Ministry of Education and Science of the Republic of Kazakhstan

Non-commercial Joint-stock Company Holding «Kasipkor»

**Specialty:** Construction Design

**Qualification:** Designer

Astana 2014

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**1. PROGRAM OUTLINE**

This document defines the curriculum framework and credit structure for Spatial Design: Construction Design undergraduate awards of The Foundation Diploma, Foundation Degree and Final Major Project at the College/University.

Aims and Objectives of the Programme

The aim of the programme is to

* Introduce students to the world of design and technology associated with that sector of the industry.
* Introduce students to design history, art & design, business and industry, culture and innovation, World perspective on the industry, including materials, sustainability, business and entrepreneurship, professional practices.
* Prepare students for progression through the programme.
* Introduce/prepare students for the world of work and business/industry

Graduates will leave the College/University equipped with the knowledge and skills in Spatial Design: Construction Design accompanied with fundamental life skills in areas such as team working, inter disciplinary collaboration, communication, entrepreneurial skills and broader business awareness necessary to survive, succeed and innovate in the world of the creative industries.

The programme aim to provide graduates with the knowledge and skills appropriate to a range of career outcomes in architecture and construction design environment architectures. Students are encouraged to develop their individual creative ability and support this with the development of a high level of technical skills. In particular, the programmes aim to enable students to develop:

* A range of creative, technical and professional skills relevant to employment in architecture construction design environment architectures and related areas; and a comprehensive knowledge of contemporary professional practice and the creative process in the professional field in which they will specialise and an awareness of current areas of development and innovation.

The objectives are:

* For students to successfully achieve the Awards and final Degree Award within the programme as laid out within each programme pathway
* For students to progress to the final destination of the programme, through the Final Major Project to the Foundation Degree Award (FdA)
* For students to be successful in their chosen and final destinations on completion of the programme

For students to be able to demonstrate upon completion of the programme combined with their associated learning and assessment strategy the abilities to:

* Demonstrate a detailed, focused and tangible understanding and awareness of current developments related to design for construction.
* Initiate, develop and sustain ideas; analyse and critically evaluate information; demonstrate visual and aesthetic awareness; solve problems and make decisions within self-initiated projects
* Present ideas and resolved outcomes through the informed selection and creative and inventive use of traditional and ‘smart’ materials and technologies, techniques and processes
* Communicate effectively with specialist and non-specialist audiences, through the use of visual, verbal and physical means
* Work independently and collaboratively to initiate, manage and conclude client briefs and projects within agreed and set timescales
* Critically evaluate the social, cultural and professional contexts within which design for the Interior Design sectors/environments

**2. STUDY CURRICULUM**

Standard duration of study: 2 years 10 months

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **№** | **Study cycles and study disciplines (modules)** | **Forms of Control** | | | | | **Volume of study time (hour, credit)** | | | | | | | | | |
| **examination** | **Pass** | **Number of quizzes** | **Course work (portfolio projects)** | | **Total Guided Learning Hours**  **1 credit = 6 GLH** | | **Number of credits** | **Including:** | | | | **Distribution by semesters** | | |
| **Theoretical lessons** | | **Practical training (lab-practical works)** | | **Semester 1 to 6** | | **Year 1 to 3** |
| 1 | 2 | 3 |  |  | 4 | | 5 | | 6 | 7 | | 8 | | 9 | | 10 |
| **Speciality Progression Programme** | | | | | | | | | | | | | | | | |
| 1 | Assess Health and Safety Risks in Your Business | N/A | N/A | N/A | N/A | | 40 | 8 | | 20 | 20 | | |  |  | |
| 2 | Structure of the Construction Industry | N/A | N/A | N/A | N/A | | 30 | 6 | | 15 | 15 | | |  |  | |
| 3 | Use of Science and Maths in Construction | N/A | N/A | N/A | N/A | | 40 | 7 | | 20 | 20 | | |  |  | |
| 4 | Sustainability | N/A | N/A | N/A | N/A | | 30 | 6 | | 15 | 15 | | |  |  | |
| 5 | Scientific and Mathematical Applications for  Construction | N/A | N/A | N/A | N/A | | 40 | 8 | | 20 | 20 | | |  |  | |
| 6 | Performing Blockwork Operations | N/A | N/A | N/A | N/A | | 30 | 6 | | 15 | 15 | | |  |  | |
| 7 | Exploring Carpentry and Joinery | N/A | N/A | N/A | N/A | | 30 | 6 | | 15 | 15 | | |  |  | |
| 8 | Construction Processes and Operations for Low-rise Domestic Buildings | N/A | N/A | N/A | N/A | | 30 | 6 | | 15 | 15 | | |  |  | |
| 9 | Construction Drawing Techniques | N/A | N/A | N/A | N/A | | 30 | 6 | | 15 | 15 | | |  |  | |
| 10 | Performing Joinery Operations | N/A | N/A | N/A | N/A | | 30 | 5 | | 15 | 15 | | |  |  | |
| 12 | Performing Carpentry Operations | N/A | N/A | N/A | N/A | | 30 | 6 | | 15 | 15 | | |  |  | |
| 13 | Exploring Trowel Operations | N/A | N/A | N/A | N/A | | 30 | 6 | | 15 | 15 | | |  |  | |
| 14 | Exploring Painting and Decorating | N/A | N/A | N/A | N/A | | 30 | 6 | | 15 | 15 | | |  |  | |
| 15 | Performing Plumbing Operations | N/A | N/A | N/A | N/A | | 30 | 6 | | 15 | 15 | | |  |  | |
| 16 | Performing Electrical Operations | N/A | N/A | N/A | N/A | | 30 | 6 | | 15 | 15 | | |  |  | |
| 17 | Exploring Plastering and Dry-lining Operations | N/A | N/A | N/A | N/A | | 30 | 6 | | 15 | 15 | | |  |  | |
| 18 | Exploring Roofing Operations | N/A | N/A | N/A | N/A | | 30 | 5 | | 15 | 15 | | |  |  | |
| 19 | Applying Coatings by the Airless Spray Method in the Workplace | N/A | N/A | N/A | N/A | | 30 | 5 | | 15 | 15 | | |  |  | |
| 20 | Hanging Standard Paper Wall coverings in the Workplace | N/A | N/A | N/A | N/A | | 30 | 6 | | 15 | 15 | | |  |  | |
| 21 | Hanging Wide-width Vinyls in the Workplace | N/A | N/A | N/A | N/A | | 30 | 6 | | 15 | 15 | | |  |  | |
| 22 | Installing Coving, Centre-pieces and Texture  Products in the Workplace | N/A | N/A | N/A | N/A | | 30 | 6 | | 15 | 15 | | |  |  | |
| 23 | Producing Broken Colour Work and Basic Stencilling | N/A | N/A | N/A | N/A | | 30 | 6 | | 15 | 15 | | |  |  | |
| 24 | Health and safety in building services engineering | N/A | N/A | N/A | N/A | | 40 | 8 | | 20 | 20 | | |  |  | |
| 25 | Principles of electrical science | N/A | N/A | N/A | N/A | | 40 | 8 | | 20 | 20 | | |  |  | |
| 26 | Electrical installations technology | N/A | N/A | N/A | N/A | | 40 | 8 | | 20 | 20 | | |  |  | |
| 27 | Installation of wiring systems and enclosures | N/A | N/A | N/A | N/A | | 40 | 8 | | 20 | 20 | | |  |  | |
| 28 | Understand how to communicate with others within building services engineering | N/A | N/A | N/A | N/A | | 30 | 6 | | 15 | 15 | | |  |  | |
| **Foundation Diploma** | | | | | | | | | | | | | | | | |
| 29 | Assess Health and Safety Risks | N/A | N/A | N/A | N/A | | 60 | 15 | | 30 | 30 | | |  |  | |
| 30 | Conceptual Design for Construction Design | N/A | N/A | N/A | N/A | | 30 | 15 | | 15 | 15 | | |  |  | |
| 31 | Introduction to Design and Research Skills | N/A | N/A | N/A | N/A | | 60 | 15 | | 30 | 30 | | |  |  | |
| 32 | Sustainable construction | N/A | N/A | N/A | N/A | | 60 | 15 | | 30 | 30 | | |  |  | |
| 33 | Colour Theory and Practice | N/A | N/A | N/A | N/A | | 60 | 15 | | 30 | 30 | | |  |  | |
| 34 | Mathematics | N/A | N/A | N/A | N/A | | 60 | 15 | | 30 | 30 | | |  |  | |
| 35 | Apply Health and Safety and Environmental Legislation and Working Practices | N/A | N/A | N/A | N/A | | 60 | 15 | | 30 | 30 | | |  |  | |
| 36 | Design and Practice | N/A | N/A | N/A | N/A | | 60 | 15 | | 30 | 30 | | |  |  | |
| 37 | Introduction to Materials, Processes and Technical Skills in Design and Construction | N/A | N/A | N/A | N/A | | 60 | 15 | | 30 | 30 | | |  |  | |
| 38 | Spatial Design Project Planning, Implementation and Review | N/A | N/A | N/A | N/A | | 60 | 15 | | 30 | 30 | | |  |  | |
| 39 | Introduction to Visual Language in Design | N/A | N/A | N/A | N/A | | 60 | 15 | | 30 | 30 | | |  |  | |
| 40 | Spatial Exploration: CAD Modelling and Visualisation | N/A | N/A | N/A | N/A | | 60 | 15 | | 30 | 30 | | |  |  | |
| 41 | Maintenance and Adaptation of Buildings | N/A | N/A | N/A | N/A | | 60 | 15 | | 30 | 30 | | |  |  | |
| 42 | Building technology in construction | N/A | N/A | N/A | N/A | | 60 | 15 | | 30 | 30 | | |  |  | |
| 43 | Design Drawing Media and Communication for Spatial Design – Construction | N/A | N/A | N/A | N/A | | 60 | 15 | | 30 | 30 | | |  |  | |
| **Foundation Degree** | | | | | | | | | | | | | | | | |
| 44 | Communication and Visualisation | N/A | N/A | N/A | N/A | 45 | | 15 | | 25 | 20 | |  | | |  |
| 45 | ContextualStudies/ArchitecturalTheoryandContext | N/A | N/A | N/A | N/A | 30 | | 15 | | 15 | 15 | |  | | |  |
| 46 | HumanFactorsandUserCentredDesign | N/A | N/A | N/A | N/A | 30 | | 15 | | 15 | 15 | |  | | |  |
| 47 | Introduction to Design | N/A | N/A | N/A | N/A | 30 | | 15 | | 15 | 15 | |  | | |  |
| 48 | Major Project | N/A | N/A | N/A | N/A | 30 | | 15 | | 15 | 15 | |  | | |  |
| 49 | Mapping Your Profession | N/A | N/A | N/A | N/A | 30 | | 15 | | 15 | 15 | |  | | |  |
| 50 | Planning for Enterprise | N/A | N/A | N/A | N/A | 30 | | 15 | | 15 | 15 | |  | | |  |
| 51 | Rehabilitation and Reuse | N/A | N/A | N/A | N/A | 30 | | 15 | | 15 | 15 | |  | | |  |
| 52 | ServiceDesignforCommunities | N/A | N/A | N/A | N/A | 30 | | 15 | | 15 | 15 | |  | | |  |
| 53 | ShapingyourIdeas into a Design | N/A | N/A | N/A | N/A | 30 | | 15 | | 15 | 15 | |  | | |  |
| 54 | SpecialistStudy2:Parametrics,CommunicationandRepresentation | N/A | N/A | N/A | N/A | 30 | | 15 | | 15 | 15 | |  | | |  |
| 55 | SpecialistStudy3: DualUseEnvironment | N/A | N/A | N/A | N/A | 68 | | 30 | | 34 | 34 | |  | | |  |
| 56 | Tangible Media | N/A | N/A | N/A | N/A | 30 | | 15 | | 15 | 15 | |  | | |  |
| 57 | The Profession,Enterpriseandforms of engagement in space/interior design concepts | N/A | N/A | N/A | N/A | 30 | | 15 | | 15 | 15 | |  | | |  |
| 58 | TheoryandPractice:DebateandPolemic | N/A | N/A | N/A | N/A | 30 | | 15 | | 15 | 15 | |  | | |  |
| 59 | TheoryandContext | N/A | N/A | N/A | N/A | 30 | | 15 | | 15 | 15 | |  | | |  |
| 60 | Urban Environments & Artefact and Element | N/A | N/A | N/A | N/A | 30 | | 15 | | 15 | 15 | |  | | |  |
|  | **Total:** |  |  |  |  | **2313** | | **667** | | **1159** | **1154** | |  | | |  |

**3. PROGRAM STRUCTURE**

|  |  |  |
| --- | --- | --- |
| Name of cycles and study disciplines (modules) | Knowledge competences and skills learned | |
| Name of discipline (module):  **Assess Health and Safety Risks in Your Business** | Learning Outcomes (LO) | |
| LO1  LO2  LO3  LO4  LO5 | Understand the importance of health, safety and welfare in the construction and built environment sector.  Know the common safety signs found in the construction workplace  Be able to perform risk assessments in the construction workplace  Be able to carry out risk assessments  Be able to specify control measures in the construction workplace |
| **Structure of the Construction Industry** | LO1  LO2  LO3  LO4 | Understand the diversity and complexity of the construction industry  Understand the contribution the construction industry makes to our economic well-being  Know about human resources in the construction industry  Know about careers in the construction industry |
| **Use of Science and Maths in Construction** | LO1  LO2  LO3 | Understand the nature of forces and their effect on construction materials  Understand how changes in temperature affect construction materials  Be able to use simple formula to solve construction problems |
| **Sustainability** | LO1  LO2  LO3 | Understand the concept of sustainability in the construction and built environment sector  Know the issues affecting the development of a sustainable built environment  Know how sustainability can benefit the built environment both locally and nationally |
| **Scientific and Mathematical Applications for Construction** | LO1  LO2  LO3  LO4 | Understand the nature of forces on construction materials  Understand how changes in temperature affect construction materials  Be able to use formula to solve construction problems  Be able to use simple trigonometry and graphical methods to solve construction problems |
| **Performing Blockwork Operations** | LO1  LO2  LO3 | Know the hand tools and materials commonly used to perform block-work tasks  Understand the important health, safety and welfare issues associated with block-work tasks  Be able to apply safe working practices to the setting out and construction of corners and junctions in solid block walling to given specifications |
| **Exploring Carpentry and Joinery** | LO1  LO2  LO3 | Know the hand tools and materials commonly used to perform carpentry and joinery tasks  Understand the important health, safety and welfare issues associated with carpentry and joinery tasks  Be able to apply safe working practices to mark out and form joints for a timber frame to a given specification |
| **Construction Processes and Operations for Low-rise Domestic Buildings** | LO1  LO2  LO3 | Know the stages of a construction project  Know the traditional and modern construction processes and operations used in low-rise domestic construction  Understand the properties and uses of natural, processed and manufactured construction materials |
| **Construction Drawing Techniques** | LO1  LO2  LO3 | Know the different types of drawings used in the construction industry  Know the drawing equipment and materials used to produce construction sketches and drawings  Be able to apply construction drawing standards and conventions to produce sketches and working drawings |
| **Performing Joinery Operations** | LO1  LO2  LO3 | Know the hand tools and materials commonly used to perform joinery tasks  Understand the important health, safety and welfare issues associated with joinery tasks  Be able to apply safe working practices to mark out and form joints for a timber product |
| **Performing Carpentry Operations** | LO1  LO2  LO3 | Know the hand tools and materials commonly used to perform carpentry tasks  Understand the important health, safety and welfare issues associated with carpentry tasks  Be able to apply safe working practices to perform carpentry tasks |
| **Exploring Trowel Operations** | LO1  LO2  LO3 | Know the hand tools and materials commonly used to perform carpentry tasks  Understand the important health, safety and welfare issues associated with carpentry tasks  Be able to apply safe working practices to set out and construct solid brick and block walling to given specifications |
| **Exploring Painting and Decorating** | LO1  LO2  LO3 | Know the hand tools, materials and access equipment used by decorators to perform specified tasks  Understand safe working practices to prepare new and previously painted surfaces for painting  Be able to apply safe working practices in the application of paints to prepared surfaces |
| **Performing Plumbing Operations** | LO1  LO2  LO3  LO4 | Know the hand tools and portable power tools commonly used to perform plumbing, heating and ventilating tasks  Understand the important health, safety and welfare issues associated with plumbing, heating and ventilating tasks  Be able form pipe joints to given specifications  Be able install pipework systems to given specifications |
| **Performing Electrical Operations** | LO1  LO2  LO3  LO4 | Know the hand tools and portable power tools commonly used to perform plumbing and heating and ventilating tasks specified tasks  Understand the important health, safety and welfare issues associated with plumbing, heating and ventilating tasks  Be able to form pipe joints to given specifications  Be able install pipework systems to given specifications |
| **Exploring Plastering and Dry-lining Operations** | LO1  LO2  LO3  LO4 | Know the hand tools and portable power tools commonly used to perform plumbing, heating and ventilating tasks  Understand the important health, safety and welfare issues associated with plumbing, heating and ventilating tasks  Be able to form pipe joints to given specifications  Be able to install pipework systems to given specifications |
| **Exploring Roofing Operations** | LO1  LO2  LO3  LO4  LO5 | Understand tools, materials and equipment used for roofing tasks  Understand the tools and equipment used to carry out roofing tasks  Develop practical skills using safe techniques to carry out roofing tasks  Understand the methods used to set up sloping roof surfaces  Know how to Fix plain roof tiles to a sloping roof surface |
| **Applying Coatings by the Airless Spray Method in the Workplace** | LO1  LO2  LO3  LO4  LO5 | Understand the instruction and information relating to the work and resources when applying coatings by the airless spray method  Know how to comply with relevant legislation in order to maintain safe and healthy working practices  Be able to select the required quantity and quality of resources to apply coatings by the airless spray method  Be able to minimise the risk of damage when applying coatings by the airless spray method  Comply with contract information when applying coatings by the airless spray method |
| **Hanging Standard Paper Wall coverings in the Workplace** | LO1  LO2  LO3 | Be able to maintain safe and healthy working practices when hanging standard paper wall coverings.  Be able to select the required quantity and quality of resources to hang standard paper wall coverings  Be able to comply with the contract information to hang standard paper wall coverings to the required specification |
| **Hanging Wide-width Vinyls in the Workplace** | LO1  LO2  LO3  LO4 | Know safe and healthy working practices when hanging wide-width vinyl  Be able to select the required quantity and quality of resources for the methods of work to hang wide- width vinyl  Be able to minimise the risk of damage when hanging wide-width vinyls  Comply with the given contract information to hang wide-width vinyls to the required specification |
| **Installing Coving, Centre-pieces and Texture**  **Products in the Workplace** | LO1  LO2  LO3 | Be able to minimise the risk of damage when installing coving and decorative mouldings  Be able to select the required quantity and quality of resources to install coving and decorative moulding  Be able to comply with information to install coving and decorative mouldings |
| **Producing Broken Colour Work and Basic Stencilling** | LO1  LO2  LO3 | Know how to comply with relevant legislation and official guidance when producing broken colour effects  Be able to select the required quantity and quality of resources to produce broken colour effects  Be able to select the required quantity and quality of resources to produce stencilling effects |
| **Health and safety in building services engineering** | LO1  LO2  LO3  LO4  LO5  LO6 | Know health and safety legislation  Know how to handle hazardous situations  Know electrical safety requirements when working in the building services industry  Know the safety requirements for working with gases and heat producing equipment  Know the safety requirements for using access equipment in the building services industry  Know the safety requirements for working safely in excavations and confined spaces in the building services industry |
| **Principles of electrical science** | LO1  LO2  LO3  LO4  LO5  LO6  LO7 | Know the principles of electricity  Know the principles of basic electrical circuits  Know the principles of electro-magnetism  Know the principles of basic mechanics  Know electrical quantities in Star Delta configuration  Know the operating principle of a range of electrical equipment  Know the principles of Alternative Current (AC) theory |
| **Electrical installations technology** | LO1  LO2  LO3  LO4  LO5  LO6 | Know implications of electrical industry regulations  Understand how to acquire technical information  Know wiring systems of electrical installations  Know requirements of earthing systems  Know how electricity is supplied  Know requirements for different types of micro-renewable energies |
| **Installation of wiring systems and enclosures** | LO1  LO2  LO3  LO4  LO5  LO6 | Know tools used to install wiring systems  Know how to prepare for installing wiring systems  Be able to install wiring systems  Be able to bond mains services to main earthing terminal  Be able to inspect a ‘dead electrical installation.  Be able to test a dead electrical installation |
| **Understand how to communicate with others within building services engineering** | LO1  LO2  LO3 | Know the members of the construction team and their role within the building services industry  Know how to apply information sources in the building services industry  Know how to communicate with others in the building services industry |
| **Assess Health and Safety Risks** | LO1  LO2  LO3  LO4 | Know the responsibilities of employers and employees under current health, safety and welfare legislation  Know how to undertake risk assessments using appropriate principles and formats  Understand the control measures used to reduce risk and meet legal requirements  Know their own role in accident recording and reporting procedures |
| **Conceptual Design for Construction Design** | LO1  LO2 | Produce and evaluate conceptual design options for new construction design/s concepts/ideas  Understand how to present your construction design/s concepts/ideas |
| **Introduction to Design and Research Skills** | LO1  LO2  LO3 | Understand research tools, methods and skills  Understand primary and secondary research sources  Be able to use research tools, methods and skills to inform ideas for creative activities |
| **Sustainable construction** | LO1  LO2  LO3  LO4 | Know the important features of the natural environment that need to be protected  Understand how the activities of the design sector impact on the natural environment  Understand how the natural environment can be protected against the activities of the construction and built environment sector  Understand sustainable construction techniques that are fit for purpose |
| **Colour Theory and Practice** | LO1  LO2  LO3  LO4 | Understand existing approaches to the use of colour  Understand the effects of colour on the subjective perception of design outcomes  Be able to experiment with colour techniques and processes  Be able to use a range of materials and media to develop creative colour solutions |
| **Mathematics** | LO1  LO2  LO3  LO4 | Be able to use basic underpinning mathematical techniques and methods to manipulate and/or solve formulae, equations and algebraic expressions  Be able to select and apply mathematical techniques correctly to solve practical construction problems involving perimeters, areas and volumes  Be able to select and apply geometric and trigonometric techniques correctly to solve practical construction problems  Be able to select and apply graphical and statistical techniques correctly to solve practical construction problems |
| **Apply Health and Safety and Environmental Legislation and Working Practices** | LO1  LO2  LO3  LO4  LO5  LO6  LO7 | Implement organisational health and safety and environmental procedures before starting work  Know safe working practices  Understand the monitoring systems and review safety on sites  Understand how to apply organisational procedures for emergencies and accidents  Understand the environmental implications of their actions or omissions at work  Understand individual and organisational responsibilities and safe working practices  Understand safe working practices |
| **Design and Practice** | LO1  LO2  LO3  LO4 | Know the factors that influence the design process  Be able to communicate ideas between various members of the design and production teams  Know about design construction methods  Be able to translate construction details into written and graphical instructions |
| **Introduction to Materials, Processes and Technical Skills in Design and Construction** | LO1  LO2  LO3  LO4 | Know the factors that influence the design process  Be able to communicate ideas between various members of the design and production teams  Know about construction method  Be able to translate construction details into written and graphical instructions |
| **Spatial Design Project Planning, Implementation and Review** | LO1  LO2  LO3  LO4 | Understand how projects are managed  Be able to plan projects using IT  Be able to follow project plans  Understand how technology affects the design and production phases of construction projects |
| **Introduction to Visual Language in Design** | LO1  LO2 | Understand the characteristics of visual language in art and design  Be able to apply visual language to a range of art and design activities |
| **Spatial Exploration: CAD Modelling and Visualisation** | LO1  LO2  LO3  LO4 | Be able to work safely when using computing and software facilities  Be able to produce 2D drawings using industry-standard CAD software applications  Be able to produce 3D drawings using industry-standard CAD software applications  Be able to plot drawings to various media and scales and export drawings to different formats |
| **Maintenance and Adaptation of Buildings** | LO1  LO2  LO3 | Understand the techniques used in site investigation and evaluation  Understand how the techniques used in site investigation and evaluation influence the type of structures  Understand the types of large structure design and construction |
| **Building technology in construction** | LO1  LO2  LO3  LO4 | Understand common forms of low-rise construction currently used for domestic and commercial buildings  Understand foundation design and construction  Understand the techniques used in the construction of superstructures for low-rise domestic and commercial buildings  Understand the implications of issues and constraints on building construction |
| **Design Drawing Media and Communication for Spatial Design – Construction** | LO1  LO2  LO3  LO4 | Understand how media, materials and processes are used in others’ work to convey ideas and meaning  Be able to develop visual language  Know how art and design is used to communicate ideas and meaning  Be able to communicate by using the language of art and design |
| **Communication and Visualisation** | LO1  LO2  LO3  LO4 | Know how to use a variety of communication methods in the creative industries  Be able to articulate ideas to a client or audience within a creative industry setting  Be able to use a variety of media and formats to communicate with others  Be able to communicate information to others |
| **Contextual Studies/Architectural Theory and Context** | LO1  LO2  LO3  LO4  LO5  LO6 | Understand architectural history and design as constructs in the context of cultural and historical developments  Be able to apply ethical issues in the analyses of design and communication media  Be able to analyse architecture as artefacts in the context of design and communication media  Be able to present project findings in an academic format  Be able to use a variety of information technologies to support research  Be able to produce an essay on interior design |
| **Human Factorsand User Centred Design** | LO1  LO2  LO3  LO4  LO5 | Know the fundamental principles of human factors and ethnography  Understand the ethical and sustainable requirements of a project  Be able to review a variety of methods and techniques when undertaking a project  Be able to generate a variety of design concepts for an ethnographic project  Be able to communicate the rationale of ideas to different audiences |
| **Introduction to Design** | LO1  LO2  LO3  LO4  LO5 | Know the fundamental principles of design processes and methodologies for research  Understand the rationale of the ethical requirements within the design industry  Be able to analyse, interpret and communicate the constraints of a project to others  Be able to generate required design concepts  Know how to work effectively with team members |
| **Major Project** | LO1  LO2  LO3  LO4  LO5 | Understand the technical, commercial and professional contexts related to the design proposal  Understand the importance of being open to change within an academic and professional setting  Be able to analyse, interpret and communicate the constraints of a project to others  Be able to generate design solutions in response to a defined need  Be able to manage the aims, objectives and deadlines of a workload |
| **Mapping Your Profession** | LO1  LO2  LO3  LO4  LO5  LO6 | Understand a specialist subject area within the creative industries  Be able to proactively engage in debate within the creative industries  Be able to Use a variety of research methods to analyse innovative design development in our chosen subject area  Be able to evaluate data in a specialist subject area within the creative industries  Be able to critically reflect upon the knowledge gained within the creative industries  Be able to communicate learned concepts in a variety of formats |
| **Planning for Enterprise** | LO1  LO2  LO3  LO4  LO5 | Understand the concept nature of entrepreneurship and its relationship to creativity, innovation and wealth creation as well as the social and environmental impact enterprise can have  Understand the meaning of openness to change in the creative industries  Be able to identify and evaluate issues relating to entrepreneurship within the creative industries  Be able to investigate, analyse and interpret ideas and information  Understand the importance, fundamental principles, and implications of intellectual property rights and legislation |
| **Rehabilitation and Reuse** | LO1  LO2  LO3  LO4  LO5  LO6  LO7 | Understand the relationship of detail to the entire design proposal  Be able to produce a design that integrates complex climate, service and energy supply systems  Understand how to flexible, adaptable and reflective when working in an architectural environment  Be able to respond to a variety of constituent interests related to reuse and rehabilitation  Be able to develop and present a response to a design proposal  Understand the role of the stakeholder in the context of rehabilitation and reuse  Evaluate the design proposal |
| **Service Design for Communities** | LO1  LO2  LO3  LO4  LO5  LO6 | Understand how to use emerging technologies to support communities and their environments  Understand how to use a variety of design processes and research methodologies within service design  Understand the relationships between the design disciplines in a team  Be able to propose design solutions in order to utilise all team members’ skills  Be able to communicate suggestions for product designs and concepts to others  Be able to work collaboratively to develop a project proposal in a community context |
| **Shaping your Ideas into a Design** | LO1  LO2  LO3  LO4 | Know the variety of materials, processes and appliances required for design development  Understand the rationale for using prototypes and mock-ups to inform design decisions  Understand how prototypes are developed and tested in a design setting  Be able to apply learned design techniques to a project |
| **Specialist Study 2:Parametrics, Communication and Representation** | LO1  LO2  LO3  LO4  LO5  LO6  LO7  LO8  LO9 | Know about basic structures and forms and their application in built form construction  Know about a variety of methods and media used to communicate in the creative industries  Explain the relationship between the human form and the structural interpretation of built form and construction  Be able to design a self supporting structure from a given brief  Be able to communicate and explain ideas to a client or audience  Be able to use construction techniques to construct a three-dimensional form  Be able to communicate with others using a variety of formats and media  Be able to collaborate with other members of a team  Be able to communicate with others in the creative industries to realise a specific outcome |
| **Specialist Study 3: Dual Use Environment** | LO1  LO2  LO3  LO4  LO5  LO6  LO7  LO8  LO9  LO10  LO11 | Understand constructional principles and the ways they inform and influence design decisions  Understand the main concepts and ideas of digital processing in spatial design  Be able to describe a built environment  Understand the creative potential of 3D CAD software in the design process  Understand the relationship between the user and technical constraints of a project  Be able to conduct a site analysis for a design proposition  Be able to analyse and interpret the processes of an established designer/architect  Be able to develop a design proposal for a small scale environment  Be able to represent space from a variety of viewpoints using computer technologies  Be able to develop team working skills in a design environment  Be able to use digital media to develop a website |
| **Tangible Media** | LO1  LO2  LO3  LO4  LO5  LO6  LO7  LO8  LO9  LO10 | Understand the rationale of technologies and methodologies used in interaction design for prototyping  Understand the importance of being open to change in design  Be able to evaluate the techniques, technologies and processes used in the making of interactive prototypes  Be able to apply technologies to produce required design solutions in an iterative approach  Be able to communicate ideas and rationales regarding prototype formats and concepts to others  Understand the rationale of technologies and methodologies used in interaction design for prototyping  Understand the importance of being open to change in design  Be able to evaluate the techniques, technologies and processes used in the making of interactive prototypes  Be able to apply technologies to produce required design solutions in an iterative approach  Be able to communicate ideas and rationales regarding prototype formats and concepts to others |
| **The Profession, Enterprise and forms of engagement in space/interior design concepts** | LO1  LO2  LO3  LO4  LO5  LO6  LO7  LO8  LO9  LO10 | Understand a variety of specialisms within the creative industries  Understand what is meant by entrepreneurship and its relationship to creativity, innovation and wealth creation  Be able to contribute proactively to current debates in design and/or communication media  Understand how to anticipate opportunities within the design environment  Be able to use a variety of research methods in a subject area  Understand how to transform ideas into potential entrepreneurial concepts  Be able to evaluate data in a specialist subject for a project  Be able to use analyse and communicate ideas and information  Be able to communicate information using a variety of mediums  Understand the importance, fundamental principles and implications of intellectual property rights and legislation |
| **Theory and Practice: Debate and Polemic** | LO1  LO2  LO3  LO4  LO5  LO6  LO7 | Understand how to evaluate the impact of contextual historical conditions on a specified period of architecture  Understand motivational drivers of consumer behavior and their relevance to a given market sector  Understand how to formulate own attitudes and anethical/political stance with regard to issues of critical consequence  Understand,evaluate and synthesise appropriate company and market intelligence to generate information to use in work/study  Understand the principles of debate and polemic~~–~~and their roles assources of inspiration(for further study)  Understand how to investigate potential entrepreneurial ideas and critically evaluate them to identify agap in the market  Understand how to communicate appropriate mode or form of presentation/writing in relevant subject areas |
| **Theory and Context** | LO1  LO2  LO3  LO4  LO5 | Understand design and communication media as constructs in the context of cultural and historical developments  Be able to apply ethical issues to the interpretations of design and communication media  Be able to observe, describe and analyse artefacts in a historical and theoretical context  Be able to apply research methods to a project and present the findings  Be able to use information technologies to support and deliver research |
| **Urban Environments &Arte fact and Element** | LO1  LO2  LO3  LO4  LO5  LO6  LO7  LO8  LO9  LO10  LO11  LO12 | Understand the history and development of the urban built environment  Understand the creative potential of object orientated programming  Understand the application of object orientated programming in the design process  Understand the relationship between architectural design proposals and their urban context  Understand how a designed artefact for the exterior/interior environment can be positioned within a commercial context  Be able to propose architectural design interventions for a specific site in the context of wider urban renewal  Understand the relationship between research, drawing, maquettes and full-scale prototypes as part of an interior design process  Understand how to organise a presentation which links multiple design interventions at different scales  Be able to analyse how materials, technologies, economies and modes of production affect the realisation of a designed artefact  Know how to work collaboratively in the production of a design proposal for a specific site in an interior context  Understand how to clearly articulate the component parts of a designed artefact  Understand how to evaluate the performance of materials and technologies in relation to a design concept |

**4. STUDY PROGRAMS**

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| **Specialty Progression Programme** |

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| **1.** | **Unit Title** | Assess Health and Safety Risks in Your Business |
| **2.** | **Credit Value of Unit** | 8 |
| **3.** | **Unit Type** | Core |
| **4.** | **Guided Learning hours** | 40 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 40 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 20 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **40** | **Total** | **40** |
| **7. Total notional hours for unit** | | | **80** |

**8. Unit Introduction**

Hazards can arise from all aspects of the construction industry in areas such as plant equipment, substances used, the actual tasks carried out and from the way people perform these tasks. An essential element of the construction industry is to gain an understanding of health and safety issues and for students to be able to carry out their work safely. This unit will enable the student to gain an understanding of organisational health and safety responsibilities to ensure that students understand their own and other people’s responsibilities.

