COURSE SPECIFICATION:
Core Award Data

ROBERT GORDON UNIVERSITY ABERDEEN

Graduate Apprenticeship in BSc (Hons) Construction and the Built Environment

VALIDATION DATE

06 June 2018

AWARDING INSTITUTION

The Robert Gordon University

INSTITUTION OF DELIVERY

The Robert Gordon University

COURSE ACCREDITED /RECOGNISED/ APPROVED BY

None.

COURSE ACCREDITATION / RECOGNITION /APPROVAL

None.

AWARDS

Stage 1

Higher Apprenticeship in Cert HE Construction and the Built Environment (120 credits at SCQF Level 7)

Stage 2

Higher Apprenticeship in Dip HE Construction and the Built Environment (120 credits at SCQF Level 8)

Stage 3

Graduate Apprenticeship in BSc Construction and the Built Environment (120 credits at SCQF Level 9)

Stage 4

Graduate Apprenticeship in BSc (Hons) Construction and the Built Environment (120 credits at SCQF Level 10)

AWARD TYPE

Undergraduate

MODES OF STUDY

Blended Learning (Full Time)

DURATION OF COURSE

Four years

LANGUAGE OF STUDY

English

LANGUAGE OF ASSESSMENT

English

JACS CODE

K200 Building

RELEVANT QAA SUBJECT GROUP

Land, Construction, Real Estate and Surveying

DATE OF PRODUCTION / REVISION

10 May 2018 – Version 1

INTRODUCTION TO THE COURSE

Graduate Apprenticeships provide work-based learning opportunities for employees and have been created by Skills Development Scotland in partnership with industry and the Further and Higher education sector. Graduate Apprenticeships combine academic knowledge with work-based learning to enable students to become more effective and productive in the workplace. They provide a new way into degree-level study for individuals who are currently employed, and afford the opportunity to undertake degree study whilst working and earning for those individuals who may otherwise have sacrificed Secondary or Further education to enter full-time work. They enable employers to develop their workforce and support staff to build their skills to industry and professional standards. Since Graduate Apprenticeships are designed around the needs of industry, employers can have confidence that what staff are learning will directly contribute to the success of the business. As they are in continuing employment, students can directly apply academic learning to workplace situations, thus truly bringing their studies to life.

The primary focus of the Graduate Apprenticeship in BSc (Hons) Construction and the Built Environment is on developing the knowledge, understanding and skills sought by employers. It is structured to provide a practical based education to enable students to develop knowledge, and skills for application in the management of construction, through its lifecycle, in the built environment. It offers a blend of built environment subjects including building design and technology, construction project management, and commercial management to enable the students to offer innovative and effective design and construction solutions for the public and private sectors. The course content and

delivery reflect the prominence of personal and interpersonal skills, professional practice and behaviour, environmental and sustainable practices together with health and safety. During their academic studies, students will apply the knowledge and skills gained to manage a real life construction project thus providing the springboard to a career as a professional Construction Manager or other built environment professional. In addition, the course offers a variety of specialised topics such as building information modelling (BIM) and data management, building pathology, construction law, contractual arrangements and procurement.

This specialist course was designed to reflect the Skills Development Scotland subject framework and take into account employer needs as identified via the University's regional employer engagement activities. Therefore, it is well placed to provide the practical skills that industry is looking for such as the ability to assess commercial viability, provide innovative design solutions, plan and manage projects, operating and evaluating performance and managing and allocating tasks and resources. In a society where demand for construction and infrastructure work continues to increase, but is hampered by a widely-acknowledged shortage of sufficiently skilled graduates, the Graduate Apprenticeship in BSc (Hons) Construction and the Built Environment will help to address skill shortages by producing graduates who possess the necessary skills and knowledge to help the construction industry flourish. This four-year undergraduate course focuses on the operational and production issues and will provide students with practical knowledge in the management of the built environment. The range of knowledge and skills are developed through a varied programme of online activities and engagement, work based activities and projects, and directed studies. Students will learn how to apply their knowledge and skills to the solution of real-world problems, understanding business needs and demands, work collaboratively to analyse complex technical problems, recommend innovative practices, and implement sustainable and safe solution to enhance business efficiency and effectiveness.

EDUCATIONAL AIMS OF THE COURSE

The purpose of the Graduate Apprenticeship in BSc (Hons) Construction and the Built Environment course is to develop students' knowledge and understanding and equip them with the practical skills necessary to manage the complete building process from inception, through construction to the maintenance of the asset. The course aims to highlight the dynamic and commercially competitive nature of the construction industry from a project management perspective. The students are introduced and made aware of the current and future issues facing the construction industry to allow them to critically analyse potential solutions utilising the appropriate information technology.

Specifically, graduates of the course will possess the following attributes:

- an appreciation of the wider societal and commercial influences on, and impact of, construction and the built environment;
- the ability to select appropriate techniques, procedures and technology and use relevant theoretical knowledge and understanding of key concepts and materials;
- skills in the use of appropriate technologies and digital platforms used in the built environment;
- skills to design and test construction solutions and to communicate them in an appropriate way;

- the ability to plan and manage projects, including managing and monitoring risk, operating and evaluating performance and managing and allocating tasks and resources;
- skills in the collection and critical analysis of data, combined with appropriate critical-thinking and problem-solving ability;
- the ability to contribute to continuous improvement and organisational performance;
- the ability to follow professional standards and work in an ethical and safe manner;
- an understanding of the importance of, and the ability to, maintain awareness of sustainability and environmental legislation, innovation and best practice;
- the ability to reflect on own performance and identify areas for improvement to broaden and expand theoretical understanding and knowledge of current and emerging professional practices and techniques.

The Graduate Apprenticeship student journey differentiates itself from the traditional course of study in that students will be employed for the entire four-year duration of their educational journey. Their employment environment affords them a unique opportunity to take full advantage of work-based learning opportunities, appreciate the relevance of theoretical learning, and open up future career opportunities with their employer. Activities within the employing organisation are coordinated to reflect the content of the modules in which students are enrolled, and are designed to provide the practical application of the theory received through academic learning. The work-based learning within the course aims to offer a new learning experience to meet the needs of both the individuals and employers. This will play a role in achieving the aspiration of the Scottish Government to see a culture of real partnership between employers and education and increasing skill levels in the workforce. This is entirely in keeping with the commitments of the University to 'provide stimulating programmes to anticipate and meet education and skills needs'; to 'strengthen partnerships further with employers and professions in design and delivery models to ensure relevant skills and capabilities' and 'to connect students and industry through enhanced work-related activities'.

LEARNING OUTCOMES

In order to assist understanding of the learner journey, the following information presents a breakdown of the principal skills and abilities which students are required to develop over the duration of the course.

Skills Development Scotland (SDS) produced a Framework which has formed the basis for the development of this course with each of the modules. The Mapping Document, situated at the end of this document, illustrates which module addresses each of the overarching outcomes from the Framework.

Overall Learning Outcomes

The purpose of the Graduate Apprenticeship in BSc (Hons) Construction and the Built Environment course is to provide the student with graduate level expertise in the management of construction projects from inception to completion. The student will develop a wide range of skills in construction management and technology. The course provides a framework within which students are encouraged to develop an enthusiasm for discovery, understanding, and application of knowledge to real life construction problems and issues. A formative base of knowledge and understanding at all levels combines factual information with contextual interpretation, application, and reflection within the study area. As students will be studying within the workplace environment, they will be expected

to apply knowledge and understanding to identify, analyse and critically evaluate problems relating to the built environment within a set of professional standards. Additionally, they will be expected to develop the ability to work confidently, as an individual to undertake significant independent study within specialist areas of the course, and as part of a team, to develop and deliver appropriate, technical and managerial solutions.

Throughout the course students will develop ethical standards and the professional skills, expertise and personal attributes appropriate and of value to a Construction Manager or other built environment professionals. These characteristics have been described by the following Scottish Credits and Qualifications Framework (SCQF) learning outcomes i.e. what a student is expected to know and be able to do if they have taken full advantage of the opportunities for learning provided by the course.

At all stages of the course students will be developed via the following course aims:

Knowledge and Understanding of:

- The relationship between natural and human made environments, the built environment in relation to contemporary society and the structures, organisations and processes of the construction industry.
- The function and forms of buildings, how they relate to local and global environments, how they are designed, constructed and managed in response to the needs of clients, users and society.
- The participants and processes which shape and contribute to the construction and use of buildings.
- The range of commercial, environmental, legal considerations that governs the management of the construction projects.
- A range of personal, team and elementary professional skills and work with others in support of current professional practice under guidance.
- The skills associated with specialist ICT techniques required by the industry as well as the processes used within the built environment to deliver complex, and in some cases specialised, projects.

Practice: Applied Knowledge, Skills and Understanding to:

- Use a range of principal professional skills, techniques, practices and/or materials associated in a meaningful way to resolve complex problems relevant to the subject/discipline.
- Apply knowledge and understanding in the use of some skills, which are at the forefront of the subject/discipline, relevant to a specific context or situation.
- Execute a defined project of research; to develop, evaluate and investigate project and then the ability to apply relevant outcomes to formulate solutions relevant to the subject/discipline.
- Balance the requirements of their own organisation, clients and potential users to plan, manage, implement, and evaluate a proposed construction project.
- Deploy effectively the skills to plan and manage the construction project with particular emphasis on understanding the whole process.
- Work as an effective member of a project team, managing the interface between the organisation, client, consultants and the end-users, recognising the different roles within a team and different ways of organising teams.
- Propose appropriate processes, technologies, and materials and plan, organise and implement a construction project with due regard to human, environmental, health and

safety, legal and contractual factors.

