University of the West of Scotland

Undergraduate Programme Specification

Session: 2023/24

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Status: Proposal

Named Award Title:	**BSc (Hons) Computer Aided Design Single**

Award Title for Each Award:	**BSc (Hons) Computer Aided Design** **BSc Computer Aided Design**

Date of Validation:	March 2019
Details of Cohorts Applies to:	Year 2023/24 Onwards

Awarding Institution/Body:	University of the West of Scotland
Teaching Institution:	University of the West of Scotland
Language of Instruction & Examination:	English
Award Accredited By:	
Maximum Period of Registration:	3 years for Full time
Mode of Study:	Full Time Part Time
Campus:	Paisley

School:	School of Computing, Engineering and Physical Sciences
Programme Board	Engineering
Programme Leader:	Dr Parag Vichare

Admission Criteria

Candidates must be able to satisfy the general admission requirements of the University of the West of Scotland as specified in Chapter 2 of the University Regulatory Framework together with the following programme requirements:

SQA National Qualifications

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or GCE

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or SQA National Qualifications/Edexcel Foundation

An appropriate HND award with the level of entry and/or credit awarded being subject to the content of the HN programme in a related discipline.

Other Required Qualifications/Experience

Applicants may also be considered with other academic, vocational or professional qualifications deemed to be equivalent.

Further desirable skills pre-application

General Overview

General Overview:

Graduates from BSc (Hons) Computer aided Design programme will have a unique blend of skill-sets and ability to apply contemporary computer aided design (CAD) and visualisation solutions and methodologies used in multidisciplinary industrial sectors. It will expose students to creativity and complexity required in diversified design projects. Students will be able to produce creative graphical contents and analyse, tackle multidisciplinary design problems using a new or existing technologies, through methodical investigation, innovation, creativity and change.

Graduates will possess the following defining characteristics: The theoretical design knowledge to develop and visualise product designs using well proven creative and developmental techniques. Successful application of knowledge and contemporary skills to deliver designs using established processes and methods. Effective interpersonal communication skills. Commitment to professional values.

BSc (Hons) Computer aided Design programme is contextually aligned with following Learning Outcomes as outlined by The Institution of Engineering Designers (IED) for Registered Product Designer (RProdDes):

R1 Apply knowledge of Design Methods, Design Management, Product Design Specifications, User-centred and inclusive design, Standards, Design codes of Practice and Processes to broadly defined problems.

R2 Apply knowledge of mathematical, scientific, and engineering principles to broadly defined problems. Have a practical knowledge of materials, manufacturing, assembly and product quality

R3 Apply knowledge of Sustainable Design to broadly defined problems including disassembly, repair, recycling. Some knowledge will be informed by current developments.

R4 Analyse and evaluate broadly defined problems design ideas, problem solutions and designed products reaching substantiated conclusions.

R5 Carry out intellectual and practical inquiry to address broadly defined problems, including manipulating information and utilising user feedback.

R6 Utilise broadly defined techniques and practices of conceptual and embodiment design in the creation of novel designs. Use broadly defined creative ideation techniques and problem-solving tools.

R7 Display effective knowledge of aesthetic concepts, anthropometry and usability interface design and ergonomics, using them to create appropriate emotional designs.

R8 Carry out prototyping, including testing and validation, displaying ability to incorporate production and manufacturing knowledge.

R9 Manage product design work including carrying out a significant, individual, complete product design exercise (from conception to physical realisation), taking responsibility for planning and management including deadlines. Plan and record personal professional development and involvement.

R10 Carry out a significant collaborative product design exercise, including liaison with stakeholders and knowledge of team dynamics as a team member.

R11 Demonstrate effective abilities at sketching, drawing, modelling (physical and virtual), and use of CAD in the design of products. Write effective reports.

R12 Use risk management processes to identify, evaluate and mitigate safety and other risks associated with projects or activities. Adopt holistic and proportionate approaches to mitigation of security and cyber-security risks.