The aim of the unit is to introduce the importance of health and safety in the workplace/business environment. It is concerned with the application of risk assessments in relation to hazards, imparting information, advice and guidance, statutory regulations, roles and responsibilities associated with working in a public environment/design industry. Students will also investigate the principles of risk assessments and gain knowledge of techniques through carrying out typical risk assessments. These include skills for identifying hazards and risks; carrying out risk analysis; recording and analysing data; communication skills in recording and using information.

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| **9. Aims of the Unit** |

**In this unit you will:**

Understand the importance of ensuring good standards of health and safety.

Become familiar with the main parts of the health and safety management system.

Investigate typical causes of accidents on site and explore when and who to report accidents to.

Explore the factors that identify risks and control effectively.

Investigate the principles of risk assessments and gain knowledge of techniques through carrying out typical risk assessments.

Become familiar with the construction sector statistics and campaigns undertaken within Health and Safety.

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| **10. Indicative Content** |

* Understand the importance of health, safety and welfare in the construction and built environment sector.
* Know the common safety signs found in the construction workplace.
* Be able to perform risk assessments in the construction workplace.
* Be able to specify control measures in the construction workplace.
* Be able to carry out risk assessments.
* Understand the roles and responsibilities of individual personnel (including managers, supervisors, clients, principal contractors, contractors, employees) both on- and off-site, under the Health and Safety at Work Act 1974 (HASWA) and Construction.
* Understand the importance of control measures in risk assessment

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Understand the importance of health, safety and welfare in the construction and built environment sector. | 1.1 Explain the importance of health and safety in the construction workplace  1.2 Explain the importance of making provision for the welfare of construction employees  1.3 Differentiate between the legal responsibilities of employers and employees for health and safety in the construction workplace.  1.4 Describe the common causes of construction workplace accidents and ill-health.  1.5 Explain the importance of reporting construction workplace accidents, ill-health and other incidents  1.6 Examine:   * Workplace policy statements * Responsibilities and safe systems of work * The need for risk assessments |
| 2.Know the common safety signs found in the construction workplace | 2.1 Identify different safety signs used in construction  2.2 Describe the hazards indicated by the different safety signs used in construction  2.3 Identify the risks that arise out of identified hazards relating to plant; equipment; machinery and materials.  2.4 Explain how to deal with changes in working method |
| 3. Be able to perform risk assessments in the construction workplace. | 3.1 Identify hazards in the construction workplace.  3.2 Identify how hazards can harm construction employees  3.3 Assess the risks associated with the hazards  3.4 Record the findings of the risk assessment  3.5 Carry out reviews of risk assessments  3.6 Raise awareness of confined spaces aligned to regulations, risk assessments; control measures and emergency arrangements |
| 4. Be able to carry out risk assessments. | 4.1 Contribute to construction workplace policy statements and safe systems of work  4.1 Specify personal protective equipment for a variety of construction operations |
| 5. Be able to specify control measures in the construction workplace | 5.1 Specify control measures that minimise hazards in construction operations due to workplace changes.  5.2 Identify the factors used for the work equipment regulations plant:   * Equipment and machinery * Inspection and testing * Operator competences   5.3 Specify control measures in safe systems of work.  5.4 Demonstrate an awareness of the requirements for the provision and Lifting operations and lifting equipment regulations. |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** | **Learning and teaching methods** | | | |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate | | | |
| **Values and Attitudes** | | | **Learning and teaching methods** | | | |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text | | | |
| Skills (Cognitive and Intellectual) | | |  | **Learning and teaching methods** | | |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure | | |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate | | |
|  | | |  | **Assessment Evidence** | | |
|  | | |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text | | |
| Skills (Subject Specific/Professional) | | |  | **Learning and teaching methods** | | |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate | | |
| **Assessment Evidence** | | |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text | | |
| Skills (Transferable) |  | | | **Learning and teaching methods** | | |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate | | |
| **Assessment Evidence** | | |
|  |  | | | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography(100% ) of final grade | | |

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| **1.** | **Unit Title** | Structure of the Construction Industry |
| **2.** | **Credit Value of Unit** | 6 |
| **3.** | **Unit Type** | Core |
| **4.** | **Guided Learning hours** | 30 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 10 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **30** | **Total** | **30** |
| **7. Total notional hours for unit** | | | **60** |

**8. An overview and introduction to the unit**

The construction industry is an important sector for the economy. The impact of this industry can have a major impact on the way we live and engage with the wider community

This unit looks at the structure of the construction industry which includes areas such as the economic importance and a wide range of work undertaken by the industry. Examples of the developing workforce within the sector can range from motorways and maintenance, through to hospitals and housing. These activities begin with the design element of projects and continue through the construction phase.

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| **9. Aims of the Unit** |

The unit will enable student to:

Gain an understanding of the diversity, complexity and impact of the construction industry.

Develop an awareness of the contributions made by those who work within it.

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| **10. Indicative Content** |

* Gain an overview of the types of activities undertaken by those working in the construction industry, from site operatives to architects.
* Gain an understanding of individual job roles and responsibilities and will examine the typical career development of various members of the design and construction team.
* Explore the various types of client who use the industry, and the range of work undertaken on their behalf.
* Recognise that clients range from private individuals using their own funds, to the national government using tax revenue to support capital work for the benefit of the whole country.
* Investigate the wide range of opportunities open to them. On completion of this unit.
* Be able to use the knowledge, understanding and skills gained to support a variety of different job roles in the construction industry.
* Become familiar with the construction sector statistics and campaigns undertaken within Health and Safety.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Understand the diversity and complexity of the construction industry | 1.1 Describe the range of work undertaken by the construction industry  1.2 Compare the types of client that use the construction industry  1.3 Distinguish between three activity areas involved in a given construction project in terms of roles and responsibilities |
| 2. Understand the contribution the construction industry makes to our economic well-being | 2.1 Evaluate the social and economic benefits of the construction industry in both national and local terms  2.2 Compare the social and economic contribution made by different areas of the construction and built environment sector |
| 3. Know about human resources in the construction industry | 3.1 Identify the personnel working in the construction industry  3.2 Describe the roles and responsibilities of the personnel working in the construction industry |
| 4. Know about careers in the construction industry | 4.1 Specify personal protective equipment for a variety of construction operations |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | | | **Learning and teaching methods** | |
| (A) Demonstrate a  knowledge of activities undertaken by those working in the construction industry, from site operatives to architects. | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate | |
| **Values and Attitudes** | |  | | **Learning and teaching methods** | |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings, individual job roles and responsibilities and examine the typical career development of various members of the design and construction team | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text | |
| Skills (Cognitive and Intellectual) | | |  | **Learning and teaching methods** | |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of use the industry, and the range of work undertaken on their behalf. | | |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate | |
|  | | |  | **Assessment** | |
|  | | |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text | |
| Skills (Subject Specific/Professional) | | |  | | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard. | | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) | | |  | **Learning and teaching methods** | |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate | |
| **AssessmentMethods** | |
|  | | |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography(100%) of final grade | |

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| **1.** | **Unit Title** | Use of Science and Maths in Construction |
| **2.** | **Credit Value of Unit** | 7 |
| **3.** | **Unit Type** | Core |
| **4.** | **Guided Learning hours** | 40 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 40 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 10 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **40** | **Total** | **30** |
| **7. Total notional hours for unit** | | | **70** |

**8. An overview and introduction to the unit**

With the changing face of the construction industry and new technologies demanding an creative approach to practical craft skills in a competent manner. This unit looks at the underpinning factors of science and mathematics in order to be able to specify the right materials for a specific task, and know how to incorporate these materials into the design of buildings. People working in construction must be able to perform a wide range of mathematical calculations relating to, for example, dimensions, areas, volumes, material quantities and costs, and be confident that the answers to such calculations are correct. This unit has been designed to focus specifically on concepts that will be clearly and immediately useful for the practical application of construction materials.

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| **9. Aims of the Unit** |

The unit will enable student to:

Understand the science and mathematics used by construction workers. To create opportunities to develop the mathematical and scientific skills needed to solve a variety of construction problems.

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| **10. Indicative Content** |

* Understand the basic scientific principles affecting the performance of construction materials.
* Gain an understanding of mathematics principles in support of the construction and performance
* Appreciate the importance of these concepts to the construction industry, and to be much better placed to apply them in a wide vocational context.
* Specifically, investigate the effect of forces acting on structures and materials, and to explore how changes in temperature can influence both the design and specification of buildings.
* Introduce the basic mathematical techniques needed to perform simple calculations relating to commonplace tasks such as setting out, dimensional control, determining material quantities and calculating land areas.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1.Understand the nature of forces and their effect on construction materials | 1.1 Explain the effects of forces on structures in terms of basic scientific principles  1.2 Explain the effects of forces on structures, using supporting calculations as appropriate  1.3 Describe the differences between the issues raised by the effect of load on change of shape  1.4 Explain two contrasting building materials in general use, in terms of their behaviour under load and their response to changes in temperature |
| 2. Understand how changes in temperature affect construction materials | 2.1 Describe the effects of temperature changes on construction materials in terms of basic scientific principles  2.2 Explain the effects of temperature changes on construction materials, using supporting calculations as appropriate  2.3 Describe how water can damage porous building materials when the temperature drops below the freezing point of water |
| 3. Be able to use simple formula to solve construction problems | 3.1use formulae for two different practical construction problems  3.2 Transpose two different practical construction problems one using trigonometry and one using graphical methods  3.3 Evaluate a construction problem using both trigonometric and algebraic methods  3.4 Assess solutions to the practical construction problems in terms of accuracy, approximation and rounding-off errors |

**11. Teaching & Learning Method**

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| Know about human resources in the construction industry  Know about careers in the construction industry. |  |
| (A) Demonstrate a knowledge of activities undertaken by those working in the construction industry, from site operatives to architects. | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** |  | **Learning and teaching methods** | |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings, and examine the nature of forces and their effect on construction materials | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text | |
| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** | |
| (C) Show their application of the skills of observation, description and analysis of changes in a wider context of theory and history that can affect the temperature and construction materials |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate | |
|  |  | **Assessment** | |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text | |
| Skills (Subject Specific/Professional) |  | | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written and to use simple formulas to solve construction problems | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Sustainability |
| **2.** | **Credit Value of Unit** | 6 |
| **3.** | **Unit Type** | Core |
| **4.** | **Guided Learning hours** | 30 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 10 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **30** | **Total** | **30** |
| **7. Total notional hours for unit** | | | **60** |

**8. An overview and introduction to the unit**

As climate changes become more challenging across the globe, the need for sustainability is at the agenda for the construction industry especially when it comes to areas such as natural resources as they are unreplaceable. Materials and resources used within the construction industry can create waste and pollution and it is important to address and introduce ways in which this industry can reduce the impact on the climate and explore ways in which we can use the resources differently without compromising future generations. Designers and contractors will need to take a different approach in order to address the sustainability issues, although the developmental need for construction is essential for the growth of communities.

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| **9. Aims of the Unit** |

The unit will enable student to:

* Use the knowledge, understanding and skills gained to support a sustainable approach to construction in the built environment.
* Use of a wide range of knowledge, skills and understanding in the planning, design, production and maintenance stages of the construction process.
* Explore the need to create a balance between the need for development of the built environment and the need to protect the natural environment both during construction and during the lifetime of the buildings and other structures created.
* An opportunity to explore the concept of sustainable construction and how it relates to the current and future impact of the built environment upon the natural environment.

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| **10. Indicative Content** |

This unit will enable students to:

Explore issues such as the minimisation of waste, pollution control, the careful use of resources, and preservation of wildlife, flora and fauna and protection of biodiversity.

Encourage students to investigate how sustainable design and construction techniques can be used to address environmental issues.

Gain an understanding of the specification of products, materials and services that do minimal harm to the environment in terms of their manufacture, transport and incorporation into the built environment, the use of environmentally friendly designs, locally sourced materials, improved management techniques and alternative energy technology.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1.Understand the concept of sustainability in the construction and built environment sector | 1.1 Explain what is meant by sustainability  1.2 Explain the relevance of sustainability  1.3 Identify the issues associated with the provision of a sustainable built environment  1.4 Describe the issues associated with the provision of a sustainable built environment  1.5 Identify the benefits of considering sustainability issues in the built environment  1.6 State the consequences of not considering sustainability issues in the built environment |
| 2. Know the issues affecting the development of a sustainable built environment | 2.1Identify the benefits of using sustainable construction, in both local and national terms  2.2 Describe the benefits of using sustainable construction, in both local and national terms  2.3 Compare the local and national benefits of sustainable construction in social and economic terms  2.4 Justify the selection of specified sustainable construction in terms of effectiveness and relative cost |
| 3. Know how sustainability can benefit the built environment both locally and nationally | 3.1 **I**dentify sustainable design and construction techniques used to minimise environmental impact  3.2 Describe sustainable design and construction techniques used to minimise environmental impact  3.3 State the effectiveness of sustainable construction techniques at each stage of the development process. |

**11. Teaching & Learning Method**

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| Know about human resources in the construction industry  Know about careers in the construction industry. |  |
| (A) Demonstrate knowledge of activities undertaken by those working in the construction industry, from site operatives to architects. | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** | |  | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings, and examine the nature of forces and their effect on construction materials | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of changes in a wider context of theory and history that can affect the temperature and construction materials |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written and to use simple formulas to solve construction problems | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography(100%) of final grade |

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| **1.** | **Unit Title** | Scientific and Mathematical Applications for  Construction |
| **2.** | **Credit Value of Unit** | 8 |
| **3.** | **Unit Type** | Mandatory |
| **4.** | **Guided Learning hours** | 40 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 40 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 20 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **40** | **Total** | **40** |
| **7. Total notional hours for unit** | | | **80** |

**8. An overview and introduction to the unit**

Science and mathematics underpin many activities and goes across many industries and sectors. Within the construction industry, these skills are are becoming even more important in order to be able to specify the right materials for a specific task, and know how to incorporate these materials into the design of structures. To work in the industry, the basic principles of science and the impact on the performance of the materials used in construction. Other technical considerations must be the range of mathematical calculations as accuracy is a component part to areas such as quantity, volume and cost.

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| **9. Aims of the Unit** |

This unit gives the students.

This unit introduces students to the concept of science and mathematics and how they are used by construction workers.

Students will explore methods and processes to develop the mathematical and scientific skills needed to solve a variety of construction issues.

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| **10. Indicative Content** |

This unit will enable students to:

Gain an understanding of basic principles affecting the performance of construction materials.

Gain an understanding of the importance of science and maths in the construction industry.

Understand a range of mathematical calculations.

Appreciate the importance of these concepts to the construction industry, and to be much better placed to apply them in a wide vocational context.

Investigate the effect of forces acting on structures and materials

Explore how changes in temperature can influence both the design and specification of buildings.

Introduce the basic mathematical techniques needed to perform simple calculations relating to commonplace tasks

Understand the principles of setting out, dimensional control, determining material quantities and calculating land areas

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Understand the nature of forces on construction materials | 1.1 Describe:   * The relationships between mass, density and volume * Loading as the result of gravitational attraction   1.2 Describe:   * The relationship between force (load), mass and acceleration due to gravity * Reactions as equal and opposite to loads   1.3 Describe:  The use of principle of moments to determine simple reactions for point loads only; Hooke’s law; stress; strain; modulus of elasticity  1.4 Describe the factors of safety using simple calculations for construction materials  1.5 Describe:   * Typical construction materials, * The consideration of key properties (strength, stiffness, weight,) * Stresses (compressive, tensile, shear, bending) * Change of shape on loading |
| 2. Understand how changes in temperature affect construction materials | 2.1 Identify:   * The principles of changes of state * The effect of sensible heat * The cooling effect of evaporation   2.2 Describe the expansion of water on freezing  2.3 Describe the effect expansion has on porous construction materials  2.4 Identify coefficients of thermal expansion for construction materials, including simple calculations |
| 3. Be able to use formula to solve construction problems | 3.1 Use formulas for adjustments to material quantities and costs, conversion of: regular areas and volumes,  3.2 Transposition of formulas using simple techniques to change arithmetical operations and square or square root terms  3.3 Evaluation of formulae: determination of numerical value of formula, up to four variables, up to four basic arithmetical operations and square and square root terms  3.4 Determine the numerical value of formula to include:   * Up to four variables * Four basic arithmetical operations and square and square root terms |
| 4. Be able to use simple trigonometry and graphical methods to solve construction problems | 4.1 Explain the following:   * Pythagoras’ theorem * Sine * Cosine * Tangent * Cartesian coordinates * Straight line graphs   4.2 Construct applications relating to design structures  4.3 Use of graphs to predict and interpolate values including calculations. |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (А) Demonstrate a knowledge of activities undertaken by scientific and mathematic performance in the construction industry |  |
| (А) Demonstrate a knowledge of activities undertaken by those working with CAD | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** |  | **Learning and teaching methods** |
| 1. Demonstrate basic application of ethical issues in their interpretations and 2. Analyse the resources in the production of materials | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show the diversity and complexity in using scientific and mathematical commands to Modify construction materials |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography(100% of final grade |

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| **1.** | **Unit Title** | Performing Blockwork Operations |
| **2.** | **Credit Value of Unit** | 6 |
| **3.** | **Unit Type** | Optional (A) |
| **4.** | **Guided Learning hours** | 30 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 10 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **30** | **Total** | **30** |
| **7. Total notional hours for unit** | | | **60** |

**8. An overview and introduction to the unit**

Blocks are one of the most common materials used in construction instead of brick which were more commonly used. Block-work has been an integral part of the construction industry since the introduction of concrete blocks in the early twentieth century. Blocks are more cost effective due to their size and coverage of space and the timescale needed to build with them. Concrete blocks can be accessed at different grades level such as lightweight and dense. Light weight concrete blocks are used primarily for their thermal insulation properties and are not considered to be weather resistant. Dense concrete blocks that are used for their structural properties and are considered to be weather resistant.

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| **9. Aims of the Unit** |

This unit gives the students

This unit will enable students to develop the skills required to select and safely use the appropriate tools and personal protective equipment (PPE) used to set out and construct block-work structures.

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| **10. Indicative Content** |

This unit will enable students to:

* Explore the common bonding arrangements for raising corners and junctions using concrete blocks, and the processes and techniques used in their construction.
* Know the appropriate selection and use of tools and personal protective equipment,
* Know good housekeeping practices needed to ensure compliance with acceptable health, safety and welfare practices.
* Use simple calculations to establish the correct dimensions of walling when setting out masonry structures.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know the hand tools and materials commonly used to perform block-work tasks | * 1. Identify the hand tools used to perform blockwork tasks   1.2 Identify the materials used to perform blockwork tasks  1.3 Select the materials required to perform given blockwork tasks  1.4 Install reinforcing materials in the correct location in accordance with the specification |
| 2. Understand the important health, safety and welfare issues associated with block-work tasks | 2.1 Identify the personal protective equipment (PPE) and safe working practices used to carry out the blockwork tasks  2.2 Explain the selection of the personal protective equipment (PPE) and safe working practices to be used in given blockwork tasks  2.3 Explain the relevant requirements of health and safety  2.4 Explain how to record the block walling details to given dimensions with guidance and supervision  2.5 Explain how to produce corners and junctions in solid block walling to given specifications |
| 3.Be able to apply safe working practices to the setting out and construction of corners and junctions in solid block walling to given specifications | 3.1 Identify the correct bonding arrangement to be used in the construction of solid block walling  3.2 Set out block walling details to given dimensions with guidance and supervision  3.3Build quetta and rat trap bonds to required specifications |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (А) Demonstrate a knowledge of activities undertaken to perform block-work tasks |  |
| (В) Demonstrate a knowledge of activities undertaken by those working with CAD | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** | |  | | **Learning and teaching methods** |
| Demonstrate basic application of ethical issues in their interpretations and analyse the resources for health, safety and welfare issues associated with block-work tasks | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** | |
| (C) Show the diversity and complexity in using safe working practices |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate | |
|  |  | **Assessment** | |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text | |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** | |
| (D) Apply basic research skills and present their findings to a recognisable academic standard. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate | |
| **Assessment** | |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text | |

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| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Exploring Carpentry and Joinery |
| **2.** | **Credit Value of Unit** | 6 |
| **3.** | **Unit Type** | Optional (A) |
| **4.** | **Guided Learning hours** | 30 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 10 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **30** | **Total** | **30** |
| **7. Total notional hours for unit** | | | **60** |

**8. An overview and introduction to the unit**

Although these two trades subjects are strong independent skill sets within the industry, they support each other across the sector especially in the area of tools and equipment as they use similar tools and the skills are closely linked. With the skills combined they are the largest craft group in the construction industry.

The work of the carpenters are mainly performed externally on site and the work performed are areas such as fitting of door frames, doors, windows, kitchen units, staircases and timber roofs.

The work of the joiners are mainly performed internally in workshops and the work carried relate to areas such as the manufacture of timber products such as staircases, windows and doors. The principle of the two trades are about working with timber to form joints to create structures for the construction industry.

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| **9. Aims of the Unit** |

This unit gives the students.

An understanding of the use of appropriate hand tools, materials and personal protective equipment applied in carpentry and joinery together with the necessary skills to mark out and form simple joints for use in a frame.

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| **10. Indicative Content** |

This unit will enable students to:

Gain an understanding of hand tools, materials and personal protective equipment (PPE) used in carpentry and joinery.

Demonstrate the use of setting out rods to mark out work.

Know the safe working techniques used to form joints in timber for use in the production of a simple frame.

Understand the risks involved in working in carpentry and joinery.

Understand the importance of good health, safety and welfare practices.

Understand the importance of following instructions in the production of working with tools, materials and equipment.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know the hand tools and materials commonly used to perform carpentry and joinery tasks | 1.1 Identify the hand tools used to perform carpentry and joinery tasks  1.2 Explain the selection of hand tools required to perform given carpentry and joinery tasks  1.3 Identify the materials used to perform carpentry and joinery tasks  1.4 Explain the selection of materials required to perform given carpentry and joinery tasks |
| 2. Understand the important health, safety and welfare issues associated with carpentry and joinery tasks | 2.1 Identify the PPE and safe working practices used to perform carpentry and joinery tasks  2.2 Explain the selection of the personal protective equipment (PPE) and safe working practices to be used in given carpentry and joinery tasks |
| 3.Be able to apply safe working practices to mark out and form joints for a timber frame to a given specification | 3.1 Produce setting out rods and use them to mark out timber  3.2 Set out and cut joints in timber  3.3 Use a range of joints to produce a timber frame to a given specification |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | | **Learning and teaching methods** |
| (А) Demonstrate a knowledge of activities undertaken tools, materials and equipment |  |
| (В) Demonstrate a knowledge of activities undertaken by those working with CAD | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Values and Attitudes** | |  | **Learning and teaching methods** |
| (С) Demonstrate basic application of ethical issues in their interpretations and analyse the resources in the production of materials, tools and equipment | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) | |  | **Learning and teaching methods** |
| (D) Show the diversity and complexity in using materials tools and equipment to Modify construction materials | |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  | |  | **Assessment** |
|  | |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) | |  | **Learning and teaching methods** |
| (E) Apply basic research skills and present their findings to a recognisable academic standard. | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) |  | | **Learning and teaching methods** |
| (F) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
|  |  | | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Construction Processes and Operations for Low-rise Domestic Buildings |
| **2.** | **Credit Value of Unit** | 6 |
| **3.** | **Unit Type** | Optional (A) |
| **4.** | **Guided Learning hours** | 30 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 10 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **30** | **Total** | **30** |
| **7. Total notional hours for unit** | | | **60** |

**8. An overview and introduction to the unit**

The foundation and structure of the construction industry workforce is based on working in collaboration and building teams. The industry relies on each component part of different skills within the workforce for the success of the industry. These skills can stem from designers, managers and planners to occupations within the crafts and creative industries which are essential to forming structures of various types and functions of the elements that are involved across the construction industry. This unit will enable students to gain an understanding of the different modern structural forms used in the construction of houses, flats and maisonettes, together with an understanding of the relationship between the function of a building, the function of the elements that comprise the building, and the final structural form.

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| **9. Aims of the Unit** |

This unit gives the students

The knowledge and understanding gained to underpin a wide range of construction job roles.

Know the Health, safety and welfare issues within the construction industry an understanding of the traditional and modern methods of construction will be explored and compared, particularly in terms of the use of modern sustainability principles

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| **10. Indicative Content** |

This unit will enable students to:

Extend and develop their knowledge and understanding by exploring pre-construction activities such as site investigations, site surveys, site preparation, specialist demolition and environmental considerations.

Explore the substructure (below ground), superstructure (above ground level) and external work phases of projects, together with their related elements.

Explore how new building elements are formed and how these elements are combined to produce the final building and incorporate sustainability into all aspects of the construction.

Investigate the on-site temporary arrangements needed to support the construction process.

Develop an understanding of how this impacts at both local and national level.

Understand how primary utilities such as water, electricity and drainage are provided to a building.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know the stages of a construction project. | 1.1 Identify the stages of a construction project  1.2 Describe the stages of a construction project  1.3 Identify the craft operations involved in each stage  1.4 Describe the craft operations involved in each stage  1.5 State why construction craft operations must be performed in a logical sequence  1.6 Describe the standard documentation used to support the planning and sequencing of construction work |
| 2. Know the traditional and modern construction processes and operations used in low-rise domestic construction | 2.1 Identify the main functional requirements of low-rise domestic buildings  2.2 Describe the processes and operations used in traditional methods of construction  2.3 Describe the processes and operations used in modern methods of construction |
| 3.Understand the properties and uses of natural, processed and manufactured construction materials | 3.1 Classify construction materials as natural, processed or manufactured  3.2 State the properties and uses of common construction materials |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge of activities undertaken tools, materials and equipment |  |
| (B) Demonstrate a knowledge of activities undertaken by those working with CAD | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** | |  | **Learning and teaching methods** |
| (C) Demonstrate basic application of ethical issues in their interpretations and analyse the resources in the production of materials, tools and equipment | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Cognitive and Intellectual) |  | | **Learning and teaching methods** |
| (D) Show the diversity and complexity in using materials tools and equipment to Modify construction materials |  | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | | **Assessment** |
|  |  | | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | | **Learning and teaching methods** |
| (E) Apply basic research skills and present their findings to a recognisable academic standard. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Transferable) |  | **Learning and teaching methods** |
| (F) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Construction Drawing Techniques |
| **2.** | **Credit Value of Unit** | 6 |
| **3.** | **Unit Type** | Optional (A) |
| **4.** | **Guided Learning hours** | 30 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 10 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **30** | **Total** | **30** |
| **7. Total notional hours for unit** | | | **60** |

**8. An overview and introduction to the unit**

Drawing skills are used to interpret the design idea of the client or designer. It is the main tool that brings an idea into reality and supports the process of communicating the development of construction information. Within this unit students will be introduced to the skills and techniques which will support them in producing sketches and drawings. The emphasis will be on the techniques needed to develop sketching and drawing techniques used in the construction industry. Students will begin to investigate the specific drawing style and explore their purpose and requirement at each stage of the development process. This unit also encourage self- independent study in drawing skills in order to practice these specific construction drawing skills

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| **9. Aims of the Unit** |

This unit gives the students:

Knowledge and technical skills in drawings and equipment used in the construction industry. An exploration of the drawing equipment and material standards also forms part of the learning process and this unit.

The opportunity to gain further drawing and sketching techniques and skills

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| **10. Indicative Content** |

The students will:

Gain an introduction to the resources needed to produce sketches and drawings for the construction industry.

Become familiar with the drawing equipment and materials in common use, and will develop an understanding of the equipment and paper needed to undertake a given drawing tasks.

Gain an understanding of the standards and conventions required for the construction industry.

