost estimating are being developed and been embedded into VLE system. The use of an Electronic Voting System in the class room for summative and formative assessments as well as software designed to facilitate peer assessments are other examples of pedagogic research undertaken by the teaching staff. This reflective, evidence-based professional practice by academic staff serves as exemplar to apprentices in their future professional practice.

**Practice-informed Teaching**

Embedded in our teaching and learning practice is another major shift in pedagogy, specifically, our teaching is both practice-informed. In addition to academic staff, the teaching of specialist topics for instance, collateral warranties, international procurement etc. is delivered by experienced practitioners including recent graduates. The involvement of practitioners in our teaching delivers a range of benefits to the apprentice experience. Practitioners are able to share their professional experience and bring a wealth of knowledge in relation to current and emerging issues within the respective discipline and industry-led practice. Practitioners also serve as inspiring role models for apprentices preparing to enter practice.

**Assessment for Learning**

The assessment strategy has been designed to help apprentices to learn and to prepare them for employment, rather than just a tool to measure their learning. The assessments are designed to be authentic, inclusive and transparent. The assessment tasks focus on the real world-quantity surveying activities that enhance apprentices’ employability.

At Level 4, apprentices will be expected to work in groups to produce a 3D model of a construction site which complies with a specific requirement set in their client’s brief in **EG4040 Construction Management and Site Investigation**. At Level 5, apprentices will expected to produce innovative client-focused solutions on renewable technologies and the use of sustainable and modern methods of construction to enhance building performance in **CE5104** **Commercial Construction Technology**. At Level 6, apprentices will be expected to produce their capstone project in **CE6102 Consultancy** bringing together knowledge gained throughout the programme including procurement, contract, cost and legislative advice.

All modules have explicit formative assessments to provide opportunities for practice and the chance to use ‘feed forward’ to help apprentices improve their work in subsequent summative assessments. At Level 4, apprentices will be using computer automated taking off software to produce preliminary estimates and get formative feedback. At Level 5, tutorial sessions are designed to provide formative feedback on draft estimating and cost planning solutions which apprentices can use to enhance their budgeting expertise that will be tested in a summative assessment. At Level 6 feedforward workshops are utilized to provide formative feedback on the development of the apprentices’ projects progress reports in

**CE6106** **Project Management**.

Examinations are still used as they are an effective way of assessing basic knowledge and understanding, and professional bodies expect to see examination covering key curriculum content. However, the strategy recognises that other assessment methods are better suited to assessing higher level problem solving skills. It is reflected in the minimise use of examination in only one module at level 5 and another module at Level 6. The use of a well-balanced range of assessment methods is key part to of our inclusive assessment strategy. Group and teamwork assessment is instrumental in developing and recognising this important employability skill.

**Quantity surveying curriculum**

Level 4 is very much designed with the following overarching principles. The first is a very strong interdisciplinary focus that promotes the collaborative working across surveying, construction and engineering related disciplines. The second overarching principle reflects the aim to enable apprentices to develop a solid understanding of the of the construction and property industry. As well as key theory and principles related to the built environment. This is achieved particularly in **EG4040** **Construction Management and Site Investigation** which is designed to develop apprentices’ understanding and knowledge of the political, economic, sociological, technological and legal forces that affect the construction industry. In this module apprentices will also develop an understanding of basic operations carried out to establish a construction site.

In **EG4010** **Engineering, Design and Professional Practice**, apprentices will develop an appreciation of the role of different professionals within an integrated design and construction team. This module is also designed to impart in apprentices’ knowledge of professional practice and ethical behaviour. Other key knowledge areas including sustainability and health and safety are embedded in this module. In **EG4020** **Structures, Materials and Construction Methods** apprentices are introduced to construction methods and materials utilized to construct cost effective building elements as well as more complex structures. Knowledge of construction technology developed in this module is fundamental for apprentices undertaking the **EG4030** **Applied Mathematics and Computing** **Applications** module where they undertake basic cost estimating and measurement using computer applications.