R13 Demonstrate knowledge of legal matters relevant to product design including intellectual property and liability.

R14 Apply and evaluate commercial, financial and economic aspects of product design.

R15 Demonstrate knowledge of human resource management, recognising the responsibilities, benefits and importance of supporting equality, diversity and inclusion.

R16 Identify and analyse ethical concerns and make reasoned ethical choices informed by professional codes of conduct.

General Overview of Programme

The current BSc Computer aided Design (BSc CAD) programme is designed as Degree ‘top-up’ at SCQF Level 9 (Year 3) for students with HND in 3D Design; Computer Aided Draughting and Design; Interior Design; Product Design; Mechanical Engineering; Architectural Design; Jewellery Design; or relevant discipline. This gave potential recruits an entry route into the University system and upon successful completion of the programme, allowed them to undertake further study, or to enter the job market. The programme is highly vocational and aims to prepare students for employment.

This degree will put your creative and technical skills to the test to produce digital models, concepts (2D and 3D designs) and specifications for multidisciplinary design and development projects. It has been developed to meet the needs of industry to enhance your existing qualifications in design, or a related area, to Honours level.

You will use Computer-aided Design, Visualisation and Manufacturing packages, Prototyping systems and ancillary equipment in combination with modern communications technologies. This unique blend of skill-set and knowledge will provide you with a lot of opportunities in industry across Civil, Structural, Architectural, Manufacturing, Product Design and Mechanical engineering.

The teaching and learning methods employed by staff in the delivery of the module portfolio covers a wide range of established and some novel approaches. Lectures and tutorials form the basis for much of the teaching within engineering but ‘flipped’ classroom and online content, video recording of sessions is now found in all modules. Extensive use is also made of laboratories, seminars, group work, independent learning and demonstrations. Synoptic learning is undertaken in a number of modules within the same level replicating how engineering problems are addressed within industry. One of the main objectives in this area is to keep teaching materials as interesting and as relevant as possible to ensure student enthusiasm for the subjects being presented. Staff make full use of all technologies when delivering material to students including high quality notes, use of multimedia presentations and use of the internet/electronic technology.

The Engineering group has a policy of using small tutorial groups in key subject areas and either sub-divides cohorts into small groups or increase staff numbers in classes or laboratories. All modules are taught by subject experts with staff making use of materials and topics raised through their professional activities whether prior industrial experience, research KTP, and/or consultancy based. Many case studies and examples of applications are taken from live industrial

situations. The School of Computing, Engineering and Physical Sciences has always taken a lead in the use of IT to either deliver material or to supplement and reinforce the traditional teaching and learning approaches. At the Paisley Campus Engineering has its own extensive networks to support all of the area's activity. Students have access to 100+ high specification PC workstations in state of the art air- conditioned laboratories dedicated specifically for Engineering students. Indeed, all modules are now supported electronically, providing notes, copies of lectures, models, sample simulations etc. A VLE (Virtual Learning Environment) is used by all staff as both a repository for material and a social learning platform and is used for online formative and summative assessment, assessment submissions and discussion forums. A variety of assessment methods are used throughout programmes. These range from class tests, laboratory reports, design assignments, individual and group presentations and formal open-book examinations. Both group project work and individual project work are incorporated into the curriculum so that students develop the learning skills associated with group and independent working as well as giving presentations on their work. Formative feedback and constructive comments are given to the student on their coursework submissions. Anonymous marking is undertaken, where possible. Mixtures of formative and summative methods are used in the assessment of student performance within the group. It is recognised that while most of the assessments are summative in nature formative assessment is also found in all modules, delivering timely and regular feedback.

The programme and programme specification has been reviewed and updated taking cognisance of the University's Curriculum Framework principles as discussed below.