Gain knowledge of scales, hatchings, lines, dimensions, annotations and projection methods used in construction drawing.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1.Know the different types of drawings used in the construction industry | * 1. Identify the different types of drawings used in the construction industry   2. Describe the purpose of the different types of drawings used in the construction industry   3. Identify the main items of drawing equipment used to produce construction sketches and drawings   4. Identify the different materials used to produce construction sketches and drawings |
| 2. Know the drawing equipment and materials used to produce construction sketches and drawings | 2.1 Describe the drawing equipment and materials used to produce construction sketches and drawings |
| 3. Be able to apply construction drawing standards and conventions to produce sketches and working drawings | 3.1 Identify the construction drawing standards and conventions used in the construction industry  3.2 Apply construction drawing standards and conventions to produce sketches and working drawings |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge of activities undertaken tools, materials and equipment |  |
| (B) Demonstrate a knowledge of activities undertaken by those working with CAD | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** |  | **Learning and teaching methods** |
| (C) Demonstrate basic application of ethical issues in their interpretations and analyse the resources in the production of materials, tools and equipment | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (D) Show the diversity and complexity in using materials tools and equipment to Modify construction materials |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (E) Apply basic research skills and present their findings to a recognisable academic standard. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Transferable) |  | **Learning and teaching methods** |
| (F) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography(100%) of final grade |

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| **1.** | **Unit Title** | Performing Joinery Operations |
| **2.** | **Credit Value of Unit** | 5 |
| **3.** | **Unit Type** | Optional (A) |
| **4.** | **Guided Learning hours** | 30 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 10 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 6 |
| **Unsupervised Access to Resources** | 4 |
| **Total** | **30** | **Total** | **20** |
| **7. Total notional hours for unit** | | | **50** |

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know the hand tools and materials commonly used to perform joinery tasks | 1.1 Identify the hand tools used to perform joinery tasks  1.2 Identify the materials used to perform joinery tasks |
| 2. Understand the important health, safety and welfare issues associated with joinery tasks | 2.1 Identify the PPE and safe working practices used to perform joinery tasks  2.2 Explain the selection of the personal protective equipment (PPE) and safe working practices to be used in given joinery tasks |
| 3. Be able to apply safe working practices to mark out and form joints for a timber product | 3.1 Produce setting out rods and use them to mark out timber  3.2 Set out and cut joints in timber  Use a range of joints to produce a timber product to a given specification |

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| **8. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge of activities undertaken tools, materials and equipment |  |
| (B) Demonstrate a knowledge of activities undertaken by those working with CAD | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Values and Attitudes** |  | **Learning and teaching methods** |
| (C) Demonstrate basic application of ethical issues in their interpretations and analyse the resources in the production of materials, tools and equipment |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (D) Show the diversity and complexity in using materials tools and equipment to Modify construction materials |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (E) Apply basic research skills and present their findings to a recognisable academic standard. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Transferable) |  | **Learning and teaching methods** |
| (F) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Performing Carpentry Operations |
| **2.** | **Credit Value of Unit** | 6 |
| **3.** | **Unit Type** | Optional (A) |
| **4.** | **Guided Learning hours** | 30 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 10 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **30** | **Total** | **30** |
| **7. Total notional hours for unit** | | | **60** |

**8. Unit Introduction**

Carpentry is a skilled trade in which the primary work performed is the cutting, shaping and installation of building materials during the construction of buildings. Carpenters traditionally worked with natural wood and did the rougher work such as framing, but today many other materials are also used. Carpenters normally framed post-and-beam buildings until the end of the 19th century; now this old fashioned carpentry is called timber framing. Carpenters are frequently considered to be amongst the most important trade within the construction industry and working in this industry can be very rewarding. This unit is **designed for students to gain the skills and knowledge used within the industry. They will explore the concept of first and second fix skills and how the skills are applied to using different material structures other than wood within the industry.**

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| **9. Aims of the Unit** |

**In this unit you will:**

This practical unit will enable the students to develop the skills required to perform carpentry to a recognised standards. Students will learn to use tools and materials effectively in completing well defined tasks for carpentry operations.

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| **10. Indicative Content** |

* Gain an understanding of processes and techniques involved in using hand tools in carpentry
* Understand the practices and technical processes involved in the drawing and setting out of resources required for the production of a timber product
* Be able to Able to carry out risk assessments aligned to legislation and regulations for the construction industry
* Understand PPE and safe working practices
* Gain an understanding of good working practice and the importance of good health, safety and welfare aligned to the construction industry.
* Understand the use of joints to produce a timber product

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know the hand tools and materials commonly used to perform carpentry tasks | 1.1 Identify the hand tools used to perform carpentry tasks  1.2 Identify the materials used to perform carpentry tasks |
| 2. Understand the important health, safety and welfare issues associated with carpentry tasks | 2.1 Identify the personal protective equipment (PPE) and safe working practices used to perform carpentry tasks  2.2 Explain the selection of the personal protective equipment (PPE) and safe working practices to be used in given carpentry tasks  2.3 Describe ~~produce~~ risk assessments used to support the safe practices performed in a carpentry task |
| 3.Be able to apply safe working practices to carpentry tasks | 3.1 Produce setting out rods and use them to mark out timber  3.2 Set out and cut joints in timber  3.3 Use a range of joints to produce a timber product to a given specification  3.4 Use a range of joints to produce a carpentry product to a given specification |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge of activities undertaken tools, materials and equipment |  |
| (B) Demonstrate a knowledge of activities undertaken by those working with CAD | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** | |  | | **Learning and teaching methods** |
| (C) Demonstrate basic application of ethical issues in their interpretations and analyse the resources in the production of materials, tools and equipment | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Cognitive and Intellectual) |  | | | **Learning and teaching methods** |
| (D) Show the diversity and complexity in using materials tools and equipment to Modify construction materials |  | | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | | | **Assessment** |
|  |  | | | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) | | |  | **Learning and teaching methods** |
| (E) Apply basic research skills and present their findings to a recognisable academic standard. | | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Transferable) |  | **Learning and teaching methods** |
| (F) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography(100%) of final grade |

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| **1.** | **Unit Title** | Exploring Trowel Operations |
| **2.** | **Credit Value of Unit** | 6 |
| **3.** | **Unit Type** | Optional (A) |
| **4.** | **Guided Learning hours** | 30 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 10 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **30** | **Total** | **30** |
| **7. Total notional hours for unit** | | | **60** |

**8. An overview and introduction to the unit**

Brickwork and blockwork form a large proportion of the visual elements of the buildings and structures seen in our towns and cities. The role of the bricklayer is valuable, there are core skills for a bricklayer that have a limited amount of upgrading and the skills learnt are durable throughout the life cycle of the building structures.

This unit introduces the student to this traditional trade skills of utilising the craft of brickwork and blockwork to create structures for the construction industry. Bricklaying is one of the oldest construction crafts, using traditional techniques and processes to build structures such as houses, bridges and chimneys, and to practically transform 2D design architectural drawings to 3D structures.

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| **9. Aims of the Unit** |

This unit gives the students

The skills to safely develop and select the right tool and equipment to construct basic construction activities

To develop the skill to be able to select and use the appropriate tools and personal protective equipment (PPE) to construct basic brickwork and blockwork structures.

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| **10. Indicative Content** |

This unit enables students gain an understanding of the basic principles and techniques of using brick and mortar to build structures both small and large.

The students will:

Know how bricks are made and explore the principles of sizing, the structure moulding, or extruded, wire cut and formed.

Be aware of the concept of design and patterning in the construction and structures appearance as well as its strength and stability

To know the specific terminology and a variety of techniques, patterns and processes.

Investigates the commonly used hand tools, equipment and craft skills needed to construct basic brickwork and blockwork structures.

Emphasis is placed on the correct selection and safe use of the appropriate tools and equipment.

The unit covers the principles and methods of producing and using gauge rods when performing brickwork and blockwork tasks

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know the hand tools and materials commonly used to perform carpentry tasks | 11 Explain the materials used to perform carpentry tasks  1.2 Identify the materials used to perform carpentry tasks |
| 2. Understand the important health, safety and welfare issues associated with carpentry tasks | 2.1 Explain the selection of the personal protective equipment (PPE) and safe working practices ~~to be~~ used in given brickwork and blockwork tasks  2.2 Identify the personal protective equipment (PPE) and safe working practices used to perform brickwork and blockwork tasks |
| 3.Be able to apply safe working practices to set out and construct solid brick and block walling to given specifications | 3.1 Produce a gauge rod for setting out brick and block walls  3.2 Identify common bonding arrangements used in the construction of solid brick and block walls  3.3 Produce solid brick and block walls to a given specification |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge of activities undertaken tools, materials and equipment |  |
| (B) Demonstrate a knowledge of activities undertaken by those working with CAD | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** | |  | **Learning and teaching methods** |
| (C) Demonstrate basic application of ethical issues in their interpretations and analyse the resources in the production of materials, tools and equipment | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Cognitive and Intellectual) |  | | **Learning and teaching methods** |
| (D) Show the diversity and complexity in using materials tools and equipment to Modify construction materials |  | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | | **Assessment** |
|  |  | | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | | **Learning and teaching methods** |
| (E) Apply basic research skills and present their findings to a recognisable academic standard. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Transferable) |  | **Learning and teaching methods** |
| (F) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Exploring Painting and Decorating |
| **2.** | **Credit Value of Unit** | 6 |
| **3.** | **Unit Type** | Optional (A) |
| **4.** | **Guided Learning hours** | 30 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 10 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **30** | **Total** | **30** |
| **7. Total notional hours for unit** | | | **60** |

**8. An overview and introduction to the unit**

Painting and decorating is one of the oldest skill sets within the construction industry. In prehistoric times our ancestors painted pictures on the walls and surfaces as a form of decoration and people from every culture have decorated their homes, places of worship, places of work and other important buildings, to make them appear more attractive, more welcoming, warmer or cooler.

Paint is also applied to protect surfaces exposed to the weather, to provide a ‘colour code’ in industrial settings and to produce hygienic surfaces that are easy to clean. Decorating is the final stage in making a building comfortable and attractive, and the ability to produce a quality paint finish is a valuable skill. This unit enables the student to gain practical skills in the application of decorating paint surfaces.

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| **9. Aims of the Unit** |

This unit gives the students

The opportunity to explore the work of the painter and decorator. The focus is on learning about this work through the practical application of skills in surface preparation and paint application.

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| **10. Indicative Content** |

The students will:

Gain an understanding of the principles and processes of painting surfaces.

Gain an understanding of the basic principles of preparing surfaces and applying paints for decorative purposes.

Be aware of the health, safety and welfare issues involved in painting and decorating.

Know which tools and materials are commonly used for basic surface preparation and painting activities

Be able to prepare surfaces for painting and to apply paints to prepared surfaces using safe working practices.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know the hand tools, materials and access equipment used by decorators to perform specified tasks | 1.1 Identify hand tools and access equipment used to perform painting and decorating tasks  1.2 Identify the materials used to perform painting and decorating tasks |
| 2. Understand safe working practices to prepare new and previously painted surfaces for painting | 2.1 Identify the personal protective equipment (PPE) and safe working practices used to perform painting and decorating tasks  2.2 Explain the selection of PPE and safe working practices used to perform painting and decorating tasks  2.3 Explain the selection of personal protective equipment (PPE) and safe working practices used to perform painting and decorating tasks |
| 3.Be able to apply safe working practices in the application of paints to prepared surfaces | 3.1 Follow manufacturers guidelines when preparing materials for use  3.2 Perform painting and decorating activities using hand tools  3.3 Demonstrate the safe use of materials when performing painting and decorating tasks  3.4 Demonstrate the safe use of low level access equipment when performing painting and decorating tasks |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge of activities undertaken tools, materials and equipment |  |
| (B) Demonstrate a knowledge of activities undertaken by those working with CAD | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** |  | **Learning and teaching methods** | |
| (C) Demonstrate basic application of ethical issues in their interpretations and analyse the resources in the production of materials, tools and equipment | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on Moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text | |
| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** | |
| (D) Show the diversity and complexity in using materials tools and equipment to Modify construction materials |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate | |
|  |  | **Assessment** | |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text | |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (E) Apply basic research skills and present their findings to a recognisable academic standard. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography(100%) of final grade |

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| **1.** | **Unit Title** | Performing Plumbing Operations |
| **2.** | **Credit Value of Unit** | 6 |
| **3.** | **Unit Type** | Optional (A) |
| **4.** | **Guided Learning hours** | 30 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 10 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **30** | **Total** | **30** |
| **7. Total notional hours for unit** | | | **60** |

**8. An overview and introduction to the unit**

Some important trade skills within the construction industry are those which contain the skills set of areas such as plumbing and heating and ventilation operations. This unit focuses on the hand tools, portable power tools, access equipment, and personal protective equipment (PPE) and safe working techniques used to install pipework systems for both plumbing and heating and ventilating trades. This unit also takes into consideration the health, safety and welfare issues for the trade skills especially in the area of pipework installation and the safe use of electrical equipment in the presence of water.

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| **9. Aims of the Unit** |

This unit gives the students

An opportunity to explore the tools, equipment and working techniques used to perform plumbing and heating and ventilation tasks, and provides opportunities to use the techniques to install pipework systems.

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| **10. Indicative Content** |

The students will:

Gain practical skills in the operation of hand tools, portable power tools, access equipment, personal protective equipment (PPE)

The safe working techniques used to install pipework systems for both plumbing and heating and ventilating trades.

The identification, correct selection, and safe use of the hand tools and power tools required to carry out the installation work.

Gain an understanding of the requirements for the safe use of access equipment, including stepladders and extension ladders.

To form joints in pipework using both compression fittings and capillary fittings. Incorporate such joints in the pipework arrangements typically found in domestic buildings.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know the hand tools and portable power tools commonly used to perform plumbing, heating and ventilating tasks | 1.1 Identify the hand tools and access equipment used to perform paperhanging operations  1.2 Identify the hand tools and portable power tools used to perform plumbing, heating and ventilating tasks  1.3 Identify the materials used in paperhanging operations |
| 2. Understand the important health, safety and welfare issues associated with plumbing, heating and ventilating tasks | 2.1 Identify the personal protective equipment (PPE), access equipment and safe working practices used to perform plumbing, heating and ventilating tasks  2.2 Explain the selection of personal protective equipment (PPE), access equipment and working techniques to be used in plumbing, heating and ventilating tasks |
| 3. Be able form pipe joints to given specifications | 3.1 Form pipe joint techniques in accordance with safe working practices |
| 4. Be able install pipework systems to given specifications | 4.1 Measure and mark out pipe work systems in accordance with safe working practices  4.2 Produce pipework installations to given specifications |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge of activities undertaken tools, materials and equipment |  |
| (B) Demonstrate a knowledge of activities undertaken by those working with CAD | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** |  | | **Learning and teaching methods** |
| (C) Demonstrate basic application of ethical issues in their interpretations and analyse the resources in the production of materials, tools and equipment | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Cognitive and Intellectual) | |  | **Learning and teaching methods** |
| (D) Show the diversity and complexity in using materials tools and equipment to Modify construction materials | |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  | |  | **Assessment** |
|  | |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) | |  | **Learning and teaching methods** |
| (E) Apply basic research skills and present their findings to a recognisable academic standard. | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Performing Electrical Operations |
| **2.** | **Credit Value of Unit** | 6 |
| **3.** | **Unit Type** | Optional (A) |
| **4.** | **Guided Learning hours** | 30 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 10 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **30** | **Total** | **30** |
| **7. Total notional hours for unit** | | | **60** |

**8. An overview and introduction to the unit**

The purpose of this unit is to allow learners to undertake some of the practical aspects of electrical operations in the construction industry. They will need to be able to select the right tools and access equipment for performing electrical services operations and be able to assess the hazards and safety measures required in carrying out these operations. Students will be able to see how electrical cabling and wiring is fitted together by undertaking some of these operations in a practical setting. The electrical installation in construction is usually undertaken by a specialist electrical sub-contractor who would undertake the installation of all the power, lighting and data requirements for a domestic or commercial property.

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| **9. Aims of the Unit** |

This unit enables learners to carry out the installation of electrical circuits for power and lighting safely using current industry standard techniques

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| **10. Indicative Content** |

The students will:

Gain an understanding of the process and principles of electrical installations.

Know how to wire cables from the mains to the outlet sockets or light fittings. Know the policy and procedures to ensure the safety of the building occupants.

Know current electrical legislation in accordance to understanding risks and hazards involved in working with electricity and how to protect students from these risks.

Gain access to a specific height using safe access systems. Safe access systems will need to be erected and dismantled correctly including inspection before use.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know the hand tools and portable power tools commonly used to perform plumbing and heating and ventilating tasks specified tasks | 1.1 Identify the hand tools and access equipment used to perform paperhanging operations  1.2 Identify the hand tools and portable power tools used to perform plumbing and heating and ventilating tasks  1.3 Identify the materials used in paperhanging operations |
| 2. Understand the important health, safety and welfare issues associated with plumbing, heating and ventilating tasks | 2.1 Identify the personal protective equipment (PPE), access equipment and safe working practices used to perform plumbing, heating and ventilating tasks  2.2 Explain the selection of personal protective equipment (PPE) , access equipment and working techniques to be used in plumbing, heating and ventilating tasks |
| 3. Be able to form pipe joints to given specifications | 3.1 Form pipe joint techniques in accordance with safe working practices |
| 4. Be able install pipework systems to given specifications | 4.1 Measure and mark out pipe work systems in accordance with safe working practices  4.2 Produce pipework installations to given specifications |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge of activities undertaken tools, materials and equipment |  |
| (B) Demonstrate a knowledge of activities undertaken by those working with CAD | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** |  | | **Learning and teaching methods** |
| (C) Demonstrate basic application of ethical issues in their interpretations and analyse the resources in the production of materials, tools and equipment | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Cognitive and Intellectual) | |  | **Learning and teaching methods** |
| (D) Show the diversity and complexity in using materials tools and equipment to Modify construction materials | |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  | |  | **Assessment** |
|  | |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) | |  | **Learning and teaching methods** |
| (E) Apply basic research skills and present their findings to a recognisable academic standard. | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Transferable) |  | **Learning and teaching methods** |
| (F) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography(100%) of final grade |

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| **1.** | **Unit Title** | Exploring Plastering and Dry-lining Operations |
| **2.** | **Credit Value of Unit** | 6 |
| **3.** | **Unit Type** | Optional (A) |
| **4.** | **Guided Learning hours** | 30 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 10 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **30** | **Total** | **30** |
| **7. Total notional hours for unit** | | | **60** |

**8. An overview and introduction to the unit**

‘Plastering and dry-lining’ is a very skilled development as it part of the preparation processes for floor or wall final decoration surfaces. This unit is focused on exploring the basic skills and materials involved in plastering and dry-lining. Plasterwork is one of the most ancient of handicrafts employed in connection with building operations. The earliest evidence showing that the dwellings of primitive man were erected in a simple fashion with sticks and plastered with mud. This construction method is still in evidence in parts of the developing world, as it provides a very effective shelter against the elements. Plastering requires a lot of practice in order to develop the techniques involved in producing a finished surface. The technique involves using a hand trowel that has to be mastered in order to achieve an acceptable finish.

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| 9. **Aims of the Unit** |

This unit will enable learners to use plastering hand tools safely and understand the different materials and techniques involved in applying this skill.

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| **10. Indicative Content** |

The students will:

Gain an understanding of the historical practices and processes involved in producing a finished surface

Explore traditional plastering techniques used for interior wall and plaster decorative mouldings on ceilings or walls.

Understand the principles and process of creating plasterwork, used in the building construction industries.

An introduction using hand tools, equipment and basic craft skills needed for stud partitions and plaster coats.

Emphasis is on the correct selection and safe use of the appropriate tools and equipment.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know the hand tools and portable power tools commonly used to perform plumbing, heating and ventilating tasks | 1.1 Identify the hand tools and portable power tools used to perform plumbing and heating and ventilating tasks  1.3 Identify the materials used in paperhanging operations |
| 2. Understand the important health, safety and welfare issues associated with plumbing, heating and ventilating tasks | 2.1 Identify the personal protective equipment (PPE), access equipment and safe working practices used to perform plumbing and heating and ventilating tasks  2.2 Explain the selection of personal protective equipment (PPE) , access equipment and working techniques to be used in plumbing, heating and ventilating tasks |
| 3. Be able to form pipe joints to given specifications | 3.1 Form pipe joint techniques in accordance with safe working practices |
| 4. Be able to install pipework systems to given specifications | 4.1 Measure and mark out pipe work systems in accordance with safe working practices  4.2 Produce pipework installations to given specifications |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | | **Learning and teaching methods** |
| (A) Demonstrate a knowledge of activities undertaken tools, materials and equipment |  |
| (B) Demonstrate a knowledge of activities undertaken by those working with CAD | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Values and Attitudes** | |  | **Learning and teaching methods** |
| (C) Demonstrate basic application of ethical issues in their interpretations and analyse the resources in the production of materials, tools and equipment | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) |  | | **Learning and teaching methods** | | |
| (D) Show the diversity and complexity in using materials tools and equipment to Modify construction materials |  | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate | | |
|  |  | | **Assessment** | | |
|  |  | | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text | | |
| Skills (Subject Specific/Professional) | |  | **Learning and teaching methods** |
| (E) Apply basic research skills and present their findings to a recognisable academic standard. | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) | |  | **Learning and teaching methods** | |
| (F) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate | |
| **Assessment** | |
|  | |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography (100%) of final grade | |

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| **1.** | **Unit Title** | Exploring Roofing Operations |
| **2.** | **Credit Value of Unit** | 5 |
| **3.** | **Unit Type** | Optional (A) |
| **4.** | **Guided Learning hours** | 30 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 10 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 6 |
| **Unsupervised Access to Resources** | 4 |
| **Total** | **30** | **Total** | **20** |
| **7. Total notional hours for unit** | | | **50** |

**8. An overview and introduction to the unit**

In this unit, students will learn about working techniques used to perform roofing tasks. Students will apply these techniques to develop practical skills in doing roofing tasks. Students will also learn about hand tools, access equipment, personal protective equipment (PPE) and safe working techniques used to perform roofing operations. Students will learn about the potential health and safety hazards in roofing, how to carry out a risk assessment, and safe working practices in the use of common tools and equipment. This is a practical based unit which involves preparing a sloping roof to receive plain tiles and the fixing of plain tiles to that surface. Students will develop an understanding of the issues associated with working at height.

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| **9. Aims of the Unit** |

This unit will enable students to develop the knowledge, skills and techniques to determine and select appropriate materials to carry out roofing tasks. Students will also know the requirements for the safe use of access equipment including extension ladders, mobile scaffold towers and mobile elevated working platforms.

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| **10. Indicative Content** |

The students will:

* Gain an understanding of the historical practices and processes involved in producing a finished surface
* Understand tools, materials and equipment used for roofing tasks
* Understand the principles and process of using tools and equipment for roofing correctly.
* Understand how to access equipment, including safe checking, erection, use, dismantling and storage
* Carry out risk assessment prior to starting the activities and procedures during the practical activity.
* Gain an understanding of fixing plain roof tiles to a sloping roof surface

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Understand tools, materials and equipment used for roofing tasks | 1.1 Identify the purpose of tools and equipment, and the use of materials in roofing.  1.2 Outline the safe use and storage of roofing tools, materials and equipment.  1.3 Explain the safe use and storage of roofing tools, materials and equipment. |
| 2. Understand the tools and equipment used to carry out roofing tasks | 2.1 Explain the selection and use of appropriate tools, materials and equipment for roofing.  2.2 Justify the selection of tools, materials and equipment for a specified roofing task.  2.3 Evaluate the use of alternative materials for a specified roofing task. |
| 3. Develop practical skills using safe techniques to carry out roofing tasks | 3.1 Carry out a risk assessment prior to commencing roofing tasks.  3.2 Comply with safe working practices including using appropriate personal protective equipment.  3.3 Calculate gauge and number of courses from technical and manufacture’s specification. |
| 4. Understand the methods used to set up sloping roof surfaces | 4.1 Prepare and set up a sloping roof surface:   * for a minimum area of 3 m2 * for a minimum pitch of 30° * underlay neatly fixed with no ridges * tile battens fixed within 5mm of parallel to each other. |
| 5. Know how to Fix plain roof tiles to a sloping roof surface | 5.1 Fix plain roof tiles to a sloping roof surface, with guidance:   * to produce a watertight roof finish.   5.2 Fix plain roof tiles to a sloping roof surface:   * to produce a watertight roof finish. * all joints correctly bonded.   5.3 Produce finished work to a sloping roof surface:   * all tiles laid to correct lap and gauge. * to produce a watertight roof finish * all joints correctly bonded. * a half-bond bedded at both verges |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge of activities undertaken tools, materials and equipment |  |
| (B) Demonstrate a knowledge of activities undertaken by those working with CAD | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** |  | **Learning and teaching methods** |
| (C) Demonstrate basic application of ethical issues in their interpretations and analyse the resources in the production of materials, tools and equipment | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (D) Show the diversity and complexity in using materials tools and equipment to Modify construction materials |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (E) Apply basic research skills and present their findings to a recognisable academic standard. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Transferable) |  | **Learning and teaching methods** |
| (F) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Applying Coatings by the Airless Spray Method in the Workplace |
| **2.** | **Credit Value of Unit** | 5 |
| **3.** | **Unit Type** | Optional (C ) |
| **4.** | **Guided Learning hours** | 30 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 10 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 6 |
| **Unsupervised Access to Resources** | 4 |
| **Total** | **30** | **Total** | **20** |
| **7. Total notional hours for unit** | | | **50** |

**8. An overview and introduction to the unit**

This unit must be assessed in a work environment and must include either water-borne or solvent based resource materials. This unit is also assessed as part of a unit covering industrial painting or decorative finishing in accordance with the construction skills. Assessors for this unit must have current industry experience, relevant occupational expertise and knowledge in the subject area and must use a combination of assessment methods to enable students to achieve the assessment criterion.

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| 9. **Aims of the Unit** |

The aim of this unit is to illustrate the skills and knowledge required to apply coatings by the airless spray method in the workplace, relevant to the construction industry

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| **10. Indicative Content** |

The students will:

* Gain an understanding of interpreting information
* Adopt safe and healthy working practices
* Select and prepare materials and associated equipment
* Provide protection to the work area
* Assemble and set up the spray system
* Apply coatings by airless spray equipment
* Clean out and maintain the airless spray equipment

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Understand the instruction and information relating to the work and resources when applying coatings by the airless spray method | 1.1 Understand ~~the~~ organisational procedures to report and rectify inappropriate information and unsuitable resources  1.2 Understand how to produce risk assessments with information from:   * Specifications * Current regulations * Method statements * Manufacturers' information   1.3 Describe how risk assessments are interpreted.  1.4 Identify information collected from risk assessments and method statements  1.5 Describe why it is important to comply with organisational procedures to solve problems  1.6 Describe the organisational procedures developed to report and rectify inappropriate information and resources |
| 2. Know how to comply with relevant legislation in order to maintain safe and healthy working practices | 2.1 Identify different safety signs used for work notification  2.2 Describe the possible hazards indicated by the different safety signs used and  2.3 State the requirement to have information for the relevant, current legislation and official guidance  2.4 Identify the risks relating to:   * Plant * Equipment * Machinery * Materials   2.5 Describe the procedure for responding to emergencies  2.6 Describe the organisational security procedures for:   * Tools * Equipment * Personal belongings   2.7 Explain the methods of accident reporting procedures and responsibilities  2.8 Describe how to report the outcomes from risk assessments  2.9 Explain how to carry out reviews of risk assessments  2.10 Explain the procedures for using health and safety control equipment |
| 3. Be able to select the required quantity and quality of resources to apply coatings by the airless spray method | 3.1 Outline the personal protective equipment (PPE) for applying coatings.  3.2 Rectify the defects in relation to:   * collective protective measures * personal protective equipment (PPE) * respiratory protective equipment (RPE) * local exhaust ventilation (LEV)   3.3 Carry out organisational procedures to select resources  3.4 Protect work from in relation to:   * Spraying operations * General workplace activities * Other occupations * Adverse weather conditions |
| 4. Be able to minimise the risk of damage when applying coatings by the airless spray method | 4.1 Specify control measures to minimise hazards in construction operations due to changes in the workplace.  4.2 Identify the factors use of Work Equipment Regulations Plant, equipment and machinery: inspection and testing  4.3 Specify control measures in safe systems of work  4.4 Demonstrate an awareness of the requirements for the provision and Lifting operations and lifting equipment regulations  4.5 Dispose of waste according to organisational procedures |
| 5. Comply with contract information when applying coatings by the airless spray method | 5.1 Comply with contract information ~~to~~ when applying coatings by the airless spray method  5.2 Communicate reasons for deadlines in progress charts, timetables and estimated times  5.3 Report circumstances which may affect the work programme.  5.4 Demonstrate the work skills used in:   * Preparing * Loading * Protecting * Measuring * Assembling * Positioning * Securing * Cleaning * Communicating   when applying coatings by the airless spray method.  5.5 Apply water-borne and solvent-borne coatings by airless spray for the broad work, linear and structural components.  5.6 Produce a checklist to demonstrate health and safety work practices the following:   * Checking wet film thickness * Shut down and clean out spray equipment to given working instructions * Safely use materials, hand tools, airless spray equipment and ancillary equipment * Safely store the materials, tools and equipment used when applying coatings by the airless spray method * Establish access requirements * Check suitability of previously prepared surfaces * Provide protection by sheeting, masking and removing items * Assemble component parts to form paint spraying equipment * Prepare coatings: single pack and two pack systems * load, operate, maintain (during use) and monitor the paint spray equipment * Establish air-change requirements in confined areas * Assemble, set up, operate and shut down spray equipment * Use correct spray gun technique on broad areas, angles, linear items and complex structural features. |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge of activities undertaken tools, materials and equipment |  |
| (B) Demonstrate a knowledge of activities undertaken | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** |  | **Learning and teaching methods** |
| (C) Demonstrate basic application of ethical issues in their interpretations and analyse the resources in the production of materials, tools and equipment | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (D) Show the diversity and complexity in using materials tools and equipment to Modify construction materials |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (E) Apply basic research skills and present their findings to a recognisable academic standard. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Transferable) |  | **Learning and teaching methods** |
| (F) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Hanging Standard Paper Wall coverings in the Workplace |
| **2.** | **Credit Value of Unit** | 6 |
| **3.** | **Unit Type** | Optional (C ) |
| **4.** | **Guided Learning hours** | 30 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 10 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **30** | **Total** | **30** |
| **7. Total notional hours for unit** | | | **60** |

**8. An overview and introduction to the unit**

The first European wall decorations in the middle ages were textiles made from materials such as wool and silk tapestries. These beautiful wall coverings were only accessible to the wealthiest consumers. The earliest surviving wallpapers are from early-16th century England. These were block-printed and then coloured by hand. These early papers usually mimicked fabrics and were used not only as wallpaper but also as liners for chests and armoires. By the 1600's, wallpaper was common in Western Europe and the 19th century was an age of immense technological development. The first machines for printing wallpaper was developed in the late-18th century and refined in the 19th century. It was during the 1800s that steam power was applied to the printing process, allowing papers to be printed much faster and cheaper than ever before. This unit will enable the student to gain the understanding of the skills and techniques required to hang paper wall covering. The student will be able to know and apply the practices and processes for the application of preparing surfaces, using the relevant materials and equipment aligned to all health and safety requirements. Students will demonstrate and carry out the relevant methodology require to hang wall coverings in line with an organisations policy guideline and in line with the relevant legislations for the construction industry.

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| **9. Unit Aim** |

The aim of this unit is to illustrate the skills, knowledge and understanding required to gain the competence in hanging standard paper wall coverings in the workplace.