Levels 5 and 6 are designed to enable apprentices to gain specialization in the field of quantity surveying and as such they comprise modules which have a very strong disciplinary focus. From a teaching and learning perspective, the key principle at Level 5 is the emphasis on apprentices applying the knowledge and skills developed up to this level.

Level 6 focuses on apprentices developing the skills and competences required to develop innovative and creative solutions as well as provide reasoned advice in a range of complex situations. In **CE5100** **Advanced Measurement** apprentices are enabled tofurther their knowledge of quantification of construction works and apply this in project specific circumstances. Cost estimation using industry standard software and the most current standard of measurement is the main focus of **CE5108** **Design Economics and Cost Planning**. The financial management of projects is covered in **CE5107** **Contract Administration** where apprentices also develop an in depth knowledge of the pre and post contract administration duties of the quantity surveyor. In **CE5104** **Commercial Construction Technology** apprentices advance the knowledge of construction methods and materials they developed at Level 4 into more complex and large scale developments.

Level 6 focuses on higher level subject areas. **CE6102** **Consultancy** is the practice of quantity surveying within an ethical framework. In **CE6106** **Project Management** apprentices develop advanced knowledge of planning, programming, and control aspects of project delivery but the module extends further to the development of soft skills in relation to the management and leadership of project teams. The application of case law in contractual disputes is covered in **CE6105** **Professional Practice in Context** where apprentices participate in simulated litigation cases to offer well informed reasoned advice to their clients. Finally, in **CE6214** **Individual Project and Research Methods**, apprentices are offered the opportunity to undertake research in a discipline specific subject of interest to them and develop a substantial piece of authoritative research work by applying the knowledge methodology and techniques developed in this module.

**Inclusive Teaching Practice**

Staff Student Consultative Committees and Boards of Study provide opportunities for apprentices to make suggestions on how to develop a more inclusive curriculum by taking into account the specific circumstances of the apprentice body. The variety of teaching activities also takes account of the apprentices’ different learning preferences and experiences and there is a careful balance of individual and group based activities.

Marking criteria are provided for all assessments as part of the assessment briefs at the beginning of the year for each module and care is taken to ensure that the language used is clear**.** Assessment and marking criteria for all substantial assessments are discussed in class so all apprentices have an opportunity to interrogate the criteria. One such typical example is the assignment brief issued for the project that apprentices undertake as part of their Level 5 residential field trip to a European destination in **CE5107** **Contract Administration**. The brief contains detailed client instructions so that apprentices are able to fully interrogate the assessment criteria that relate to project appraisal, site investigation, and proposed project delivery solution once they have been able to visit the selected sites.

In the programme as a whole, the following components are used in the assessment of the various modules:

* Practical exercises: to assess apprentices’ understanding and technical competence
* Individual and group-based case project work: to assess ability to understand requirements, to provide solutions to realistic problems and to interact and work effectively with others as a contributing member of a team. The outcomes can be:
* Written reports, where the ability to communicate the relevant concepts, methods, results and conclusions effectively will be assessed.
* Oral presentations, where the ability to summarise accurately and communicate clearly the key points from the work in a brief presentation will be assessed.
* Video, which may replicate features of oral presentations but allows advance preparation away from the audience (which may suit some apprentices better).
* Multiple choice or short answer questions: to assess competence in basic techniques and understanding of concepts.
* Long answer structured questions in coursework assignments: to assess ability to apply learned techniques to solve simple to medium problems and which may include a limited investigative component
* Long answer structured questions in end-of-module examinations: to assess overall breadth of knowledge and technical competence to provide concise and accurate solutions within restricted time
* Project-based outcomes in both **CE6102 Consultancy** and **CE6214 Individual Project and Research** Methods modules which provide an opportunity for apprentices to draw together different aspects of their learning on the course and to apply the techniques learned in an extended study. As such the assessment in both will place greater emphasis on ability to plan work, manage time effectively, and research background information, culminating in a written report and interview.
* Individual and group practical laboratory reports.