Student Centred
Reflection on learning is inherent and credit bearing in all years of the programme.
Advanced entry to the programme is available where RPL/CPD/informal learning is evidenced.
Access to student support (programme team, peers and wider University student services) is promoted at induction, through personal tutoring/year/programme leader, group activity in all levels of the programme, SCQF Level appropriate employability and careers sessions and within modules evident in entry level of the programme.
Engagement and progress is monitored by module coordinators, this takes the form of VLE analytics, assessment engagement, on-campus activity engagement and formative and summative assessment engagement. Monthly meetings with year leads and programme leads allows the programme teams to respond appropriately and quickly both from a student and programme learning, teaching and assessment perspective.
Co-creation of curriculum is challenging due to the need to demonstrate that Engineering Council learning outcomes are met by all students. However, within a number of modules students can determine the direction of their learning with boundaries set to ensure the assessment is fit for purpose. [1]

Programme Delivery
Delivery of the programme is on-campus lectures, tutorials, laboratory or group work activity. The timetables are produced to ensure on-campus learning time is efficiently maximised.

Simple and Coherent
The programme has multiple exit award points as demonstrated in the programme specification and students are supported/counselled appropriately by the programme leader after examiners' panels.
Programme teams are aware of the programme learning outcomes through ongoing programme development meetings. The importance of the modular outcomes and assessment approaches on the overall programme outcomes and Engineering Council's learning outcomes, student feedback and sustainability are core to the discussions at these meetings. Students are made aware of the programme learning outcomes at induction, module introductions and programme development workshops. A capstone module is present at L10- Final Year Project.
Assessment, wherever possible, follows real-world activities examination is required as part of the accreditation requirements however this follows an open-book approach providing time-bound, individually assessed, unfamiliar problems- assessing content and developing a number of important meta-skills. All modules have inherent tutorial activity with formative assessment providing concurrent feedback allowing implementable feed-forward.
Meta-skills are embedded in the programme include digital skills, creativity, critical thinking, innovation, and entrepreneurship and social enterprise.
Students are assessed in a variety of ways and settings including, practical, written, oral, time-bound, group, real-world environment, creative, critical thinking and this broad approach to assessment provides a number of transferrable skills to be developed whilst assessing.

Inclusivity
The programme team have reviewed the content of the AdvanceHE Anti-Racist Curriculum Project [2] and are aware that in this regard 'curricular reform is a continual process rather than a final destination'. With this in mind, further institutional guidance is welcomed to ensure that every effort has been made to safeguard that the curriculum is and will continue to be anti-racist and inclusive for all.

Sustainability
Wherever possible modules are shared with other engineering programmes to maximise efficiency with specific programme contextualised components of learning, teaching and assessment. All modules have been reviewed to ensure they meet the norms around contact hours.

[1]- https://www.uws.ac.uk/media/8142/assessment-handbook-2021-22.pdf

[2]- https://www.advance-he.ac.uk/anti-racist-curriculum-project

During the course of this programme students will develop their UWS Graduate Attributes. Academic Universal and Work-ready attributes: Students will gain knowledge and understanding of this important discipline as well as having the opportunity to develop a broad range of ICT, technical and transferable skills.

Graduate Attributes, Employability & Personal Development Planning

Graduate Attributes

UWS' Graduate Attributes focus on academic, personal and professional skills and throughout the programmes that these skills develop graduates who are universally prepared, work-ready and successful. The BSc (Hons) Computer Aided Design programme provides opportunities throughout the levels to enable these skills to be developed and focussed appropriately.

BSc (Hons) Computer Aided Design knowledge is assembled throughout the programme and wherever possible digital literacy skills and ability to provide effective solutions is enhanced utilising industry standard appropriate technologies such as Desig, Modelling, Manufacturing and Visualisation tools. Most of the undergraduate projects are designed with commercial potential in collaboration with local industry / internal research groups, leading towards long/short term projects and possible employment after graduation.