- Using appropriate software technologies plan, resource and cost a construction project with appropriate monitoring and control mechanisms.
- Effectively communicate complex ideas and technical issues using verbal, visual and written techniques and media appropriate to the target audience.
- Communicate complex ideas and issues using a range of media relevant to the discipline which include verbal, written and graphic techniques.

Generic Cognitive Skills to:

- Research, identify, define and critically analyse complex problems and develop, plan and implement effective strategies to their solutions in an original and creative way.
- Critically seek, review and consolidate new knowledge and skills to develop imaginative and practical solutions to a diverse range of problems.
- Seek to demonstrate originality and creativity in dealing with professional level issues and in the development of personal learning, leadership and management of work.
- Make judgments where data/information is limited or comes from a range of sources and to critically evaluate judgments/problems.
- Plan and manage work appropriately, and to work to deadlines.
- Develop an understanding of personal learning needs and methods.

Communication, ICT and Numeracy Skills to:

- Express individual and group ideas through verbal and/or written and/or visual work to a professional standard.
- Practice in a way, which shows a clear awareness of own and others' roles and responsibilities and to work with others to bring about development/change and new thinking.
- Demonstrate knowledge and understanding through investigative, modelling and problem solving activities.
- Deal with complex, ethical and professional issues and present this information to a range of audiences for a range of purposes.
- Use a range of ICT applications to support and enhance work in an innovative and creative manner relevant to the subject/discipline.
- Interpret, use and critically evaluate using a range of skills and techniques, some of it advanced, in order to set and then achieve set goals/benchmarks.
- Communicate with peers, senior colleagues and specialists on a professional level.

Autonomy, Accountability and Working with Others to:

- Adopt a broad-ranging and flexible approach to study, identifying learning needs, pursuing activities designed to meet these needs in increasingly autonomous ways.
- Be able to exercise initiative and autonomy in professional activities within the built environment including the ability to continually learn and manage and critically evaluate own work.
- To take the lead on planning and management of group and individual work activities and projects to a professionally high standard and to professional codes of ethics.
- To acquire an understanding of current professional practice in accordance to ethical and professional issues in the subject/discipline.
- Demonstrate the ability to take responsibility for own learning and to exhibit reflection of own work as well as taking responsibility effectively within a team or group in a collaborative and professional manner.

- Work effectively both independently and as a member of a team, showing a willingness to learn from others.
- Be innovative, foster creativity and drive, and manage the process of change.

These characteristics can be identified within each stage of the course:

Stage 1: SCQF 7

Characteristic 1: Knowledge and Understanding

The student will be able to:
- Demonstrate an overall appreciation of the body of knowledge, main theories, concepts and principles of the discipline of construction management, and the ability to integrate principles, theories, and conventions in their understanding of the discipline.
- Demonstrate an overall appreciation of the body of knowledge, main theories, concepts and principles of construction technology, building design, detailing and specification, project management, health and safety and risk management.
- Demonstrate an overall appreciation of the body of knowledge, main theories, concepts and principles of emerging areas of specialist professional knowledge including collaborative working using ICT and BIM, environmental considerations and management of time, cost and quality.
- Demonstrate a basic understanding that professional knowledge is continually developing, and an understanding of how to absorb, contextualize and utilise new knowledge within contemporary professional practice.
- Demonstrate an overall appreciation of the procedures, practices, and values of the construction management profession and its role within the wider industry context, including an understanding of how the professions have evolved and developed adopting the use of established methods of enquiry.

Characteristic 2: Practice: Applied Knowledge, Skills and Understanding

The student will be able to:
- Apply knowledge, skills and understanding in practical contexts using basic and routine disciplinary skills related to building technology, building design, construction processes, building structure, environmental services and project management with the effective use of, word-processing, specialist software and professional data bases.
- Apply knowledge, skills and understanding in practical contexts using basic and routine disciplinary skills related in emerging specialist construction management areas including the management of sustainable construction projects, global standardised measurement of time, cost and quality, digital / BIM applications and collaborative working with other building professions.
- Apply knowledge, skills and understanding in practical contexts using basic and routine professional skills in a range of construction management level contexts, apply and adapt their skills to basic situations.

Characteristic 3: General Cognitive Skills

The student will be able to:
- Present and evaluate arguments, information and ideas that are of a routine nature related to construction management.

- Use a range of approaches to address defined and routine professional problems and issues related to the discipline.

Characteristic 4: Communication, ICT and Numeracy Skills

The student will be able to:

- Use a wide range of routine skills and some advanced skills to convey ideas in well-structured and coherent manner.
- Use a range of forms of communications effectively.
- Select and use ICT applications to process and obtain information related to the discipline.
- Use a range of numerical and graphical skills in combination as well as to measure progress and achieve goals and targets.

Characteristic 5: Autonomy, Accountability and Working with Others

The student will be able to:

- Exercise some initiative and independence in carrying out defined activities.
- Exercise some managerial or supervisory responsibility for the work of others, take account of own and others' roles and responsibilities when carrying out and evaluating tasks.
- Work under guidance with qualified practitioners and make informed judgment on issues, based on critical reflection.
- Work under guidance with others in acquiring an understanding of ethical and professional issues in accordance with current professional/or ethical codes of practice, seeking guidance where appropriate and practice in ways which take account of own and others' roles and responsibilities, and to recognise the limits of these professional codes and seek guidance where appropriate.

Stage 2: SCQF 8

Characteristic 1: Knowledge and Understanding

The student will be able to:

- Demonstrate development of the scope, defining features, core theories, concepts, principles and terminology of construction management, and ability to integrate principles, theories, and conventions in their understanding of the discipline.
- Demonstrate development of the scope, defining features, core theories, concepts, principles and terminology associated with construction technology, building structures, building services, maintenance, lifecycle costing, cost planning, law and procurement, contracts conditions, management concepts, project management, costing and estimating, health and safety, quality control and contract administration.
- Demonstrate development of the scope, defining features, core theories, concepts, principles and terminology of emerging areas of specialist professional knowledge including collaborative working using ICT and BIM, and sustainable life costing.
- Demonstrate a sound understanding of the fact that professional knowledge is continually developing, and an understanding of how to absorb, contextualize and utilise new knowledge within contemporary professional practice.

- Continue to demonstrate development of the scope, defining features, core theories, concepts, principles and terminology associated with procedures, practices, and values of the construction management profession and its role within the wider industry context, including an understanding of how the professions have evolved and developed adopting the use of established methods of enquiry.

Characteristic 2: Practice: Applied Knowledge, Skills and Understanding

The student will be able to:

- Apply knowledge, skills and understanding in practical contexts using a range of disciplinary skills, carry out routine lines of enquiry, development and investigation into professional level problems and issues related to building technology, estimating, and contract administration with the effective use of word-processing, and specialist software and professional databases.

- Apply knowledge, skills and understanding in practical contexts using a range of disciplinary skills, carry out routine lines of enquiry, development and investigation into professional level problems and issues related in emerging specialist construction management areas including the management of sustainable construction projects, project planning and the management of time, cost and quality contract management, procurement options, digital / BIM applications and collaborative working with other building professions.

- Apply knowledge, skills and understanding in practical contexts using a range of professional skills, carry out routine lines of enquiry, development and investigation into disciplinary level problems to basic data processing and statistical skills appropriate to project work to a professional level, and interact confidently and effectively within a range of teaching/learning and professional groups by demonstrating appropriate negotiating, role, leadership and group support skills to a junior professional standard.

- Apply knowledge, skills and understanding in practical contexts using a range of professional skills, carry out routine lines of enquiry, development and investigation into professional level problems in a range of construction management level contexts, apply and adapt their skills to developing situation in an integrated manner.

Characteristic 3: General Cognitive Skills

The student will be able to:

- Undertake critical analysis, evaluation and/or synthesise ideas, concept information and issues relating to the discipline of construction management and will use a range of approaches to address defined and routine professional problems and issues related to the discipline.

- Use a range of approaches to formulate and evaluate evidence based solutions to routine professional problems and issues related to the discipline.

Characteristic 4: Communication, ICT and Numeracy Skills

The student will be able to:

- The student will use a wide range of routine skills and some advanced skills to convey moderately complex ideas to a range of audiences for a range of purposes.

- Use a range of forms of communications effectively.

- Select and use ICT applications to process and obtain information related to the

discipline.

- Use a range of numerical and graphical skills in combination as well as to measure progress and achieve goals and targets.

Characteristic 5: Autonomy, Accountability and Working with Others

The student will be able to:

- Exercise autonomy and initiative in carrying out some defined activities, take the lead on planning workload and initiatives within familiar areas of work, exercise some managerial or supervisory responsibility for the work of others and take account of own and others roles and responsibilities when carrying out and evaluating tasks.

- Work under guidance with others to acquire an understanding of current professional practice.

- Manage under guidance, with others in acquiring an understanding of ethical and professional issues in accordance with current professional/or ethical codes of practice, seeking guidance where appropriate and practice in ways which take account of own and others' roles and responsibilities, and to recognise the limits of these professional codes and seek guidance where appropriate.