**Employability**

Initially apprentices are guided towards learning about employability skills and career pathways, but as they move through the course they are expected to become more independent and take ownership of their career development by engaging with classes provided by KU Talent, including; professional communication, time management, organisation and other skills. There are also opportunities to perfect skills required to gain employment such as; CV writing, Psychometric Test and Using LinkedIn. An apprentice’s development and career options are discussed in personal tutor meetings and guidance given as appropriate. This is in liaison with the KU Talent team, the University’s Careers Service.

Apprentices receive added value to their learning experience through an informed curriculum and by undertaking field trips, site visits, simulated practice projects and a series of support activities such as employability evenings, CV writing sessions etc. Apprentices are also encouraged to take part in professional body competitions. However, we recognise that employers also value a range of other skills and experiences and apprentices are encouraged to take part in the wider life of the University through sporting, musical or other activities or through community volunteering. In recent years, apprentices within the School have won numerous awards including the National Women in Property Award, the national CIOB Novus Challenge competition and RICS Student Award.

1. **Support for Apprentices and their Learning**

The University recognises that the learning experience is unique to each apprentice. A key part of our approach to an inclusive curriculum is that we acknowledge and where possible accommodate their individual circumstances. The personal tutor scheme is central to the efforts to provide a personalised learning experience. At Level 4 and 5 a core set of problems for each quantity surveying module are issued to apprentices. These cover the whole curriculum for a particular level. Apprentices are required to work through these formative assessment problems as they cover the relevant curriculum. This allows apprentices to test their learning and measure their progress. Discussion of progress on these problem sets will be a key part of the Personal Tutor Scheme. Apprentices are required to upload their progress on these activities onto the learning log created on the University VLE system. The learning log will be available to the relevant personal tutors for further discussion during one-to-one meetings. There will be milestones for apprentices to meet at every level, and it will be one of the personal tutor’s roles to monitor the apprentices’ progress and give appropriate advice*.*  Where difficulties are encountered, personal tutors will be able to help or direct apprentices to available support including peer mentoring schemes, PAL, Maths aid and on-line resources etc.

Apprentices are supported by:

* **A Module Leader** for each module
* **A Course Leader** to help apprentices understand their programme structure and provide academic support
* **A Personal Tutor** (PT) to foster a close and engaging academic relationship with the apprentices and advise and refer them to other University services.
* An **Employer Mentor** on the apprenticeship route for work based learning
* There is a **Student Support and Engagement Team** to help apprentices with any problem that is affecting their studies.
* A dedicated **Undergraduate Course Administrator**
* **An induction programme** and study skills sessions at the start of each academic year
* **SEC Academic Success Centre (SASC)** is a one-to-one drop-in Study Skills session for apprentices every weekday. Help is available on a range of academic skills from writing reports, note-taking, to exam revision, referencing, programming and mathematical skills.
* **VLE** – a versatile on-line interactive intranet and learning environment accessible both on-site and remotely
* **Course Representative scheme**
* **KUTalent** a University Careers and Employability Service
* Comprehensive University support systems including the provision of advice on finance, regulations, legal matters, accommodation, international apprentice support, disability and equality support.
* The **Student Union**
* An **Academic Team** that seeks to maintain an open door policy in the spirit of supporting apprentices.

**Personal Tutor Scheme (PTS) in the School of Engineering**

The following provides the aims and structure of the Personal Tutor Scheme (PTS) for the School of Engineering. It is intended that the PTS be embedded within the BSc programme.

**Overall Aims**

* To build a rapport between staff and apprentices and contribute to personalising apprentices’ experience within the School of Engineering
* To support apprentices in the development of their academic skills providing appropriate advice and guidance to apprentices throughout their time at Kingston, while monitoring their progress, helping to identify individual needs and referring apprentices to other University services as appropriate
* To help apprentices to develop the ability to be self-reliant and confident self-reflective learners who use feedback to their best advantage
* To encourage apprentices to reflect on how their learning relates to a wider context and their personal career progression

**Allocation of Personal Tutors**

* Personal tutors will be allocated during induction week
* Tutors will be allocated on a course basis where appropriate with apprentice numbers being equally divided amongst the staff within the School
* Apprentices will keep the same tutor throughout their course of study If they change discipline at the end of TB1 a change of PT is likely to occur to allow comprehensive support through the programme.

