University of the West of Scotland

Undergraduate Programme Specification

Session: 2024/25
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Status: Final

1	**Named Award Title:**	BSc (Hons) Physics with Nuclear Technology (2023) Single
2	**Award Title for Each Award:** [1]	BSc (Hons) Physics with Nuclear Technology (Sandwich) (2023) BSc Physics (Sandwich) Dip HE Science Cert HE Science
3	**Date of Validation / Approval:**	2024
4	**Details of Cohorts Applies to:**	New students entering at L7, L8, L9 in AY 2024-25 L7 students from AY 2023-24 continuing to L8 in AY 2024-25 L8 students from AY 2023-24 continuing to L9 in AY 2024-25
5	**Awarding Institution/Body:**	University of the West of Scotland
6	**Teaching Institution(s)[2]:**	University of the West of Scotland
7	**Language of Instruction & Examination:**	English
8	**Award Accredited By:**	Institute of Physics
9a	**Maximum Period of Registration:**	6 Years Full-time, 8 Years Part-time
9b	**Duration of Study:**	4 Years Full-time, 8 Years Part-time
10	**Mode of Study:**	Full Time Part Time
11	**Campus:**	Paisley
12	**School:**	School of Computing, Engineering and Physical Sciences
13	**Programme Board:**	Physical Sciences
14	**Programme Leader:**	Professor John F. Smith

[1] Include main award and all exit awards e.g. BA / BSc / BEng / DipHE / CertHE
[2] University of the West of Scotland and include any collaborative partner institutions involved in delivery.

15. 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:

Year 1: Higher: BCCC including Physics and Mathematics, with English at Standard Grade.

Year 2: Advanced Higher: CCD including Mathematics, with English at Standard Grade.

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or GCE

Year 1: A-Level: CCD including Physics and Mathematics with English at GCSE.

Year 2: A-Level: BCC including Physics and Mathematics with English at GCSE.

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or SQA National Qualifications/Edexcel Foundation

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

Normally, suitably applicants with HNC will qualify for direct entry into the second year of the programme and applicants with HND will qualify for direct entry into the third year of the programme.

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 (i.e. to satisfy additional PSRB requirements or other)

16	**General Overview** The BSc (Hons) Physics with Nuclear Technology (Sandwich) programme presents a unique opportunity for the students to study the core elements of Physics together whilst obtaining specialist knowledge and training in the area of Nuclear Technology. Physics and Nuclear Technology are experimental subjects dealing with fundamental concepts. Some of the individual modules that will be studied are focused on applied aspects at the interface of Physics and Nuclear Technology, incorporating the delivery of physics fundamentals whilst being underpinned by active research programmes in nuclear physics. The distinct selection of modules meets the expectations of the QAA Subject Benchmarks for Physics and related criteria set out by the Institute of Physics. The Physics with Nuclear Technology programme is accredited by the Institute of Physics. The QAA document states: "Honours degrees should be awarded to students who have demonstrated: (1) A basic knowledge and understanding of physical laws and principles, and some application of these principles; (2) An ability to identify relevant principles and laws when dealing with problems; (3) The ability to execute and analyze the results of an experiment or investigation." This programme meets all of these criteria with a selection of Modules that are not only benchmarked with modern topics in physics research and on industry demands. The programme includes in the first two years an intense study of the core principles of traditional physics - mechanics, heat, electromagnetism, special relativity, waves, optics and electronics, and modern physics. In addition, relevant modules in mathematics are provided and the student can chose an optional module. The third and fourth years focus on nuclear technology as well as core physics. The physics topics covered include atomic, nuclear, and particle physics, quantum mechanics, solid-state physics, electromagnetism and thermodynamics. Modules relating to nuclear technology include a module devoted to Imaging and Nuclear Medicine in third year, and Principles and Applications of Nuclear Physics in fourth year. In the final year students perform project work in the nuclear-physics research group, or with a relevant project in one of the other UWS physics research groups. Alternatively students may be able to carry out a placement in industry or a laboratory. In this research-related feature of the delivery students should be able to gain a high degree of independence throughout their studies. As such all modules promote the evaluation of results and comparison with theoretical predictions or published data. The delivery of the programme is carried out by traditional lectures and laboratories. Small size tutorial classes are used to unfold learning outcomes and engender staff/student discussions. After graduation, students will be able to pursue scientific careers in the form of master's or PhD qualifications. The student may start a career in the nuclear industry; this may be employment directly in the nuclear-power industry, or in one of the related sectors. Knowledge of physics with specialist knowledge in the areas of nuclear technology will allow graduates to gain a competitive edge in the current competitive job market, especially since a successful sandwich-placement will give the student valuable experience in the nuclear industry or a related sector. Teaching and learning methods employed on this programme include lectures, tutorial and problem classes, laboratory classes, project work, computer aided learning, textbooks, journals,