Stage 3: SCQF 9

Characteristic 1: Knowledge and Understanding:

The student will be able to:

- Demonstrate the application of principal professional skills, techniques, practices and materials associated with the discipline of construction management and the ability to integrate principles, theories, and conventions in their understanding of the discipline.

- Demonstrate the application of principal professional skills, techniques, practices and materials associated with the discipline of construction technology, project management, health and safety, quality control and contract administration, building pathology, organisational change and management, financial management and accountancy, value engineering and management.

- Demonstrate the application of principal professional skills, techniques, practices and materials associated with of emerging areas of specialist professional knowledge including collaborative working using ICT and BIM, sustainable management of whole life costing, and global standardised measurement of cost.

- Demonstrate a comprehensive understanding of the fact that professional knowledge is continually developing, and an understanding of how to absorb, contextualize and utilise new knowledge within contemporary professional practice.

- Demonstrate the application an overall appreciation of the procedures, practices, and values of the construction management profession and its role within the wider industry context, including an understanding of how the professions have evolved and developed adopting the use of established methods of enquiry and research methods.

Characteristic 2: Practice: Applied Knowledge, Skills and Understanding

The student will be able to:

- Apply knowledge, skills and understanding in practical contexts using a range of principal or where appropriate more specialised professional skills to carry out routine lines of enquiry, development and investigation into professional level problems and

issues related to management of the design process, building pathology, organisational accountancy and finance, stakeholder management and management of the supply chain, and the application of value management and value engineering in the selection of the alternatives and best options.

- Apply knowledge, skills and understanding in practical contexts using a range of principal or where appropriate more specialised professional skills to carry out routine lines of enquiry, development and investigation into professional level problems and issues related in emerging specialist construction management areas including the management of sustainable construction projects, new methods of construction, use of different material and practices, digital / BIM applications and collaborative working with other building professions.

- Apply knowledge, skills and understanding in practical contexts using a range of principal or where appropriate more specialised professional skills to carry out routine lines of enquiry, development and investigation into professional level problems in a range of construction management level contexts, apply and adapt their skills to (particular) situation in an integrated manner.

Characteristic 3: General Cognitive Skills

The student will be able to:

- Undertake critical analysis, evaluation and/or synthesise ideas, concept information and issues relating to the discipline of construction management and use a range of approaches to address defined and routine professional problems and issues related to the discipline.

- Use a range of approaches to formulate and critically evaluate evidence based solutions to routine professional problems and issues related to the discipline and demonstrate the ability to draw from a range of sources in making judgements associated with routine professional problems and issues related to the discipline.

Characteristic 4: Communication, ICT and Numeracy Skills

The student will be able to:

- Use a wide range of routine skills and some advanced skills to present or convey both formally and informally information on mainstream topics associated with construction management.

- Use a range of forms of communications effectively.

- Use ICT applications to support and enhance work related to the discipline.

- Use a range of numerical and graphical skills in combination as well as to interpret, use and evaluate numerical and graphical data to achieve goals/targets.

Characteristic 5: Autonomy, Accountability and Working with Others

The student will be able to:

- Exercise autonomy and initiative in carrying out defined activities at a professional level and exercise managerial responsibility and practice in ways that show awareness of the work of others, take account of own and others roles and responsibilities when carrying out and evaluating tasks.

- Work under guidance with qualified practitioners seeking guidance where appropriate.

- Manage ethical and professional issues in accordance with current professional/or

ethical codes of practice, seeking guidance where appropriate and practice in ways which take account of own and others' roles and responsibilities, and to recognise the limits of these professional codes and seek guidance where appropriate.

Stage 4: SCQF 10

Characteristic 1: Knowledge and Understanding

The student will be able to:

- Convey a detailed, professional level of knowledge and understanding in the discipline of construction management, and ability to integrate principles, theories, and conventions in their understanding of the discipline.

- Demonstrate knowledge and understanding of areas of specialist professional knowledge including construction management, strategic planning, change management, understand the role of governance and leadership, capacity and capability building, strategic planning, and commercial management.

- Demonstrate knowledge and understanding of emerging areas of specialist professional knowledge including collaborative working using ICT and BIM, sustainable management of construction projects.

- Demonstrate an advanced understanding of the fact that professional knowledge is continually developing, and an understanding of how to absorb, contextualize and utilise new knowledge within contemporary professional practice.

- Demonstrate an understanding of the role of knowledge and information in the identifying of outcome solutions and will demonstrate an understanding of the use of established methods of enquiry and research methods, and a good understanding of data collection and analytical methods will be demonstrated through the research project.

Characteristic 2: Practice: Applied Knowledge, Skills and Understanding

The student will be able to:

- Demonstrate understanding, apply professional skills related to construction management, strategic planning, change management, understand the role of governance and leadership, capacity and capability building, strategic planning, and commercial management.

- Demonstrate basic data processing and statistical skills and the execution of a defined research project via dissertation appropriate to discipline specific project work to a professional level, and interact confidently and effectively within a range of teaching/learning and professional groups by demonstrating appropriate negotiating, role, leadership and group support skills to a junior professional standard.

- Demonstrate the ability to practice in a range of construction management level contexts, apply and adapt their skills to developing and unpredictable situation in an integrated manner.

- Apply knowledge, skills and understanding in practical contexts to basic data processing and statistical skills appropriate to project work to a disciplinary level, and interact confidently and effectively within a range of teaching/learning and professional groups by demonstrating appropriate negotiating, role, leadership and group support skills to a junior professional standard.

Characteristic 3: General Cognitive Skills

The student will be able to:

- Work with minimal guidance, identify and classify principles and complex ideas in contemporary information sources; analyse them vigorously, effectively, critically and creatively.

- Demonstrate understanding of construction management issues, professional analysis and interpretations, and offer appropriate solutions to these issues, be able to demonstrate working independently, confidently integrate theory with professional/vocational practice, evaluate theories, processes and solutions and outcomes critically and effectively; use the evaluation of others critically, reflectively and constructively, and be able to display higher analytical cognitive skills including making professional judgements in situation where information needs to be collated and interpreted in an integrated manner.

Characteristic 4: Communication, ICT and Numeracy Skills

The student will be able to:

- Apply data processes and statistical skills using spread sheet, appropriate industry standard and innovative software to deliver project work to a professional level.

- Demonstrate appropriate numeracy skills and methods for costing, measuring and estimating using traditional and advanced techniques.

- Effectively employ a broad range of modes of communication associated with work as a Construction Manager or other built environment professional, including oral presentations, reports, electronic and mediated communication; and competence in a wide range of professional presentation skills.

- Process, evaluate, interpret and graphically illustrate a wide range of process data and synthesise to achieve set goals specifically within the context of the construction management discipline and construction industry in general.

Characteristic 5: Autonomy, Accountability and Working with Others

The student will be able to:

- Exercise substantial autonomy and initiative; demonstrate leadership and ability to make an identifiable contribution to development within a group context, and take some responsibility for the work of others and for a range of resources.

- Work under guidance with qualified practitioners and make informed judgment on issues, based on critical reflection.

- Demonstrate the skills of dealing with ethical and professional issues in accordance with current professional/or ethical codes of practice, seeking guidance where appropriate and practice in ways which take account of own and others' roles and responsibilities. Recognise the limits of these professional codes and seek guidance where appropriate.

DISTINCTIVE FEATURES OF COURSE

Robert Gordon University Graduate Apprenticeships will share institutional Graduate Apprenticeship characteristics; therefore course design will:

- optimise candidate time within the workplace;

- be flexible, enabling students to participate in the course and student experience whilst not bound to a physical campus;

- include meaningful and substantial employer engagement from the outset;

- use innovative teaching, learning and assessment methods;

- support the development of reflective practitioners, equipped to excel in their field and add value to their employers;

- ensure that the professional practice of learners is informed and enhanced by expert technical and theoretical knowledge;

- combine work based learning, the latest thinking within the field, and work-related/centric assessments to produce graduates equipped with valuable skills and knowledge.

The Graduate Apprenticeship model of achieving a degree through work-based learning has been designed such that:

- In contrast to the traditional student journey, Graduate Apprenticeship students will be employed for the entire duration of the course, and the course will be designed to integrate their course learning outcomes with suitable workplace projects in collaboration and partnership with their employer. The development of transferable skills will also be supported throughout the course via course content, assessment, and work-based learning.

- The course will utilise the technology investment that the University has made in lecture capture and Virtual Learning Environment (VLE) delivery providing the student with a cutting edge experience.

Employers are closely involved with the specification and delivery of work-based learning activities to support the learning and development of students. Workplace Mentors appointed by the employer, and supported by the University, will work with students to create individual learning plans which outline the shadowing, observation, training, work activities and project opportunities which students will undertake in the workplace. These learning plans will be reviewed by the University to ensure that the required employer contextualisation is appropriate.

The course adopts a practical approach to developing students' professional skills; for example employing group discussion activities within course workshops to foster leadership, listening, and communication skills, and requiring students to deliver presentation and reports as a means of further refining their professional skillset. Within the work-based learning environment, students will continue their professional development as they enhance planning and negotiation skills via development of their learning plan in conjunction with their Workplace Mentor and engage in practical activities designed to further their professional skillset. The knowledge and insights gained across the University and work-based learning environment, coupled with the active role students are expected to take in planning and executing their own learning, will act to supports the students' overall professional enrichment.