There are specific aims and outcomes for each level, as the PTS is progressive and cumulative, apprentices will find that they are building on the skills developed in previous levels. Formative assessment will be provided in the form of regular feedback during meetings with the Personal Tutor and Employer Mentor when the apprentice will be able to put forward draft assignments for evaluation. The summative assessment will be part of the assignments given in each module.

**Level 4: Settling in and building confidence**

**Aims and Learning Outcomes**

* To assist apprentices in making the transition to Higher Education and to generate a sense of belonging to the School Engineering with an emphasis on widening participation issues
* To help apprentices to develop good academic habits and to gain the confidence to operate successfully in a university context
* To prepare apprentices to make the most of feedback throughout their course

**Contact:**

* Teaching block 1: three one-to-one meetings during induction week, weeks 2 and 6-7
* Teaching block 2: two one-to-one meetings during week 1 and week 6-7
* End of academic year individual ‘wrap up’ email

In addition to a core set of problems for each module apprentices are also given a list of engagement activities that they are encouraged to take advantage of at Level 4. PT will discuss progress on problem sets and engagement with certain activities with tutees throughout the year.The learning log will be available to the relevant personal tutors for further discussion during one-to-one meetings. There will be milestones for apprentices to meet at every level, and personal tutors’ will monitor the apprentices’ progress and give appropriate advice.

**EG4010 Engineering Design and Professional Practice** is closely linked to the Personal Tutor Scheme as it introduces key academic and employability skills. In addition it focuses on reflective practice on feedback and their progress with academic and employability skills. It is expected that these are topics of conversation personal tutor meetings.

**Level 5: Stepping it up and broadening horizons**

**Aims and Learning Outcomes**

* To help apprentices comprehend and plan for the academic demands of level 5 and to support increasing independence
* To encourage apprentices to look forward, to take up opportunities to develop wider skills and to take responsibility for their personal development
* To foster apprentices’ ability to build on and respond proactively to the feedback they have received
* To assist apprentices in reflecting on the skills that they are developing and consider how they relate to employability

**Contact:**

* One-to-one meeting in week 1
* Email contact at the end of teaching block 1
* Individual ‘wrap up’ email at end of academic year

Throughout the year, apprentices are expected to reflect on their acquisition of skills with their Personal Tutors. This activity is integrated into **CE5107** **Contract Administration** where apprentices are required to producea reflective diary and provide a self-evaluation of the competences developed and their learning journey up to that level.

**Level 6: Maximising success and moving on**

**Aims and Learning Outcomes**

* To support apprentices with the planning necessary to maximise success in their penultimate undergraduate year
* To encourage apprentices to reflect on the employability skills they have developed and be proactive in moving towards a professional life and/or further study
* To help apprentices to make best use of the feedback they have received so that they can build on their strengths and take steps to address any weaknesses

**Contact:**

* One-to-one meeting in week 1
* Email contact at the end of teaching block 1
* Individual ‘wrap up’ email at end of academic year

The application of skills closely linked to the PTS is key requirement of the work-based learning module **CE6214 Individual Project and Research Methods.** In this module, apprentices are enabled to make connections across various other modules and undertake a research project tailored to situations they face at their work place. In doing so, they are required to demonstrate a range of employability skills including independent and analytical thinking, problem-solving and advanced communication and literacy.

Personal Tutors would have access to all the formative and summative assessment results of their tutees and would be responsible to discuss them with their tutees and assist them to prepare plans for further improvements and advise on any academic issues they may have. The personal tutors are also responsible for giving a bigger and more complete picture of learning, teaching, learning outcome and assessment and their linkage to the tutees.