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| **10. Indicative Content** |

The students will:

* Understand how to interpret information relating to the work and resources
* Understand the safe and healthy working practices relevant to legislation and official guidance to carry out your work and maintain safe and healthy work practices
* Know the processes and procedures required for the selection and preparation of materials and associated equipment in the work place.
* Know and comply with the organisational policies and procedures to minimise the risk of damage to the work and surrounding area and provide protection to the work area.
* Gain an understanding of the processes and procedures of hanging foundation paper (cross), textured/relief and patterned finishing papers in non-complex locations.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Be able to maintain safe and healthy working practices when hanging standard paper wall coverings. | 1.1 Use control equipment in accordance with organisational requirements when hanging standard paper wall coverings  1.2 Comply with risk to health information when hanging standard paper wall coverings  1.3 Comply with health and safety information when using control equipment  1.4 Communicate the requirements of: collective protective measures   * using personal protective equipment (PPE) * using respiratory protective equipment (RPE) * using local exhaust ventilation (LEV)   1.5 Use health and safety control equipment in accordance with the given instructions.  1. Ensure emergencies are responded to in accordance with organisational authorisation |
| 2. Be able to select the required quantity and quality of resources to hang standard paper wall coverings | 2.1 Select resources associated with own work in relation to:   * Materials * Tools * Equipment   2.2 Identify the characteristics of:   * Surface preparation materials * Pastes and adhesives * Wallpapers * Protective sheeting * Rubbish containers/bags * Access equipment * Hand tools and associated equipment   2.3 Use resources in accordance with organisational requirements  2.4 Report problems associated with the resources in accordance with organisational requirements  2.5 Calculate quantities of materials required to hang standard paper wall coverings |
| 3. Be able to comply with the contract information to hang standard paper wall coverings to the required specification | 3.1 Demonstrate the following work skills when hanging standard paper wall coverings:   * Shading * Measuring * Matching and cutting * Mixing and applying * Folding * Positioning * Fixing * Trimming * Cleaning-off   3.2 Hang standard papers to the given working instructions to the following areas:   * Ceilings with any type of paper * Walls with both internal and external angles using foundation paper (cross) * Textured/relief and patterned finishing papers   3.3 Use materials, hand tools and associated equipment in accordance with organisational work instructions  3.4 Store the materials, tools and equipment used when hanging standard paper wall coverings  3.5 Conform with safe and healthy work practicesin orderto:   * Establish access requirements * Check suitability of surface to receive wallpaper * Prepare and apply pastes and adhesives * Prepare and hang paper to ceilings * Prepare and hang foundation paper, textured/relief and patterned finishing papers * Work to reveals and internal and external angles * Work around electrical fittings and pipework * Keep paper and adjacent surfaces clean * Use access equipment * Use tools and associated equipment   3.6 Communicate within a team when hanging standard paper wall coverings.  3.7 Maintain the tools and equipment used when hanging standard paper wall coverings. |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge of activities undertaken tools, materials and equipment |  |
| (B) Demonstrate a knowledge of activities undertaken by those working with CAD | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** |  | | **Learning and teaching methods** |
| (C) Demonstrate basic application of ethical issues in their interpretations and analyse the resources in the production of materials, tools and equipment | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Cognitive and Intellectual) |  | | **Learning and teaching methods** |
| (D) Show the diversity and complexity in using materials tools and equipment to Modify construction materials |  | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | | **Assessment** |
|  |  | | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** | |
| (E) Apply basic research skills and present their findings to a recognisable academic standard. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate | |
| **Assessment** | |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text | |

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| Skills (Transferable) |  | **Learning and teaching methods** |
| (F) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography(100% ) of final grade |

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| **1.** | **Unit Title** | Hanging Wide-width Vinyls in the Workplace |
| **2.** | **Credit Value of Unit** | 6 |
| **3.** | **Unit Type** | Optional (C ) |
| **4.** | **Guided Learning hours** | 30 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 10 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **30** | **Total** | **30** |
| **7. Total notional hours for unit** | | | **60** |

**8. An overview and introduction to the unit**

**This unit in Decorative Finishing of wall covering is designed to develop the skills and knowledge needed to work within the construction industry. It will equip students with the know-how and ability to work with a textured wall treatment to a professional standard whilst meeting all relevant health and safety requirements.**

This unit will enable the student to gain the understanding of the skills and techniques required in hanging wide-width vinyls in the workplace. The student will be able to know and apply the practices and processes for the application of preparing surfaces, using the relevant materials and equipment.

Students will demonstrate and carry out the relevant methodology required to hang wide-width vinyls in line with the organisation’s policies, procedures and quality guideline, relevant to legislations for the construction industry.

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| **9. Aims of the Unit** |

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in applying coatings by the hanging wide-width vinyls in the workplacemethod in the workplace within the construction industry.

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| **10. Indicative Content** |

The students will:

* Understand how to interpret information relating to the work and resources
* Gain an understanding of the health and safety control equipment used in accordance with current legislation
* Understand reporting procedures and indicate lines of responsibility for making reports.
* Understand the resources associated with to materials, tools and equipment.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know safe and healthy working practices when hanging wide-width vinyl | 1.1 Describe how to use health and safety control equipment and access equipment ~~to~~ when hanging wide-width vinyls in accordance with organisational requirements  1.2 Explain the procedures for making accident reports.  1.3 Explain health and safety procedures in relation to:   * collective protective measures * personal protective equipment (PPE) * respiratory protective equipment (RPE) * local exhaust ventilation (LEV)   1.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.  1.5 Describe how emergencies should be responded to in accordance with organisational authorisation procedures |
| 2. Be able to select the required quantity and quality of resources for the methods of work to hang wide- width vinyl | 2.1 Outline the resources associated with own work in relation to materials, tools and equipment.  2.2 Identify the characteristics of:   * Primer * Sealer * Adhesives * Wide-width vinyls (fabric-backed and paper- backed), * Protective sheeting * Rubbish containers * Access equipment * Hand tools and associated equipment   2.3 Use resources in accordance with organisational requirements  2.4 Report any potential hazards associated with the resources and methods of work  2.5 Calculate Describe the method/procedures in calculating the quantities of materials required to use wide-width vinyls |
| 3. Be able to minimise the risk of damage when hanging wide-width vinyls | 3.1 Outline the processes used to protect the work and its surrounding area from damage in accordance with and organisational procedures  3.2 Minimise damage and maintain a clean work space  3.3 Dispose of waste in accordance with current legislation  3.4 Communicate the purpose of protecting work from damage in a workplace situations and external weather conditions  3.5 Dispose of waste in accordance with environmental responsibilities, organisational procedures, manufacturers’ information, statutory regulations and official guidance |
| 4. Comply with the given contract information to hang wide-width vinyls to the required specification | 4.1 Demonstrate the following when hanging wide-width vinyls   * Shading * Measuring * Cutting * Mixing and applying * Folding * Positioning and fixing * Trimming and cleaning off   4.2 Demonstrate completion of the work within the allocated time  4.3 Demonstrate the procedures in order to hang wide-width vinyl:  4.4 Use materials, hand tools and associated equipment in a safe manner  4.5 Demonstrate the processes used to safely store materials, tools and equipment used for hanging wide-width vinyls  4.6 Describe the safe and healthy procedures in order to:   * Establish access requirements * Check suitability of previously prepared surfaces * Prepare appropriate primer sealer and adhesives * Prepare and hang paper-backed, fabric-backed non-woven and polyester acrylic backed vinyls to walls form joints using joint cutter or protective strip, knife and straight-edge * Work to broad wall areas with reveals and internal and external angles * Work around electrical fittings and pipework * Keep the material and adjacent surfaces clean * Use access equipment * Use tools and associated equipment |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** |  | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) |  | | **Learning and teaching methods** | |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate | |
|  |  | | **Assessment Evidence** | |
|  |  | | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text | |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** | |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate | |
| **Assessment Evidence** | |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text | |
| Skills (Transferable) |  | **Learning and teaching methods** | |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate | |
| **Assessment Evidence** | |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography (100%) of final grade | |

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| **1.** | **Unit Title** | Installing Coving, Centre-pieces and Texture  Products in the Workplace |
| **2.** | **Credit Value of Unit** | 6 |
| **3.** | **Unit Type** | Optional (C ) |
| **4.** | **Guided Learning hours** | 30 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 10 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **30** | **Total** |  |
| **7. Total notional hours for unit** | | | **60** |

**8. An overview and introduction to the unit**

**This unit in** installing coving and decorative moulding **is designed to develop the skills and knowledge needed to work within the construction industry. It will equip students with the know-how and ability to work with in coving and decorative to a professional standard whilst meeting all relevant health and safety requirements.**

This unit will enable the student to gain the understanding of the skills and techniques required in coving, centre-pieces and Texture in the Workplace within the construction industry.

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| **9.Aims of the Unit** |

The aim of this unit is to illustrate the skills, knowledge and understanding required in applying coving, centre-pieces and Texture in the Workplace within the construction industry

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| **10. Indicative Content** |

The students will:

* Understand the characteristics and associated with the resources coving tools and equipment
* Understand the correct methods of using the resources and how problems associated with the resources are reported.
* Gain an understanding of why the organisational procedures have been developed.
* Gain an understanding of potential hazards associated with the resources and methods of work
* Gain an understanding of developing work skills when installing coving and decorative mouldings.
* Gain an understanding of developing Cut and install coving and decorative mouldings to form straight runs and internal and external angles to given working instructions.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Be able to minimise the risk of damage when installing coving and decorative mouldings | 1.1 Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures  1.2 Minimise damage and maintain a clean work space  1.3 Dispose of waste in accordance with current legislation  1.4 Protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions  1.5 Dispose of in accordance with environmental responsibilities, organisational procedures, manufacturers’ information, statutory regulations and official guidance |
| 2. Be able to select the required quantity and quality of resources to install coving and decorative moulding | 2.1 Select resources associated with own work in relation to materials, tools and equipment  2.2 Identify the characteristics of:   * ~~S~~ealers * Adhesive * Coving * Decorative mouldings and lightweight centre pieces * Access equipment * Protective sheeting and masking materials * Rubbish container/bag * Fixing * Coving tools and equipment   2.3 Use resources accordance with organisational requirements  2.4 Communicate how required resources are selected in accordance with organisational procedures  2.5 Report any potential hazards associated with the resources and methods of work |
| 3. Be able to comply with information to install coving and decorative mouldings | 3.1 Demonstrate the following work skills when installing coving and decorative mouldings:   * Mixing * Manipulating * Levelling * Cleaning * Measure * Cutting * Positioning * Jointing * Securing * Filling and smoothing   3.2 Cut and install coving and decorative mouldings to form straight runs and internal and external angles  3.3 Use materials, tools and associated equipment in accordance with ‘work instructions  3.4 Store the materials, tools and equipment used when installing coving and decorative mouldings |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** |  | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment Evidence** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Producing Broken Colour Work and Basic Stencilling |
| **2.** | **Credit Value of Unit** | 6 |
| **3.** | **Unit Type** | Optional (C ) |
| **4.** | **Guided Learning hours** | 30 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 10 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **30** | **Total** | **30** |
| **7. Total notional hours for unit** | | | **60** |

**8. An overview and introduction to the unit**

**This unit in** broken colour and stencilling **is designed to develop the skills and knowledge needed to work within the construction industry. It will equip students with the know-how and ability to work with decorative paint finishes and stencilling to a professional standard whilst meeting all relevant health and safety requirements.**

This unit will enable the student to gain the understanding of the skills and techniques required broken colour and stencilling within the construction industry.

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| **9.Aims of the Unit** |

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in Producing Broken Colour Work and Basic Stencilling in the workplace within the relevant sector of industry

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| **10. Indicative Content** |

The students will:

Understand how to interpret and extract relevant information from specifications, current regulations, risk assessments, method statements and manufacturers' information.

Understand the methodology of selecting resources associated with own work in relation to materials, tools and equipment.

Understand the characteristics of working with the resources and materials to create decorative finishes.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know how to comply with relevant legislation and official guidance when producing broken colour effects | 1.1 Explain how to interpret and extract relevant information from:   * Specifications * Current regulations * Risk assessments * Method statements * Manufacturers' information   1.2 Describe how to comply with information and/or instructions derived from risk assessments and method statements  1.3 Describe the organisational procedures to report and rectify inappropriate information and unsuitable resources  1.4 Describe how different types of information are interpreted in relation to:   * Specifications * Current legislation * Risk assessments * Method statements * Manufacturer’s information |
| 2. Be able to select the required quantity and quality of resources to produce broken colour effects | 2.1 Select resources associated with own work in relation to materials, tools and equipment  2.2 Identify the characteristics of:   * Water-borne and solvent-borne proprietary scumbles and scumble glazes * Paints * Stainers * Binders * Solvents/thinners * Pigments * Glaze/varnish * Driers * Draggers * Bags * Rag-rolling materials * Natural sponges * Stipplers * Other items for working scumble * Protective sheeting and masking materials * Rubbish containers/bags * Aaccess equipment * Hand tools * Broken colour work equipment   2.3 Use resources in accordance with organisational requirements  2.4 Report problems associated with the resources  2.5 Communicate how required resources are selected in accordance with organisational procedures  2.6 Report any potential hazards associated with the resources and methods of work  2.7 Calculate quantities of materials required  2.8 Describe the safe and healthy procedures in order to:   * Establish access requirements * Check suitability of previously prepared surface and bring up to suitable finish/ground * Prepare paint/scumble products (proprietary and self-produced) * Prepare brushes, rollers, specialised tools and equipment * Produce broken colour effects of rag-rolling * Bagging * Dragging * Brush and sponge stippling * Wiping-off relief surfaces and colour washing * Decorate broad and linear areas * Apply protective glaze/varnish over decorative effects * Identify how atmospheric conditions affect coatings and their application process * Use access equipment * Use hand tools and associated equipment |
| 3. Be able to select the required quantity and quality of resources to produce stencilling effects | 3.1 Identify the characteristics of:  Water-borne and solvent-borne coatings   * Stainers * Solvents * Driers * Glaze/varnish * Pre-cut stencil plates * Protective sheeting and masking materials * Rubbish containers/bags * Access equipment * Paint application equipment * Stencilling tools * Stencil setting-out equipment   1. Use resources in accordance with organisational requirements   2. Report problems associated with the resources in accordance with organisational requirements   3.4 Communicate how required resources are selected in accordance with organisational procedures  3.5 Report any potential hazards associated with the resources and methods of work.  3.6 Demonstrate the following work skills when producing stencil designs using pre-cut stencil plates:   * Protecting * Moving * Matching * Mixing * Pouring * Diluting * Positioning * Securing * Applying and transferring   3.7 Prepare high-quality ground to given working instructions  3.8 Position pre-cut stencils to produce stencil designs using water-borne or solvent-borne coatings to linear runs and/or wall applications to given working instructions |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** | | |  | | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | | | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Values and Attitudes** | | |  | | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Cognitive and Intellectual) |  | | **Learning and teaching methods** | |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate | |
|  |  | | **Assessment Evidence** | |
|  |  | | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text | |
| Skills (Subject Specific/Professional) |  | | **Learning and teaching methods** | |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate | |
| **Assessment Evidence** | |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text | |
| Skills (Transferable) |  | | **Learning and teaching methods** | |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate | |
| **Assessment Evidence** | |
|  |  | | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography(100%) of final grade | |

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| **1.** | **Unit Title** | Health and safety in building services engineering |
| **2.** | **Credit Value of Unit** | 8 |
| **3.** | **Unit Type** | Optional (B) |
| **4.** | **Guided Learning hours** | 40 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 40 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 20 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **40** | **Total** | **40** |
| **7. Total notional hours for unit** | | | **80** |

**8. Unit Introduction**

This unit introduces students to the methodology, skills and techniques for working in the electrical and building services engineering sector of the construction industry. This unit does not stand alone and does not make students fully qualified electricians

This unit introduces students to develop, learn and practise the skills required for a career progression in the sector. Students will learn about the safety requirements when working in the building services industry

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| **9. Aims of the Unit** |

**In this unit you will:**

This unit provides students with the essential health and safety knowledge and skills to demonstrate best practice in a building services engineering environment or sector. The aim of this unit is for students to gain an awareness of relevant legislation to underpin the knowledge of practical processes carried out with the building services engineering industry.

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| **10. Indicative Content** |

* Gain an understanding of how to handle hazardous situations
* Gain an understanding of the common safety signs found for electrical installation.
* Know electrical safety requirements when working in the building services industry
* Know the safety requirements for working with gases and heat producing equipment
* Gain an understanding of the safety requirements for using access equipment in the building services industry
* Know the safety requirements for working in in excavations and confined spaces in the building services industry
* Be able to apply safe working practice

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know health and safety legislation | 1.1 State the aims of health and safety legislation  1.2 Identify the responsibilities of individuals under health and safety legislation  1.3 Identify statutory and non-statutory health and safety materials  1.4 Identify the different roles of Health and Safety Executive in enforcing health and safety legislation |
| 2. Know how to handle hazardous situations | 2.1 Identify common hazardous situations found on site  2.2 Describe safe systems at work  2.3 Identify the categories of safety signs  2.4 Identify symbols for hazardous substances  2.5 List common hazardous substances used in the building services industry  2.6 List precautions to be taken when working with hazardous substances  2.7 Identify the types of asbestos that may be encountered in the workplace  2.8 Identify the actions to be taken if the presence of asbestos is suspected  2.9 Describe the implications of being exposed to asbestos  2.10 State the application of different types of personal protective equipment (PPE)  2.11 Identify the procedures for manually handling heavy and bulky items  2.12 Identify the actions that should be taken when an accident or emergency is discovered  2.13 Describe procedures for handling injuries sustained on-site  2.14 Describe the procedures for recording accidents and near misses at work. |
| 3. Know electrical safety requirements when working in the building services industry | 3.1 Identify the common electrical dangers to be aware of on- site  3.2 List different sources of electrical supply for tools and equipment  3.3 Describe reasons for using reduced low voltage electrical supplies for tool and equipment on site  3.4 Identify how to conduct a visual inspection of portable electrical equipment for safe condition before use  3.5 Outline the actions to take when portable electrical equipment fails visual inspection  3.6 Outline the Safe Isolation Procedure  3.7 Understand the procedures for dealing with electric shocks. |
| 4. Know the safety requirements for working with gases and heat producing equipment | 4.1 Identify different types of gases used on site  4.2 Describe how bottled gases and equipment should be safely transported and stored  4.3 Describe how to conduct a visual inspection on heat producing equipment for safe condition 4.4 Describe how combustion takes place  4.5 Outline the dangers of working with equipment that produce heat  4.6 Outline the procedures and actions to be taken on discovery of fires on site  4.7 Identify different classifications of fires  4.8 Identify types of fire extinguisher for different classifications of fires. |
| 5. Know the safety requirements for using access equipment in the building services industry | 5.1 Identify different types of access equipment 5.2 Describesuitable equipment for carrying out work at heights based on the work being carried out  5.3 Describe the safety checks to be carried out on access equipment |
| 6. Know the safety requirements for working safely in excavations and confined spaces in the building services industry | 6.1 Identify the situations in which it may be necessary to work in difficult situations  6.2 Describe how excavations should be prepared for safe working  6.3 Describe the precautions to be taken to make excavations safe  6.4 Identify areas where working in confined spaces need to be taken into consideration and outline the safety procedures when working in confined spaces. |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Values and Attitudes** | |  | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment Evidence** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Principles of electrical science |
| **2.** | **Credit Value of Unit** | 8 |
| **3.** | **Unit Type** | Optional (B) |
| **4.** | **Guided Learning hours** | 40 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 40 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 20 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **40** | **Total** | **40** |
| **7. Total notional hours for unit** | | | **80** |

**8. Unit Introduction**

This unit introduces students to the methodology, skills and techniques for working in the electrical and building services. This unit focus~~s~~es on the principles of electrical science when testing electrical installations.

This unit does not stand alone and does not make students fully qualified electricians. The unit introduces students to develop the skills required for a career progression for the electrical operations.

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| **9. Aims of the Unit** |

**In this unit you will:**

The aim of this unit is to enable the students to gain an understanding of the basic principles of electrical science.

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| **10. Indicative Content** |

* Gain an understanding of the principles of electricity
* Gain an understanding of the sources required for an electromotive force
* Know how to calculate resistance of a conductor in a basic electrical circuit
* Understand how instruments are connected into circuits in order to measure electrical quantities.
* Understand the principles of electro-magnetism
* Know the principles of basic mechanics
* Understand how to calculate quantities of mechanical loads and the use of levers
* Know how to differentiate between voltages and currents in Star configured loads
* Know the operating principle of a range of electrical equipment
* Understand the principles of Alternative Current (A.C) theory

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know the principles of electricity | 1.1 Describe the reaction of electrons when charged to form an electric current  1.2 Identify sources of an electromotive force  1.3 Describe the effects of an electric current  1.4 Identify the term System Installation Units for various electrical quantities  1.5 **Describe how to use a basic formula in more than one setting** |
| 2. Know the principles of basic electrical circuits | 2.1 Describe how to calculate resistance of a conductor in a basic electrical circuit  2.2 Describe how to apply Ohm’s law to electrical circuits  2.3 Describe how to calculate power in a basic electrical circuits  2.4 State how instruments are connected into circuits in order to measure electrical quantities. |
| 3. Know the principles of electro-magnetism | 3.1 Describe the magnetic flux patterns of electromagnets  3.2 Describe how to ~~apply~~ Fleming’s right hand rule applies to the operating principles of a simple alternator  3.3 Describe how to calculate magnitudes of a generated EMF  3.4 State how an alternator produces a sinusoidal waveform output  3.5 Describe how to calculate sinusoidal quantities  3.6 State the reason for a.c. distribution. |
| 4. Know the principles of basic mechanics | 4.1 Maybe change AC to  Describe how to calculate:   * Quantities of mechanical loads * The efficiency of a machine expressed as a percentage * Mechanical advantage gained by use of lever |
| 5. Know electrical quantities in Star Delta configuration | 5.1 Differentiate between voltages and currents in Star configured loads  5.2 Differentiate between voltages and currents in Delta configured loads  5.3 Describe why single phase loads should be balanced across a three line supply |
| 6. Know the operating principle of a range of electrical equipment | 6.1 Describe the operating principle of electrical equipment  6.2 Describe how Fleming’s left hand rule determines the direction of rotation of a motor  6.3 Describe the operating principle of transformers |
| 7. Know the principles of Alternative Current (AC) theory | 7.1 State the effects of components in alternative current (AC) circuits  7.2 State characteristics of power quantities for an AC circuit  7.3 Describe why power factor correction is required  7.4 Describe how power factor correction may be achieved. |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** |  | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment Evidence** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Electrical installations technology |
| **2.** | **Credit Value of Unit** | 8 |
| **3.** | **Unit Type** | Optional (B) |
| **4.** | **Guided Learning hours** | 40 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 40 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 20 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **40** | **Total** | **40** |
| **7. Total notional hours for unit** | | | **80** |

**8. Unit Introduction**

This unit introduces students to the methodology, skills and techniques for working in the electrical and building services. This unit focusses on the principles of electrical technology when testing electrical installations. This unit does not stand alone and does not make students fully qualified electricians.

The purpose of this unit is for the student to gain knowledge of underpinning principles and industry standards

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| **9. Aims of the Unit** |

**In this unit you will:**

Students will be able to gather different sources of information regarding the processes and principles of electrical technology

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| **10. Indicative Content** |

* Gain an understanding of the implications of electrical industry with statutory and non- statutory regulations.
* Gain an understanding of the principles and processes of gathering technical information.
* Gain an understanding of the principles of different circuit types and wiring systems in electrical installations
* Gain an understanding of the requirements for the component parts in earthing systems
* Gain an understanding of how electricity is supplied and the methods used in generating electricity for distribution
* Gain an understanding of the requirements used for different types of micro-renewable energies

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know implications of electrical industry regulations | 1.1 Identify statutory regulations  1.2 Identify non statutory regulations  1.3 State implications of statutory regulations  1.4 State implications of non-statutory regulation |
| 2. Understand how to acquire technical information | 2.1 State purpose of different sources of technical information  2.2 Recognise different drawing types  2.3 Recognise symbols used in drawings  2.4 Describe how to convert scale from drawings to actual dimensions. |
| 3. Know wiring systems of electrical installations | 3.1 Describe principles of operation of different circuit types  3.2 Identify wiring systems for different environments  3.3 State the minimum current carrying capacity of live conductors for given installation conditions  3.4 State applications of different types of protective devices  3.5 Identify purpose of specialised equipment for installing wiring systems  3.6 Calculate spacing factor of wiring enclosures |
| 4. Know requirements of earthing systems | 4.1 Identify different types of earthing systems  4.2 Identify component parts of Automatic Disconnection of Supply (ADS)  4.3 Identify exposed conductive parts  4.4 Identify extraneous conductive parts  4.5 Identify component parts of an earth loop impedance path |
| 5. Know how electricity is supplied | 5.1 Identify methods of generating electricity for distribution  5.2 Identify transmission voltages  5.3 Identify distribution voltages  5.4 State the component parts of the electrical distribution network |
| 6. Know requirements for different types of micro-renewable energies | 6.1 Describe types of micro-renewable energies  6.2 Identify requirements for installation of micro-renewable energies  6.3 Identify advantages and disadvantages of micro-renewable energies |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** | |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Values and Attitudes** | |  | | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment Evidence** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Installation of wiring systems and enclosures |
| **2.** | **Credit Value of Unit** | 8 |
| **3.** | **Unit Type** | Optional (B) |
| **4.** | **Guided Learning hours** | 40 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 40 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 20 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **40** | **Total** | **40** |
| **7. Total notional hours for unit** | | | **80** |

**8. Unit Introduction**

This unit introduces students to the methodology, skills and techniques for working in the electrical and building services. This unit looks at the practical processes for installing wiring systems. Students will learn to use tools and materials effectively in completing well defined tasks for electrical installations.

This unit does not stand alone and does not make students fully qualified electricians.

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| **9. Aims of the Unit** |

**In this unit you will:**

This unit will enable students to develop the skills required to install wiring systems to recognised standards. Students will learn how to use tools and materials effectively

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| **10. Indicative Content** |

* Gain an understanding of tools used to install wiring systems
* Understand the processes for installing wiring systems
* Be able to prepare the materials tools and equipment used to installing wiring systems
* Demonstrate the ability to carry out practical processes of bonding mains services to main earthing terminal
* Know the skills and procedures required to inspect a ‘dead electrical installation.
* Understand the skills and techniques required to test a dead electrical installation

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know tools used to install wiring systems | 1.1 Identify hand tools for different tasks  1.2 Identify power tools required to carry out different tasks  1.3 Describe safety checks used for tools |
| 2. Know how to prepare for installing wiring systems | 2.1 Identify possible hazards in the workspace  2.2 Identify Personal Protection Equipment (PPE) for different tasks  2.3 Select access equipment |
| 3. Be able to install wiring systems | 3.1 Select materials from drawings  3.2 Mark out dimensions on work areas from drawings  3.3 Fix accessories to dimensions from drawings  3.4 Install wiring systems  3.5 Terminate wiring systems  3.6 Maintain safe working practices  3.7 Use Joint Industry Board (JIB) safe isolation procedures |
| 4. Be able to bond mains services to main earthing terminal | 4.1 Identify cable sizes  4.2 Terminate cables  4.3 Connect bonding clamps  4.4 Test continuity. |
| 5. Be able to inspect a ‘dead electrical installation. | 5.1 Verify that wiring systems conform to IET standards |
| 6. Be able to test a dead electrical installation | 6.1 Test continuity of protective conductor  6.2 Test ring final circuit  6.3 Test insulation resistance  6.4 Test polarity  6.5 Test functionality 6.6 Record test results |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Values and Attitudes** | |  | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment Evidence** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing  and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Understand how to communicate with others within building services engineering |
| **2.** | **Credit Value of Unit** | 6 |
| **3.** | **Unit Type** | Optional (B) |
| **4.** | **Guided Learning hours** | 30 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 10 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 10 |
| **Unsupervised Access to Resources** | 10 |
| **Total** | **30** | **Total** | **30** |
| **7. Total notional hours for unit** | | | **60** |

**8. Unit Introduction**

It is important that communication plays a large part of building working relationships within the construction industry. This unit enables students to gain an understanding of the methods and processes of building working relationships through practical communication skills. This unit does not stand alone and does not make students fully qualified electricians.

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| **9. Aims of the Unit** |

**In this unit you will:**

This unit will enable students to gain an understanding of the methods and processes used in building working relationships through practical communication skills

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| **10. Indicative Content** |

* Gain an understanding of working as a team
* Know individual roles within the industry
* Understand legislation and guidance information that applies to working in the industry.
* Understand the processes of communication through the different streams of information
* Gain skills in dealing with difficult situations.
* Gain an understanding of the effects that poor communication may have on an organization

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know the members of the construction team and their role within the building services industry | 1.1 Identify the following roles of the site management team:   * + architect   + project manager/clerk of works   + structural engineer   + surveyor   + building services engineer   + quantity surveyor   + buyer   + estimator   + contracts manager   + construction manager.   1.2 Identify the following roles of the individuals that report to the site management team:   * + sub contractors   + site supervisor   + trade supervisor   + trades:   + bricklayer   + joiner   + plasterer   + tiler   + electrician   + H&V fitter   + gas fitter   + decorator   + ground workers   1.3 Identify the following roles of site visitors:   * + building control inspector   + water inspector   + HSE inspector   + electrical services inspector. |
| 2. Know how to apply information sources in the building services industry | 2.1 Identify the types of statutory legislation and guidance information that applies to working in the industry:   * + legislation   + data protection   + equal opportunities   + health & safety   + employment   + regulations   + british standards   + codes of practice * manufacturer guidance:   + installation instructions   + service & maintenance instructions   + user instructions   2.2 Identify the purpose of information that is used in the workplace:   * + job specifications   + plans/drawings   + programmes   + delivery notes   + time sheets   + policy documentation – health & safety, environmental, customer service   1. Identify the purpose of information given to customers:   + quotations   + estimates   + invoices/statements   + statutory cancelation rights   + handover information   2.4 State the importance of company policies and procedures that affect working relationships:  - company working policies/procedures:   * + behaviour   + timekeeping   + dress code   + contract of employment * limits to personal authority:   + apprentices   + level 2 qualified staff   + level 3 qualified staff   + supervisor and management responsibilities. |
| 3. Know how to communicate with others in the building services industry | 3.1 Identify suitable communication methods for use in work situations:   * + verbal communication * written communication:   + e-mail   + fax   + letter   3.2 Define methods of effective communication for people with:   * + physical disabilities   + learning difficulties * language differences:   + dialects   + accents   + foreign and second language issues   3.3 State the actions to take to deal with conflicts between:   * + customers and operatives   + co-workers   + supervisors and operatives   3.4 State the effects that poor communication may have on an organisation:   * + between operatives   + between operatives and management   + company to customer. |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** |  | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment Evidence** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing and a bibliography(100%) of final grade |

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| **1.** | **Unit Title** | Assess Health and Safety Risks |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **Unit Type** | Core |
| **4.** | **Guided Learning hours** | 60 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 60 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 80 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 6 |
| **Unsupervised Access to Resources** | 4 |
| **Total** | **60** | **Total** | **90** |
| **7. Total notional hours for unit** | | | **150** |

**8. Unit Introduction**

Health and safety in the work place is an importance aspect of the construction industry. This unit enables student to gain an understanding of the working conditions of both employees and employers. This enables to look at the people who may be at risk and the consequences for the organisation. It is important for the student to learn about the responsibilities of employers and employees especially with regards to current legislation within the built environment. The impact for the students is to gain the knowledge of making the right choices when selecting and implementing the control measures for a given workplace situation Student also need to understand how to reduce risks and meet legal requirements, using workplace health and safety policies. These include skills for identifying hazards and risks; carrying out risk analysis; recording and analysing data; communication skills in recording and using information.

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| **9. Aims of the Unit** |

**In this unit you will:**

The aim of the unit is to introduce the importance of health and safety in the workplace/business environment. It is concerned with the application of risk assessments in relation to hazards, imparting information, advice and guidance, statutory regulations, roles and responsibilities associated with working in a public environment/design industry.