	and online resources on a virtual learning environment. Assessment methods include examinations, essays, coursework, project reports, oral presentations, and problem sheets. Students are required to undertake self-study and independent learning in each module and assessment is via a mixture of coursework and final examination. All Physics staff practice an “open door policy” with regard to additional contact time for students. Tutorials are scheduled at all Levels in order to encourage student-staff interaction. A guideline to the content of the tutorials is presented below, level-by-level. Level 7: Tutorials are focussed on core scientific problems and a general introduction of students into Higher Education. Development of PDP skills such as critical evaluation of scientific concepts, mathematical and scientific skills, time management and core concepts of e-learning are also important. An introduction to core university regulations (e.g. plagiarism) is also provided. Level 8: Tutorials are focused on problem solving, literature review and scientific writing, including an introduction to e-learning facilities in the university and the internet, and a continuation of PDP skills. Level 9: Tutorials will have a focus on advanced topics of modern physics, report writing and information retrieval using e-environment of university. Preparation for Honours project-work is implicit. Advice and discussion of possible placement options can be given at this stage. PDP skills continue to develop, for example a discussion of interview skills. Level 10: Time can be scheduled for discussion of the project work. Contact time can be used for project one-to-one supervision and an introduction in specialist high-level aspects of PDP (e.g. career and small-finance planning). The normal period of registration for the BSc(Hons) Physics with Nuclear Technology programme is four years. Students should refer to Section 5.4 of the UWS Regulatory Framework for regulations regarding duration of study and authorized interruptions.
17	**Graduate Attributes, Employability & Personal Development Planning**
	Employability skills can be summarized as: a high level of technological expertise geared towards problem solving and project progress, numeracy, literacy, transferable skills with regard to computer use, project leadership, team work and management of peers, and dissemination of scientific results. Graduates of this programme will have specialized knowledge and skills in the area of nuclear technology in addition to core physics. PDP activities will be associated with some of the modules in the programme, such as the PHYS10003 Project and Professional Skills module in fourth year. In first and second year there are two modules, ASPIRE and ASPIRE 2, which are focused on the development of academic, professional, and personal skills. The employability skills which students will gain during the sandwich placement will be those identified by The Council for Industry and Higher Education (CIHE) (2006) as the key competencies which employers value as defined below. **Cognitive Skills** (attention to detail, analysis and judgement)