1. **Ensuring and Enhancing the Quality of the Course**

The University has several methods for evaluating and improving the quality and standards of its provision. These include:

* External examiners
* Boards of study with apprentice representation
* Annual review and development
* Periodic review undertaken at subject level
* Apprentice evaluation
* Moderation policies

The School interfaces with several professional bodies in the context of annual monitoring and periodic reviews and these provide other opportunities for reflection and external contribution to course design and quality assurance and enhancement. Employer liaison groups which take varying forms also provide the opportunity for external input to the quality assurance and enhancements of the School’s programmes.

1. **Employability Statement**

The curriculum embeds the development of employability skills throughout the Course and is designed to equip apprentices with the ability to relate the knowledge and skills that they have learned to the real world contexts. Group work in conjunction with external organisations at Level 4 will provide apprentices with relevant experience to add to their CV. Apprentices are required to produce a CV early at Level 5 and to enhance this following feedback.

Initially apprentices are guided towards learning about employability skills and career pathways, but as they move through the course they are expected to become more independent and take ownership of their career development by engaging with classes provided by KU Talent, including; professional communication, time management and computer literacy skills. There are also opportunities to perfect skills required to gain employment such as; CV writing, Psychometric Test and using LinkedIn. An apprentice’s development and career options are discussed in personal tutor meetings and guidance given as appropriate. This is in liaison with the KU Talent team, the University’s Careers Service.

Graduates develop careers in all branches of the construction industry both here in the UK and throughout the world; as contract and consulting quantity surveyors, within local authorities, utility, infrastructure and transport companies, government organisations and private practices. The academic and employability skills developed throughout a surveying course also allow graduates to follow careers in other professions such as ICT, finance, accountancy and teaching.

Professional practice and ethics are introduced in the first year in the **EG4010** **Engineering Design and Professional Practice** this is followed through all other modules at Levels 5 and 6 especially in **CE5107** **Contract Administration, CE6102 Consultancy, CE6214 Individual Project and Research Methods**.

1. **Approved Variants from the Undergraduate Regulations**

None.

1. **Other sources of information that you may wish to consult**

Subject benchmark

<http://www.qaa.ac.uk/assuring-standards-and-quality/the-quality-code/subject-benchmark-statements/honours-degree-subjects>

Professional Body:

[www.rics.org](http://www.rics.org)

[www.ciob.org](http://www.ciob.org)

**Development of Field/Course Learning Outcomes in Modules**

This map identifies where the field/course learning outcomes are summatively assessed across the modules for this field/course. It provides an aid to academic staff in understanding how individual modules contribute to the field/course aims, a means to help apprentices monitor their own learning, personal and professional development as the field/course progresses and a checklist for quality assurance purposes.

|  |  |  | **Level 4** | **Level 5** | **Level 6** |
| --- | --- | --- | --- | --- | --- |
|  | **Module Code** |  | **EG4010** | **EG4020** | **EG4030** | **EG4040** | **CE5100** | **CE5104** | **CE5107** | **CE5108** | **CE6102** | **CE6105** | **CE6106** | **CE6214** |
| **Programme Learning Outcomes** | **Knowledge & Understanding** | **A1** |  |  | S/F |  | S/F |  | S/F | S/F | S/F |  | S/F |  |
| **A2** | S/F | S/F |  | S/F |  |  | S/F | S/F | S/F | S/F | S/F | S/F |
| **A3** |  | S/F | S/F | S/F | S/F |  |  | S/F | S/F |  | S/F |  |
| **A4** |  |  |  |  | S/F |  |  | S/F | S/F | S/F | S/F |  |
| **A5** |  | S/F |  | S/F | S/F |  |  | S/F | S/F | S/F | S/F |  |
| **A6** | S |  | S/F | S/F | S/F | S/F |  | S/F | S/F | S/F | S/F | S |
| **Intellectual Skills** | **B1** | S/F | F |  |  | S/F | S/F | S/F | S/F | S/F | S/F | S/F | S/F |
| **B2** |  | S/F | F | S/F | S/F |  |  | S/F | S/F | S/F | S/F | S/F |
| **B3** |  |  |  |  | S/F | S/F |  | S/F | S/F | S/F | S/F | S/F |
| **B4** | S/F |  | S/F |  | S/F | S/F |  | S/F | S/F | S/F | S/F | S/F |
| **B5** | S | S/F | F | S/F | S/F | S/F |  | S/F | S/F | S/F | S/F | S/F |
| **Practical Skills** | **C1** |  |  |  | F | S/F |  | S/F | S/F | S/F |  | S/F |  |
| **C2** |  |  |  |  | S/F |  |  | S/F | S/F |  |  |  |
| **C3** |  |  | F | F | S/F | S/F | S/F | F | S/F | S/F | S/F | S/F |
| **C4** | S |  |  | F | F | S/F |  | S/F | S/F |  | S/F |  |
| **C5** | S/F |  |  |  | F/S | S/F | S/F | S | S/F |  | F/S |  |
| **C6** |  |  |  |  |  | S/F |  |  | S/F | S/F |  |  |