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| **10. Indicative Content** |

* Understand the responsibilities of employers and employees under current.
* Know the legal duties of employees and employers health, safety and welfare legislation relevant to the construction and built environment sector
* Know how to undertake risk assessments using appropriate principles and formats
* Gain an understanding of the importance of highlighting hazards in a given situation. Gain an understanding of the possible consequences for the people in organisations
* Gain an understanding of the principles of risk assessment

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know the responsibilities of employers and employees under current health, safety and welfare legislation | 1.1 Examine the roles and responsibilities of employee’s assigned specific health and safety duties at work.  1.2 Examine the legal duties of employees and employers in relation to three pieces of health, safety and welfare legislation relevant to the construction and built environment sector |
| 2. Know how to undertake risk assessments using appropriate principles and formats | 2.1 Explain the importance of highlighting hazards in a given workplace situation.  2.2 Describe the people who may be at risk, and the possible consequences for the organisation  2.3 Describe the main principles and features of a typical risk assessment for a given workplace situation |
| 3. Understand the control measures used to reduce risk and meet legal requirements | 3.1 Select control measures for a given workplace situation to reduce risks and meet legal requirements, using workplace health and safety policies |
| 4. Know their own role in accident recording and reporting procedures. | 4.1 Assess the role of the individual in accident recording and reporting procedures |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** | |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Values and Attitudes** | |  | | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment Evidence** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing and a bibliography(100%) of final grade |

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| **1.** | **Unit Title** | Conceptual Design for Construction Design |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **Unit Type** | Optional |
| **4.** | **Guided Learning hours** | 60 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 60 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 80 | |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 6 | |
| **Unsupervised Access to Resources** | 4 | |
| **Total** | **60** | **Total** | **90** | |
| **7. Total notional hours for unit** | | | | **150** |

**8. Unit Introduction**

The focus of this unit is for the students to know the processes of working safely and understand the importance of complying with health and safety. As part of the statutory regulations students will need to know and understand the relevant regulations and directives and guidelines. A practical based unit which will enable the student to produce conceptual designs. Students will evaluate the conceptual designs against established criteria in order to gain an awareness of customer’s requirements.

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| **9. Aims of the Unit** |

**In this unit you will:**

This unit will enable the students to produce conceptual designs. The student will also work to specific specifications in order to support the customer requirements and evaluate their findings.

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| **10. Indicative Content** |

* Gain the understanding of systematic approach for the process of evaluation.
* Know how to gather information from the customer to support the design specification for the new product.
* Understand how to establish the technologies required for the design process.
* Produce conceptual designs using each of the identified technologies
* Know the methods used to evaluate the conceptual design process
* Develop a strategy to compare data of the design performance processes used.
* Know how to develop a strategy to minimise risks

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Produce and evaluate conceptual design options for new construction design/s concepts/ideas | 1.1 Work safely at all times, complying with health and safety and other relevant regulations/directives and guidelines   1.2 Carry out all of the following activities in producing and evaluating conceptual designs:   * produce the conceptual design options * identify the criteria to be used to evaluate each of the conceptual designs * evaluate each conceptual design against the established criteria * identify the designs that are most effective at meeting the customer’s requirements * identify any risks, and produce a contingency strategy for minimising them    1.3 Evaluate design such as concepts for two of the following:   * materials (metals, chemicals, plastics, ceramics, composites) * electrical components * software programs * electronic components * mechanical components * integrated technologies * fabricated/welded * brick * cement   other *(specify)*  1.4 Apply a systematic approach to the evaluation process  1.5 Obtain all customer requirements and the design specification for the new product  1.6 Establish all the technologies to be considered as part of the design  1.7 Produce conceptual designs using each of the identified technologies  1.8 Identify the criteria to be used to evaluate each of the conceptual designs from the customer requirements, and evaluate using at least one of the following:   * strengths, weaknesses, opportunities and threats (SWOT) analysis * force field analysis * critical success factor/process matrix * design failure mode & effects analysis (DFMEA) * weighted selection * tree diagram * attribute analysis * fishbone diagram * relationship diagram * paired comparison * mind map * technology/state-of-the-art analysis   other *(specify)*  1.9 Evaluate each conceptual design against the established criteria, and identify the designs that are most effective at meeting the customer’s requirements  1.10 Compare results and design performance from similar design exercises, and identify any lessons learned  1.11 Identify any perceived risks, and produce a contingency strategy for minimising them  To include all of the following:   * embedded technology * innovative technology * security of supply * lack of performance * environmental constraints * interfacing components/technologies * hazardous processes * hazardous material * hazardous emissions   other specific  1.12 Record and present the results of the evaluation to the appropriate people, according to agreed procedures |
| 2. Understand how to present your construction design/s concepts/ideas | 2.1 Present your design concepts to a target audience and client  2.2 Summarise your journey through the development of your ideas |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** | |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Values and Attitudes** | |  | | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment Evidence** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing and a bibliography(100%) of final grade |

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| **1.** | **Unit Title** | Introduction to Design and Research Skills |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **Unit Type** | Core |
| **4.** | **Guided Learning hours** | 60 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 60 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 80 | |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 6 | |
| **Unsupervised Access to Resources** | 4 | |
| **Total** | **60** | **Total** | **90** | |
| **7. Total notional hours for unit** | | | | **150** |

**8. Unit Introduction**

This unit focuses on students developing skills and knowledge on methods to apply skills in research. It is important for the students to understand the different styles of workship. Students will be able to compare a .range of primary and secondary research sources. As part of research students will learn how to record information in order to support the development of ideas for creative activities. Students will also evaluate the effectiveness of research tools to continue to develop their design ideas.

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| **9. Aims of the Unit** |

**In this unit you will:**

Be able to learn about the skills and techniques involved with the process and practices of research. Students will also gain an understanding of the theories and practice of collecting information in order to inform the development of ideas for creative activities

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| **10. Indicative Content** |

* Gain an understanding of the skills used to apply research
* Understand primary and secondary research sources in order to compare finings for design development.
* Understand the methods and technologies used to record and interpret information for the development of design ideas.
* Evaluate the methods and skills used to develop ideas for creative activities
* Be able to use research tools, methods and skills to inform ideas for creative activities

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Understand research tools, methods and skills | 1.1 Critically compare a range of research tools, methods and skills |
| 2. Understand primary and secondary research sources | 2.1 Critically compare a range of primary and secondary research sources |
| 3. Be able to use research tools, methods and skills to inform ideas for creative activities | 3.1 Apply research tools, methods and skills to record and interpret information and develop ideas for creative activities  3.2 Evaluate the effectiveness of research tools, methods and skills to develop ideas for creative activities |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** |  | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment Evidence** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Sustainable construction |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **Unit Type** | Core |
| **4.** | **Guided Learning hours** | 60 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 60 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 80 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 6 |
| **Unsupervised Access to Resources** | 4 |
| **Total** | **60** | **Total** | **90** |
| **7. Total notional hours for unit** | | | **150** |

**8. Unit Introduction**

This unit enables students to gain an understanding of the methods and processes used for sustainable construction techniques. It is important that student know the features of the natural environment in order to support the development of the construction project. This unit will enable the student to address these features at the planning stages of the project. Students need to be fully aware of the region including areas such as soil mass and density in order to inform them of the possible pollution that can occur as a result of the construction project. Therefore students will gain an understanding of different forms of global pollution that can arise from design projects. They will also learn about different forms of local pollution arising from construction projects and how this may harm the local environment. A large emphasis of this unit will address key methods of protecting the environment from the impact of the construction and built environment sector. Students will engage in exploring important features of the natural environment that need to be protected and understand through practical investigations how the activities of the design sector impact on the natural environment. This will also include the students studying whether their design and construction ideas are fit for purpose.

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| **9. Aims of the Unit** |

**In this unit you will:**

This unit enables students to. This will also enable students to gain an understanding of different forms of local and global pollution that can arise from design projects, inclusive of the protective measures used to support design and construction activities for the sector.

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| **10. Indicative Content** |

* Gain an understanding of the methods and processes used for sustainable construction techniques.
* Understand the features of the natural environment
* Consider the features of the natural environment at the planning stage of a construction project
* Gain an understanding of different forms of local and global pollution arising from design projects.
* Know the methods used to protect the natural environment from the impact of the construction industry.
* Know the important features of the natural environment that need to be protected.
* Understand how the activities within the design development can have an impact on the natural environment.
* Gain an understanding of how the natural environment can be protected against the activities of the construction industry.
* Understand sustainable construction techniques that are fit for purpose

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know the important features of the natural environment that need to be protected | 1.1 describe six different features of the natural environment that must be considered at the planning stage of a construction project |
| 2.Understand how the activities of the design sector impact on the natural environment | 2.1 explain four different forms of global pollution arising from design projects  2.2 explain how four different forms of local pollution arising from construction projects may harm the local environment |
| 3.Understand how the natural environment can be protected against the activities of the construction and built environment sector | 3.1explain four key methods used to protect the natural environment from the impact of the construction and built environment sector |
| 4. Understand sustainable construction techniques that are fit for purpose | 4.1 explain three different, fit-for-purpose sustainable construction techniques |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** | |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Values and Attitudes** | |  | | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment Evidence** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Colour Theory and Practice |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **Unit Type** | Core |
| **4.** | **Guided Learning hours** | 60 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 60 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 80 | |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 6 | |
| **Unsupervised Access to Resources** | 4 | |
| **Total** | **60** | **Total** | **90** | |
| **7. Total notional hours for unit** | | | | **150** |

**8. Unit Introduction**

This unit enables the student to explore the effect of colour on perceptions of images and products for the design of construction ideas. Students will explore the idea of symbolism within different cultures and societies and how choices of colour can change environments such as the effects of mood and safety. It is also important that students understand the existing approaches to the use of colour in order to appreciate the dynamic changes and influences it has within the concept of design for the construction environment. Students will experiment with colour techniques and processes such as the use of colour to convey status and the differing perceptions of harmonic, complementary and clashing colours. Students will further develop their appreciation for colour qualities through the exploration of applying appropriate colour schemes in order to match specific design intentions both objectively and subjectively.

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| **9. Aims of the Unit** |

**In this unit you will:**

This unit enables the student to explore the effect of colour on perceptions of images and products for the design of construction ideas Students will experiment with colour techniques and processes in order to understand the qualities of colour for the design of the construction environment.

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| **10. Indicative Content** |

* Gain an understanding of the effect of colour on perceptions of images and products for the design of construction.
* Gain an understanding of the existing approaches to the use of colour
* Gain an understanding of the use of colour in different cultures and societies and how choices of colour can change environments
* Gain an appreciation for the use of colour within design
* Understand the impact of using different colour schemes to match specific design intentions

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Understand existing approaches to the use of colour | |  |  | | --- | --- | |  | 1.1 Evaluate a minimum of six examples of the use colour by artists and/or designers to determine  1.2 Describe the relationship between the approach of the artists/ designers to final applications, formats and outcomes  1.3 Assess the potential to employ similar approaches in own work  1.4 Describe colours in different colour spaces, such as RGB, **(**Red, Green and Blue) CMYK, (cyan, magenta, yellow, and key (black} hexadecimal notation, and pantone system  1.5 Describe the following:   * Differences between colour management in screen, print and film based devices * Principles of human colour vision, including cone and rod light receptors * Wavelength principle of colour differentiation and the visual light spectrum * Human colour perception versus that of film or digital media | |
| 2. Understand the effects of colour on the subjective perception of design outcomes | 2.1 Explore the effect of colour on perceptions of images and products to include at least four of the following:   * Uses of colour to convey status * Perceptions of utility as affected by colour coding (signalling purpose / safety etc) * Symbolism of colour in different societies/cultures * Uses of colour to effect mood * Differing perceptions of harmonic, complementary and clashing colours * Colour forecasting |
| 3. Be able to experiment with colour techniques and processes | 3.1Experiment with colour techniques and processes to include:   * Colour harmonies based on the colour wheel * Colour value and saturation to create moods * Colour mixing with light * Colour mixing with pigment * Mood-boards * Colour-ways * Accessorising * Optical colour filters/gels * Digital colour manipulation |
| 4. Be able to use a range of materials and media to develop creative colour solutions | 4.1 Select and apply appropriate colour schemes to match a specific design intention  4.2 Evaluate the application of the colour schemes in terms of both objective and subjective qualities |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** |  | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment Evidence** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing and a bibliography  (100%) of final grade |

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| **1.** | **Unit Title** | Mathematics |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **Unit Type** | Core |
| **4.** | **Guided Learning hours** | 60 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 60 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 80 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 6 |
| **Unsupervised Access to Resources** | 4 |
| **Total** | **60** | **Total** | **90** |
| **7. Total notional hours for unit** | | | **150** |

**8. Unit Introduction**

The main focus of this unit to look at how mathematical techniques and methods are carried out to support the work of the construction industry. Students will be able to gain underpinning knowledge of the processes used to calculate and manipulate formulae. Students will be introduced further to the methods and techniques applied for algebraic expressions and equations. To support the learning process student will be expected to know and use the main functions of a scientific calculator to perform mathematical technical calculations. As part of this process, students will learn how to select and apply mathematical techniques correctly to solve practical construction problems involving perimeters, areas and volumes. The graphical methods taught in this unit is to demonstrate methods for solving linear and quadratic equations. Students must also not forget the importance of also using algebraic methods to solve quadratic simultaneous linear equations.

Alternative mathematical methods are demonstrated in order to further enable the student to use a range of appropriate judgements in any given situation. This may include areas such as applying geometric and trigonometric techniques correctly to solve practical construction problems or applying appropriate algebraic methods to find lengths, angles, areas and volumes for a 2D and 3D complex construction industry-related problem.

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| **9. Aims of the Unit** |

**In this unit you will:**

Students will be able to use mathematical techniques and methods to support the work of the construction industry. Students will be able to know and use the main functions of a scientific calculator to perform mathematical technical calculations

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| **10. Indicative Content** |

**In this unit you will:**

* Gain an understanding of how to use mathematical techniques and methods to support the work of the construction industry.
* know how to use the main functions of a scientific calculator to perform mathematical technical calculations
* Know the processes used to calculate and manipulate formulae.
* Gain an understanding of the methods and techniques applied for algebraic expressions and equations.
* Know the methods and techniques used to solve practical construction problems involving perimeters, areas and volumes.
* Gain an understanding of how to apply graphical methods for solving linear and quadratic equations.
* Gain an understanding of using alternative mathematical methods for making a range of appropriate judgements for the design and construction of 2D and 3D structure.
* Know how to apply geometric and trigonometric techniques correctly to solve practical construction problems
* Know how to apply appropriate algebraic methods to find lengths, angles, areas and volumes for a 2D and 3D complex construction industry-related problem.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Be able to use basic underpinning mathematical techniques and methods to manipulate and/or solve formulae, equations and algebraic expressions | 1.1 Use the main functions of a scientific calculator to perform mathematical technical calculations  1.2 Use standard mathematical techniques to simplify expressions and solve problems using linear formulae |
| 2. Be able to select and apply mathematical techniques correctly to solve practical construction problems involving perimeters, areas and volumes | 2.1 Outline and use graphical methods to solve linear and quadratic equations  2.2 Use mathematical techniques to solve construction problems associated with simple perimeters, areas and volumes  2.3 Use algebraic methods to solve linear, quadratic simultaneous linear and quadratic equations  2.4 Carry out checks on calculations using relevant alternative mathematical methods, making appropriate judgements on the outcome |
| 3. Be able to select and apply geometric and trigonometric techniques correctly to solve practical construction problems | 3.1 Apply appropriate algebraic methods to find lengths, angles, areas and volumes for one 2D and one 3D complex construction industry-related problem  3.2 Use trigonometric techniques to solve simple 2D construction problems |
| 4. Be able to select and apply graphical and statistical techniques correctly to solve practical construction problems. | 4.1 Demonstrate an understanding of the limitations of certain solutions in terms of accuracy, approximations and rounding error  4.2 Use trigonometric techniques to solve simple 2D construction problems  4.3 Use geometric techniques to solve simple construction problems |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** |  | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment Evidence** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Apply Health and Safety and Environmental Legislation and Working Practices |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **Unit Type** | Core |
| **4.** | **Guided Learning hours** | 60 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 60 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 80 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 6 |
| **Unsupervised Access to Resources** | 4 |
| **Total** | **60** | **Total** | **90** |
| **7. Total notional hours for unit** | | | **150** |

**8. Unit Introduction**

**In this unit you will:**

This unit is to support students in developing an understanding of organisational health and safety and environmental procedures. Students will examine organisational policies and address strategies for reporting hazards. Relevant health and safety guidelines will also be addressed in accordance with organisational procedures for the safe use and maintenance of tools, plant, materials and equipment. Students will be able to know safe working practices such as gathering the relevant information to prepare and carry out risk assessments. Students will also undergo a range of assessment processes. They will assess own working practices and working environment for hazards which could cause serious harm, including the handling of potentially hazardous materials, tools and equipment.

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| **9. Aims of the Unit** |

**In this unit you will:**

The students will be able to carry out organisational health and safety and environmental procedures. Students will also be able to assess own working practices and working environment for hazards which could cause serious harm, including the handling of potentially hazardous materials, tools and equipment.

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| **10. Indicative Content** |

**In this unit you will:**

* Gain an understanding of the preparation processes for organisational health and safety and environmental procedures.
* Know organisation’s policies and the importance of personal conduct.
* Understand the importance of health and safety risk assessment within job responsibility
* Understand how to apply organisational procedures for emergencies and accidents
* Understand the monitoring systems and review safety on sites
* Assess own working practices and working environment for hazards which could cause serious harm.
* Understand individual and organisational responsibilities and safe working practices

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Implement organisational health and safety and environmental procedures before starting work. | 1.1 Identify relevant workplace health and safety and environmental procedures.  1.2 Identify the relevant person(s) in the workplace, to whom hazards should be reported. |
| 2. Know safe working practices. | 2.1 Prepare a risk assessment and identify control measures  2.2 Describe the organisation’s policies and procedures for the safe use and maintenance of tools, plant, materials and equipment  2.3 Identify the health and safety hazards within job responsibility limits.  2.4 Outline the importance of personal conduct does not endanger the health and safety of self or others  2.5 Carry out work processes which comply with health and safety risk assessment requirements.  2.6 Describe hazard warning and prohibition notices. |
| 3. Understand the monitoring systems and review safety on sites | 3.1 Assess own working practices and working environment for hazards which could cause serious harm, including the handling of potentially hazardous materials, tools and equipment  3.2 Identify remedial action(s) where site conditions change original risk assessment significantly |
| 4. Understand how to apply organisational procedures for emergencies and accidents. | 4.1 Produce information to demonstrate the organisation’s procedures in the event of injuries to self and others. |
| 5. Understand the environmental implications of their actions or omissions at work. | 5.1 Demonstrate work processes which comply with organisational environmental requirements.  5.2 Analyse those environmental hazards within own job responsibility limits. |
| 5. Understand individual and organisational responsibilities and safe working practices. | 5.3 Describe key roles and responsibilities under current health and safety and environmental legislation. |
| 7. Understand safe working practices. | 6.1 Identify how to locate relevant health and safety and environmental information and where to get assistance if needed.  6.2 Identify the particular risks which may be present in own job role and the procedures for managing these risks. |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** | |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Values and Attitudes** | |  | | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment Evidence** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing and a bibliography(100%) of final grade |

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| **1.** | **Unit Title** | Design and Practice |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **Unit Type** | Core |
| **4.** | **Guided Learning hours** | 60 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 60 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 80 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 6 |
| **Unsupervised Access to Resources** | 4 |
| **Total** | **60** | **Total** | **90** |
| **7. Total notional hours for unit** | | | **150** |

**8. Unit Introduction**

Design and practice looks at the factors that influence the design process. Students will be able to research these factors and address their financial; social and environment needs. Students will also gain an understanding of the factors that affect a structured framework for design architect’s plan of work at each stage. Students will be able to review the characteristics of individual stages and ways in which various stages interconnect. Working in teams is an essential part of the construction industry. Students will develop a design and production team and explain their roles and responsibilities within the construction team.

They will gain an understanding of the legal implications and position of each member of a design team. They will also assess the importance of each role and begin to assess the various members of the design team. The relationship between client and the contractors are important in order to complete the design and development process. Students will also investigate traditional and modern methods of construction and the influence of these on design. Students will be able to identify the specifications needed to meet the requirements of clients, management and production teams. This unit will also enable students will be able to gain an understanding of the rights, health, safety and welfare of a client in relation to written communication, to making design decisions and such decisions on final project outs comes. They will also develop design construction methods and translate construction details into written and graphical structured materials. As a team students will be able to produce multiple options in sketch form to satisfy given brief and comply with technical, financial, legal and environmental constraints. They will also produce drawings and documentation needed to make a formal planning and building regulations application with working drawings and details to facilitate construction.

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| **9. Aims of the Unit** |

**In this unit you will:**

Students will also gain an understanding of the factors that affect a structured framework for design architect’s plan of work at each stage. The students will be able to develop design construction methods and translate construction details into written and graphical structured materials.

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| **10. Indicative Content** |

Students will be able to:

* Gain an understanding of the factors that affect a structured framework for design architect’s plan of work at each stage
* Understand research factors and address their financial; social and environment needs.
* Review the characteristics of individual design stages and ways in which various stages interconnect.
* Know how to develop a design and production team and explain their roles and responsibilities within the construction team.
* Gain an understanding of the legal implications and position of each member of a design team.
* Assess the importance of each role within the design team
* Gain an understanding of the relationship between client and the contractors
* Use research skills to investigate traditional and modern methods of construction and the influence of these on design.
* Be able to gain an understanding of the rights, health, safety and welfare of a client in relation to communication skills
* Know how to produce drawings and documentation needed to make a formal planning and building regulations application with working drawings and details to facilitate construction.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know the factors that influence the design process | 1.1 Identify the Factors that influence the financial; social and environment needs and constraints for a for the design team.  1.2 Understand the building regulations, health, safety and welfare within Design and Management (CDM)  1.3 Understand the need and benefits of regulations and the planning acts for the design process.  1.3 Understand the factors that affect a structured framework for design Architect’s Plan of Work/Job at each stage. Review the characteristics of individual stages and ways in which various stages interconnect. |
| 2. Be able to communicate ideas between various members of the design and production teams | 2.1 Describe and develop a design and production team and explain their roles and responsibilities within the construction team.  2.2 Understand the legal implications and position of each member of a design team.  2.3 Demonstrate an understanding of the rights, health, safety and welfare of a client in relation to written communication; to aid and influence design factors that contribute to making design decisions and such decisions on final project outs comes |
| 3. Know about design construction methods | 3.1 Describe the characteristics, applications and limitations of traditional and modern methods of construction and the influence of these on design  3.2 Identify multiple design options available to satisfy the primary and secondary requirements of design sustainability.  3.3 Outline the terminology used in landscape, construction, product, interior and architectural to describe traditional and contemporary elements and methods associated with legislation; health and safety and environmental factors |
| 4. Be able to translate construction details into written and graphical instructions | 4.1 Identify the specifications needed to meet the requirements of clients, management and production teams  4.2 Produce multiple options in sketch form to satisfy given brief and comply with technical, financial, legal and environmental constraints.  4.3 Produce drawings and documentation needed to make a formal planning and building regulations application with working drawings and details to facilitate construction. Include variations and superseded drawings; compliance with current legal standards, (e.g Drawing Office Practice) |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** | |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Values and Attitudes** | |  | | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment Evidence** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Introduction to Materials, Processes and Technical Skills in Design and Construction |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **Unit Type** | Core |
| **4.** | **Guided Learning hours** | 60 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 60 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 80 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 6 |
| **Unsupervised Access to Resources** | 4 |
| **Total** | **60** | **Total** | **90** |
| **7. Total notional hours for unit** | | | **150** |

**8. Unit Introduction**

This unit enables the student to gain an understanding of the building regulations, health, safety and welfare within Construction Design and Management (CDM)

The will explore the legislations for the construction industry and understand the need and benefits of regulations such as the planning acts for the design process. Students have the opportunity to communicate ideas between various members of the design and production teams

Students will produce technical drawings and documentation needed to make a formal planning and building regulations application with working drawings and details to facilitate construction. Students will further identify different construction options available to satisfy the primary and secondary requirements of design sustainability

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| **9. Aims of the Unit** |

**In this unit you will:**

Students will be able to explore the use of materials, processes and technical skills in design and construction. This will include the process and practice of building regulations, health, safety and welfare within Construction Design and Management.

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| **10. Indicative Content** |

**In this unit you will:**

* Understand materials, processes and technical skills in design and construction.
* Understand the process and practice of building regulations, health, safety and welfare within Construction Design and Management.
* Know how to produce technical drawings and documentation to make a formal planning and building regulations application with working drawings and details to facilitate construction.
* Know the characteristics, applications and limitations of traditional and modern methods of construction and the influence of these on design.
* Know the terminology used in construction and architectural to describe traditional and modern building elements and methods associated with legislation; health and safety and environmental factors

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know the factors that influence the design process | 1.1 Identify the Factors that influence the financial; social and environment needs and constraints for a for the design team.  1.2 Understand the building regulations, health, safety and welfare within Construction Design and Management (CDM)  1.3 Understand the need and benefits of regulations and the planning acts for the design process).  1.3 Understand the factors that affect a structured framework for design Architect’s Plan of Work/Job at each stage. Review the characteristics of individual stages and ways in which various stages interconnect. |
| 2. Be able to communicate ideas between various members of the design and production teams | 2.1 Describe and develop a design and production team and explain their roles and responsibilities within the construction team.  2.2 Understand the legal implications and position of each member of a design team.  2.3 Demonstrate an understanding of the rights, health, safety and welfare of a client in relation to written communication; to aid and influence design factors that contribute to making design decisions and such decisions on final project outs comes |
| 3. Know about construction method | 3.1 Describe the characteristics, applications and limitations of traditional and modern methods of construction and the influence of these on design  3.2 Identify multiple construction options available to satisfy the primary and secondary requirements of design sustainability.  3.3 Outline the terminology used in construction and architectural to describe traditional and modern building elements and methods associated with legislation; health and safety and environmental factors |
| 4. Be able to translate construction details into written and graphical instructions | 4.1 Identify the specifications needed to meet the requirements of clients, building control and production teams  4.2 Produce multiple options in sketch form to satisfy given brief and comply with technical, financial, legal and environmental constraints.  4.3 Produce drawings and documentation needed to make a formal planning and building regulations application with working drawings and details to facilitate construction. Include variations and superseded drawings; compliance with current legal standards, (e.g Drawing Office Practice) |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** |  | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment Evidence** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Spatial Design Project Planning, Implementation and Review |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **Unit Type** | Core |
| **4.** | **Guided Learning hours** | 60 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 60 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 80 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 6 |
| **Unsupervised Access to Resources** | 4 |
| **Total** | **60** | **Total** | **90** |
| **7. Total notional hours for unit** | | | **150** |

**8. Unit Introduction**

**In this unit you will:**

This unit is involved in the disciplines within project management. Students will gain an understanding the project lifecycles, expertise and responsibilities in the planning and designing methods and specification of construction projects. Students will be able to gains general planning and scheduling skills including project methodologies, specialised software packages and company specifics. Students will be able to explore further the effects of changing external factors in managing projects and working within the relevant legislation guidelines. This unit will allow the student to engage in the project specification and investigate the information for the development of business case requirements. Students will use computer systems in the design process; to demonstrate modern methods of construction; the effect of design on construction methods; development of new materials; use of construction plant

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| **9. Indicative Content** |

* Gain an understanding of project management tools
* including general planning Know individual roles within the industry
* Understand how projects are managed in the construction industry.
* Be able to plan projects using computer systems in the design process
* Understand and follow project plans
* Understand the effect of design on construction methods; development of new materials; use of construction plant

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Understand how projects are managed | 1.1 Understand the project lifecycles, expertise and responsibilities in the planning and designing methods and specification of projects.  1.2 Understand project management tools including general planning and scheduling tools including project methodologies, specialised software packages and company specifics.  1.3 Describe the effects of changing external factors in managing projects and working within the relevant legislation guidelines. |
| 2. Be able to plan projects using IT | 2.1 Identify the project specification and investigate the information for the development of a business case requirements.  2.2 Discuss the benefits and success factors of managing a project including boundaries, scope; constraints; and ethical issues relating to the planning and development process.  2.3 Understand the consequences of failure in relation to time management, production, deadline, risk mitigation and project plans  2.4 Outline the resources needed for each activity, including milestones, checkpoints, deadlines; use of appropriate and available software packages, drawing packages, graphics and databases. |
| 3. Be able to follow project plans | 3.1 Demonstrate monitoring systems, routine interim reviews; use of logbooks; routine updating of plan where necessary and assess the resources needed as part of the communication process; |
| 4. Understand how technology affects the design and production phases of construction projects | 4.1 Use computer systems in the design process; to demonstrate modern methods of construction; the effect of design on construction methods; development of new materials; use of construction plant |

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| **10. Teaching & Learning Methods** |

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| **Knowledge and Understanding** | |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Values and Attitudes** |  | | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment Evidence** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Introduction to Visual Language in Design |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **Unit Type** | Core |
| **4.** | **Guided Learning hours** | 60 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 60 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 80 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 6 |
| **Unsupervised Access to Resources** | 4 |
| **Total** | **60** | **Total** | **90** |
| **7. Total notional hours for unit** | | | **150** |

**8. Unit Introduction**

This unit enables the student to compare and contrast the characteristics of a wide range of visual language. Students will look at visual languages within art and design. An experimental approach towards the design and development of construction design ideas.