	Demonstrate the use of their knowledge, understanding the skills, in both identifying and analyzing problems and issues and formulating, evaluations and applying evidence-based solutions and arguments; undertake critical analysis, evaluation and/or synthesis of ideas, concepts information and issued; identify and analyze routine professional problems and issues; draw on a range of sources in making judgements **Generic competencies** (planning and organization, influencing, written communication, questioning, listening, teamwork, interpersonal sensitivity, organization sensitivity and lifelong learning and development) Well-developed skills for the gathering, evaluation, analysis and presentation of information, ideas, concepts and quantitative and/or qualitative data, drawing on a wide range of current sources. This will include the use of ICT as appropriate to the subject; Communication of the results of their own and other work accurately and reliably in a range of different contents using the main specialist concepts, constructs and techniques of the subject; Identifying and addressing their own learning needs including being able to draw on a range of current research, development and professional materials; Interpreting, using and evaluating numerical and graphical data to achieve goals targets; Making formal and informal presentations on standard/mainstream topics in the subject/discipline to a range of audiences; Work under guidance with qualified practitioners; Practice in ways which take account of own and others' roles and responsibilities; Take some responsibility for the work or others and for a range of resources. **Personal capabilities** (creativity, decisiveness, initiative, adaptability/flexibility, achievement orientation, tolerance for stress and leadership) Application of their subject and transferable skills to contexts where criteria for decisions and the scope of the task may be well defined but where personal responsibility, initiative and decision-making is also required; Exercising autonomy and initiative in some activities at a professional level. **Technical Ability** (knowledge of key trends in modern technology and experience of using modern technology) Use of a range of IT applications to support and enhance work. **Practical and professional elements** (professional expertise, process operation and image) Show familiarity and competence in the use of routine materials, practices and skills and of a few that are more specialized, advanced and complex; practice in a range of professional level contexts which include a degree of unpredictability; deal with ethical and professional issued in accordance with current professional and/or ethical codes or practices, seeking guidance where appropriate. **Graduate Attributes** We have defined a set of Graduate Attributes that are the skills, personal qualities and understanding to be developed through your university experience that will prepare for life and work in the 21st century (https://www.uws.ac.uk/current-students/your-graduate-attributes/). The Graduate Attributes relevant to this module are listed below. • Academic: critical thinker; analytical; inquiring; knowledgeable; digitally literate; problem

	solver; autonomous; incisive; innovative • Personal: effective communicator; influential; motivated • Professional: collaborative; research-minded; enterprising; ambitious; driven
18	**Work Based Learning/Placement Details**
	Project Work All students on the programme will take the 40-credit project module at Level 10 (fourth year) entitled Project and Professional Skills. Students will have the opportunity to carry out projects outside of the university at, for example, local relevant companies or hospitals. This will provide the opportunity for credit-bearing work-related learning. **Sandwich Placement** Students on the BSc (Hons) Physics with Nuclear Technology (Sandwich) programme will have the opportunity for a one-year placement in industry or a research institution in the UK or abroad. The Physics staff will be happy to initiate contacts with known providers of sandwich placements. Details will depend on the chosen project. The sandwich placement is primarily designed for students to gain work experience. The experience may also contribute towards meeting the membership requirements of a professional body. Students carrying out a sandwich placement are required to continue their PDP programme and to maintain a portfolio from which they will be required to produce a comprehensive “learning log report” charting their development during placement. This is assessed on a pass/fail basis only with the majority of ongoing assessment being formative in nature. The student will be required, through reflection, to explore their own role within their placement organization and to take account of the roles and responsibilities of themselves and others in the context of the structure in which they operate. On successful completion of the placement, the student will be more employable as a result of having developed their ability to integrate essential generic skills and attributes with subject-related knowledge. The placement will be governed by a tripartite learning agreement between the student, placement provider and the university. The agreement will define the learning outcomes and confirm elements of support and commitment from all parties. The agreement will be signed by each party prior to the start of the placement and it is expected that Schools will continue to use their existing placement systems for the management of such agreements. **Learning Outcomes of the Sandwich Placement** At the end of the placement the student will be able to: • L1 Critically relate elements of the placement work experience to the main themes and issues of academic student of physics relevant within the workplace and be confident in articulating this to others. • L2 Analyze organizational cultures and structures with particular relevance to the current

workplace and exhibit the ability to critically evaluate employee roles in an applied setting.

- L3 Recognize, critically assess and be able to clearly demonstrate to others the personal development and application of essential employability skills and attributes within a real work situation.