The programme promotes cultural awareness and emotional intelligence with a variety of group exercises developing resilient, ambitious and enterprising leadership qualities whilst ensuring that group members are emotionally and culturally aware and respectful communication and behaviours are the norm. Commercial awareness is linked to various produc design activities during the programme ensuring that costs associated with staff, materials, manufacture, in-service and decommissioning are considered when developing transformational/innovative solutions with commercial potential.

Ethical awareness and social responsibility is developed throughout and is formalised in final year project studies where School/University ethical approval is sought if required.

Links to current University and programme research are promoted through the programme with opportunities for students to become involved in aspects of the research from the earliest opportunity either discretely or as part of an assessment.

Employability

As a graduate, your wide-ranging skills and experience will be sought by employers within the design, engineering, manufacturing, construction, structural, civil, architectural sectors. Roles include Design, CAD/CAM, Manufacturing, Process Planning and Product Design Engineer and Civil/Structural CAD Technician. Graduates from this programme have progressed onto post-graduate study in Computer Aided Mechanical Engineering, Digital Construction Management and Advanced Manufacturing or similar academic streams.

Personal Development Planning

Across the programme of study, the Personal Development Planning (PDP) process gives the opportunity for engagement of students with a set of core activities, which include

• Reflection on prior experience, personal attributes and goals;
• Audits of skills and feedback on their development;
• Opportunities and guidance on the recording of achievements;
• Identification/development of learning goals;
• Opportunities to reflect on this material and to gain feedback;
• Opportunities (and guidance) on presentation of evidence for different audiences and planning of future
• Learning and career development (such as CVs);
• Maintaining an effective PDP record.

The School has set up a group to co-ordinate and improve the effectiveness of the delivery of PDP and students are encouraged to maintain an effective PDP record using e-portfolios.

Work Based Learning/Placement Details

Engagement

In line with the Academic Engagement Procedure, Students are defined as academically engaged if they are regularly engaged with timetabled teaching sessions, course-related learning resources including those in the Library and on the relevant learning platform, and complete assessments and submit these on time.

Where a programme has Professional, Statutory or Regulatory Body requirements these will be listed here:

In line with the Academic Engagement Procedure, Students are defined as academically engaged if they are regularly engaged with timetabled teaching sessions, course-related learning resources including those in the Library and on the relevant learning platform, and complete assessments and submit these on time.

Where a programme has Professional, Statutory or Regulatory Body requirements these will be listed here:

Students are expected to attend all timetabled sessions and to engage with all formative and summative assessment elements of all the modules that are included in the programme specification as core modules as well as any optional module when applicable.

Equality and Diversity

The University's Equality, Diversity and Human Rights Procedure can be accessed at the following link: UWS Equality and Diversity Policy

Aligned with the University’s commitment to equality and diversity, this module supports equality of opportunity for students from all backgrounds and learning needs. Using the VLE, material will presented electronically in formats that allow flexible access and manipulation of content. This module complies with University regulations and guidance on inclusive learning and teaching practice. Specialist assistive equipment, support provision and adjustment to assessment practice in accordance with the University’s policies and regulations. More information on the University’s EDI policies can be accessed at: https://www.uws.ac.uk/about-

uws/uws-commitments/equality-diversity-inclusion/
(N.B. Every effort will be made by the University to accommodate any equality and diversity issues brought to the attention of the School).

Programme structures and requirements, SCQF level, term, module name and code, credits and awards (Chapter 1, Regulatory Framework)

A. Learning Outcomes (Maximum of 5 per heading)

Outcomes should incorporate those applicable in the relevant QAA Benchmark statements

Knowledge and Understanding	
A1	
Practice - Applied Knowledge and Understanding	
B1	
Communication, ICT and Numeracy Skills	
C1	
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	
Autonomy, Accountability and Working With Others	
E1	

Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	

* Indicates that module descriptor is not published.

Footnotes

Optional Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	

* Indicates that module descriptor is not published.