The Graduate Apprenticeship in BSc (Hons) Construction and the Built Environment course is structured to provide a broad based construction education to enable students to develop knowledge and skills to manage the building process from inception through to demolition in a professional and sustainable manner.

Course content has been designed to correspond with the needs of employers with a particular emphasis on the operational, production and commercial issues which affect businesses at a project and strategic level, with opportunities for students to develop areas of particular expertise relevant to their chosen career path or personal interest. Focus is placed on the development of core competencies relating to construction management, building technology, project planning, risk management, health and safety as well as commercial and contract administration. The delivery of the course will also be informed and guided by new industrial developments emerging in the areas of technology and management, the latest guidance issued by the relevant professional institutes, as well as by research carried out by experts within the School.

Students will have access to use the brand new bespoke facilities that the University has invested in for the School. These include bespoke modern teaching and learning facilities including lecture theatres, teaching labs, IT facilities, model-making workshops and top of the range printing facilities. Additionally, the University library houses a comprehensive collection of books and journals as well as an extensive range of electronic and digital resources.

The course will be delivered as part of the School's extensive suite within the built environment undergraduate programme, which is unique in Scotland. This range of courses is delivered by staff from a range of professional backgrounds including specialists in construction processes and management, architects, architectural technologists, building/quantity surveyors, and environmental/structural engineers.

Graduates from the School achieve a high level of employment because they develop sought after expertise, which combines analytical and critical abilities with excellent communication skills and other practical and transferrable attributes necessary to develop a successful career in the built environment professional practice or industry. Unique to this course, all students will be in full-time employment from the outset of the course either as new recruits to their organisation, or as existing, experienced employees. It is envisaged that the professional enrichment delivered via the Graduate Apprenticeship course will positively enhance the professional capabilities of students and facilitate career advancement.

WHAT THE COURSE INVOLVES

The four-year Graduate Apprenticeship in BSc (Hons) Construction and the Built Environment is an industry focused degree route, where students work full-time for a partner employer while studying towards a fully accredited degree. The course combines workplace training with a programme of education designed to meet students' career ambitions. The core curriculum is focused on latest thinking in construction and the built environment coupled with a "flipped-classroom" approach to work-based learning developed through ongoing collaboration between University staff, Workplace Mentors, and line managers in the workplace.

Learning support materials are provided through the VLE which includes a range of equipment such as video and distance learning technologies as well as online interaction. Where appropriate, modules use technologies such as computer-mediated formative assessment to bring interactivity and immediacy to the teaching and learning process. Additionally, there will be opportunities for the student to attend on-campus events to allow face-to-face interaction with staff and peers, participate in group activities with peers and this will contribute to the overall student experience. Arrangements for these on-

campus events will be determined in liaison/partnership with employers and stakeholders will be advised well in advance to facilitate attendance.

Staff will support students engaged in problem solving from an academic and/or theoretical perspective, while Workplace Mentors will guide students in the application of theory to workplace scenarios. University staff will undertake visits to the student's place of work in order to observe the work-based learning environment and discuss the student's progress with the Workplace Mentor.

This combination of blended academic study will allow the student to contextualise learning immediately within their workplace thereby developing their understanding and enhancing and their contribution to organisational effectiveness.

The course equips the student with specialist skills in the managerial, technical and operational spheres. These are a key component in the work of a Construction Manager or other built environment professional and help to shape the future of existing buildings and create new environments. There is a great emphasis on interdisciplinary relationships and on the importance of the role of the different stakeholders. Course modules are designed to guide students from Stage 1, with very little knowledge of the structure and the nature of the built environment or construction industry to Stage 4 where there is a concentration on the skills and knowledge base that are needed by the professional Construction Manager and other built environment professionals in a modern and rapidly changing environment.

With its annual turnover of more than £110 billion and up to 9% of the UK's GDP, the UK construction industry makes a valuable contribution to the UK economy. It employs over 2 million people in many different roles and uses a great number of suppliers for materials and plants, along with many different specialist subcontractors. Its massive economic operations have a significant impact on the social, economic, and environmental well-being of the local society. Such significance has been growing slowly for some years now and is expected to accelerate since the introduction of the Social Value Act in January 2013 which proved a catalyst for local authorities to enshrine social value principles in their procurement and planning policies for construction and infrastructure work.

The Social Value Act (2013) requires local authorities and contractors to consider the wider impact of a construction contract or framework agreement. By requiring all new contracts over £4 million to deliver wider social, economic and environmental benefits, it marked a shift in attitudes towards how value is assessed in the delivery of public construction and infrastructure projects. It has brought together the twin concepts of sustainable procurement and community benefits in one, shared approach. Furthermore it has empowered those procuring and delivering public projects to look beyond the immediate end product to also consider innovative ways of delivering wider, positive benefits for people and local communities as a way of getting the best possible value from the public money being spent. For the construction industry, it also means a welcome move away from contracts awarded only on the basis of the lowest price towards those which offer the best long-term outcomes for communities and the environment.

To ensure that contracting authorities maximise their purchasing power, reap the benefit of the money being spent on public schemes and ensure that the ripple effect radiates as far as possible, all of those involved must play their part. For contracting authorities, this means setting ambitious targets and a clear vision as early as possible, and being inclusive from the concept and design phase onwards, while contractors must take social value seriously, bringing their best ideas to the table. This offers the best chance of securing social,

economic and environmental benefits while building stronger, more resilient communities.

This shift in approach has its origins in academic and research institutions investigating and developing sustainable practices which are already reflected in course curricula as a result of the link between teaching and research. The Graduate Apprenticeship in BSc (Hons) Construction Management and the Built Environment reflects this philosophy within its course content and future course graduates will play a significant role in the commissioning and implementation of sustainable, efficient and effective construction and infrastructure projects. Successful completion of the course will provide an appreciation of the significance of the industry beyond delivery of construction products and its contribution to the social, economic and environmental agenda is critical. It will also equip graduates with the tools to identify, assess, and deliver projects which will return maximum value for money, protect resources, reduce waste, preserve the environment and minimise risk. For example, Module SU1050 will set the scene and present an introduction to the construction industry and its relevance to the UK economy. It will consider the role and importance collaboration play in the successful delivery of projects. It will introduce students to the sustainability agenda in terms of design, material, procurement, and construction. The module will also introduce the terms value for money, considerate construction, collaborative working, social value, reference to the sustainability agenda and many other ethical and professional considerations. The principles of social responsibility and value will continue throughout the course where other modules will use increasingly larger and complex design considerations, projects size and working relationships to explore value for money, return on investment, social benefits, sustainability and environmental considerations.

In demonstration of their learning and professional development, students are required to submit a mixture of courseworks, class tests, essays, reports, study sheets, freehand or instrumental drawings to provide evidence of achievement of the learning outcomes of the course. Alternatively, or in addition, this evidence may be assessed in examinations by written papers. Assessment of project work is undertaken on a continuous basis. Individual project work will be integrated, where possible, into the candidate's place of work, and live projects may be customised to the relevant industry or specialism. In the final year of the course, students will undertake an individual Honours project. This is an extended piece of work, completed under the supervision of an academic tutor. The employer agrees a specification for a task, which would be the investigation and/or implementation of a relevant current industry problem, technique, methodology etc.

PROFESSIONAL EXPERIENCE / PLACEMENT

Students enrolled on the course are employed by a collaborating partner organisation while studying for the degree. Employers may provide a series of internal placements within their organisations as part of the student's learning plan where it would be beneficial for the student to spend time within a department other than their own to gain specialist skills and knowledge and where this can be supported by their employer.

Whilst learning in the workplace, students will have access to a range of software which is free to download, particularly Autodesk products. They will also have remote access to additional software available via the University website, through RGU 'Access to Apps' icon. This includes Adope, In-Design, Photoshop, Open Office, Articulate, ArchiCad, COSTX, IES, BRE- U Value image calculator and many other applications such as Microsoft applications, including MS Project used for project planning and control. The students may have access

to other similar software within their working environment which they may use as an alternative to the above.

To be able to use the above applications the students will need access to a personal computer with at least the following specifications:

HP Z240 Workstations with Intel Xeon E3-1245 v5 processors, 16Gb RAM, 250Gb HD, NVIDIA Quadro K620 Graphics Card.

Whilst on campus, students will have access to laser printers and a range of scanners, including very wide formats. Wireless is also available across the campus for those who choose to use personal computing devices.

Technical support is available to students via a University wide Help Desk telephone system. In addition there are in-house technicians who deal with specific technical issues and everyday maintenance of the underlying systems in conjunction with the central IT services department.

In terms of access to surveying equipment, digital technologies and model making facilities, it is important that students have access at work to this equipment.

OPPORTUNITIES FOR FURTHER STUDY

An Honours degree achieved with at least an upper second classification (2.1) will normally provide access to postgraduate and doctoral programmes in UK higher education institutions.

EXTERNAL AND INTERNAL INDICATORS OF QUALITY AND STANDARDS

In October 2016 the QAA (Quality Assurance Agency for Higher Education) issued an Interim Statement on Degree Apprenticeships confirming the final UK-wide statement will be in keeping with the existing suite of characteristics statements within Part A of the UK Quality Code for Higher Education. The QAA further state the Quality Code is a key reference point for setting the academic standards and assuring the quality of apprenticeships involving a higher education qualification. Subsequently, in May 2017 the QAA published its paper 'Quality Assuring Higher Education in Apprenticeships: Current Approaches'. This document highlights considerations for higher education providers in relation to standards and quality and extrapolates relevant guidance from the UK Quality Code. Whilst the document does not constitute formal QAA guidance, its contents have informed the University's approach to the design and delivery of all Graduate Apprenticeships.