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| **9. Aims of the Unit** |

**In this unit you will:**

Introduction to Visual Language in Design for the application of construction design ideas

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| **10. Indicative Content** |

**In this unit you will**

* Understand the characteristics of a wide range of visual language construction ideas.
* Identify economic, environmental and sustainability factors that may affect impact on the goals and priorities of the potential project outcomes.
* Understand art and design principles

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Understand the characteristics of visual language in art and design | 1.1 Critically compare, through experimental application, the characteristics of a wide range of visual language elements |
| 2. Be able to apply visual language to a range of art and design activities | 2.1 Apply visual language, across a range of contexts, to influence appearance and meaning in art and design.  2.2 Critically compare the use of visual language, across a range of contexts, to influence appearance and meaning in art and design |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** |  | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment Evidence** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Spatial Exploration: CAD Modelling and Visualisation |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **Unit Type** | Core |
| **4.** | **Guided Learning hours** | 60 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 60 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 80 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 6 |
| **Unsupervised Access to Resources** | 4 |
| **Total** | **60** | **Total** | **90** |
| **7. Total notional hours for unit** | | | **150** |

**8. Unit Introduction**

This unit introduces students to the world of computer aided design (CAD) and the practices associated with the design process. Students will explore the standard methods of data protection and evaluate of creating hierarchical folder structures for the storage of CAD files. Students will be able to produce industry-standard 2D drawings of residential and commercial properties. This will also include the construction of complex 3D models and the production of fully rendered set of elevations for properties, using different media and scales

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| **9. Indicative Content** |

**In this unit you will**

* Gain an understanding of the characteristics of computer aided design.
* Gain an understanding of the principles and practices associated with the design process.
* Understand the standard methods of data protection.
* Evaluate methods and processes of creating hierarchical folder structures for the storage of CAD files.
* Be able to produce industry-standard 2D drawings of residential and commercial properties.
* Produce 3D models of residential and commercial structures

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Be able to work safely when using computing and software facilities | 1.1 Justify the safe working practices associated with CAD work  1.2 Evaluate standard methods of data protection 1.3 Create hierarchical folder structures for the storage of CAD files |
| 2. Be able to produce 2D drawings using industry-standard CAD software applications | 2.1 Produce industry-standard 2D drawings of residential properties  2.2 Produce industry-standard 2D drawings of commercial properties |
| 3. Be able to produce 3D drawings using industry-standard CAD software applications | 3.1 Produce complex 3D models  3.2 Produce a fully rendered set of elevations for properties |
| 4. Be able to plot drawings to various media and scales and export drawings to different formats | 4.1 Plot drawings using different media and scales  4.2 Create and export CAD files in different format |

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| **10. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |

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| **Values and Attitudes** |  | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| --- | --- | --- |
| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment Evidence** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Maintenance and Adaptation of Buildings |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **Unit Type** | Optional |
| **4.** | **Guided Learning hours** | 60 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 60 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 80 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 6 |
| **Unsupervised Access to Resources** | 4 |
| **Total** | **60** | **Total** | **90** |
| **7. Total notional hours for unit** | | | **150** |

**8. Unit Introduction**

This unit looks at the skills and techniques required in the development, maintenance and adaptation of buildings within the construction industry. Students will be able to give a examine techniques used to investigate and evaluate sites. This will include comparing the information found and evaluate the impact on resources such as soil and chemical composition. Students will also be expected to explain how the classification and properties of soils affect structured design. Students will also be able to carry out further soil testing and analyse soils in terms of their classification and chemical composition. The information and experimentation gathered on these units enables the student to analyse the types of construction used for the environment. Students will also go further to address the types of construction used for the large structure of domestic and commercial buildings. This will also include addressing the discussions the specifications of internal finishes commonly used in building

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| **9. Aims of the Unit** |

**In this unit you will:**

A practical based unit that introduces the student to the skills and techniques required in the development, maintenance and adaptation of buildings within the construction industry

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| **10. Indicative Content** |

* Understand the processes used to evaluate sites
* Gain an understanding of the techniques used to investigate and evaluate soils
* Gain an understanding of the skills and techniques required in the development, maintenance and adaptation of buildings
* Evaluate the impact of difference chemical composition on the construction sites.
* Know how the classification and properties of soils affect structured design.
* Analyse the types of construction used for the environment.
* Gain an understanding of the types of construction used for large structures of domestic and commercial buildings.
* Know how to define specifications of internal finishes commonly used in buildings.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Understand the techniques used in site investigation and evaluation | 1.1 Explain the techniques used to investigate and evaluate sites  1.2 Compare the techniques used to investigate and evaluate soils  1.3 Analyse soils in terms of their classification and chemical composition |
| 2. Understand how the techniques used in site investigation and evaluation influence the type of structures | 2.1 Explain how the classification and properties of soils affect structured design  2.2 Evaluate the effects of water, chemicals and contaminated soils on the design and construction of a substructure |
| 3. Understand the types of large structure design and construction | 3.1 Describe the types of construction used for the large structure of domestic buildings  3.2 Discuss the specifications of internal finishes commonly used in buildings |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** | |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Values and Attitudes** | |  | | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment Evidence** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Building technology in construction |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **Unit Type** | Optional |
| **4.** | **Guided Learning hours** | 60 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 60 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 80 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 6 |
| **Unsupervised Access to Resources** | 4 |
| **Total** | **60** | **Total** | **90** |
| **7. Total notional hours for unit** | | | **150** |

**8. Unit Introduction**

Building technology in construction unit looks at the different forms of low-rise construction currently used for domestic and commercial buildings. Students will examine how the procedures used in subsoil investigation provide information for the design of substructures. Students will gain an understanding of the principles of foundation design and the methods used to construct different types of foundation. The students will also investigate the principles of superstructure design and the techniques used to construct and finish the component elements of a superstructure. Students will address the implications of environmental issues and legislative constraints for building construction. They will also explore the purpose of the various parts of the infrastructure required to support the construction process.

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| **9. Aims of the Unit** |

**In this unit you will:**

Be able to look at the different forms of low-rise construction currently used for domestic and commercial buildings.

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| **10. Indicative Content** |

* Gain an understanding of building technology in construction.
* Understand the different forms of low-rise construction currently used for domestic and commercial buildings.
* Examine procedures used in subsoil investigation.
* Gain an understanding of the principles of foundation design and the methods used to construct different types of foundation.
* Understand the principles of superstructure design and the techniques used to construct and finish the component elements of a large structure.
* Gain an understanding of the implications of environmental issues and legislative constraints for building construction.
* Gain an understanding of the purposes for the various parts of the infrastructure required to support the construction process.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Understand common forms of low-rise construction currently used for domestic and commercial buildings | 1.1 Explain the different forms of low-rise construction currently used for domestic and commercial buildings |
| 2. Understand foundation design and construction | 2.1 Explain how the procedures used in subsoil investigation provide information for the design of substructures  2.2 Describe the principles of foundation design  2.3 Explain the methods used to construct different types of foundation |
| 3. Understand the techniques used in the construction of superstructures for low-rise domestic and commercial buildings | 3.1 Explain the principles of superstructure design  3.2 Describe the techniques used to construct and finish the component elements of a superstructure |
| 4. Understand the implications of issues and constraints on building construction | 4.1 Explain the implications of environmental issues and legislative constraints for building construction  4.2 Explain the purpose of the various parts of the infrastructure required to support the construction process |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** | |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Values and Attitudes** |  | | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment Evidence** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing and a bibliography (100%) of final grade |

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| **1.** | **Unit Title** | Design Drawing Media and Communication for Spatial Design – Construction |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **Unit Type** | Mandatory |
| **4.** | **Guided Learning hours** | 60 |
| **5.** | **Assessment type** | Internal |

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| **6. Breakdown of Notional Learning Hours** | | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 60 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 80 | |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 6 | |
| **Unsupervised Access to Resources** | 4 | |
| **Total** | **60** | **Total** | **90** | |
| **7. Total notional hours for unit** | | | **150** | |
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**8. Unit Introduction**

This unit will enable the student to gain understanding of

* how media, materials and processes are used in own and others’ work to convey ideas and meaning
* how to develop visual language
* how design is used to communicate ideas and meaning
* to communicate by using the language of design

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| **9. Aims of the Unit** |

The aim of the unit is to develop and understanding of

* design media, materials and processes are used in others’ work to convey ideas and meaning
* visual language in design
* how art and design is used to communicate ideas and meaning
* how visual language is used to communicate in design

**In this unit you will:**

Learn about different media, materials and processes and how they are used in own and others’ work to convey ideas and meaning

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| **10. Indicative Content** |

Understand that there is a range/extensive variety of media, materials and processes can be used in own and others’ work to convey ideas and meaning

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Understand how media, materials and processes are used in others’ work to convey ideas and meaning | 1.1 Explain how media and materials are used in the work of others to convey ideas and meaning.  1.2 Evaluate how media, materials and processes are used diversely to convey ideas and meaning, drawing on own experiments to make effective comparisons  1.3 Communicate an intended meaning cogently to a specified audience through imaginative use of the language of art and design |
| 2. Be able to develop visual language | 2.1 Create own visual language by working with materials, media and processes  2.2 Communicate an intended meaning clearly to a specified audience through refined use of the language of art and design. |
| 3. Know how art and design is used to communicate ideas and meaning | 3.1 Describe ways in which visual language is used to communicate ideas and meaning |
| 4. Be able to communicate by using the language of art and design | 4.1 Communicate an intended meaning to a specified audience using the language of art and design |

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| **11. Teaching & Learning Methods** |

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| **Knowledge and Understanding** | |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge how media, materials and processes are used in others’ work to convey ideas and meaning | | Students find their voice, gain confidence, orientate themselves, and practise communication in oral and written form.  Lectures, seminars, as a context for group discussions and group work;  Quizzes, debates and other types of interactive activities or questioning;  Directed, specialist reading to encourage independent learning;  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Virtual Learning support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Values and Attitudes** | |  | | **Learning and teaching methods** |
| (B) Demonstrate basic application of visual language | | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show art and design is used to communicate ideas and meaning |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  |  | **Assessment Evidence** |
|  |  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Workshop to develop technical skills  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  Students are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
|  |  | Formative: sketch book, 3D model  Summative: Researched Text: Text (1000-1500 words) with referencing and a bibliography (100%) of final grade |

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| **Foundation Degree (FdA)** |

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| **1.** | **Unit Title** | Communication and Visualisation |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **GLH** | 45 |
| **4.** | **Unit Type** | Mandatory |

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| **5. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 50 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 20 |
| **Unsupervised Access to Resources** | 50 |
| **Total** | **45** | **Total** | **105** |
| **6. Total notional hours for unit** | | | **150** |

**7. Unit Introduction**

As a professional working in the fields of design, media or production, your ability to communicate your ideas isessential. As any project evolves you will need to call up on different skills to convey your ideas to at hird party. Being fluent in avariety of different media isessential in the creative workplace.

This unit will introduce students to the presentation and communication skills expected of all students at **the world class college/university** and in all the creative industries. They will learn a variety of communication method using both traditional physical and online digital medias, developing visual presentation skills for use in the generation, development and communication of ideas in avariety of different media forms.

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| **8. Aims of the Unit** |

* Communicate in physical and screen based media.
* Selection of appropriate methods of communication for their ideas.
* Engagement with different audiences.
* Understand the basic principals of visual communication for presentation.
* Introduction to the range of digital applications available for the purposes of presentations.
* Competence in use of the **the world class college/university** VLE and online blogs

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| **9. Indicative Content** |

As this unit responds to current industry practice, the content of this unit may vary in response to industry advancements. However, topics are likely to include:

* Visual communication skills, including mark making, drawing, sketches,collage and/orphotographic and video methods;
* Recognised standards of presentation;
* Graphic presentations of tware, including inputs, outputsand file management;
* Basic composition, layoutand use of type;
* Use of the web, online technology and social media as a tool;
* Uploading and downloading to theVLE and external websites;
* Image acquisition and output;
* Appropriate supporting media as presentation tools such as photography and video for moving image applications;
* Examining issues of personal safety and professional identity;
* copyright, citations and plagiarism.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know how to use a variety of communication methods in the creative industries | 1.1 Use a variety of communication methods to express your ideas |
| 2. Be able to articulate ideas to a client or audience within a creative industry setting. | 2.1 Explain your ideas to a client or audience within a creative industry setting. |
| 3. Be able to use a variety of media and formats to communicate with others | 3.1 Use a variety of media and formats to communicate with others. |
| 4. Be able to communicate information to others | 4.1 Communicate contextual design information and how this has influenced our creative decisions |

**10. Teaching & Learning Methods**

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. |  |
|  | **Assessment** |
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| **Values and Attitudes** | | |  | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | | |  |
|  | **Assessment** |
|  |  |
| Skills (Cognitive and Intellectual) | |  | | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure | |  |
| **Assessment** |
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| Skills (Subject Specific/Professional) |  | | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs |  |
| **Assessment** |
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| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. |  |
| **Assessment** |
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| **1.** | **Unit Title** | ContextualStudies/ArchitecturalTheoryandContext |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **GLH** | 30 |
| **4.** | **Unit Type** | Mandatory |

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| **5. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 50 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 20 |
| **Unsupervised Access to Resources** | 50 |
| **Total** | **30** | **Total** | **120** |
| **6. Total notional hours for unit** | | | **150** |

**7. Unit Introduction**

This is a document-based unit introducing the history and theory of space/interior design concepts.

These units introduce the history of space/interior design concepts and its production as a cultural construct, and the critical theories and historical analyses of key precedents from the ancient world to the 21st.

It considers how Architectural design and human inhabitation influence, or are influenced by, the thinking and events of aparticular time and place. It explores issues of social, cultural and historical context, including the role ethics has played in creative disciplines.

The unit is progressed in two parts and links to the level 5unit 'Debateand Polemic'

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| **8. Aims of the Unit** |

* To introduce key issues in the understanding of space/interior design concepts history as developed in a global context of cultural and historical change;
* To introduce ethical issues for influencing your interpretation of architectural design;
* To enable students to learn to ask questions–in order to investigate, research, challenge opinions or preconceptions and form their own stand point;
* To develop skills and confidence inconducting research and presenting written ideas effectively and to arecognisable academic standard;

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| **9. Indicative Content** |

* This is a series of lectures, panel sessions and other interactive activities focusing on critical theories, issues and significant movements relating to the history and development of architecture in a global context, such as:
* The key works of architecture/ space/interior design concepts, art, and design;
* Fundamental concepts and significant movements of architecture and design theory;
* The making of architectural architecture/ space/interior design concepts,designs,artefacts or media texts as an evolutionary process;
* Ethics in design and architecture/ space/interior design concepts: the historical implications of the production and consumption of architectural / space/interior design concepts design;
* Gender and ethnicity in architecture/ space/interior design concepts,design and communication media;
* The power of persuasion in architecture design and the media;
* The analys is and critique of key exemplars: history of archtecture/ space/interior design concepts as fact and as story telling, myth;
* Basic research skills and there ferencing of sources;

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| **Learning Outcomes** | **Assessment Criteria** | |
| 1. Understand architectural history and design as constructs in the context of cultural and historical developments | 1.1 Explain with examples a period in architectural history and design as constructs in the context of cultural and historical developments | |
| 2. Be able to apply ethical issues in the analyses of design and communication media | 2.1 Apply ethical issues in the analyses of design and communication media | |
| 3. Be able to analyse architecture as artefacts in the context of design and communication media | 3.1 Analyse architecture as artefacts in the context of design and communication media | |
| 4. Be able to present project findings in an academic format | 4.1 Present project findings in an academic format | |
| 5. Be able to use a variety of information technologies to support research | 5.1 Use a variety of information technologies to support research | |
| 6. Be able to produce an essay on interior design | 6.1 Produce an essay on interior design | |
| **13. Teaching & Learning Methods** | |
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|  |  | **Learning and teaching methods** |
|  | This unit willbedeliveredusingacombinationof:   * 1. Briefings   2. Lectures   3. Projectwork   4. Seminars   5. Workshops   6. Group work   7. Online activity   8. IndividualPresentationsandcritiques   9. Individual presentations and critiques   10. Group presenttations and critiques   11. Self-directed independent study   12. Other (describe below) |
|  | **Assessment** |
|  | This unit is assessed holistically (100%oftheunit).  m. Research edtext (1000-1500words) 100%  Assessment will be against the specified marking criteria |

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| **1.** | **Unit Title** | Human Factors and User Centred Design |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **GLH** | 30 |
| **4.** | **Unit Type** | Mandatory |

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| **5. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 50 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 20 |
| **Unsupervised Access to Resources** | 50 |
| **Total** | **30** | **Total** | **120** |
| **6. Total notional hours for unit** | | | **150** |

**7. Unit Introduction**

The aim of this unit is to introduce you to the area of human factors and User Centred Design research skills used within the design discipline. Design ethnographypertainstoauser-centred focus of study, in which society and individual sare often observed in detail as a means of dissecting user behaviours.

The human factors orientation of the unit will allow you to gatherin sights, research behaviors, and conduct qualitative field work.You will be led through analysis and synthesis to interpret the meaning behind what they’ve seen and experienced in the field. You will then translate particular in sights from the field into design principles and frameworks that could be universally applied.

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| **8. Aims of the Unit** |

* To provide you with an understanding of the tools and techniques used in ethnographic and human factors research/analysis;
* To provide you with an understanding of the tools and techniques used to research and assess problems from a usability angle;
* To engage you with a user-centred approach to design.
* To instill the value of engaging within the parameters of the world eitherphysically or virtually.

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| **9. Indicative Content** |

Topics covered in this unit may include:

* Introduction to Human Factors;
* Terms and references;
* Ergonomic data and principles;
* Ability to gather relevant research and data
* Ability to distill and communicate findings
* User-centred research models;
* Various communication methods for disseminating research;
* Useranalysis;
* User testing;
* User Centred Design;
* Effective and meaning ful project documentation.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know the fundamental principles of human factors and ethnography | 1.1 Summarise the fundamental principles of human factors and ethnography |
| 2. Understand the ethical and sustainable requirements of a project | 2.1 Explain the ethical and sustainable requirements of a project |
| 3. Be able to review a variety of methods and techniques when undertaking a project | 3.1 Review a variety of methods and techniques when undertaking a project |
| 4. Be able to generate a variety of design concepts for an ethnographic project | 4.1 Generate a variety of design concepts for an ethnographic project |
| 5. Be able to communicate the rationale of ideas to different audiences | 5.1 Communicate the rationale of ideas to different audiences |

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| **10. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | Lectures;  Workshops;  Tutorials;  VLE |
|  | **Assessment** |
|  | Formative and Summative Assessment;  Practical Projects and Presentation |

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| **Values and Attitudes** |  | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | Lectures;  Workshops;  Tutorials;  VLE |
|  | **Assessment** |
|  | Formative and Summative Assessment;  Practical Projects and Presentation |
| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | Lectures;  Workshops;  Tutorials;  VLE |
|  | **Assessment Evidence** |
|  | Formative and Summative Assessment;  Practical Projects and Presentation |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures;  Workshops;  Tutorials;  VLE |
| **Assessment Evidence** |
| Formative and Summative Assessment;  Practical Projects and Presentation |

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| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures;  Workshops;  Tutorials;  VLE |
|  | **Assessment** |
|  | Formative and Summative Assessment;  Practical Projects and Presentation |

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| **1.** | **Unit Title** | Introduction to Design |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **GLH** | 30 |
| **4.** | **Unit Type** | Mandatory |

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| **5. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 50 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 20 |
| **Unsupervised Access to Resources** | 50 |
| **Total** | **30** | **Total** | **120** |
| **6. Total notional hours for unit** | | | **150** |

**7. Unit Introduction**

The aim of this unit is to introduce you to the course and its core subject matter at **the world class college/university**. The unit aims to enable you to research, generate and realise ideas in a traditional context. To support you in this, you will be exposed to various design processes, which will form a foundation for their future work methods on the course. The unit will introduce you to the idea of project briefs, research methods, brainstorming, idea generation, drawing as a design tool, prototyping and communication methods. The unit will also introduce you to project sketchbooks, as a method for documenting and recording project and subject observations and thoughts.

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| **8. Aims of the Unit** |

* To provide you with an understanding of the tools and techniques used to

research and assess their user group;

* To provide you with a broad understanding of design principles which is

applicable to the majority of design disciplines;

* To introduce you to the design profession and business in which they will

work.

* Build confidence as an individual practitioner and group member, whilst

engaging positively in a group. Building presentation material both verbal and graphic where relevant.

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| **9. Indicative Content** |

Topics covered in this unit may include:

* Course structure and philosophy;
* Design process;
* Introduction to design research sources and methods;
* The role of drawing and sketching (and communication) in design;
* Design development through experimentation and visualisation;
* Communication methods;
* User analysis;
* Effective and meaningful project documentation.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know the fundamental principles of design processes and methodologies for research | 1.1 Explain with examples fundamental principles of design processes and research |
| 2. Understand the rationale of the ethical requirements within the design industry | 2.1 Explain the rationale of the ethical requirements within the design industry in relation to your chosen design specialism |
| 3. Be able to analyse, interpret and communicate the constraints of a project to others | 3.1 Analyse, interpret and communicate the constraints of a project to others |
| 4. Be able to generate required design concepts | 4.1 Generate required design concepts for a specific project brief |
| 5. Know how to work effectively with team members | 5.1 Work effectively with team members to realise a final design idea/concept |

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| **10. Teaching & Learning Methods** |

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| **Knowledge and Understanding** | |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | | Lectures;  Workshops;  Tutorials;  VLE. |
|  | **Assessment** |
|  | Formative and Summative Assessment;  Practical Projects and Presentation |
| **Values and Attitudes** | | |  | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | | | Lectures;  Workshops;  Tutorials;  VLE. |
|  | **Assessment** |
|  | Formative and Summative Assessment;  Practical Projects and Presentation |
| Skills (Cognitive and Intellectual) | | |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure | | |  | Lectures;  Workshops;  Tutorials;  VLE. |
|  | | | **Assessment Evidence** |
|  | | | Formative and Summative Assessment;  Practical Projects and Presentation |
| Skills (Subject Specific/Professional) | | |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | | | Lectures;  Workshops;  Tutorials;  VLE. |
| **Assessment Evidence** |
| Formative and Summative Assessment;  Practical Projects and Presentation |
| Skills (Transferable) | |  | | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | | Lectures;  Workshops;  Tutorials;  VLE. |
|  | | **Assessment** |
|  | | Formative and Summative Assessment;  Practical Projects and Presentation |

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| **1.** | **Unit Title** | Major Project |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **GLH** | 30 |
| **4.** | **Unit Type** | Mandatory |

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| **5. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 50 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 20 |
| **Unsupervised Access to Resources** | 50 |
| **Total** | **30** | **Total** | **120** |
| **6. Total notional hours for unit** | | | **150** |

**7. Unit Introduction**

The aim of this unit is to enable you to identify and develop a substantial andcomplex area of enquiry. It provides you with the opportunity to demonstrate your ability to engage in critical debate and to present work orally and visually at a level appropriate to a graduate entrant to professional practice.

The Major Project unit commences with preparation of a project proposal, which is scrutinised by tutors and student peer groups, and is subsequently refined and developed as the unit progresses.

The major project will be reviewed at the mid-way point with a presentation of ‘work in progress’. At this stage there should be prototypes that demonstrate that you have reached a critical point in the development of your idea. It should also be supported by a draft of the Major project report that illustrates the journey so far and concludes with a plan of action that clearly sets out how the project will progress. At this point you can renegotiate your brief to accommodate new direction and influences; this must be done through discussion with the tutors.

You are required to prepare and present a consolidated body of work ulminating for the final assessment presentation. This body of work should demonstrate mature reflection, increasing clarity of focus and synthesis of ideas and process. You are encouraged to contextualise your individual practice, with the opportunity to embark on industrial collaborations or consultations where appropriate. The Major Project submission will embrace completed work, together with research and supporting studies sufficient to assess the learning outcomes associated with this unit.

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| **8. Aims of the Unit** |

* To enable you to negotiate and take responsibility for project from concept through to launch;
* To develop skills in initiating a project brief and to research fully an area of interest;
* To enable exploration of more experimental approaches;
* To enable you to document their design process in report format.

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| **9. Indicative Content** |

Whilst the teaching in this unit will be responsive to individual developments and requirements, you will be supported by sessions in areas such as:

* Defining, framing and a ‘problem’;
* Researching and interpreting user needs;
* Developing a personal brief;
* Recording the design process and reflecting on it;
* Managing a complex project from conception to realisation;
* Report Writing.

You will be encouraged to shape your project through consultation with a range of academic and industry figures and organisations such as designers, consultants, manufacturers, retailers and focus groups.

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| **Learning Outcomes** | **Assessment Criteria** | |
| 1. Understand the technical, commercial and professional contexts related to the design proposal | 1.1 Summarise the technical, commercial and professional contexts related to the design proposal | |
| 2. Understand the importance of being open to change within an academic and professional setting | 2.1 Summarise the importance of being open to change within an academic and professional setting | |
| 3. Be able to analyse, interpret and communicate the constraints of a project to others | 3.1 Analyse, interpret and communicate the constraints of a project to others | |
| 4. Be able to generate design solutions in response to a defined need. | 4.1 Generate design solutions in response to a defined need | |
| 5. Be able to manage the aims, objectives and deadlines of a workload | 5.1 Manage the aims, objectives and deadlines of a workload | |
| **10. Teaching & Learning Methods** | |

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| **Knowledge and Understanding** | |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | | Lectures, self directed study |
|  | **Assessment** |
|  | Project and supporting materials |
| **Values and Attitudes** |  | | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | Self directed study, research |
|  | | **Assessment** |
|  | | Project and supporting materials  Project report |
| Skills (Cognitive and Intellectual) | |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure | |  | Self directed study  Tutorials |
| **Assessment Evidence** |
| Project and supporting materials |
|  | |  | **Learning and teaching methods** |
| Self directed study |
| **Assessment Evidence** |
| Project and supporting materials |
| Skills (Subject Specific/Professional) |  | | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Self directed study |
|  | | **Assessment** |
|  | | Project and supporting materials |
| Skills (Transferable) |  | | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Self directed study |
|  | | **Assessment** |
|  | | Project and supporting materials  Project report |

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| **1.** | **Unit Title** | Mapping Your Profession |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **GLH** | 30 |
| **4.** | **Unit Type** | Mandatory |

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| **5. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 50 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 20 |
| **Unsupervised Access to Resources** | 50 |
| **Total** | **30** | **Total** | **120** |
| **6. Total notional hours for unit** | | | **150** |

**7. Unit Introduction**

This unit provides the opportunity for you to

Observe your subject area within the creative media industries: its history and current position; its national and international perspectives; its uniqueness and its commonalities; its success and failures.

The unit will specifically engage with subjects in the design, media and broadcasting fields of study and industry, providing knowledge, insight, and understanding to a full range of cultural references and exemplars.

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| **8. Aims of the Unit** |

* Expand and develop insight into your chosen field of study.
* Deepen and strengthen subject specific knowledge by exposing you to diverse, related contexts.
* Provide a platform for debate, where you feel your voice and views have value, and where you can explore new concepts as you develop your own views and positions on the industries they wish to enter.
* Encourage student engagement with mixed research methods and critical analysis and evaluation within your discipline.

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| **9. Indicative Content** |

* Techniques of mixed methods of research
* Concepts of professional is mand practice theory
* Media representations
* Significant movements and practitioners
* Political and economic perspectives
* Contemporary practice and new technologies
* Current debates
* National and international perspectives

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Understand a specialist subject area within the creative industries | 1.1 Explain with examples a specialist subject area within the creative industries in relation to our chosen specialism |
| 2. Be able to proactively engage in debate within the creative industries | 2.1 Proactively engage in debate within the creative industries |
| 3. Be able to Use a variety of research methods to analyse innovative design development in our chosen subject area. | 3.1 Use a variety of research methods to analyse innovative design development in our chosen subject area. |
| 4. Be able to evaluate data in a specialist subject area within the creative industries | 4.1 Evaluate data in our chosen specialist subject area within the creative industries |
| 5. Be able to critically reflect upon the knowledge gained within the creative industries | 5.1 Critically reflect upon the knowledge gained within the creative industries in relation to our work and chosen specialism. |
| 6. Be able to communicate learned concepts in a variety of formats | 6.1 Communicate learned concepts in a variety of formats to demonstrate how you have solved design problems within our own own/client project/s brief/s |

**10. Teaching & Learning Methods**

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| **Knowledge and Understanding** | |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | |  |
|  | **Assessment** |
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| **Values and Attitudes** |  | | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments |  |
|  | | **Assessment** |
|  | |  |
| Skills (Cognitive and Intellectual) | |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure | |  |  |
| Skills (Cognitive and Intellectual) | | **Assessment Evidence** |
|  | |  |
| Skills (Subject Specific/Professional) | |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | |  |
| **Assessment Evidence** |
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| **Skills (Transferable)** |  | | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. |  |
|  | | **Assessment** |
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| **1.** | **Unit Title** | Planning for Enterprise |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **GLH** | 30 |
| **4.** | **Unit Type** | Mandatory |

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| **5. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 50 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 20 |
| **Unsupervised Access to Resources** | 50 |
| **Total** | **30** | **Total** | **120** |
| **6. Total notional hours for unit** | | | **150** |

**7. Unit Introduction**

The international creative industries, and particularly….., are widely regarded as being the most creatively vibrant on the planet. Great innovative ideas and creations are conceived, but sadly many ideas never become any thing more than just that. Furthermore, the creative people behind the ideas that are commercialized often don’t profit from their ideas as much as others within the business food chaindo.

Great ideas need to be matched by commercial awareness and entrepreneurial skill to turn the ideas intoventures that can benefit individuals, businesses, oursociety and the economy as a whole. Intellectual property is at the heart of the digital economy and every one in the creative industries should be able to recognise, value and monetiseit.

It is essential to have acute trenda wareness and a good sense of timing in order to swiftly bank on opportunities that ariseina complex and rapidly changing environment. Knowing ones’own discipline is not enough-successful people and companies look beyond their own field to stay in touch with the zeitgeistand be inspired by innovation else where. This wide rperspective means that one can recognise signs of change, spot business opportunities and fore see risks ahead of competitors.

During this unit, you will identify trends and translate these intoviable business concepts. You will gain a basic overview of different business models, funding schemes, budget in gand business planning from an entrepreneurial perspective.The knowledge, understanding and skill set gained through this unit will equip you to prosper in the future whether that is in employment or selfemployment-as an intrapreneur or entrepreneur, working for acommercial or social enterprise, and as part of a global economy, society and environment. You will learn how to:

* Articulate the creative process, how to innovate systematically and turn ideas into potential business concepts;
* recognise, protect and exploit intellectual property, the life blood of wealth creation in the 21stcentury;
* work in teams effectively, since nowadays few ideas get realized without the suppor to farange of skills, and innovation often comes from cross discipline collaboration;
* plan and manage projects, from developing briefs and proposals, to building budgets, schedules and contracts;
* Operatein an ethical manner, essential for long term sustainable creative practice.

You will been courage to apply the entrepreneurial attributes, behaviours and skills you acquire in the Enterprise and Entrepreneurship unit to your work within your specialist subjects and the industry specific contexts you encounter during your course.

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| **8. Aims of the Unit** |

The aims of the unit are to:

* 1. Nurture and encourage entrepreneurial attributes, skills and behaviours and raise awareness that they are of value in awide range of contexts;
  2. Raise your awareness of what entrepreneurshipis, how it is open to all, how it is relevant in arrange of contexts, and how the entrepreneurial mind set isessential in an increasingly complex and unpredictable world;
  3. Develop your capacity to recognize and track trends, and to identify,evaluate and grasp opportunities;
  4. Cultivate your ability to think strategically, develop scenarios, evaluate and make decisions, then plan and implement a course of action;
  5. Encourage you to engage with other disciplines, view their practice from awider perspective,become more open minded and commercially aware
  6. Give you methodological tools to drivean effective creative process;
  7. Build your knowledge around intellectual property, the protection and exploitation of it;
  8. Develop capacity to identify an audience or market, describeits’characteristics and begin thinking about how to design sales communication with aspecific audience in mind introduce you to some basic sales and pitching techniques;
  9. Build your team working capability.

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| **9. Indicative Content** |

In this unit you will learn to:

1. Recognize and try out entrepreneurial attributes, skills and behaviours;
2. Articulate the creative process and relationship of creativity, innovation and entrepreneurship;
3. Identify trends, spotpotential opportunities and generate ideas to exploit them;
4. Evaluate ideas and transform an idea in to a business concept;
5. Learn about intellectual property;
6. Teamwork effectively;
7. Develop a basic action plan and budget;
8. Construct and deliver a basic business spitch.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Understand the concept nature of entrepreneurship and its relationship to creativity, innovation and wealth creation as well as the social and environmental impact enterprise can have | 1.1 Explain the concept nature of entrepreneurship and its relationship to creativity, innovation and wealth creation as well as the social and environmental impact enterprise can have. |
| 2. Understand the meaning of openness to change in the creative industries | 2.1 Explain the meaning of openness of ideas to change in the creative industries |
| 3. Be able to identify and evaluate issues relating to entrepreneurship within the creative industries | 3.1 Evaluate the issues relating to entrepreneurship in your chosen specialism within the creative industries |
| 4. Be able to investigate, analyse and interpret ideas and information. | 4.1 Investigate design ideas and information in relation to your own work.  4.2 Analyse design ideas and information in relation to your own work  4.3 Interpret design ideas and information in relation to your own work |
| 5. Understand the importance, fundamental principles, and implications of intellectual property rights and legislation | 5.1 Explain the importance, fundamental principles, and implications of intellectual property rights and legislation on design creation |

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| **1.** | **Unit Title** | Rehabilitation and Reuse |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **GLH** | 30 |
| **4.** | **Unit Type** | Mandatory |

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| **5. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 50 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 20 |
| **Unsupervised Access to Resources** | 50 |
| **Total** | **30** | **Total** | **120** |
| **6. Total notional hours for unit** | | | **150** |

**7. Unit Introduction**

This unit develops an understanding of the effects on architectural space/interior to changing patterns of work and habitation on space rehabilitation, re-use and design of buildings in contemporary society.