Footnotes

Criteria for Progression and Award

B. Learning Outcomes (Maximum of 5 per heading)

Outcomes should incorporate those applicable in the relevant QAA Benchmark statements

Knowledge and Understanding	
A1	
Practice - Applied Knowledge and Understanding	
B1	
Communication, ICT and Numeracy Skills	
C1	
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	
Autonomy, Accountability and Working With Others	
E1	

Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	

* Indicates that module descriptor is not published.

Footnotes

Optional Modules

SCQF Level	Module Code	Module Name	Credit	Term	Footnotes

				1	2	3	

* Indicates that module descriptor is not published.

Footnotes

Criteria for Progression and Award

C. Learning Outcomes (Maximum of 5 per heading)

Outcomes should incorporate those applicable in the relevant QAA Benchmark statements

Knowledge and Understanding	
A1	Demonstrate a broad knowledge and understanding of the essential design principals and techniques of digital product design using Computer Aided Design, modelling and visualisation Methods.
A2	Demonstrate an understanding of material properties and testing when selected for design and multi-disciplinary engineering applications.
A3	Demonstrate a capability to analyse complex, ill-defined problems using design analysis methodologies and suggest feasible design solutions.
A4	Demonstrate a knowledge and understanding of contemporary design practices such as collaborative product development, design data management, prototyping technology, project and risk management for multi-disciplinary industrial sectors.
Practice - Applied Knowledge and Understanding	
B1	Demonstrate the analysis of broadly-to-ill defined problems to reach substantiated conclusions using design Methods and design management tools.
B2	Demonstrate a capability to produce multi-disciplinary design solution using digital 3D assets production and visualisation methods.
B3	Evaluate the environmental and societal impact of solutions to complex problems and minimise adverse impacts. Use a risk management process to identify, evaluate and mitigate risks (the effects of uncertainty) associated with a particular project or activity.
B4	Undertake the design, testing, data-collection and analysis for multi-disciplinary design and engineering products using contemporary design tools
B5	Select and evaluate technical literature and other sources of information to address complex problems. Use practical laboratory and workshop skills to investigate complex problems.
Communication, ICT and Numeracy Skills	
C1	Demonstrate the ability to apply rendering, visualisation and animation techniques to design problems as a communication aid.
C2	Use different design, modelling, visualisation and product data management tools for product design and development tasks.
C3	Use computer software to develop a rapid prototype to assist in communicating ideas and concepts to potential customers.
C4	Make formal and informal presentations on aspects of the engineering design process.

C5	Communicate effectively on complex engineering matters with technical and non-technical audiences.
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	Demonstrate digital 3D modelling, visualisation and product data management skills appropriate to Architecture, Construction, Engineering (ACE) industry.
D2	Assess the strengths and weaknesses of different tools for the processing of digital information.
D3	Develop the ability to work independently or as part of a team.
D4	Develop effective technical based communication skills.
Autonomy, Accountability and Working With Others	
E1	Adopt an inclusive approach to engineering practice and recognise the responsibilities, benefits and importance of supporting equality, diversity and inclusion.
E2	Recognise the need for professional and ethical conduct in engineering and awareness of environmental issues.
E3	Function effectively as an individual, and as a member or leader of a team. Communicate effectively on complex engineering matters with technical and non-technical audiences.
E4	Demonstrate knowledge of current professional issues in the ACE and 3D content creation industry.

Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
9		Computer Aided Design 1 *	20	✓			
8	COMP08013	3D Asset Production 1	20	✓			
9	ENGG09018	Independent Study	20	✓			
9		Computer Aided Design 2 *	20		✓		
9		Building Modelling and Visualisation *	20		✓		
9	ENGG09001	Design Prototyping & Testing	20		✓		

* Indicates that module descriptor is not published.

Footnotes

Optional Modules

SCQF Level	Module Code	Module Name	Credit	Term	Footnotes

				1	2	3	

* Indicates that module descriptor is not published.

Footnotes

Criteria for Progression and Award

Students obtaining 360 credits of which 100 credits are at SCQF 9 from the above programme, plus 20 credits from another module at either SCQF levels 9 or 10 from the Engineering SDG are eligible for the exit award of BSc in Computer Aided Design.