Assessment of the Sandwich Placement

Assessment will be based on pass/fail only and all assessment elements must be passed for progression as part of the Sandwich programme. Assignments will be open to external examiners in accordance with university regulations.

In order to submit for assessment students need to:

- Attend the workplace(s) in which they have been placed for a minimum total of 36 weeks (180 full working days) and have their employer(s) confirm their attendance.
- Receive a satisfactory assessment of work performance from their workplace supervisor(s) and academic tutor (based on two interviews and other evidence as required).
- Maintain a PDP portfolio and use this to submit a satisfactory "learning log report" reflecting on the placement experience (minimum 2,000 words).
- Successfully complete a subject related project (minimum 3,000 words or equivalent).
- Where a student's sandwich placement is made up of two separate planned periods of work experience (i.e. a "Thin Sandwich"), the PDP portfolio report and subject related report will normally be submitted and assessed during the second period of placement.

Assessment of the first period of placement will relate to satisfactory performance in the workplace. Extenuating circumstances will be taken into consideration in accordance with University regulations.

Reassessment of the sandwich placement

- Minimum period in work: It is essential that the student completes at least 36 weeks (180 working days) in employment. If the student does not meet this minimum requirement then they cannot pass the placement.
- Catch up: Where through no fault of their own a student has been unable to attain at least 36 weeks placement experience they will be entitled to secure the additional work experience required through a suitable additional period of work experience provided this is agreed in advance with the Programme Team.
- Retake of Placement: a repeat or alternative placement will only be considered on health or other mitigating grounds or where the placement is terminated due to no fault of the student. In such cases the student will receive counselling from the placement tutor on how best to proceed.
- Satisfactory Performance: The first interview will be used to assess the student's progress. If it is considered that the student's performance is less than expected at that stage, the student will be advised of this and of the elements of their performance that need to improve. If the student's performance is assessed as unsatisfactory at the second interview then the student will be given further advice on the steps they need to take to achieve a satisfactory assessment and will be reassessed through a third interview at the end of their

	placement period. Interviews will normally be conducted within the workplace unless a suitable alternative method is agreed by all parties. • Reflective Report from PDP: If the reflective report is unsatisfactory, the student will be given the opportunity to resubmit in line with University regulations. • Subject related report: If the subject related report is unsatisfactory the student will be given the opportunity to resubmit in line with University regulations. **Progression/Award** Placement students will be assigned to a specific Subject and Programme Panel. The relevant Programme Panel will consider the performance of each sandwich placement student enrolled on that Programme and decide eligibility for reassessment, progression and awards in accordance with University Regulations. A student who fails the sandwich placement after reassessment will no longer be eligible for a "with sandwich" award. They will either progress to level 9 or 10 (as appropriate) of a non-sandwich equivalent programme or exit with an equivalent non-sandwich award.
19	**Attendance and Engagement**
	In line with the Student Attendance and 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 VLE, and complete assessments and submit these on time.
20	**Equality and Diversity**
	The University's Equality, Diversity and Human Rights Procedure can be accessed at the following link: UWS Equality, Diversity and Human Rights Code.

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

21	**Learning Outcomes (Maximum of 5 per heading)**
	Outcomes should incorporate those applicable in the relevant QAA Benchmark statements. Please ensure that Learning Outcomes are appropriate for the level of study. Further information is available via SCQF: https://scqf.org.uk/support/support-for-educators-and-advisers/support-for-colleges-heis/ and a Level Descriptors tool is available (SCQF Level Descriptors Tool | Scottish Credit and Qualifications Framework) and ensure appropriate cognisance of Chapter 1, Regulatory Framework. https://www.uws.ac.uk/media/6514/regulatory-framework-2023-2024.pdf