This unit looks at there-use and re-design of buildings to accommodate new ways of working and divergent purposes.This necessitates a detailed investigation of the detail and internall and scape of artefacts, furniture and equipment which might make up such a space and an explorative approach to the solution of spatial design issues. The development of a twenty four hour society means that buildings maybe in constant use.

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| **8. Aims of the Unit** |

* To consider and propose architectural responses through the design of new and/or the rehabilitation of existing buildings, the flexible uses to which architecture must respond, and the creation of buildings that meet these needs.
* Develop an understanding of the impact that changing patterns of employment, work related activity and the demographics of the workforce (e.g.home and flexible working, the growth of free lancing and childcare) are having on the design of the workplace environment.
* To consider issues of sustainability and the economics of building use present a series of questions relating to how buildings are rehabilitated and reused effectively in contemporary cities.

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| **9. Indicative Content** |

* Demographics of the work place and changing user need;
* ‘Public-private’dichotomy;‘Live-work’paradigm;
* Structure and materiality‘ and intervention;
* Design for multiple use and occupation;
* Building services and sustainability; sound light and strategies for control;
* Organisational structure, hierarchy and proximities;
* Access and disability;
* Interior landscape and its population (artefacts furniture and equipment);
* Semiotics and psychology of material colour surface and texture;

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Understand the relationship of detail to the entire design proposal | 1.1 Summarise the relationship of detail to the entire design proposal |
| 2. Be able to produce a design that integrates complex climate, service and energy supply systems | 2.1 Produce a design that integrates complex climate, service and energy supply systems |
| 3. Understand how to flexible, adaptable and reflective when working in an architectural environment | 3.1 Explain how you have flexibly, adapted and reflected when working in an architectural environment  3.2 Summarise the approach to development of a series of architectural issues, problems and opportunities |
| 4. Be able to respond to a variety of constituent interests related to reuse and rehabilitation | 4.1 Respond to a variety of constituent interests related to reuse and rehabilitation  4.2 Summarise a range of issues in relation to divergent constituency of interests and to social and emergent ethical issues and concerns related to reuse and rehabilitation |
| 5. Be able to develop and present a response to a design proposal | 5.1 Develop a response to a design proposal  5.2 Present a response to a design proposal |
| 6. Understand the role of the stakeholder in the context of rehabilitation and reuse | 6.1 Summarise the role of the stakeholder in the context of rehabilitation and reuse |
| 7. Evaluate the design proposal | 7.1 Evaluate the design proposal |

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| **10. Teaching & Learning Methods** |

This unit will be delivered using a combination of:

* Briefings
* Lectures
* Project work
* Seminars
* Workshops
* Group work
* Online activity
* Individual Presentations and critiques
* Group presentations and critiques
* Self-directed independent study
* Other (describe below)
* Research visits
* Site visits

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| **1.** | **Unit Title** | Service Design for Communities |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **GLH** | 30 |
| **4.** | **Unit Type** | Mandatory |

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| **5. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 50 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 20 |
| **Unsupervised Access to Resources** | 50 |
| **Total** | **30** | **Total** | **120** |
| **6. Total notional hours for unit** | | | **150** |

**7. Unit Introduction**

Communication and interaction technologies impact on the way we think about and inhabitour localities and communities. They also affect the social and physical fabric of a place. Consider the traditional market place, or the sites of political debate where communal interaction is no longer bounded by the physical environment.

Developments in technologies and interactive opportunities have resulted in design intervention and application on the‘services’provided by companies, brands and the public sector.

This unit explores the Service Design opportunities of a specified location, in which arrange of communities are catered for.

Service design is the design of intangible experiences that reach people through many different touch-points, and that happen overtime. In abroad spectrum, service design aims to improve factors like ease, satisfaction, loyalty and efficiency as well as areas such as environments, communications and products, while paying particular notice of all the people who are part of the entire network.

Service touch-points are the tangibles that makeup the total experience of using the service. Touch-points can take many forms, from advertising to loyalty cards, web interactions, mobilephone and PC interfaces, products, retailshops, and customer representatives. When designing services, it's fundamental to considerall the touch points and crafts them in order to create a clear and consistent unified experience.

You are expected to explore interaction and communication technologies to resolve a Service Design solution to improve the quality of communal life.

The unit project will involve working with students from other disciplines in a multi-disciplinary team context, internally the ideal partner is Graphics unit (GRA09207) ‘Way finding’alternative lycol laboration with an external, local orinternational partner could be arranged.

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| **8. Aims of the Unit** |

* You will reflect upon the practical, technological and ethical factors which impact on the design of a specified environment and the community infrastructure.You should consider the current critical issues surrounding the aesthetics of the populated environment (order, design, architecture, literature, traffic, technology, products, communications, psychology, work, play, learn);
* Introduce you to the user research and design techniques employed in Service Design.
* Exploration of emerging technologies and their appropriateness to community;
* The unit requires you to work in teams in a multi-disciplinary capacity; which will provide you with the skills to understand and apply exterior knowledge to a project and also how to work within a team environment

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| **9. Indicative Content** |

Topics covered in this unit may include:

* Collaborative communication technologies and socio-economic change;
* Display and presentation technologies;
* Team working and project planning and time management;
* Stakeholder/User observations;
* Brain storming;
* Body storming;
* Story boarding;
* Experience prototyping and models;
* Touch-point modelling;
* Evidence models;
* Service blue prints.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Understand how to use emerging technologies to support communities and their environments | 1.1 Explain the various emerging technologies that support communities and their environments in relation to the creative industries |
| 2. Understand how to use a variety of design processes and research methodologies within service design | 2.1 Explain the various design processes and research methodologies within service design |
| 3. Understand the relationships between the design disciplines in a team | 3.1 Explain the relationships between the different design disciplines in a team and the impact on a project development and outcome |
| 4. Be able to propose design solutions in order to utilise all team members’ skills | 4.1 Propose design solutions in order to utilise all team members’ skills to realise a creative end product solution |
| 5. Be able to communicate suggestions for product designs and concepts to others | 5.1 Communicate suggestions for product designs and concepts to others |
| 6. Be able to work collaboratively to develop a project proposal in a community context | 6.1 Work collaboratively to develop a project proposal in a community context for a creative outcome |

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| **10. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** | |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | * Initial briefing; * Site visits; * Lectures and group seminars; * Interim presentations; * Final presentation and crit; * Team working (communication, time management) | |
|  | **Assessment** | |
|  | Formative and Summative Assessment   * Practical Projects and Presentation | |
| **Values and Attitudes** |  | **Learning and teaching methods** | |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | * Initial briefing; * Site visits; * Lectures and group seminars; * Interim presentations; * Final presentation and crit; * Team working (communication, time management) | |
|  | **Assessment** | |
|  | Formative and Summative Assessment   * Practical Projects and Presentation | |
| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** | | |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | * Initial briefing; * Site visits; * Lectures and group seminars; * Interim presentations; * Final presentation and crit; * Team working (communication, time management) | | |
| **Assessment** | | |
| Formative and Summative Assessment   * Practical Projects and Presentation | | |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** | | |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | * Initial briefing; * Site visits; * Lectures and group seminars; * Interim presentations; * Final presentation and crit; * Exhibition of design outcome and supporting work. | | |
| **Assessment** | | |
| Formative and Summative Assessment   * Practical Projects and Presentation | | |
| Skills (Transferable) |  | | **Learning and teaching methods** | |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | * Initial briefing; * Site visits; * Lectures and group seminars; * Interim presentations; * Final presentation and crit; * Exhibition of design outcome and supporting work. | |
| **Assessment** | |
|  | | Formative and Summative Assessment   * Practical Projects and Presentation | |

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| **1.** | **Unit Title** | Shaping your Ideas into a Design |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **GLH** | 30 |
| **4.** | **Unit Type** | Mandatory |

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| **5. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 50 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 20 |
| **Unsupervised Access to Resources** | 50 |
| **Total** | **30** | **Total** | **120** |
| **6. Total notional hours for unit** | | | **150** |

**7. Unit Introduction**

This is a precursor unit to the Design Prototyping unit run at the end of Level1.This unit focuses on the thinking required by designers to move their ideas on from conceptin to development and testing. You will gain an understanding of:

* Materials from basic to advanced, new emerging smart materials
* Interaction based technology, computational media and tools

Taking a user and function based approach to the development of their design outcomes; you will explore their design marrying both the physical and contentidentity of their design.

Project approaches for this unit will encompass both 2D and 3D, resulting in both digital and actual outcomes/ simulations.

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| **8. Aims of the Unit** |

* Understand and gain confidence in there search and exploration techniques needed to develop ideas;
* Select appropriate materials for manufacturing of a product based on its properties and manufacturing techniques;
* Confidently use computation tools to experiment, test and present inter active content;
* Select appropriate interactive tools and technologies to resolveauser’s engagement with a design proposal, this should encompass software, hardware and networking technologies.

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| **9. Indicative Content** |

Topics are likely to include:

* Turning an idea into a design;
* Introduction to basic, composite and emerging material technologies and processes;
* Introduction to prototyping, physical manifestations, testing, detailing and the appliance of knowledge and research to materials;
* Introduction to computational technologies for the design interactive content and function;
* Identifying, sampling and experimenting with materials;
* Experimentation with simple computational tools to test, evaluate and demonstrate interaction;
* Moving into more advanced Design prototyping

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know the variety of materials,processes and appliances required for design development | 1.1 Summarise with examples the variety of materials, processes and appliances required for design development. |
| 2. Understand the rationale for using prototypes and mock-upstoinformdesigndecisions. | 2.1 Explain with reasons the rationale for using prototypes and mock-upstoinformdesigndecisions. |
| 3. Understand how prototypes are developed andtested in a design setting | 3.1 Summaries with examples how prototypes are developed andtested in a design setting. |
| 4. Be able to apply learned design techniques to a project | 4.1 Apply learned design techniques to a project |

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| **10. Teaching & Learning Methods** |

This unit will be delivered using a combination of:

* Briefings
* Lectures
* Project work
* Seminars
* Workshops
* Group work
* Online activity
* Individual Presentations and critiques
* Group presentations and critiques
* Self-directed independent study
* Other (describe below)
* Research visits
* Site visits

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| **1.** | **Unit Title** | Specialist Study2: Parametrics, Communication and Representation |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **GLH** | 30 |
| **4.** | **Unit Type** | Mandatory |

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| **5. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 50 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 20 |
| **Unsupervised Access to Resources** | 50 |
| **Total** | **30** | **Total** | **120** |
| **6. Total notional hours for unit** | | | **150** |

**7. Unit Introduction**

This unit provides an introduction to three-dimensional analysis and representation using drawing and proportional systems which underpin built forms and contexts; formal architectural measurement, documentation and modelling necessary for built form idea communication.

The unit examines how spatial elements relate to scale and purpose changes through exploration of sequential propositions. Examining small building production, understanding urban scale, the inter relationship of use, infrastructure and daily time frame; articulating design rationale related precedent, exploring shape grammar and creative potential of calculative manipulation of space and formusing visualization software; students will understand how interior use and form affects its environs.

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| **8. Aims of the Unit** |

The unit aims to:

* Introduce the skills and knowledge necessary for the production of a small scale free-standing building and the imperatives which drive their creation and use;
* Examine the relationship between interiority and architectural/ Architectural, spatial/interior design, (between the qualities of an interiorspace and the externalised form of the building);
* Develop an awareness of the uses of and application of computation in design;
* Understand the creative potential of computational technology;
* To provide an understanding of the tools and techniques used to assess and represent built form;
* To provide an understanding of perspective, proportion and scale,
* And the systems used in their representation, and to understand how materials, structure and formencapsulate built form.

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| **9. Indicative Content** |

Topics covered in this unit will include:

* Architectural/spatial/interior design, Design research and the collation of information;
* Small scale urban interventions and simple buildings structures;
* Introduction to three-dimensional analysis and representation using drawing and proportional systems which underpin built forms and contexts; Drawingskills, drafting skill, including introduction to perspective, isometric projection and CAD;
* Formalarchitectural/ spatial/interior design, surveying and measurement skills, documentation and modelling necessary for built for midea communication;
* Examine show spatial elements relationship to scale and purpose changes through exploration of sequential propositions, and the rendering of spatial propositions throughlight, shade, colour, and texture;
* Building construction, detail and the construction process, including an introduction to building services and technology;
* Outline architectural/ spatial/interior design, feasibility studies, to include ergonomics, space planning and an introduction to sustainability;
* Site analysis, using avariety of documentation techniques, to include mapping and digital techniques and their role in the formation of a design brief;
* Form generation, shape grammars natural and abstract development (Euclidean progression/spiral,gold ensection),and the use of appropriate soft ware programs.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Know about basic structures and forms and their application in built form construction | 1.1 Know about basic structures and forms and their application in built form construction  1.2 Explain the use of and properties of connections and detail in the design of structures  1.3 Summarise the nature of materials and their use in the design of built structures |
| 2. Know about a variety of methods and media used to communicate in the creative industries | 2.1 Summarise a variety of methods and media used to communicate in the creative industries |
| 3. Explain the relationship between the human form and the structural interpretation of built form and construction | 3.1 Summarise the relationship between the human form and the structural interpretation of built form and construction |
| 4. Be able to design a self supporting structure from a given brief | 4.1 Design a self supporting structure from a given brief |
| 5. Be able to communicate and explain ideas to a client or audience | 5.1 Communicate and explain ideas to a client or audience |
| 6. Be able to use construction techniques to construct a three-dimensional form | 6.1 Use construction techniques to construct a three-dimensional form |
| 7. Be able to communicate with others using a variety of formats and media | 7.1 communicate with others using a variety of formats and media |
| 8. Be able to collaborate with other members of a team | 8.1 Collaborate with other members of a team |
| 9. Be able to communicate with others in the creative industries to realise a specific outcome | 9.1 Communicate with others in the creative industries to realise a specific outcome |

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| **10. Teaching & Learning Methods** |

This unit will be delivered using a combination of:

* Briefings
* Lectures
* Project work
* Seminars
* Workshops
* Group work
* Online activity
* Individual Presentations and critiques
* Group presentations and critiques
* Self-directed independent study
* Other (describe below)

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| **1.** | **Unit Title** | Specialist Study3: Dual Use Environment |
| **2.** | **Credit Value of Unit** | 30 |
| **3.** | **GLH** | 68 |
| **4.** | **Unit Type** | Mandatory |

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| **5. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 40 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 92 |
| **Supervised Access to Resources** | 28 | **Preparation for Assessment** | 80 |
| **Unsupervised Access to Resources** | 60 |
| **Total** | **68** | **Total** | **232** |
| **6. Total notional hours for unit** | | | **300** |

**7. Unit Introduction**

This is a design unit focusing on the development of (Look, see, analysesite, draw, structure, and detail) a new small dual-use building.

Issues of a single building of multiple use are investigated.These are to include identification and interaction of function, the satisfaction of contradictory needs through the manipulation and organization of space, leading to animplication of potential spatial uses. Levels and vertical circulationare to be taken into account,a long with developing an understanding of there gulatory framework governing urban construction.

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| **8. Aims of the Unit** |

* To introduce ecomplex interior/architectural problem solving in an urban context;
* Allow students to build upon the knowledge and skills developed in other Level 1 units and to apply them in the design of a more complex multi-functionalin terior environment, which meets the needs of disparate users.

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| **9. Indicative Content** |

* Public/domestic and commercial hospitality space;
* The relationship of the new to existing structure and their connections;
* Primary and secondary structures;
* Materiality, colour and texture;
* Circulation;
* Volume trics and creative volume planning;
* Semiotics of space;
* Ergonomics;
* Regulatory framework for construction;
* Digital technology.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Understand constructional principles and the ways they inform and influence design decisions | 1.1 Explain constructional principles and the ways they inform and influence design decisions |
| 2. Understand the main concepts and ideas of digital processing in spatial design | 2.1 Explain the main concepts and ideas of digital processing in spatial design |
| 3. Be able to describe a built environment | 3.1 Describe with examples the a built environment |
| 4. Understand the creative potential of 3D CAD software in the design process | 4.1 Describe the creative potential of 3D CAD software in the design process |
| 5. Understand the relationship between the user and technical constraints of a project | 5.1 Explain the relationship between the user and technical constraints of a project |
| 6. Be able to conduct a site analysis for a design proposition | 6.1 Conduct a site analysis for a design proposition |
| 7. Be able to analyse and interpret the processes of an established designer/architect | 7.1 Analyse and interpret the processes of an established designer/architect |
| 8. Be able to develop a design proposal for a small scale environment | 8.1 Develop a design proposal for a small scale environment |
| 9. Be able to represent space from a variety of viewpoints using computer technologies | 9.1 Show representation of space from a variety of viewpoints using computer technologies |
| 10. Be able to develop team working skills in a design environment | 10.1 Develop team working skills in a design environment |
| 11. Be able to use digital media to develop a website | 11.1 Use digital media to develop a website to create a platform to display/promote our work |

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| **10. Teaching & Learning Methods** |

This unit will be delivered using a combination of:

* Briefings
* Lectures
* Project work
* Seminars
* Workshops
* Group work
* Online activity
* Individual Presentations and critiques
* Group presentations and critiques
* Self-directed independent study
* Other (describe below)

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| **1.** | **Unit Title** | Tangible Media |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **GLH** | 30 |
| **4.** | **Unit Type** | Mandatory |

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| **5. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 50 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 20 |
| **Unsupervised Access to Resources** | 50 |
| **Total** | **30** | **Total** | **120** |
| **6. Total notional hours for unit** | | | **150** |

**7. Unit Introduction**

*“Untilrecently, renderingbits (data) into human-read able form has been restricted to displays and keyboards-sensorydeprived and physically limited.”-*Nicholas Negroponte, MIT Media Lab founder.

The term "Tangible Media design"or"Tangible Interface design"describes the potential of the designer to give physical form to digital information.

The world has become saturated with physical objects (products) containing screens, keyboards, buttons and speakers and their physical at tributes often have little to do with their purpose. The contrast between these interactive objects and the physical world aroundus is full of self-evident things, like knives and glasses and gloves.

It is there for ethet ask of the designer to re-evaluate and experiment when it comes to the products of today, while using the technologies today and tomorrow. People aren't just limited to visual (and audio) perception, we can touch, taste, feel, smell, stroke, poke,listen to, shout at and ignore. It is thought that there are 21 human senses including vision, hearing, smell, taste, touch, pain, pressure, temperature, motion, balance, acceleration.These perceptions can become valuable platforms for designing new human-computer inter faces to push the boundaries of interaction and product design, potentially creating new paradigms or market potential.

This unit will introduce you to avariety of prototype tools in which they can explore human-computer interactions. These include exploring programming languages, electronics, physical computing through sensors, and computer interfacing.

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| **8. Aims of the Unit** |

* To introduce you to the techniques of physical computing and digital technologies relevant to the interaction designer;
* To equip you with the practical skills required to create working prototypes which can be used to test the user experience;
* To encourage innovation and experimentation.

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| **9. Indicative Content** |

* Physical computing, interaction programming languages;
* Introduction to Arduino (or similar) as an electronic prototyping platform\*;
* The use of sensors, game controllers, microcontrollers, motors and other hardware;
* User testing and usability;
* An introduction to Max MSP software\*.

\*Note: As all software training is to be out sourced this may not takeplace within the contact hours. There may also be a requirement for Flash and Max MSP training to support this unit. This is dependent on chosen project brief.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Understand the rationale of technologies and methodologies used in interaction design for prototyping | 1.1 Summarise the technologies and methodologies used in interaction design for prototyping |
| 2. Understand the importance of being open to change in design | 2.1 Explain the importance of being open to change in design |
| 3. Be able to evaluate the techniques, technologies and processes used in the making of interactive prototypes | 3.1 Evaluate the techniques, technologies and processes used in the making of interactive prototypes |
| 4. Be able to apply technologies to produce required design solutions in an iterative approach | 4.1 Apply technologies to produce required design solutions in an interactive design approach |
| 5. Be able to communicate ideas and rationales regarding prototype formats and concepts to others | 5.1 Communicate ideas and rationales regarding prototype formats and concepts to others |
| 6. Understand the rationale of technologies and methodologies used in interaction design for prototyping | 6.1 Summarise the technologies and methodologies used in interaction design for prototyping |
| 7. Understand the importance of being open to change in design | 7.1 Explain the importance of being open to change in design |
| 8. Be able to evaluate the techniques, technologies and processes used in the making of interactive prototypes | 8.1 Evaluate the techniques, technologies and processes used in the making of interactive prototypes |
| 9. Be able to apply technologies to produce required design solutions in an iterative approach | 9.1 Apply technologies to produce required design solutions in an interactive design approach |
| 10. Be able to communicate ideas and rationales regarding prototype formats and concepts to others | 10.1 Communicate ideas and rationales regarding prototype formats and concepts to others |

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| **10. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** | |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | * Lectures; * Workshops; * Tutorials; * VLE. | |
|  | **Assessment** | |
|  | Practical Project | |
| **Values and Attitudes** | |  | | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | | * Lectures; * Workshops; * Tutorials; * VLE. |
|  | | **Assessment** |
|  | | Practical Project |

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| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | * Lectures; * Workshops; * Tutorials; * VLE. |
| **Assessment** |
| Practical Project |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | * Lectures; * Workshops; * Tutorials; * VLE. |
| **Assessment** |
| Practical Project |
| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | * Lectures; * Workshops; * Tutorials; * VLE. |
| **Assessment** |
|  | Practical Project |

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| **1.** | **Unit Title** | The Profession,Enterprise and forms of engagement in space/interior design concepts |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **GLH** | 30 |
| **4.** | **Unit Type** | Mandatory |

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| **5. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 50 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 20 |
| **Unsupervised Access to Resources** | 50 |
| **Total** | **30** | **Total** | **120** |
| **6. Total notional hours for unit** | | | **150** |

**7. Unit Introduction**

This is a lecture-based unit introducing forms of practice, professional is mand critical reflection

This unit provides the opportunity to observe a subject area of architecture within the creative media industries: its history and current position, its national and international perspectives, its uniqueness and its commonalities, its success and failures.

The unit will specifically engage with subjects in there alms of Architecture, design, media and broadcasting fields of study and industry, providing knowledge, insight, and understanding to a full range of cultural references and exemplars.

During this unit, students will identify trends and translate these into viable business concepts. They will gain a basic overview of different business models, funding schemes, budgeting and business planning from an entrepreneurial perspective as they apply to architecture space/interior design concepts. The knowledge, understanding and skill-set gained through this unit will equip students to prosper in the future whether that is in employment or self employment, as an intrapreneur or entrepreneur, working for a commerciall or social enterprise, and as part of a global economy, society and environment.

Students will learn how to:

Articulate the creative process, how to innovate systematically and turn ideas into potential business concepts, recognise, protect and exploit intellectual property (the life blood of wealth creation in the 21stC.), work in teams effectively (since nowadays few ideas get realized without the support of arrange of skills,and innovation often comes from cross discipline collaboration), plan and manage projects (from developing briefs and proposals, to building budgets, schedules and contracts),operate in an ethical manner (essential for long term sustainable creative practice in Architectural/ space/interior design concepts).

Nurture and encourage entrepreneurial attributes, skills and behaviour, raise awareness of personal value in a widerange of contexts; raise awareness of what entrepreneurship is, how it is open to all, how it is relevantin arrange of contexts, and how the entrepreneurial mind set is essential in an increasingly complex and unpredictable world; develop a capacity to recognize and tracktrends, and to identify,evaluate and grasp opportunities; cultivate an ability to think strategically, develop scenarios, evaluate and make decisions, then plan and implement a course of action; encourage engagement with other disciplines, view their practice from awider perspective, become more open minded and commercially aware; acquire methodological tools to drive an effective creative process; build knowledge around intellectual property, the protection and exploitation of it; develop capacity to identify an audience or market, describe its characteristics and begin thinking about how to design sales communication with a specific audience in mind; introduce some basic sales and pitching techniques; build team working capability.

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| **8. Aims of the Unit** |

* Expand and develop in sight into a chosen field of study.
* Deepen and strengthen subject specific knowledge by exposing students to diverse, related contexts in architecture.
* Provide a platform for debate, where students feel their voice and views have value, and where they can explore new concepts as they develop their own views and positions on the field they wish to enter.
* Encourage student engagement with mixed research methods, critical analysis and evaluation within the discipline of architecture;

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| **9. Indicative Content** |

* Techniques of mixed methods of research.
* Concepts of Architectural/ space/interior design concepts professionalism, practice and theory: significant movements and practitioners.
* Media representations, political and economic perspectives.
* Contemporary practice and new technologies: current debates, national and international perspectives.
* Articulation of the creative process and relationship of creativity, innovation and entrepreneurship; identify trends, spotpotential opportunities and generate ideas to exploit them.
* Evaluation of ideas and the transformation of an idea into a business concept; learn about intellectual property;
* Teamwork Effectively;
* Develop a basic action plan and budget; construct and deliver a basic business pitch;
* Recognise and try out entrepreneurial attributes, skills and behaviours

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Understand a variety of specialisms within the creative industries | 1.1 Summarise with examples a variety of specialisms within the creative industries |
| 2. Understand what is meant by entrepreneurship and its relationship to creativity, innovation and wealth creation | 2.1 Explain what is meant by entrepreneurship and its relationship to creativity, innovation and wealth creation |
| 3. Be able to contribute proactively to current debates in design and/or communication media. | 3.1 Contribute proactively to current debates in design and/or communication media. |
| 4. Understand how to anticipate opportunities within the design environment | 4.1 Anticipate opportunities within the design environment |
| 5. Be able to use a variety of research methods in a subject area | 5.1 Use a variety of research methods in a subject area |
| 6. Understand how to transform ideas into potential entrepreneurial concepts | 6.1 Explain how to transform ideas into potential entrepreneurial concepts |
| 7. Be able to evaluate data in a specialist subject for a project | 7.1 Evaluate data in a specialist subject for a project |
| 8. Be able to use analyse and communicate ideas and information | 8.1 Analyse and communicate ideas and information. |
| 9. Be able to communicate information using a variety of mediums | 9.1 Communicate information using a variety of mediums |
| 10. Understand the importance, fundamental principles and implications of intellectual property rights and legislation. | 10.1 Explain the importance, fundamental principles and implications of intellectual property rights and legislation. |

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| **10. Teaching & Learning Methods** |

This unit will be delivered using a combination of:

* Briefings
* Lectures
* Project work
* Seminars
* Workshops
* Group work
* Online activity
* Individual Presentations and critiques
* Group presentations and critiques
* Self-directed independent study
* Other (describe below

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| --- | --- | --- |
| **1.** | **Unit Title** | Theory and Practice: Debate and Polemic |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **GLH** | 30 |
| **4.** | **Unit Type** | Mandatory |

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| **5. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 50 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 20 |
| **Unsupervised Access to Resources** | 50 |
| **Total** | **30** | **Total** | **120** |
| **6. Total notional hours for unit** | | | **150** |

**7. Unit Introduction**

This is a lecture and seminar-based unit offering opportunities for debate, discussion and polemic, this unit explores some of the more controversial historical or political aspects of design and communication. Focusing on a series of particular opics and themes in architecture, students receive lectures and undertake there search of historical contexts, issues and case studies for debate and discussion, leading to the submission of an individual critique/analysis in writing or other appropriate media.

This unit allows students to understand and dicerne changes in context and a commercial polemic.

The unit also offers a possible source of, or path way to subjects for investigation in the Dissertation on Architecture.

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| **8. Aims of the Unit** |

* To acquire knowledge, then reflecton, analyse and evaluate it; within the subject area of architecture;
* Develop confidence in the appropriate articulation of that knowledge with regard to message, medium, mode of communication, and intent;
* Develop confidence in the value of individual views and beliefs, as well as skills in the appreciation and evaluation of the views of others;
* Enhance understanding of relevant research,and the need for and appropriate use of referencing;

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| **9. Indicative Content** |

* Contextual and/orhistorical information of significance in the development of design polemic;
* To formulate acritical point of view or argument with regard to the subject matter;
* To acknowledge different attitudes towards and opinions on the subject matter;
* To articulate a personal and political stance;
* The use of a variety of research (information gathering) techniques and the application of an appropriate method of referencing sources;
* The application of relevant research;
* Examples of the appropriateness of different modes of writing or presentation with regard to subject and audience.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1.Understand how to evaluate the impact of contextual historical conditions on a specified period of architecture | 1.1 Evaluate the impact of contextual/historical conditions on a specified period of architecture  1.2 Summarise how the changes in contextual/historical conditions have contributed to how designers work to create ideas and products |
| 2.Understand motivational drivers of consumer behavior and their relevance to a given market sector | 2.1 Explain how motivational drivers of consumer behavior and their relevance to a given market sector  2.2 Summarise consumer behaviour in a specific market sector in relation to product selection |
| 3. Understand how to formulate own attitudes and anethical/political stance with regard to issues of critical consequence | 3.1 Formulate your own attitudes and anethical/political stance with regard to issues of critical consequence  3.2 Summarise your own attitudes to a variety of ethical/political view point with regard to issues of critical consequence on design practices |
| 4. Understand, evaluate and synthesise appropriate company and market intelligence to generate information to use in work/study | 4.1 Evaluate appropriate company and market intelligence to generate information to use in your work/study  4.2 Synthesise appropriate company and market intelligence to generate information to use in your work/study |
| 5.Understand the principles of debate and polemic~~–~~and their roles as sources of inspiration (for further study) | 5.1 Summarise principles of debate and polemic–and their roles as sources of inspiration (for further study). |
| 6. Understand how to investigate potential entrepreneurial ideas and critically evaluate them to identify a gaping the market | 6.1 Investigate potential entrepreneurial ideas to identify a gapin the market  6.2 Critically evaluate potential entrepreneurial ideas to identify a gapin the market |
| 7.Understand how to communicate appropriate mode or form of presentation/writing in relevant subject areas | 7.1Communicate appropriate mode or form of presentation/writing in relevant subject areas. |

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| **10. Teaching & Learning Methods** |

This unit will be delivered using a combination of:

* Briefings
* Lectures
* Project work
* Seminars
* Workshops
* Group work
* Online activity
* Individual Presentations and critiques
* Group presentations and critiques
* Self-directed independent study
* Other (describe below)

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| --- | --- | --- |
| **1.** | **Unit Title** | Theory and Context |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **GLH** | 30 |
| **4.** | **Unit Type** | Mandatory |

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| **5. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 50 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 20 |
| **Unsupervised Access to Resources** | 50 |
| **Total** | **30** | **Total** | **120** |
| **6. Total notional hours for unit** | | | **150** |

**7. Unit Introduction**

This unit introduces some critical theories and historical analyses of design and communication media in the 20th and 21st centuries.

Its how show design and communication media influence, or are influenced by,the thinking and events of a particular time and place.It explores issues of social, cultural and historical context, including the role ethics has played increative disciplines.

The unit is progressed in two parts, over two terms.

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| **8. Aims of the Unit** |

* Introduce you to key issues in the understanding of design and communication media and your processes, as developed in a global context of cultural and historical change;
* Introduce you to ethical issues for influencing your interpretation of design/communication media and their own practice;
* Enable you to learn to ask questions–in order to investigate, research,challenge opinions or preconceptions and form your own stand point; and
* Develop your skills and confidence in conducting research and presenting your written ideas effectively and to a recognizable academic standard.

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| **9. Indicative Content** |

This unit is progressed in two parts, over two terms.