In addition to its specific objectives the course aims to meet the University's mission, vision and objectives statements and the requirements of professional, statutory and regulatory bodies. A number of professional bodies have already been involved in developing the learning outcomes of the course in line with their requirements. The intention is that in the near future the course will be presented for accreditation by the relevant professional bodies such as the Royal Institution of Chartered Surveyors and the Chartered Institute of Building.

The Quality Assurance Agency (QAA) sets and maintains standards for academic quality in UK Higher Education academic establishments. Academic subjects are grouped at undergraduate and postgraduate levels. The QAA benchmarking statements for

building/construction represents the national threshold standards for achievement in this area and articulate the attributes and capabilities, which those possessing qualifications from these areas should demonstrate. As such, QAA benchmarks underpin course articulation, delivery and development through providing guidance for learning outcomes across the breadth of the course and within specific cognate areas such as technology and management. The Graduate Apprenticeship in BSc (Hons) Construction and the Built Environment course falls within the QAA subject group for Land, Construction, Real Estate and Surveying (2016):

http://www.qaa.ac.uk/en/Publications/Documents/SBS-Land-Construction-Real-Estate-and-Surveying-16.pdf

Scottish Credit and Qualification Framework (SCQF) statements are also used during the design of modules, courses and programmes and the relevant SCQF level is included within each Module Descriptor.

The University appoints External Examiners to monitor course quality through evaluating instruments of assessment, attendance at Assessment Boards and engaging with course development. Examiners are appointed from both academic and practice backgrounds to cover key subject areas.

The School has strong links with other academic institutions, both within the UK and Europe, a facet which adds diversity of approach in maintaining appropriate standards at national and international levels.

Additionally, the School's Industrial Liaison Group meets regularly to enhance partnership working, build links with local employers to ensure the delivery of appropriate course materials.

ACADEMIC REGULATIONS

This course is governed by the provisions of the University's Academic Regulations, which are available at **www.rgu.ac.uk/academicregulations**. In particular:

Regulation A1: Courses
Regulation A2: Admission
Regulation A3: Section 1: Student Appeals (Awards and Progression) Procedure
Regulation A3: Section 2: Student Misconduct Procedure
Regulation A4: Assessment and Recommendations of Assessment Boards

Applicants must satisfy the University's general admission requirements for undergraduate and postgraduate courses as contained in *Academic Regulation A2: Admission*, including proficiency to a minimum standard in the English language. Specific entry requirements for this course are detailed below.

Entry Requirements and Qualifications

Employment: All applicants must be employed in a full-time position, relevant to their course of study and have the right to live and work in Scotland. An applicant's employer must be committed to and involved in the provision of a suitable workplace environment, coupled with supportive workplace learning guidance and mentoring to create a suitable workplace environment in which the student will be able to obtain the necessary experience

and learning outcomes. Employers must be willing to formally partner with the University via a Collaboration Agreement which sets forth the obligations of each party.

Subject specific qualifications: SQA Higher: Normally BBCC to include English (or a written subject requiring the use of English). Maths or a science subject is required at National 5 grade C or above if not held at Higher.

Experiential equivalencies:

First year entry: For those applicants who do not meet our Standard Course Entry Requirements, applications may be considered from those who possess 4 years' relevant work experience of which 1 year is at supervisory level or higher and where the applicant has demonstrated the development of key skills evidenced through a detailed CV. Candidates will also be requested to attend an interview.

Advanced entry: Advanced entry may be considered for those who have minimum 4 years relevant work experience all at supervisory role or higher and where the applicant has demonstrated the development of key skills evidenced through a detailed CV. Candidates will also be requested to attend an interview.

The above are broad standards provided to guide applicants who do not meet our Standard Course Entry Requirements, however in all cases admission decisions rest with the University and the relevance, breadth and depth of employment experience will be taken into consideration.

Alternative qualifications: Applications are welcomed from those with equivalent qualifications to those stated, including Foundation Apprenticeships (SCQF 6), SVQs/NVQs, access programmes and overseas qualifications. Applications from students with non-standard qualifications or work experience will be considered on an individual basis.

Advanced entry: Applicants who are interested in applying for advanced (or flexible) entry will be considered on an individual basis, applications may be based upon prior education and/or professional experience. A relevant HNC or HND from one of our partner colleges will be considered for entry into Year 2 or 3. Attention is drawn to the University's process for Recognition of Prior Learning (RPL).

English language requirements: All applicants whose first language is not English are required to have an Academic IELTS (International English Language Testing System) minimum score of 6.0. Appropriate equivalents will be considered.

Course Specific Academic Regulations

Honours classification is based solely on performance in Stage 4 of the course.

Due to the sequential delivery of the modules and the scheduling of the Assessment Board, students will be allowed one re-assessment opportunity for modules 1-3 prior to the Assessment Board each year.

SOURCES OF FURTHER INFORMATION

- Further information about Degree Apprenticeships in Scotland can be found at the Skills Development Scotland Apprenticeships website:

https://www.Apprenticeships.scot/

- The Robert Gordon University Graduate Apprenticeship information made available to employers and prospective students can be found at:

http://www.rgu.ac.uk/business-services/graduate-Apprenticeships

- Further information about the undergraduate programme in the Scott Sutherland School of Architecture and Built Environment can be found at the school website:

http://www.rgu.ac.uk/areas-of-study/subjects/architecture-construction-and-surveying

- Library resources can be accessed via the Library web portal:

https://www.rgu.ac.uk/staff-and-current-students/library

- Advice for student about study and welfare issues is found at the Student Advice and Support portal:

https://www.rgu.ac.uk/student-life/student-advice-and-support/student-advice-and-support

- Links to the Academic Regulations governing the course can be accessed at:

http://www.rgu.ac.uk/academicregulations

A number of external sources were consulted in the process of curriculum development for the Graduate Apprenticeship in BSc (Hons) Construction and the Built Environment:

- Skills Development Scotland Graduate Apprenticeship subject frameworks are available at:

https://www.skillsdevelopmentscotland.co.uk/publicationsstatistics/publications/?page=1&area[]=14&order=date-desc

- For reference, the Modern Apprenticeship Program is available at:

http://www.sqa.org.uk/sqa/35912.html

EQUALITY AND DIVERSITY

A specific ambition of government and Skills Development Scotland is that Foundation, Modern and Graduate Apprenticeships will help to achieve social mobility and inclusivity. The approach taken by the University in respect of flexible admissions requirements, a commitment to helping partner employers ensure equal opportunity, study skills support for learners from the point of induction, innovative curriculum design and delivery and work-related/centric assessment is supportive of these ambitions.

The University has a strong commitment to the active promotion of equality across its functions, including its course provision. To this end the University has developed an inclusivity statement which articulates the University's desire to strive towards creating a working, learning and social atmosphere which is inclusive, harmonious and respectful of diversity. The University has also developed an equality and diversity policy and every two

years publishes a mainstreaming report, including equality outcomes, which explains how the University is developing and implementing its inclusivity statement. At a course level, course leaders monitor and comment on equalities data through the annual appraisal process. Through this process any significant trends in equalities data are highlighted. Further information can be found at:

www.rgu.ac.uk/about/equality-and-diversity

All Schools have a nominated School Contact who can advise on the requirements of the course and the range of course-specific reasonable adjustments that may be made. The current School Contacts are available from:

www.rgu.ac.uk/studentservices/disability/page.cfm?pge=7853

The University's Disability and Dyslexia Service provides support for students, details of which may be found at: **www.rgu.ac.uk/disability**

NOTE

This document constitutes one of two course documents that should be read together:
Course Specification: Core Award Data
Course Specification: Student Learning Experience

CONTACT DETAILS

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In compiling this information the University has taken every care to be as accurate as possible, though it must be read as subject to change at any time and without notice. The University reserves the right to make variations to the contents or methods of delivery of courses, to discontinue, merge or combine courses, and to introduce new courses.

DETAILED COURSE STRUCTURE

The modules studied within each Stage run consecutively in 10 week learning blocks with the exception of the Professional Practice Project module which will run for 20 weeks.

Blended Learning			
Stage 1		*CREDITS*	*LEVEL*
SU1050	The Construction Industry: An Introduction	30	7
SU1051	Building Design and its Determinants	30	7
SU1052	Construction Project Management	30	7
SU1053	Building Design and Technology	30	7
	Total for Stage:	**120**	

Blended Learning			
Stage 2		*CREDITS*	*LEVEL*
SU2050	Construction Procurement, Contracts and Law	30	8
SU2051	Construction: Technologies, Methods and Implications	30	8
SU2052	Project Planning, Execution and Control	30	8
SU2053	Integrated Construction Project	30	8
	Total for Stage:	**120**	

Blended Learning			
Stage 3		*CREDITS*	*LEVEL*
SU3050	Management of Design and Construction	30	9
SU3051	Building Pathology	30	9
BS3009	Business Finance and Accounting	30	9
SU3053	Managing Complex Projects	30	9
	Total for Stage:	**120**	

Blended Learning			
Stage 4		*CREDITS*	*LEVEL*
BS4006	Strategic and Commercial Management	30	10
SU4051	Dissertation	30	10
SU4052	Professional Practice Project	60	10
	Total for Stage:	**120**	

COURSE STRUCTURE DIAGRAM

SCQF Framework

The course structure is based on the Scottish Credit and Qualifications Framework (SCQF). The Framework comprises 12 Levels of which Levels 7-10 are directly relevant to the course, as shown below. Students generally enter University education from secondary school at Level 7 although this may not be the case for this course. Honours Degree awards are at Level 10. The table also shows:

- The credit standards required at each stage of the course;
- The number of years of study in the workplace supported by the Scott Sutherland School of Architecture and Built Environment to complete the award.