	SCQF LEVEL 7 Learning Outcomes (Maximum of 5 per heading)
Knowledge and Understanding	
A1	Demonstrate a broad general knowledge of the physics topics covered (mechanics, electromagnetism, waves, heat, gravitation, and core maths).
A2	To apply knowledge and understanding to solve relevant numerical and non-numerical problems.
A3	Record simple experimental procedures in individual work.
Practice - Applied Knowledge and Understanding	
B1	Use the skills of observation, recording of measurements and problem solving in both theoretical and practical situations.
B2	Use skills to plan and perform small scientific projects in the laboratory.
B3	Use some of the basic and routine professional skills, techniques and practices.
Communication, ICT and Numeracy Skills	
C1	Use a range of forms of communication, both spoken and written.
C2	Use graphical and numerical skills in combination.
C3	Be able to summarise and present scientific individual work effort for critical peer evaluation.
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	Use a range of approaches to address problems in a routine context within physics.
D2	Critical analysis of obtained experimental data.
D3	Present and evaluate arguments, information and ideas in physics.
D4	Use a range of numerical and graphical skills in combination.
Autonomy, Accountability and Working With Others	
E1	Exercise initiative and independence in practical situations.
E2	Work in partnership with others in practical classes, taking account of each other's roles and responsibilities.
E3	Work with others in support of current professional practise under tutorial guidance.

Level 7 Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
7	PHYS07006	Introductory Physics A	20	✓			
7	MATH07011	Applied Mathematics	20	✓			
7	APPD07001	ASPIRE	20	✓			
7	PHYS07007	Introductory Physics B	20		✓		
7	MATH07009	Mathematical Analysis	20		✓		
7	MATH07008	Computational Methods	20		✓		

Footnotes for Core Modules:

N/A

22 a	**Level 7** **Criteria for Progression and Award**
	Progression to level SCQF 8 is available to students who fulfil the university progression requirements and who have obtained at least a C pass in each of the core modules at SCQF 7. A student may exit with a Cert HE Science with • a minimum of 120 credit points achieved at Level 7 or above and • at least 80 credit points are achieved from any (PHYS/MATH/CHEM) modules

	Level 8 Learning Outcomes (Maximum of 5 per heading)
Knowledge and Understanding	
A1	Demonstrate a broad knowledge of physics at the appropriate level, with detailed knowledge in some areas.
A2	Demonstrate understanding of a limited range of core theories, principles and concepts.
Practice - Applied Knowledge and Understanding	
B1	Carry out routine investigations in a lab situation.
B2	Adapt routine practices within accepted standards.
Communication, ICT and Numeracy Skills	
C1	Convey complex information on a topic to an audience.
C2	Use a range of applications to obtain, process and interpret data.
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	Understanding core issues of depicted physics problems.
D2	Solving of smaller scale theoretical and hand-on laboratory work problems.
Autonomy, Accountability and Working With Others	
E1	Work in close partnership with peers on problems.

Level 8 Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
8	PHYS08007	Classical Mechanics	20	✓			
8	PHYS08002	Optics & Electronics	20	✓			
8	PHYS08006	Mathematics for Physics	20	✓			
8	PHYS08004	Properties of Matter	20		✓		
8	PHYS08009	Modern Physics	20		✓		
8	APPD08001	ASPIRE 2	20		✓		

Footnotes for Core Modules:

N/A

22b	**Level 8** **Criteria for Progression and Award**
	Progression to level SCQF 9 is available to students who fulfil the university progression requirements and who have obtained at least a C pass in each of the core modules at SCQF 8. A student may exit with a Dip HE Science with • a minimum of 240 credit points where • at least 100 credit points are achieved at Level 8 or above and • at least 80 credit points are achieved from any PHYS/MATH/CHEM modules at Level 7 • at least 80 credit points are achieved from any PHYS/MATH/CHEM modules at Level 8