**S**  indicates where a summative assessment occurs.

**F** indicates where formative assessment/feedback occurs.

**Apprentices will be provided with formative assessment opportunities throughout the course to practise and develop their proficiency in the range of assessment methods utilised.**

This map identifies where the RICS competencies cross - reference to modules across the field.

|  |  |
| --- | --- |
|   | **Quantity Surveying and Construction** |
| RICS competencies |
| Mandatory | Core | Optional |
| Ethics, Rules of Conduct and professionalism | Client care | Communication and negotiation | Health and safety | Accounting principles and procedures | Business planning | Conflict avoidance, management and dispute resolution procedures | Data management | Diversity, inclusion and teamworking | Inclusive environments | Sustainability | Commercial management (of construction works) | Design economics and cost planning | Construction technology and environmental services | Contract practice | Procurement and tendering | Project finance (control and reporting) | Quantification and costing (of construction works) | Capital allowances | Commercial management (of construction works) | Design economics and cost planning | Conflict avoidance, management and dispute resolution procedures | Sustainability | Contract administration | Corporate recovery and insolvency | Due diligence | Insurance | Programming and planning | Project feasibility analysis | Risk management |
| **Programme modules** | **EG4010** |  |  | **√** | **√** |  |  |  |  | **√** |  | **√** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | **√** |
| **EG4020** |  |  |  | **√** |  |  |  |  |  |  | **√** |  |  | **√** |  |  |  |  |  | **√** |  |  |  |  |  |  |  |  | **√** |  |
| **EG4030** |  |  |  |  |  |  |  | **√** |  |  |  | **√** | **√** |  |  |  |  | **√** |  |  |  |  |  |  |  |  |  |  |  | **√** |
| **EG4040** | **√** |  | **√** | **√** |  | **√** | **√** |  | **√** |  | **√** |  | **√** | **√** |  | **√** |  |  |  | **√** |  |  |  |  |  |  |  |  | **√** | **√** |
| **CE5100** | **√** | **√** |  |  |  |  |  | **√** |  |  |  |  |  |  |  |  | **√** | **√** |  |  |  |  |  |  |  |  |  |  |  |  |
| **CE5104** |  |  |  | **√** |  |  |  |  |  |  | **√** |  |  | **√** |  |  |  |  |  | **√** |  |  | **√** |  |  |  |  |  |  | **√** |
| **CE5107** |  |  | **√** |  |  |  |  | **√** |  |  |  | **√** |  |  | **√** | **√** | **√** |  |  |  |  |  |  | **√** |  |  |  |  |  | **√** |
| **CE5108** | **√** | **√** | **√** |  |  |  |  | **√** |  |  | **√** | **√** | **√** |  |  |  |  | **√** |  |  | **√** |  | **√** |  |  |  |  |  |  |  |
| **CE6102** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** |  |  | **√** | **√** | **√** |  | **√** |  |  | **√** | **√** | **√** |  |  | **√** |  |  | **√** |
| **CE6105** | **√** | **√** | **√** |  |  |  | **√** |  |  |  |  | **√** |  |  | **√** |  |  |  |  |  |  | **√** |  | **√** | **√** |  |  |  |  |  |
| **CE6106** |  | **√** | **√** |  |  | **√** |  | **√** | **√** | **√** | **√** | **√** |  |  | **√** | **√** | **√** |  |  |  |  |  |  | **√** |  | **√** |  | **√** | **√** | **√** |
| **CE6014** | **√** |  | **√** |  |  |  |  | **√** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