The award of distinction can be made to a student obtaining a pass degree as stated in the University Regulations.

D. Learning Outcomes (Maximum of 5 per heading)

Outcomes should incorporate those applicable in the relevant QAA Benchmark statements

Knowledge and Understanding	
A1	Demonstrate an integrated knowledge and understanding of the principals and techniques of product design and manufacture and testing, using modern CAD/CAM techniques
A2	Demonstrate a critical understanding of the concepts of engineering management tools used in design/engineering industry
A3	Demonstrate an integrated knowledge and understanding of computer aided engineering tools in reverse and conventional modes in engineering product design
A4	Demonstrate an integrated knowledge and understanding of manufacturing systems and its effective use for resolving manufacturing problems
Practice - Applied Knowledge and Understanding	
B1	Apply a range of CAD methods to the design of engineering components and systems
B2	Execute a defined project of research or investigation and identify and implement relevant outcomes
B3	Apply advanced methods in CAD
Communication, ICT and Numeracy Skills	
C1	Use a wide range of standard software in the planning, execution and control of the design process.
C2	Use dedicated computer assisted methods to present project results to a variety of audiences including peers, academics and industrialists.
C3	Interpret, use and evaluate a wide range of numerical and graphical data.
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	Demonstrate creative skills using digital technologies in preparing design solutions

D2	Demonstrate the ability to investigate and solve design and engineering problems through the use of computer aided design techniques
D3	Make engineering judgements where data/information is limited
D4	Develop effective technical based communication skills
Autonomy, Accountability and Working With Others	
E1	Exercise autonomy and initiative in the study of an advanced practices and trends in digital design used in Engineering industry.
E2	Practice in ways which show a clear awareness of own and other roles and responsibilities.
E3	Demonstrate personal development and awareness of professional standards in their chosen field.

Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
10	ENGG10001	Final Year Project	40	✓	✓		
10	ENGG10018	Advanced Computer Aided Design	20	✓			
10	ENGG10024	Computer Aided Manufacture CAM	20		✓		

* Indicates that module descriptor is not published.

Footnotes

Optional Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
10	ENGG10008	Engineering Management 2	20	✓			
10	ENGG10010	Manufacturing Systems Engineering	20		✓		

* Indicates that module descriptor is not published.

Footnotes

Criteria for Award

To be eligible for the award of BSc Honours degree a candidate must hold 480 credits, including 100 at SCQF 10 from the above programme.
The Classification of Honours will be determined by University Regulatory Framework 3.20-3.24.

Regulations of Assessment

Candidates will be bound by the general assessment regulations of the University as specified in the University Regulatory Framework.

An overview of the assessment details is provided in the Student Handbook and the assessment criteria for each module is provided in the module descriptor which forms part of the module pack issued to students. For further details on assessment please refer to Chapter 3 of the Regulatory Framework.

To qualify for an award of the University, students must complete all the programme requirements and must meet the credit minima detailed in Chapter 1 of the Regulatory Framework.

Combined Studies

There may be instances where a student has been unsuccessful in meeting the award criteria for the named award and for other more generic named awards existing within the School. Provided that they have met the credit requirements in line with the SCQF credit minima (please see Regulation 1.21), they will be eligible for an exit award of CertHE / DipHE or BA / BSc in Combined Studies.

For students studying BA, BAcc, or BD awards the award will be BA Combined Studies.

For students studying BEng or BSc awards, the award will be BSc Combined Studies.