Structure of Graduate Apprenticeship in BSc (Hons) Construction and the Built Environment	Award / Exit Award	Scottish Credit + Qualifications Framework	Minimum level + Credit Requirements	Number of years study to complete the course in the workplace
Stage 1	Higher Apprenticeship in Cert HE Construction and the Built Environment	SCQF level 7	120 credits (Minimum of 90 credits at SCQF 7)	1 (Full-time)
Stage 2	Higher Apprenticeship in Dip HE Construction and the Built Environment	SCQF level 8	240 credits (Minimum of 90 credits at SCQF 8)	2 (Full-time)
Stage 3	Graduate Apprenticeship in BSc Construction and the Built Environment	SCQF level 9	360 credits (Minimum of 90 credits at SCQF 9)	3 (Full-time)
Stage 4	Graduate Apprenticeship in BSc (Hons) Construction and the Built Environment	SCQF level 10	480 credits (Minimum of 90 credits at SCQF 10)	4 (Full-time)

STAGE 1		Stage 1 Exit Award
SU1050	The Construction Industry: An Introduction	Higher Apprenticeship in Cert HE Construction and the Built Environment
SU1051	Building Design and its Determinants	
SU1052	Construction Project Management	

SU1053	Building Design and Technology	
STAGE 2		**Stage 2 Exit Award**
SU2050	Construction Procurement, Contracts and Law	Higher Apprenticeship in Dip HE Construction and the Built Environment
SU2051	Construction: Technologies, Methods, and Implications	
SU2052	Project Planning, Execution and Control	
SU2053	Integrated Construction Project	
STAGE 3		**Stage 3 Exit Award**
SU3050	Management of Design and Construction	Graduate Apprenticeship in BSc Construction and the Built Environment
SU3051	Building Pathology	
BS3009	Business Finance and Accounting	
SU3053	Managing Complex Projects	
STAGE 4		**Stage 4 Exit Award**
BS4006	Strategic and Commercial Management	Graduate Apprenticeship in BSc (Hons) Construction and the Built Environment
SU4051	Dissertation	
SU4052	Professional Practice Project	

STUDENT LEARNING EXPERIENCE

The University's vision is to be a disruptive educational innovator, developing a distinctive university model. To achieve this ambition, the University has committed to:

- Achieve high graduate employability;
- Cultivate student success;
- Enrich the student experience;
- Drive research excellence to support stakeholders;
- Offer innovation-driven solutions;
- Prioritise societal and economic impact

The University believes a professional education starts with excellent teaching and research within a supporting environment, and is about a lifelong and sustainable approach to working and living. The University's portfolio is informed by its commercial and public sector partners, who are instrumental in helping to develop courses to ensure their relevance for the evolving economy and society. Many courses include practical experience and placements, and are professionally accredited. These contribute to the University's position as one of the UK's top universities for graduate employment, and industry connections and engagement.

By combining the best of both academic and professional worlds, the University aims to give its students the best possible start to their careers. A degree from Robert Gordon University is confirmation to a future employer that a graduate from Robert Gordon University will possess an effective blend of learning, skills and experience.

The introduction of the Graduate Apprenticeship model is a natural development of the University's philosophy to combine theory, practice and experience in developing the skills, knowledge, confidence and professional practice of its students.

The principles of work-based learning are core to the philosophy of each Graduate Apprenticeship course at Robert Gordon University. It is fundamental to the Graduate Apprenticeship courses that students have access to relevant and up-to-date theory as they approach practical workplace situations and problems. Encountering theory and practice simultaneously will enable the student to critically analyse each in conjunction with the other. This will embed a rounded knowledge base and develop the ability to question situations while seeking a range of opinions in forming solutions to challenges.

Working in conjunction with learning will also enable students to develop the soft skills necessary in an ever-changing work-place. This means that the student will develop not only the knowledge and skills required for the technical aspects of their career but also the

ability to operate in the work-place and communicate effectively with internal and external parties.

Most of the practical aspects of the course take place in the student's workplace and will therefore vary according to the nature and resources of the student's employing organisation.

The course will concentrate on the following core themes:
- The construction management and delivery of quality and cost effective, sustainable, and safe projects to meet specified requirements;
- The development of the ability to work both individually and as part of a team in order to produce software products that meet clients' needs;
- The development and application of the business skills, techniques, and analyses necessary to manage construction projects delivery.

In addition, the resources of the Scott Sutherland School of Architecture and Built Environment are available to the student and support the teaching staff attached to the course. This includes access to dedicated studio spaces where students can work alongside their peers and workshop and laboratory facilities. Graduate Apprenticeship students will also have access to all the ICT facilities and software required to enable them to complete their course. Additionally, the University library houses a comprehensive collection of books and journals as well as an extensive range of electronic and digital resources which can be accessed remotely.

TEACHING AND LEARNING STRATEGY

The institutional teaching and learning strategy for Graduate Apprenticeships is characterised by a commitment to ensuring a genuine interaction between theoretical and work-based learning. This is supported by a pedagogical approach which embraces and makes use of experiential learning where experiences framed by reflection lead to learning (Schon, 1983) and andragogy where adult learners understand the need to learn something and self-direct their learning process via a negotiated learning plan.   Specifically students are encouraged to identify learning opportunities, consider the learning objectives associated with these and reflect upon these experiences to consolidate and apply learning. With regard to work-based learning activities, employers are guided in the identification of suitable activities and projects, and Workplace Mentors are supported in aiding students to reflect on and capture learning from the workplace and encourage the unification of knowledge and experience from the work and university spheres.

The Learning Process: Teaching Strategy and Methods

The course curriculum is designed to deliver the skills and knowledge identified by Skills Development Scotland's framework for Construction and the Built Environment. It has been developed as a coherent whole with an emphasis on the integration of theory, practical skills and applications. It enables the student to acquire and develop the subject knowledge and understanding necessary for successful professional employment. Close consultation with the student's employer will ensure that practical situations and projects encountered within the workplace correlate with the theoretical knowledge developed throughout the course. Opportunities for critical reflection and analysis of apparent or real disparities or conflicts between theory and practice will inform the student of the practicalities of real-world situations and form a rich basis for developing their professional

practice.

These skills are developed at levels corresponding to the Scottish Credit and Qualifications Framework levels and form a progression through levels 7, 8, 9 and 10.

As the student progresses through the course they are encouraged to expand their understanding and critical appreciation of building design and technology, project management, business management and professional practice.

A central feature of all Robert Gordon University Graduate Apprenticeship courses is that they promote a unified, integrated view of the subject area. Courses are designed to:

- Present a coherent underpinning of the theory and practice appropriate to the aims of the course which is further developed and applied within the work-based learning environment. This enables graduates of the course to adapt to future developments in the field.
- Reflect changes within the field and ensure that coverage is given to a selection of emerging topics so that students are aware of likely future developments in the subject together with their potential impact.
- Integrate the delivery of teaching across thematic boundaries to highlight fundamental aspects of interconnectivity and interdisciplinarity within different areas of the syllabus.
- Integrate modes of assessment which complement the methodology of work-based learning and support the development of workplace communication skills.
- Facilitate students to exhibit competence and achievement across a number of different themes (integrated assessment).
- Encourage students to combine elements of their learning from different parts of the course and to show their accumulated and integrated knowledge and understanding of a topic or subject area (synoptic assessment).

The professionally-orientated nature of the course requires students to obtain general and specific skills, this being addressed by a combination of teaching and learning methods. These methods are built around mentored workplace learning directed, supported and extended by University guided, student-centred learning including virtual lectures, tutorials, discussion forums, workshops and private study.

Teaching and Learning Approaches

The main goal of the teaching and learning strategy for the University's Graduate Apprenticeship's is to enable students to become critical, reflective, independent learners who are active participants in the learning process and who develop the motivation and autonomy needed to take control and regulate their own educational experiences and develop the discipline of continuous professional development and life-long learning. This means that, throughout their course of study, students will begin to take more responsibility for their own acquisition of necessary skills and knowledge so that, by the end of their degree, they will be in a position to evaluate and assess their own effectiveness.

This process is driven by various objectives such as the need for constructive alignment of syllabus and learning approaches and makes use of a wide-range of appropriate delivery styles. In addition to mentored workplace learning these include conventional instructional teaching methodologies, social learning activities such as group discussion, as well as constructivist, investigative approaches such as problem-based learning and enquiry-

based learning.