This map identifies where the CIOB degree learning outcomes cross - reference to modules across the field.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  | **Level 4** | **Level 5** | **Level 6** |
|  |  | **Module Code** | **EG4010** | **EG4020** | **EG4030** | **EG4040** | **CE5100** | **CE5104** | **CE5107** | **CE5108** | **CE6102** | **CE6105** | **CE6106** | **CE6014** |
| **CIOB Learning Outcomes** | **Construction Management** | Process management | **√** |  |  | **√** |  |  |  |  | **√** |  | **√** |  |
|  | Human resource/people management |  |  |  | **√** |  |  |  |  | **√** |  | **√** |  |
|  | Construction Technology | **√** | **√** |  | **√** |  | **√** |  |  |  |  |  |  |
|  | Planning and Scheduling of projects |  |  |  |  |  |  |  |  | **√** |  | **√** |  |
|  | Process performance management |  |  |  |  |  |  |  |  | **√** |  | **√** |  |
| **Ethics and Professionalism** | Roles and Conduct |  |  |  | **√** | **√** |  | **√** | **√** | **√** | **√** | **√** |  |
|  | Equality, diversity, disability, etc.: culture and behaviours |  |  |  |  |  |  |  |  | **√** | **√** |  |  |
|  | Procurement & tendering practice |  |  |  | **√** |  |  | **√** |  | **√** | **√** |  |  |
|  | Governance & CSR |  |  |  |  |  |  |  |  | **√** | **√** | **√** |  |
|  | Self-development & reflection | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** |  |
| **Health, safety and Wellbeing** | Legislation and practice |  | **√** |  | **√** |  | **√** |  |  |  | **√** | **√** |  |
|  | Personal Responsibility | **√** |  |  | **√** |  | **√** |  |  | **√** | **√** | **√** |  |
|  | Management |  | **√** |  | **√** |  |  |  |  | **√** | **√** | **√** |  |
|  | Wellbeing and safety culture | **√** | **√** |  | **√** |  |  |  |  | **√** |  |  |  |
| **Sustainability** | Global issues | **√** |  |  | **√** |  | **√** |  | **√** | **√** |  | **√** |  |
|  | Legislation and policy | **√** |  |  |  |  | **√** |  | **√** |  | **√** | **√** |  |
|  | New build design and retrofit |  |  |  | **√** |  | **√** |  | **√** |  |  |  |  |
|  | Assessment of buildings |  |  |  |  |  |  |  | **√** |  |  |  |  |
|  | Waste |  |  |  | **√** |  | **√** |  |  | **√** |  |  |  |
|  | Construction site specific issues |  | **√** |  | **√** |  | **√** |  |  |  |  | **√** |  |
|  | Clients |  |  |  |  |  |  |  | **√** | **√** |  | **√** |  |
| **The Construction Environment** | The construction industry |  |  |  | **√** |  | **√** |  | **√** | **√** |  | **√** |  |
|  | Social and economic impact |  |  |  | **√** |  | **√** |  | **√** | **√** |  | **√** |  |
|  | Legal environment |  |  |  | **√** |  |  |  |  |  | **√** |  |  |
|  | Economic principles and commercialism |  |  | **√** | **√** |  |  |  | **√** | **√** |  | **√** |  |
|  | Financial management |  |  | **√** |  |  |  | **√** | **√** | **√** |  | **√** |  |
|  | Design and construction process  | **√** | **√** |  | **√** |  | **√** |  | **√** | **√** |  | **√** |  |
|  | Measurement and estimating | **√** |  | **√** |  | **√** |  | **√** | **√** | **√** |  |  |  |
| **Construction Technology** | Building performance & technology |  | **√** |  | **√** |  | **√** |  |  |  |  |  |  |
|  | Building services design |  |  |  |  |  | **√** |  |  |  |  |  |  |
|  | Problems and defects |  | **√** |  | **√** |  |  |  |  |  |  |  |  |
|  | Site investigations |  |  |  | **√** |  | **√** |  |  |  |  |  |  |
|  | Materials | **√** | **√** |  | **√** |  | **√** |  |  |  |  |  |  |
|  | Building performance & maintenance |  |  |  |  |  | **√** |  |  |  |  |  |  |
| **Dissertation/Design/Research Project** | Research |  |  |  |  |  |  |  |  |  |  |  | **√** |
| **Work-based Learning** | Communication | **√** | **√** |  |  | **√** | **√** | **√** |  |  |  |  |  |
|  | Decision Making |  | **√** |  |  | **√** | **√** | **√** |  |  |  |  |  |
|  | Managing information |  |  |  |  | **√** | **√** | **√** |  |  |  |  |  |
|  | Leadership and strategic/financial management |  |  |  |  | **√** | **√** | **√** |  |  |  |  |  |
|  | Personal effectiveness at work |  | **√** |  |  | **√** | **√** | **√** |  |  |  |  |  |
|  | Planning and organising work |  | **√** |  |  | **√** | **√** | **√** |  |  |  |  |  |
|  | Managing health and safety | **√** | **√** |  |  | **√** | **√** | **√** |  |  |  |  |  |
|  | Managing quality |  | **√** |  |  | **√** | **√** | **√** |  |  |  |  |  |
|  | Implementing sustainable construction and development |  |  |  |  |  | **√** |  |  |  |  |  |  |
|  | Knowledge of commercial, contractual and legal issues |  |  |  |  |  | **√** | **√** |  |  |  |  |  |