Changes

Changes made to the programme since it was last published:

20/04/2023
New BSc CAD structure is implemented for L9. Major changes in Programme Spec: Overview, L9 Outcome and modules. L10 structural change will be implemented for Year 2024-25.
General Overview updated to reflect full return to campus delivery.
EDI text updated to reflect current institutional position.
L9: New modules:
Computer Aided Design 1 * (Replaces ENGG09051 Product design and data management)
Computer Aided Design 2 * (Replaces 30% part of ENGG09025 Visualisation Techniques)
COMP08013 3D Asset Production 1 (Replaces 40% part of ENGG09025 Visualisation Techniques)
Building Modelling and Visualisation * (Replaces 30% part of ENGG09025 Visualisation Techniques and covers Some LOs of ENGG09004 Project Management)

L9: Removed modules
ENGG09051 Product design and data management (Replaced with Solidworks based Computer Aided Design 1)
ENGG09025 Visualisation Techniques (Replaced with Solidworks based Computer Aided Design 2, Building Modelling and Visualisation and COMP08013 3D Asset Production 1)
ENGG09004 Project Management (Replaced with few LOs from Building Modelling and Visualisation)
ENGG09006 Engineering Management 1 (Completely replaced with COMP08013 3D Asset Production 1 with primary focus on creative/organic surface modelling)

L10 Changes:
ENGG10008 Engineering Management 2 as an option for Year 2023-24 Only. (This will be replaced by COMP09100 Advanced Texturing, Lighting and Rendering for year 2024-25)

ENGG10010 Manufacturing Systems Engineering as an option for Year 2023-24 Only. (This will be replaced by ENGG10015 Modern Practice in Construction Management for year 2024-25)

All L10 modules added to core.

23/04/2022
Text demonstrating how the programme aligns with UWS' Curriculum Framework principles added.

L9 Changes:
L9 Outcomes are updated for introducing Engineering management 1 aspects in Year 3.
ENGG09006 Engineering Management 1 module is added to Level 9 T1 (currently it is L10 T1), This module is replacing ENGG08001 Materials & Manufacture (T2). Materials and Manufacture module is kept as an optional for clearing any re-attend students.
ENGG09018 Independent Study (T1) is transferred to T2
ENGG08002 Computer Aided Design CAD and ENGG09011 Analysis and Simulation (currently optional for any clearing any Y2020-21 re-attend students) is removed from BSc CAD programme.

L10 Changes:
L10 Outcomes are updated for introducing Engineering management aspects.
ENGG10018 Advanced Computer Aided Design is made Core module for BSc CAD Programme (currently it is an optional module)
ENGG10008 Engineering Management 2 module will be added to BSc CAD L10 T1 for Year 2023-24. This module will be replacing ENGG09006 Engineering Management 1 on L10 level. ENGG09006 Engineering Management 1 is still listed as an optional (for progressing students), but it will be taken in L9 T1 from 2022-23.

08/07/2020
Honours spec ref to Regulatory Framework 3.20-3.24

27/04/2020
Graduate Attributes added
Level 9 Outcomes
Level 9 module changes: New module ENGG0900X Product design and Data Management will replace current ENGG08002 Computer Aided Design CAD Existing module ENGG08001 Materials & Manufacture from Mechanical Engineering programme will replace ENGG09011 Analysis & Simulation 1

Level 10 Outcomes
Level 10 module changes: ENGG09022 Design for Manufacture with Plastics module will be replace with ENGG0900 Engineering Management 1. Engineering Management 1 is offered in T1.
ENGG10024 Computer Aided Manufacture CAM will be offered in T2
ENGG10018 Advanced Computer Aided Design will be offered in T1

01/05/2019
Graduate Attributes added
PL name
Date of validation
Engagement and Attendance

04/05/2018
L10 ENGG10010 Manufacturing Operations Mgt 2 will not be offered in Year 2018-19, this will be replaced with ENGG10XXX Manufacturing System Engineering.

03/04/2017
Analysis and Simulation 1 module was core. Now it is Optional at Year 3
Design for manufacture with plastics was core. Now it is Optional at Year 4
These modules will be replaced with more appropriate and relevant modules to BSc CAD Programme next year
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Change to recommended option at L10

2014
Updated Subject health review dates + applicable from dates.
Changed references from Blackboard to Moodle - various.

Version Number: 1.10