Part One(Term One, a weekly two-hour session in weeks 4-8, delivered to all Level One B A students–each session delivered inrepetition to large clusters of courses). This is a series of lectures, panel sessions and other interactive activities focusing on critical theories, issues and significant movements relating to design and communication media in a global context, such as:

* 1. Fundamental concepts of design theory and communication theory;
  2. An introduction to the notions of sequence of time and consequentiality;
  3. Ethics in design and communication media;
  4. Gender and ethnicity in design and communication media;
  5. The power of persuasion in design and the media;
  6. History as story telling, myth, geography;
  7. The personal is political;

Part Two (Term Two, a weekly 2.5 hours ession in weeks 1-8, delivered to clusters of related courses and underlining specific shared elements).

This is a series of lectures and other interactive activities focusing on ways in which design or communication media affector are affected by historical and cultural context,with consideration for social,economic and technological developments relating to they our course subject area, including:

* 1. Some significant art, design and media movements;
  2. The works of key art, design or media practitioners;
  3. The making of designs, artefacts or media texts as an evolutionary process;
  4. The analys is and critique of key exemplars–designs, artefacts or media texts–within an historical context;
  5. The historical implications of the production and consumption of design and communication media;
  6. Basic research skills and the referencing of sources;
  7. Meaning and value in research.

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Understand design and communication media as constructs in the context of cultural and historical developments. | 1.1 Explain the importance of design and communication media as constructs in the context of cultural and historical developments. |
| 2. Be able to apply ethical issues to the interpretations of design and communication media | 2.1 Apply ethical issues to the interpretations of design and communication media |
| 3. Be able to observe, describe and analyse artefacts in a historical and theoretical context | 3.1 Observe artefacts in a historical and theoretical context  3.2 Describe artefacts in a historical and theoretical context  3.3 Analyse artefacts in a historical and theoretical context |
| 4. Be able to apply research methods to a project and present the findings. | 4.1 Apply research methods to a project and present the findings. |
| 5. Be able to use information technologies to support and deliver research | 5.1 Use information technologies to support and deliver research |

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| **10. Teaching & Learning Methods** |

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| **Knowledge and Understanding** |  | **Learning and teaching methods** |
| (A) Demonstrate a knowledge and the importance of health, safety and welfare in the construction and built environment. | *You find your voice, gain confidence, orientate yourself, and practice communication in oral and written form.*  Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  You are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc). |
|  | **Assessment** |
|  | Formative:A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| **Values and Attitudes** |  | **Learning and teaching methods** |
| (B) Demonstrate basic application of ethical issues in their interpretations and analyse the meanings and values of risk assessments | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  You are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  | **Assessment** |
|  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |

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| Skills (Cognitive and Intellectual) |  | **Learning and teaching methods** |
| (C) Show their application of the skills of observation, description and analysis of artefacts in a wider context of theory and history of design and communication.Generate the concept of the importance of control measures in risk assessment, through the notion of designs (composition, form, space and structure |  | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  You are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
|  | **Assessment Evidence** |
|  | Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Subject Specific/Professional) |  | **Learning and teaching methods** |
| (D) Apply basic research skills and present their findings to a recognisable academic standard (with referencing).  Generate design ideas and concepts both in the abstract and as an analogue of 2/3 dimensional designs | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  You are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment Evidence** |
| Formative: A Quiz with Peer Assessment and tutors  Summative: Researched Text |
| Skills (Transferable) |  | **Learning and teaching methods** |
| (E) Effectively employ information technologies in support of research and for delivery of a written text to a deadline. | Lectures, interviews or panel sessions supported by still or moving images;  Quizzes, debates and other types of interactive activities or questioning;  Seminars, as a context for group discussions and group work;  Directed, specialist reading to encourage independent learning;  Briefs and support material posted on moodle.  You are encouraged to make independent study visits to galleries, museums, professional studios and other sites for direct experience of designs, artefacts or people (interviews, discussions etc).  Strong VLE support via research contacts, film-clips, reflective student material, etc.  Individual dyslexia support and language mentoring as appropriate |
| **Assessment** |
| Formative: A Quizwith Peer Assessment and tutors. |

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| **1.** | **Unit Title** | Urban Environments &Artefact and Element |
| **2.** | **Credit Value of Unit** | 15 |
| **3.** | **GLH** | 30 |
| **4.** | **Unit Type** | Mandatory |

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| **5. Breakdown of Notional Learning Hours** | | | |
| **Staff – Student Contact** | | **Independent Study Hours** | |
| **Classes**  (e.g. lectures, seminars and supervised group activity) | 30 | **Independent Study**  (e.g. project development, reading, research and work on online forums) | 50 |
| **Supervised Access to Resources** | 0 | **Preparation for Assessment** | 20 |
| **Unsupervised Access to Resources** | 50 |
| **Total** | **30** | **Total** | **120** |
| **6. Total notional hours for unit** | | | **150** |

**7. Unit Introduction**

The unit takes a portion of the city and redesigns and repurposes that portion in respon set research, analysis, contextual understanding, sustainability and futureuse.

The unit focuses on the Interior design, development of spaces structure, organisation and likely future development. Students gain understanding of urban-decay, the need for regeneration and renewal, a sense of the importance of balanced socio-historical continuity in spatial designer development. It builds upon and develop sprevious computational skills gained.

The aim of the artifact elementis to develop an understanding of the interdisciplinary nature of architecture and to give experience of related areas of environment design. Students will consider small scale external physical interventions for example lighting elements, street furniture etc.

The unit revolves around an interior design case study of aparticular area of stucture/space, and a specific site within that area, and looks at the relationship between interventions on this site and regeneration and renewal of the area. Students work in groups to survey the site and analyse the area and to proposed esigninterventions for renewal. Inparticular, the unit provides opportunities for the investigation of cellular automata and fractal sutilising computer software. The unit is based around a project in which students create amesh structure with predetermined parameter susing a variety of model forms.

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| **8. Aims of the Unit** |

* Reflection upon the practical, historical, theoretical and ethical factors which impacton the design of the urban environment.
* To consider the current critical issues surrounding the aesthetics of city life (order, scale, design, architecture, literature, theatre and the‘derive’). The unit increases students’awareness of the uses of and application of computation in design.
* The unit also explores the nature of virtual cities (maps, models, utopiasand computer simulations) and their relationship to the realthing.The basic concepts of shape grammar in Level1 are reinforced and elaborated upon and students further explore the creative potential of the digital visualization software.
* To articulate a design which clearly defines the component parts of a designed artifact in the interior, or exterior as an individual or integrated item.
* To gain an awareness of how a design interms of layers or parts is an effective means by which an architectural project mightbe managed and how the particular issues relating to the design might be isolated and evaluated, separately and in combination, allowing for trial and error risk taking.
* This unit provides the opportunity to gain an understanding of designing an artifact within the interior or exterior environment demonstrating a clear social and economic rationale for its creation. An awareness of the effects and responses which an artifact may have indefining the use and understanding of the given interior environment.

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| **9. Indicative Content** |

Interior design planning infrastructure and design; Sustainability in communities;

The history and context of spatial interior design development; Conservation;

User groups and the regulatory requirements of spatial design planning;

There habilitation and renewal of communities; Technological change and its impacton human interaction and the environment;

Interiorutopias and their socio-political impact on future projected development;

The space/interior asmetaphor and a vehicle for polemic, as viewed through related disciplines (film, artphilosophy, psychology literature and computer generated form);

The space/interior as state and as an area for services; the space/interior as monument and a receptacle of memory;

Contemporary Nomadic lifestyles;

Web based interactive structures; Object orientated programming and organisation; Appropriates of tware programs; Formation and evaluation of prototypical computer generated models;

Interior /Architecture Spatial Design;

Material sand texture Colour and form Styling and perception Ergonomics;

Product development strategy; economics; and the economics of production;

Social and cultural issues related to the production and development of an artefact

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| **Learning Outcomes** | **Assessment Criteria** |
| 1. Understand the history and development of the urban built environment | 1.1 Summarise the history and development of the urban built environment. |
| 2. Understand the creative potential of object orientated programming | 2.1 Explain the creative potential of object orientated programming |
| 3. Understand the application of object orientated programming in the design process | 3.1 Summarise the application of object orientated programming in the design process |
| 4. Understand the relationship between architectural design proposals and their urban context. | 4.1 Explain the relationship between architectural design proposals and their urban context |
| 5. Understand how a designed artefact for the exterior/interior environment can be positioned within a commercial context | 5.1 Summarise how a designed artefact for the exterior/interior environment can be positioned within a commercial context |
| 6. Be able to propose architectural design interventions for a specific site in the context of wider urban renewal | 6.1 Propose architectural design interventions for a specific site in the context of wider urban renewal |
| 7. Understand the relationship between research, drawing, maquettes and full-scale prototypes as part of an interior design process | 7.1 Explain the relationship between research, drawing, maquettes and full-scale prototypes as part of an interior design process. |
| 8. Understand how to organise a presentation which links multiple design interventions at different scales | 8.1 Summarise how to organise a presentation which links multiple design interventions at different scales |
| 9. Be able to analyse how materials, technologies, economies and modes of production affect the realisation of a designed artefact. | 9.1 Analyse how materials, technologies, economies and modes of production affect the realisation of a designed artefact |
| 10. Know how to work collaboratively in the production of a design proposal for a specific site in an interior context | 10.1 Summarise how to work collaboratively in the production of a design proposal for a specific site in an interior context. |
| 11. Understand how to clearly articulate the component parts of a designed artefact | 11.1 Explain how to clearly articulate the component parts of a designed artefact |
| 12.Understand how to evaluate the performance of materials and technologies in relation to a design concept | 12.1 Evaluate the performance of materials and technologies in relation to a design concept |

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| **10. Teaching & Learning Methods** |

This unit will be delivered using a combination of:

* Briefings
* Lectures
* Project work
* Seminars
* Workshops
* Group work
* Online activity
* Individual Presentations and critiques
* Group presentations and critiques
* Self-directed independent study
* Other (describe below)

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| **11. Teaching & Learning Methods** |

This unit will be delivered using a combination of:

* Briefings
* Lectures
* Project work
* Seminars
* Workshops
* Group work
* Online activity
* Individual Presentations and critiques
* Group presentations and critiques
* Self-directed independent study
* Other (describe below)
* Site visits
* Individual tutorials
* Exhibition

**5. LIST OF EQUIPMENT**

**Hardware List**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **№** | **Name** | **Technical specification** | **Purpose of equipment/ Covered topics** | **Module(s) where will be used** | **Units- pieces/ per number of students** | **Total quantity** | **Comments** | **Picture**  **(if possible )** |
| 1 | Makerbot 2x | 100 micron layer thickness 6691cc volume – 28x15x15 | Low End 3d printer -Sketch modeling – function prototpyes, test rigs and demostrations of fit and feel or mechanical principles |  |  | 12 | Cheap machine capable of being used independently by students – software is downloaded to users laptop and as such requires very low staff input |  |
| 2 | Stratasys uPrint | 200 micron layer thickness | Mid range 3d printers Refinement of models for concept testing and more refined |  |  | 1 | Used by staff for the students as a bureau service – post process on objects needs staff because of chemicals involved. |  |
| 3 | 3D Systems Z450 | 720DPI 3d printer | Mid range 3d printer for finished models and proof of concept |  |  | 1 | Staff use as bureau as above but with safe chemicals, big volume allows lots of models to be made overnight for lots of students. |  |
| 4 | Stratasys Conex 260 | Multi material 3d ptiner | Proof onf concept at high level of detail featuring multiple levels of flexibility in one solid model |  |  | 1 | Staff use only, staff liase with students before print to make the best of the technology and best value for money per print. Post process involves water jets to remove supports |  |
| 5 | Artec EVA 3d Scanner | Structured light based scanner – non contact scanning of soft surfaces and objects, handheld and operable from laptop | Scanning objects to bring them into the digital CAD environment, for reverse engineering and |  |  | 1 | High end device normally used in conjunction with staff aftter a demonstration woth students |  |
| 6 | Artec Spider 3D Scanner | Structured light scanner for small objects – as above | As above |  |  | 1 | As above |  |
| 7 | 3D Sytems Sense scanner | Basic optical scanner | As above but for loan to students on an ad-hoc basis or for use in group tutorials |  | 1 for every 3 students when taught in class situation | 4 | Simple device that can be used by students by downloading the software to their own machines |  |
| 8 | Roland MDX 540a | 4 Axis CNC milling machine 500x400x150 volume | Realisation of 3d geometry in solid materials such as PU foams, model board and wood using the same 3d data as needed for a 3d print |  |  | 1 | Mayka Pro software we currently use is very intuitive and easy to learn for the students, works well with the MDX20 below as well |  |
| 9 | Roland MDX 20 | 3 axis very small milling machine. | As above at a very small scale for detailed work in soft materials such as wax and softer modeling boards |  |  | 1 | As above |  |
|  |  |  |  |  |  |  |  |  |
| 10 | Universal Laser PLS6.60 | 810x450mm 65watt laser | 2 dimensional cutting and engraving of a massive range of solid materials from woods and plastics to fabrics glass and papers etc. |  |  | 2 | Operating directly from Adobe Illustrator the lasers are very intuitive and simple to operate. Operation by students independent of staff after one training session |  |
| 11 | Zund M800 | 1200x900 plotter cutter with roller and vinyl cutter. | For cutting flat materials such as fabrics and plastic sheeting or vinyl and card. Can operate from Adobe Illustrator files |  |  | 1 | Much as the laser, training is simple and allows the students to operate independently |  |
| 12 | Roland Picza Laser Scanner | Rotating laser scanner for objects up to 500mm high | The quick scanning of hand sculpted objects, reverse engineering or objects |  |  | 1 | Scanner that creates detailed models by rotating the object and scanning the surface with laser. |  |
| 13 | Microscriber MHT | Touch probe digitizer | For the detailed reverse engineering and metrology of objects, using an industrial ruby as a probe for extremely accurate measurement |  |  | 1 |  |  |
| 14 | Mimaki TX2 | Fabric printer with various inks and pigments – 1.3mm rolls of fabrics | For printing onto prepared fabrics using industry standard inks and pigments – mostly Dye-Sub and Acid dyes |  |  | 2 | Allows designs created on computers (Adobe suite) to be printed full size onto fabrics via an ink jet process. |  |
| 15 | Transmatic Rotary Heatpress | For use with 1.3m fabrics and paper | For use with Dye-Sublimation transfer printer for manmade fabrics |  |  | 1 | Heavy machine, 200 Celsius operation with staff assisting students only |  |
|  |  |  |  |  |  | 1 per student |  |  |
|  | Dell Precision M3800 15.6-inch or Apple MacBook Pro 13-inch Retina dual-core | Student laptop | Will contain student software for assignments, seminar and all student educational activity |  |  |  |  |  |
|  |  |  |  |  |  | 1 per student |  |  |
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**Software List**

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| **№** | **Name** | **Technical specification** | **Purpose of equipment/ Covered topics** | **Module(s) where will be used** | **Units- pieces/ per number of students** | **Total quantity (If the number of students is 15)** |
| 1 | Google SketchUp pro 2014 for Windows | SketchUp Pro 2014 is 3D modelling software for professionals. SketchUp allows anyone to model in 3D quickly and accurately. Using 3D models, designers can make more informed decisions, communicate project details, and share ideas with colleagues and customers to reach a common goal.  System Requirements Windows:  - Microsoft® Internet Explorer 6.0 or higher.  - Google SketchUp Pro requires .NET 1.1 framework.  - SketchUp will run on 64bit versions of Windows, but it will run as a 32bit application.  - 800 MHz processor.  - 1 GB RAM.  - 15 MB of total hard-disk space.  - 3D class Video Card with 256 MB of memory or higher. Please ensure that the video card driver is 100% OpenGL compliant and up to date. | Google SketchUp Pro is a program that allows students to make 3D designs, which can be used in applications such as architectural projects and others. The software has a lot of drawing tools, 3D modeling tools, effects and textures. A student will be free to create their own drawings from scratch. | Software will be used throughout all levels modules. Particularly in Prototyping, Introduction into Specialty, Specialty 1and etc. | 1 | 15 |
| 2 | Autodesk Entertainment Creation Suite Ultimate 2014 | System requiremements:  Operating System- Microsoft® Windows® 8 Professional (64-bit)  Microsoft Windows 7 Professional (64-bit)  CPU- 64-bit Intel® or AMD® multi-core processor  RAM -8 GB or RAM (or more recommended)  Disk space- Entertainment Creation Suites for Education requires 17GB free disk space | Software helps to accelerate 3D modelling and sculpting, texture painting, mocap editing, advanced character animation and visual effects tasks, and optimise end-to-end production workflows. | Software will be used throughout all levels modules | 1 | 15 |
| 3 | Autodesk Entertainment Creation Suite Ultimate 2015 | Operating System Microsoft® Windows® 7 (SP1), Windows® 8 and Windows® 8.1 Professional operating systeml  CPU 64-bit Intel® or AMD® multi-core processor  RAM 8 GB of RAM (or more recommended)  Disk Space Free disk space for install:  Entertainment Creation Suites for Education requires 19GB free disk space | Software helps to accelerate 3D modelling and sculpting, texture painting, mocap editing, advanced character animation and visual effects tasks, and optimise end-to-end production workflows. | Software will be used throughout all levels modules | 1 | 15 |
| 4 | Autodesk Entertainment Creation Suite Ultimate Subscription | AutoCAD LT 2015  Create precise 2D CAD drawings with intuitive drafting software that uses the latest DWG™ technology  Maya 2015 (Desktop Subscription)  Comprehensive 3D animation software  AutoCAD 2015  Powerful new 3D CAD design tools  SketchBook Pro 7 | The software helps to produce higher-quality entertainment content with 3D animation software in the Entertainment Creation Suites. | Software will be used throughout all levels modules | 1 | 15 |
| 5 | McNeel Rhino 5.0 Upgrade Lab Kit | Operating System Windows  Disk space 600 MB disk space  Memory (RAM) 1 GB minimum, 8+ GB recommended | MCNEEL\_RHINO  Rhino 5.0 has many new features and enhancements: Modeling, Editing tools, Interface, Display, Rendering and animation, 2-D drawing/drafting tools, Mesh modeling, editing, analysis, repair, and rapid prototyping, Analysis, Large projects, Compatibility, Software developer tools (lab kit for 30 students) | Software will be used throughout all levels modules | 1 | 1 |
| 6 | Rhino 5 / Flamingo / Penguin / Bongo Bundle Lab Kit | MCNEEL\_PENGUIN  Penguin 2.0 is completely integrated with Rhino. All of its configuration dialogs can be accessed as any other Rhino dialog would be, inside Rhino properties or object properties.  MCNEEL\_BONGO  Bongo. Simple, integrated animation for Rhino 5.  MCNEEL\_FLAMINGO  Next generation rendering technology  30 user Lab | Penguin. Sketch rendering mode  Simulates hand drafting. It allows student to create images in styles that look like drawings using pencil, ink, chalk, pen marker, watercolor (and others).  Configurable parameters for the wavy or straight lines. Control over line width, intensity, and color. Cartoon rendering mode  Objects rendered with a limited number of shades and edges draw with a line to generate "illustration" drawings.  Controls the color and width of the silhouettes, borders, and creases.  Bongo allows student drag and drop to create animations in Rhino, change between programs, preview inside Rhino, in real time, in any shading mode (including Neon!), render to video using any compatible renderer.  Flaminngo features Image Editor with support for multiple lighting channels, 3D Plant Editor, render Farm support, Content libraries (plants, materials, HDRi),pre-textured mesh support,  support for 3rd party texture sets. | Software will be used throughout all levels modules | 1 | 1 |
| 7 | MAXON CINEMA 4D Studio R15 Education | System Requirements.Windows Vista, 7 or 8 (64-bit only) on Intel or AMD processors with SSE3 support; Mac OS X 10.6.8 or higher on 64-bit Intel-based Macs; 1024 MB available RAM, DVD ROM drive. A standard DVD installation can require up to 7 GB of hard drive space. The software must be registered for unrestricted use.  - Windows 8 64-bit (all versions)  - Windows 7 64-bit (all versions)  - Windows Vista 64-bit (all versions)  - Windows 2008 Server 64-bit  - Windows 2012 Server 64-bit  Mac  - Apple Mac OS X 10.6.8~ (and higher) | MAXON\_CINEMA4D  Maxon'x Cinema 4D Studio is a great tool for professional 3D artists. If you want to create advanced 3D graphics but need a helping hand to ensure you create jaw-dropping graphics quickly and easily, then this is the choice for you. As well as containing all of the features found in Cinema 4D Prime, Visualize and Broadcast, Cinema 4D Studio adds advanced character tools, hair, a physics engine and an unlimited client network for rendering. The result is that Cinema 4D Studio can tackle any project you throw at it with ease. | Software will be used throughout all levels modules | 1 | 15 |
| 8 | Adobe Creative Cloud for teams | System requiremements - Microsoft® Windows 7, 8 or 8.1  Mac OS X v10.7, v10.8, or v10.9  Internet connection required | Adobe Creative Cloud for teams. Adobe® Creative Suite® 6 application, access to online services for file sharing, collaboration, and publishing. (Photoshop, In-design, After-effects and etc.). | Software will be used throughout all levels modules | 1 | 15 |
| 9 | Designer/Renderworks 2014 Educ | VECTORWOKS addresses the wide variety of design-oriented decisions and workflows.  You will need to purchase a network dongle to run Lab seats  Windows XP SP 3, Windows Vista SP 2, Windows 7 SP 1, Windows 8  - QuickTime 7.7.0 to 7.7.3 (higher versions not recommended)  - Pentium 2GHz or better  - RAM: 2GB minimum, 4GB highly recommended, 8GB recommended for large files and complex renderings.  - Screen Resolution 1024 x 768 minimum, 1280 x 800 recommended  - DVD-ROM drive (dual layer) | The software allows students to advance their ideas from concept through completion. | Software will be used throughout all levels modules | 1 | 1 |

**6. LIST OF LITERATURES**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **№** | **Name** | **Author** | **Publisher** | **Edition Number** | **Purpose / Covered topics** | **ISBN Code-13** | **ISBN Code 10** | **Place of publication, year** | **Module(s) where will be used** | **Comments** |
|  |  |  |  |  |  |  |  |  |  |  |
| 1 | Understanding Housing Defects | By Duncan Marshall,  Derek Worthing,  Roger Heath, Nigel Dann |  | 4 | Reviewing structures | 978-0728205567 | 80971121 |  | Introduction to Materials, Processes and Technical Skills in Design and Construction  Sustainable construction  Science and materials in construction and the built environment  Building technology in construction |  |
| 2 | The Construction of Houses | By Duncan Marshall,  Derek Worthing,  Nigel Dann, Roger Heath | Estates Gazette | 5 | Purpose Covered topics  Reviewing structures  Applying practical and theory for the built environment | 978-0415-53817-6 |  | February 25th 2013 | Spatial Design, Project Planning, Implementation and Review  Introduction to Design and Research Skills  Introduction to Materials, Processes and Technical Skills in Design and Construction  Performing Joinery Operations  Structure of the Construction Industry  Construction Methods and Techniques for Low-rise Domestic Buildings  Planning, organisation and control of resources in construction and the built environment |  |
| 3 | Building Construction Handbook | Roy Chudley,  Roger Greeno | Routledge | 10 |  | 978-0415836388 | 415836387 | April 16th 2014 | All units including:  Assess Health and Safety Risks in Your Business  Health, safety and welfare in construction and the built environment  Apply Health and Safety and Environmental Legislation and Working Practices | Series code:INDG344 (REV2) This toolkit provides a ready checklist for health and safety problems on small construction sites. It will help you to manage or avoid them and to ensure your own health and safety as well as the health and safety of the people who work for you, your clients, and others such as the public. The toolkit also acts as a signpost to more detailed advice. |
| 4 | Managing health and safety in construction | HSE | HSE Books |  |  | 9780717662234 | 071-7662233 | 2007 |  |  |
| 5 | The absolutely essential health and safety toolkit for the smaller construction contractor. |  | HSE Books |  |  |  | 9780717662326 | 2008 |  |  |
| 6 | A guide to the Control of Major Accident Hazards Regulations 1999 (as amended) |  |  |  |  |  | 9780717661756 | 2008 | as units above | Revised guidance and detailed advice on the regulatory scope and duties imposed. Addressed to operators of establishments covered by the Regulations but also useful for others with duties falling under them, eg local authorities and emergency services.  Emphasising that the central aim of the Regulations is to prevent and mitigate the wider effects, on people and the environment, of major incidents involving dangerous substances. Matters covered include safety reporting, emergency planning, provision of information by operators and competent authority function. |
| 7 | Construction Mathematics | By Surinder Virdi, Roy Baker, Narinder Kaur Virdi | Routledge | 2 |  | **978-0415-81078-4** |  | 2014 | Exploring Carpentry and Joinery  Performing Joinery Operations  Maths in construction and the built environment  Measuring, estimating and tendering processes in construction and the built environment  Building technology in construction  Planning, organisation and control of resources in construction and the built environment  Measurement Processes for Construction  Site Surveying Procedures for Construction and the Built Environment | Construction Mathematics is an introductory level mathematics text, written specifically for students of construction and related disciplines. Learn by tackling exercises based on real-life construction maths. Examples include: costing calculations, labour costs and cost of materials etc. |
| 8 | Electrical Installations Illustrated Dictionary | John Blaus | Heinemann | 1 |  | 13: 978-0435402075 | 10: 0435402072 | 2006 | Electrical and Electronic Control Principles for Building Services |  |
| 9 | **Electric Wiring for Domestic Installers** | Brian Scaddan | Routledge |  |  | 13: 978-0415522090 | 415522099 | 2012 | Engineering  Electrical Installation for Building Services Engineering  Operation and Maintenance of Electrical Systems and Components |  |
| 10 | **Home Plumbing Manual: The Complete Step-by-Step Guide** | Andy Blackwell | J H Haynes & Co Ltd |  |  | 13: 978-0857330697 | 10: 0857330691 | 2012 | Performing Plumbing Operations  Construction Processes and Operations for Low-rise Domestic Buildings  Project Planning, Implementation and Review |  |
| 11 | Ceramic and Stone Tiling: A Complete Guide | John Ripley | The Crowood Press Ltd |  |  | 978-1861267771 | 1861267770 | 2005 | Exploring Trowel Operations  Performing Blockwork Operations  Performing Decorating Operations |  |
| 12 | The Ecology of Building Materials | Bjørn Berg | Routledge |  |  | 978-1856175371 | 1856175375 | 2009 | The Ecology of Building Materials explores key questions surrounding sustainability of building materials. It provides technical data to enable design and building professionals to choose the most appropriate materials for a project: those that are least polluting, most energy efficient, and from sustainable sources. The book also gives information and guidance on a wide range of issues such as recycling, detailing for increased durability and Life Cycle Analysis | This book explores the sustainability of building materials. It includes technical data relating to choosing the most appropriate materials for a project. This includes analysis of materials that are least polluting, most energy efficient, and from sustainable sources. The book also outlines issues of recycling, detailing for increased durability and Life Cycle Analysis. |
| 13 | The Environmental Design Pocketbook | Sofie Pelsmakers | RIBA Publishing |  |  | 978-1859463741 | 1859463746 | 2012 |  | Guidance on key topics including main facts and figures, checklists and simple tools for architects and engineers designing sustainable houses (and other building types). |
| 14 | Painting and Decorating | Derek Butterfield | Wiley-Blackwell |  |  | 978-1444335019 | 1444335014 | 2011 | The Environmental Design Pocketbook places the information you need for sustainable, low-energy building design at your fingertips. |  |
| 15 | Painting and Decorating | A. Fulcher, B. Rhodes, W. C. Stewart and D. Tickle | Wiley-Blackwell | 5 |  | 978-1405112543 | 1405112549 | 2005 | This book provides all the technical information needed by the trainee painting and decorating student and supports knowledge evidence for NVQ Levels 2 and 3.The new edition includes new developments in tools and equipment, materials, scaffolding and health and safety. |  |
| 16 | Materials for Architects and Builders | Arthur Lyons |  | 4 |  | 978-1856175197 | 1856175197 | 2007 | A necessary purchase for level 1 and 2 undergraduates studying building/ construction materials modules, Materials for Architects and Builders provides an introduction to the broad range of materials used within the construction industry and contains information pertaining to their manufacture, key physical properties, specification and uses. |  |
| 17 | The Whole House Book: Ecological Building Design and Materials | Cindy Harris, Pat Borer |  | 2 |  | 978-1902175546 | 1902175549 | 2005 | This is a green building encyclopaedia. The book combines social, economic and environmental design objectives with an evaluation of buildings' local and global impact. Topics include creating a healthy house with good air quality, designing a home with minimum reliance on fossil fuels and so on. |  |
| 18 | Теория и история архитектуры: Избранные сочинения | Габричевский А. Г. |  |  |  | [5-8238-0151-3](https://ru.wikipedia.org/wiki/%D0%A1%D0%BB%D1%83%D0%B6%D0%B5%D0%B1%D0%BD%D0%B0%D1%8F:%D0%98%D1%81%D1%82%D0%BE%D1%87%D0%BD%D0%B8%D0%BA%D0%B8_%D0%BA%D0%BD%D0%B8%D0%B3/5823801513). |  | Киев, 1993 |  |  |
| 19 | Морфология искусства | Габричевский А. Г. |  |  |  | [5-7784-0167-1](https://ru.wikipedia.org/wiki/%D0%A1%D0%BB%D1%83%D0%B6%D0%B5%D0%B1%D0%BD%D0%B0%D1%8F:%D0%98%D1%81%D1%82%D0%BE%D1%87%D0%BD%D0%B8%D0%BA%D0%B8_%D0%BA%D0%BD%D0%B8%D0%B3/5778401671). |  | Аграф, 2002 |  |  |
| 20 | Биография и культура: Документы, письма, воспоминания | Габричевский А. Г. |  |  |  | 978-5-8243-1619-3 |  | Москва, 2011 |  |  |
| 21 | Основы архитектурной композиции: Учебное пособие | Иконников А. В.,  [Степанов Г. П.](https://ru.wikipedia.org/w/index.php?title=%D0%A1%D1%82%D0%B5%D0%BF%D0%B0%D0%BD%D0%BE%D0%B2,_%D0%93%D0%B5%D0%BE%D1%80%D0%B3%D0%B8%D0%B9_%D0%9F%D0%B5%D1%82%D1%80%D0%BE%D0%B2%D0%B8%D1%87&action=edit&redlink=1) |  |  |  |  |  | Москва, 1971 |  |  |
| 22 | Архитектура города: Эстетические проблемы композиции | Иконников А. В. |  |  |  |  |  | Москва, 1972 |  |  |
| 23 | Пространство и форма в архитектуре и градостроительстве. | Иконников А. В |  |  |  | [5-484-00424-1](https://ru.wikipedia.org/wiki/%D0%A1%D0%BB%D1%83%D0%B6%D0%B5%D0%B1%D0%BD%D0%B0%D1%8F:%D0%98%D1%81%D1%82%D0%BE%D1%87%D0%BD%D0%B8%D0%BA%D0%B8_%D0%BA%D0%BD%D0%B8%D0%B3/5484004241). |  | Москва, 2006 |  |  |
| 24 | [Архитектурная физика](http://www.books.ru/books/arkhitekturnaya-fizika-uchebnik-dlya-vuzov-243093/) | [В.К. Лицкевич](http://www.books.ru/author/litskevich-66996/), [Л.И. Макриненко](http://www.books.ru/author/makrinenko-66997/), [И.В. Мигалина](http://www.books.ru/author/migalina-66998/) |  |  |  |  |  |  |  |  |