The delivery of material centres on using the University's VLE, CampusMoodle, virtual campus platform. This centres on the creation and sustenance of active community groups, and delivery of topics is structured in such a way as to facilitate the maintenance of student interaction. Papers, supported by recommended reading lists and private study guides, are augmented by a discussion forum and the initiation of discussion threads. Live chat rooms are used to encourage debate and the exchange of ideas between candidates, on the one hand, and with tutors on the other. Video conferencing is used, as required, during specific workshops and presentation/discussion of project work. The Library provides support for all students learners and is progressively expanding its provision of electronic texts such as e-journals and books.

Pedagogical Progression

The Graduate Apprenticeship in BSc (Hons) Construction Management and the Built Environment is set up to cater for new entrants and to those mature individuals who have a specialised but narrow expertise of the industry. This is delivered through a course structure which builds on a generic introduction of the industry, its working relations and requirements through to the use of complex technologies and delivery structure. The learning progresses from a formative base of knowledge and understanding at SCQF7 and SCQF8 which also combines factual information with contextual interpretation and application. During SCQF9 students interpret and apply key aspects of knowledge and understanding to a set professional standard. In SCQF10 and as independent learners, students are increasingly encouraged to integrate vocational skills gained through investigation analysis and evaluation of problems relating to the built environment.

The delivery of Building Technology and Construction Project Management reflects the above pedagogical philosophy from year one to year four. The first year starts with an introduction to the industry and the parties involved in a construction project and its different stages. By the end of year one the students should be familiar with the duties of the construction manager and requirements of each project stage from inception to completion. This is further detailed in year two by exploring the different procurement options and the obligations and working relations of the different parties. This understanding and appreciation of requirements and relationships underline the need for planning and the use of different software technologies to produce a comprehensive project plan complete with its resource and budgeting requirements. In year three the students are encouraged to explore different construction management process and techniques to enhance efficiencies and effectiveness of project delivery. This is then applied to different types of projects with different complexities of technology, construction, budgeting issues, procurement, and risk. Finally, in year four the student will work independently to integrate the knowledge and understanding developed through the previous years to independently manage a construction project.

The delivery of building technology builds on an introductory module to the industry and the different types of buildings and the factors affecting their design and construction. The rest of the modules throughout the course consider in greater detail building design and technology considerations for different types of building. In year one it considers the analysis and application of materials, structure and construction of domestic buildings. Basic structural principles in relation to forces and loads applied to typical building of domestic scale; Investigation and critical appraisal of principles of timber frame construction; Use and specification of building components and basic domestic scale services; drainage;

heating, ventilation. It will also introduce masonry domestic buildings and the analysis and application of materials, construction and structure of masonry domestic buildings. In later stages and further years the investigation of building technologies will then progress to consider the technologies applied to low/medium size contemporary buildings. Individual roles and team issues relating to the realisation of the design for the built environment will be examined. Consideration and the assessment of the sources and causes of decay in buildings and the application of appropriate maintenance, refurbishment and rehabilitation process.

The course and module mappings against the SDS framework (see appendix) and SCQF level learning outcomes reflect the progressive development of knowledge and abilities of the students as required by the framework. The early modules/stages underpin an understanding and development of knowledge of a construction manager role within design, construction and management and the requirements to manage smaller project with few relationships. The later stages build on this knowledge to consider larger projects with more complex relationships and issues such as maintenance and refurbishment of existing infrastructures, environmental aspects, to more legal and financial complexities. The learning methods adopted will within the early years concentrate on directive underpinning of the knowledge and understanding of facts and principles. The later stages will encourage independent learning and further reflection and critical evaluation and justification of for example chosen methods of construction, material justification and assessment of risk.

MODES OF DELIVERY

Work Based Learning

The workplace forms the central learning environment for the student. It is important, however, to appreciate that whilst much learning takes place naturally in a workplace that this typically happens in an unplanned and unstructured way, with limited opportunity for reflection or consolidation of learning. For the purposes of this course there needs to be a structure in place to guide the student and ensure that learning outcomes are met. This structure is governed by a subject framework established by Skills Development Scotland and developed into a curriculum by the University who will work closely with the student's employer to ensure that learning outcomes are achieved through correlated theory and practice. This will be expressed for the student in the form of a learning plan which will guide them through the course and help to ensure that workplace learning is supported, resourced, and planned with space and time for critical reflection and consolidation of learning.

Workplace Mentoring

Key to the delivery and support of work based learning is the Workplace Mentor. Partner employers are required to assign a Workplace Mentor whose role will be to oversee the work based learning undertaken by the student. The University provides employers with guidance as to how appropriate Workplace Mentors should be selected, and provide Workplace Mentors with training and support via induction and ongoing liaison designed to help mentors understand the remit of their role and the activities associated with this. Workplace Mentors will have an overview of the course and its aims, will develop the student's learning plan, assign projects and in-house placements and provide feedback on work-based activities. Workplace Mentors are granted 'Affiliate Student' status enabling them to access all course learning materials via the University's VLE and they may join an

online mentor forum.   In addition to mentoring support for students, supplementary support may be provided by the employer, for example when subject matter experts are brought in to provide specific business or technical expertise or through access to other departments within the organisation. This enables work-based learning to reflect the range of the curriculum as the student progresses in their studies, therefore providing adequate support for the student's workplace learning on a project, placement or task basis.

Employers' Responsibilities

Partner employers commit to supporting students via the signing of a Collaboration Agreement which sets forth the obligations of the employer and the University.   In supporting students, employers are obliged to provide a work based learning environment which adequately represents and reflects the students' course to ensure appropriate functional expertise, supporting infrastructure and professional and technical knowledge within the organisation.   Central to this is the provision of a supportive and educative work-based learning environment which affords opportunities to learn, gain new experiences, acquire and build competencies, and reflect on and apply learning. Additionally, employers are obliged to provide protected time to allow students to attend on-campus study days and to undertake study-related activities such as participation in online discussion forums, and access to the requisite IT hardware and software to facilitate this.

Student Role in Learning

Students are expected to be active participants in the learning process. This means that there is a requirement for students to extend their learning from formally delivered materials through wider reading, research and self-directed enquiry. As students develop over the duration of the course, they are expected to become increasingly self-directed and self-motivated, taking greater control of the study process, and defining their own personal objectives for learning. Students are encouraged to reflect regularly upon their learning and to establish a view of their own progress and development, which they triangulate with feedback from their Workplace Mentor and course delivery team. Students are expected to utilise the full range of facilities and resources available to them, for example the services and resources provided by the library.

Lecture

Lectures are for the purpose of dissemination of information and the demonstration of techniques. These will usually be available via the VLE but may also be delivered face to face at RGU as part of an on-campus event.

Tutorials

Tutorials may be arranged remotely (e.g. online via the VLE) or in person. Tutorials are an opportunity to raise questions, discuss ideas and consequences and exchange experiences and lessons learned. This format is used for a wide range of activities, each suited to the particular subject. It may consist of the staff supporting students engaged in problem-solving or may consist of a series of group exercises where each group is encouraged to allocate responsibilities, allocate tasks, etc. Generally this type of teaching is used to support the lecture, clarify the material and experiment with the techniques and skills required.

On-Campus Events

It is anticipated that from time to time it will be beneficial for Graduate Apprenticeship students to meet on-campus for a variety of events. These may be group sessions where students can discuss the relationship between theory and practice through critical analysis and reflection. On-campus events will also give students the opportunity to develop their professional practice through ideas exchange with peers and academic staff and through other networking. On-campus events will be organised in consultation with employers when there is benefit to be gained for students in attending such events.

Individual Project

The student will agree a specification for this extended piece of work with their University tutor and their Workplace Mentor. Individual project work will be integrated, where possible, into the student's place of work, and live projects may be customised to the relevant industry or specialism. The work will vary depending on the stage of study. At the early stages it may include an investigative approach to one aspect of construction management related to a defined project. This may include things as recommendation of a construction method, a procurement and a contract option, or the preparation of a health and safety plan. Progressively this will increase in scale and complexity ultimately culminating in the preparation of a full integrated delivery plan for a construction project. The work will be completed under the guidance and supervision of the student's assigned University tutor.

ASSESSMENT

A variety of assessment methods are used in this course, as deemed appropriate to the learning outcomes and subject material being assessed and the context in which the material is delivered. Assessment will be in line with the University Assessment Policy and quality assurance and will remain the responsibility of the University.

Coursework

Coursework may be used as a form of summative assessment, and within the context of Graduate Apprenticeship courses this may be work-related, for example based around a project being undertaken in the workplace, or work-centric, such as a report in response to a case study scenario where the case study is built to reflect current issues within a specific sector. Coursework may take many forms, for example reports, essays, and integrative project-based modules where employers are given direction and support by the University as to the appropriate nature and scope of projects. Coursework may also include portfolios of evidence demonstrating the application of specific skills and knowledge allowing a view to be formed of the extent to which a student has satisfied learning outcomes. The University provides students with access to ePortfolio software in order to assist students in their creation of portfolios. Where a deadline applies to a particular piece of work the student will be informed at the commencement of the relevant module. Appropriate review measures will be implemented in order to ensure that the students' coursework is individual in nature and not the result of a group effort involving co-workers and colleagues.