**Technical Annex**

|  |  |
| --- | --- |
| **Final Award(s):** | BSc (Hons) Quantity Surveying Consultancy |
| **Intermediate Award(s):** | Cert HE in Quantity Surveying Dip HE in Quantity Surveying  |
| **Minimum period of registration:** | PT = 5 years (Direct entry to Level 5 = 3 years) |
| **Maximum period of registration:** | PT = 10 years (Direct entry to Level 5 = 6 years) |
| **FHEQ Level for the Final Award:** | Level 6 |
| **QAA Subject Benchmark:** | Land, Construction, Real Estate and Surveying  |
| **Apprenticeship Standard:** | Institute for Apprenticeships Chartered Surveyor (Degree) Standard (ST0331) |
| **Modes of Delivery:** | Degree Apprenticeship Day Release |
| **Language of Delivery:** | English |
| **Faculty:** | Science, Engineering and Computing |
| **School:** | Engineering and The Environment |
| **Department:** | Civil Engineering, Surveying and Construction  |
| **Course/Route Code:** | UPQSC1QSC77 |

**APPENDIX**

**BSc (Hons) Quantity Surveying Consultancy Degree Apprenticeship – course diagram**

**APPRENTICESHIP ONE-DAY RELEASE**

 **YEAR 1 OF 5 YEAR 2 OF 5 YEAR 3 OF 5**

 **TB1 TB2 TB1 TB2 TB1 TB2**

CE5104

Commercial Construction Technology

30 credits

30 credits

EG4010

Engineering Design and Professional Practice

30 credits

EG4030

Applied Mathematics and Computing Applications

30 credits

CE5107

Contract Administration

30 credits

EG4040

Construction Management and Site Investigation

30 credits

EG4020

Structures, Materials and Construction Methods

30 credits

CE5108

Design Economics and Cost Planning

30 credits

**APPRENTICESHIP ONE-DAY RELEASE (cont.)**

 **YEAR 4 OF 5 YEAR 5 OF 5**

 **TB1 TB2 TB1 TB2**

CE6102

Consultancy

30 credits

30 credits

CE6214

Individual Project and Research Methods

30 credits.

CE5100

Advanced Measurement

30 credits

CE6106

Project Management

30 credits

CE6105

Professional Practice in Context

30 credits

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