Work-Based Learning

Amongst the assessment tools suitable for the context of work-based learning are diary

logs, student blogs, vlogs, other social media engagement, logs developed through critical analysis and reflection which can be worked up as case studies, written critical analysis of theory and practice, reports and presentations. As discussed above, portfolio work also provides an invaluable self-compiled reference resource and starting point for additional learning for the student as they progress into professional practice. Whilst the output of work-based learning may form the basis for assessment, Workplace Mentors will not be expected to play a role in the evaluation of work submitted to Robert Gordon University for summative assessment purposes.

Computer Aided Assessment

Computer-assisted assessment packages integrated into the VLE may be used for formative and/or summative assessment, to enhance student engagement and increase the speed of feedback.

Unseen Exams

Unseen exams may be used to assess students' base of knowledge and understanding.

Individual Project

Projects are used in later stages as a learning vehicle and assessment process which allows students to tackle more complex problems that often require the integration of knowledge and understanding, and intellectual skills from a variety of subject areas. These projects often require the integration and practical application of the learning and knowledge gained previously. They provide students with the opportunity to learn new investigative and evaluative skills and often used as the vehicle for gaining valuable employability skills or as a means of professional enrichment. Project work is usually assessed by a combination of assessment of the completed project deliverable such as a drawing or a model, and an accompanying report or dissertation documenting the project work undertaken by the student. Assessment of project work is undertaken on a continuous basis. Individual project work will be integrated, where possible, into the student's place of work, and live projects may be customised to the relevant industry or specialism.

Assessment Types

Many modules use a combination of assessment types that integrate modes of assessment in order to balance the types of activity and purposes of assessment, such as formative and summative.

Where there are a number of modules that cover allied subject material, integrated assessment may be used to facilitate students to exhibit competence and achievement across a number of different themes.

At all Stages, synoptic assessments embedded into projects and other practical assignments are used to encourage students to combine elements of their learning from different parts of the course and to show their accumulated knowledge and understanding of a set of topics or a subject area.

A student's Honours Classification is based solely on performance in Stage 4 of the course.

The Assessment of Student Work

The University has developed a Grading Scheme for assessment purposes, details of which may be accessed at:

http://www.rgu.ac.uk/academicregulations

It is important to note that all grades indicated to students during the course of the academic session are provisional until confirmed by an Assessment Board. The Board consists of academic staff involved in course delivery as well as External Examiners, and a final decision is confirmed on the performance of every student for each module undertaken by them and any eligibility for an award. This is subsequently confirmed to each student in a published transcript, and may be accessed electronically on the Student Portal.

Any potential barriers to students with disabilities or specific needs are assessed by the School's Disability Coordinator who liaises with the Dyslexia and Disability Service and appropriate teaching staff to ensure that such students are not disadvantaged during an assessment. In the case of examinations, students must register by a specified deadline date to have specific examination requirements considered.

SUPPORT FOR TEACHING, LEARNING AND ASSESSMENT

The University provides a number of means of supporting teaching and learning:

- Student and mentor induction sessions
- An ongoing scheme of personal/pastoral support for students
- Ongoing liaison with mentors
- An extensive programme of student study skills delivered through the *Library* and the *Study Skills and Access Unit*
- An extensive library of learning resources
- Close collaboration with the student's employer and with industry and professional, statutory and regulatory bodies
- A dedicated VLE - *CampusMoodle,* http://campusmoodle.rgu.ac.uk/
- A commitment to knowledge exchange and technology transfer through focused research activity, which contributes to the critical underpinning for all taught courses
- On-campus activities in the state-of-the-art, purpose-built facilities and buildings

In addition to the above the course will have a dedicated Course Leader to support the development and the delivery of the course. Course Leaders will also act as students' Personal Tutors to support them in successfully completing the course. They will deal with students' course related and personal issues, guiding them to successful completion of the course. Module Coordinators are also available to support students with course and module related issues and concerns. Dedicated administrative support will be available to deal with any queries students may have.

In addition to this, students can access study support material from the Department for the Enhancement of Learning, Teaching and Access (DELTA). This is the central department that supports the Schools in implementing the University's strategic goals in teaching and learning, extending access and the student experience. Further information can be found at: **http://www.rgu.ac.uk/delta.**

Frequent informal feedback is provided to students through regular contact with academic staff and Workplace Mentors. Feedback is provided on all assessed work normally within 20 working days of submission of the work.

Provisional grades are made available electronically with final grades available electronically via the Student Portal following ratification by the Assessment Board.

MONITORING OF QUALITY AND STANDARDS

The University employs several mechanisms for evaluating and improving the quality and standards of teaching, learning and assessment, including:

- *Annual Course/Programme Appraisals* are prepared for each course and reviewed and approved by Course/Programme Management
- Course Management Teams and School Academic Boards which consider, amongst other things, feedback generated from student questionnaires
- *Institution-Led Subject Review*, involving external panel members, on a six-yearly basis to formally review its major subject provision, followed by a three year interim review to monitor progress against actions/issues raised through the review process;
- *External Examiner Annual Reports*
- Ongoing liaison with industrial/professional liaison groups

Formal Committees with responsibility for monitoring and evaluating quality and standards:

- Staff/Student Liaison Committees, or equivalent
- Course/Programme Management Teams
- School Academic Boards
- Assessment Boards
- Quality Assurance and Enhancement Committee and associated Sub-Committees

Annual Course Appraisals are reviewed and approved by the Course Management Team and the School Academic Board which meet at least once per semester. The Course Management Team considers teaching and learning issues arising from feedback generated by External Examiner Annual Reports, staff/student engagement/partnership liaison, and Student Experience Questionnaires.

FEEDBACK FROM STUDENTS

The University and RGU:Union work in partnership to create an environment which stimulates:

- the participation of students, by empowering them to proactively provide views and opinions
- a supportive learning community where students and staff engage in meaningful dialogue
- the engagement of students in the design of solutions and enhancements

This approach is underpinned by the Student Partnership Agreement which promotes the ethos of partnership at all levels of the University. Further information can be found at the Student Representation and Partnership CampusMoodle Area:

www.rgu.ac.uk/studentpartnership.

There are a variety of opportunities for students to provide feedback to the University, and to become actively involved in shaping their learning experience. These opportunities are integral to the University's approach to the quality assurance and enhancement of teaching and learning, and the holistic student experience. Mechanisms through which students are engaged and supported are:

- participation in Student Experience Questionnaires (SEQ) and the National Student

Survey (NSS)
- staff/student liaison arrangements at course/programme level
- support for Student Representatives
- student representation on Institution-Led Subject Review Panels and Validations
- student representation on key University committees
- Annual meetings of the Principal with Student Representatives.

In addition, there is regular collaboration and engagement with officers of the Student Union. More detailed information on student engagement may be found at the *Student Involvement* website at: **www.rgu.ac.uk/studentinvolve.**

The course cohort will be offered the opportunity to nominate a student representative. Student School Officers take part in the School Academic Board where they can contribute to discussions. Students can raise issues with the Course Leader who will discuss concerns and recommend or action solutions as appropriate.

NOTE

This document constitutes one of two course documents that should be read together:
Course Specification: Core Award Data
Course Specification: Student Learning Experience

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In compiling this information the University has taken every care to be as accurate as possible, though it must be read as subject to change at any time and without notice. The University reserves the right to make variations to the contents or methods of delivery of courses, to discontinue, merge or combine courses, and to introduce new courses.

BSc (Hons) Construction Management and the Built Environment
Learning Outcomes - Mapping

SDS High Level Learning Outcome

	Stage 1				Stage 2				Stage 3				Stage 4		
	SU1050	SU1051	SU1052	SU1053	SU2050	SU2051	SU2052	SU2053	SU3050	SU3051	BS3009	SU3053	BS4006	SU4051	SU4052
Learning Outcome 1: Design and Technology														x	x
Technology of Buildings Including Materialss	x	x		x		x	x	x	x			x			
Principles of Design and Construction	x	x		x		x		x	x						
Detailed Pathology of Buildings and the related Defects, Causes and Remedies								x		x					
Sustainability	x	x		x		x		x	x	x					
Learning Outcome 2: Business Management														x	x
Law					x			x	x	x					
Data Management	x			x	x	x		x	x		x	x	x	x	
Business Finance and Accounting											x		x		
Business Strategy and Management			x		x								x		
Learning Outcome 3: Project and Delivery Management															
Measurement							x	x							
Project Management	x		x		x		x	x	x	x	x	x		x	x
Project Planning							x	x							x
Project Execustion							x		x						x
Project Risk Assessment and Management	x		x		x		x	x	x	x	x	x	x	x	x
Commercial Management	x		x		x		x	x	x	x	x	x	x		x
Learning Outcome 4: Professional Practice															
comply with overarching professional standards		x		x	x	x		x	x	x		x	x	x	x
Exercise Responsibilities in an Ethical Manner		x	x	x	x	x	x	x		x	x		x	x	x
Maintain Current Awareness of Sustainability and Environmental Considerations		x		x		x		x	x	x		x		x	x
Mainatin Sound Theoratical Understanding of Current and Emerging Professional Practice		x	x	x	x	x	x	x	x	x	x	x	x	x	x
Apply Knowledge of Health, Safety, Welfare, Environment and Quality		x	x	x		x	x	x	x	x		x		x	x
Learning Outcome 5: Personal and Interpersonal															
Communications	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Personal Attributes		x	x		x		x	x	x	x	x	x	x	x	x
Professioanl Attributes		x	x	x	x	x	x	x	x	x	x	x	x		x
Team Working	x	x	x	x		x	x	x				x	x		x