	SCQF LEVEL 9 Learning Outcomes (Maximum of 5 per heading)
Knowledge and Understanding	
A1	Demonstrate a broad and integrated knowledge and understanding of the main areas of physics (quantum mechanics, electromagnetism, atomic, nuclear and particle physics).
A2	Demonstrate a critical evaluation of modern-day physics knowledge.
Practice - Applied Knowledge and Understanding	
B1	Practise routine methods of enquiry in a lab setting, including topics with a degree of unpredictability.
B2	Use information retrieval system present at the university for further reading and understanding of modern day physics concepts.
B3	Discuss outcomes in detail with peers and supervisors.
Communication, ICT and Numeracy Skills	
C1	Write formal reports which include elements of interpretation and evaluation of numerical data.
C2	Be able to make a formal presentation on a topic as a member of a group.
C3	Be able to lead own project.
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	Undertake critical analysis; evaluate information and synthesise ideas.
D2	Benchmark own findings with standard results as depicted in modern-day physics.
D3	Critical evaluate sources of uncertainties and limits of modern day physics understanding.
Autonomy, Accountability and Working With Others	
E1	Exercise autonomy and initiative in practical classes and in intermediate problem solving exercises.
E2	Work with others in a group to produce a presentation of intermediate level.

Level 9 Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
9	PHYS09008	Quantum Mechanics	20	✓			
9	PHYS09012	Mathematics for Physics 2	20	✓			
9	PHYS09009	Imaging and Nuclear Medicine	20	✓			
9	PHYS09003	Electromagnetism	20		✓		
9	PHYS0900X	Atoms, Nuclei, and Particles	20		✓		
9	PHYS0900X	Radiation Detectors and Nuclear Lab Skills	20		✓		

Footnotes for Core Modules:

N/A

Level 9 Optional Modules

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

Footnotes for option modules

22c	Level 9 Criteria for Progression and Award
	Progression to level SCQF 10 is available to students who fulfil the university progression requirements and who have obtained at least a C pass in each of the core modules at SCQF 9. Students may, subject to availability, be able to undertake a sandwich placement for one academic year, before proceeding to SCQF level 10. A student may exit with a BSc Physics, with a minimum of 360 credit points. The Progression and Awards Board will award distinction to candidates for undergraduate awards other than Honours degrees where a mean mark of 70% or above is achieved by candidates at their first attempt.

	SCQF LEVEL 10 Learning Outcomes (Maximum of 5 per heading)
Knowledge and Understanding	
A1	Demonstrate knowledge that integrates the principle topics in advanced physics at the required level (project, advanced topics in experimental and theoretical physics).
A2	Demonstrate a detailed knowledge and understanding of at least one specialism.
Practice - Applied Knowledge and Understanding	
B1	Execute a defined project of research or investigation and identify relevant outcomes.
B2	Use a range of skills and practices associated with a specialist area of study.
Communication, ICT and Numeracy Skills	
C1	Make a formal presentation on a specialised topic to an informed audience.
C2	Be able to defend own project results under peer scrutiny.
C3	Be able to communicate with peers and senior colleagues.
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	Be able to make judgements where data is limited, in a practical or theoretical situation.
D2	Critically identify, define and analyse complex physics problems and issues.
Autonomy, Accountability and Working With Others	
E1	Exercise autonomy and initiative in practical classes and in advanced problem solving exercises.
E2	Work with others in a group to produce a presentation of advanced level.

Level 10 Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
10	PHYS1000X	Statistical Physics & Thermodynamics*	20	✓			
10	PHYS1000X	Principles of Nuclear Physics	20	✓			
10	PHYS10009	Solid State Physics	20		✓		
10	PHYS10012	Applications of Nuclear Physics	20		✓		
10	PHYS10003	Project and Professional Skills	40	✓	✓		

Footnotes for Core Modules:

N/A

Level 10 Optional Modules

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

Footnotes for option modules

N/A

22d	Level 10 Criteria for Award
	Students will exit with an award of BSc (Hons) Physics with Nuclear Technology with a minimum of 480 points. Students who have done a sandwich year will be entitled to BSc (Hons) Physics with Nuclear Technology (Sandwich). Honours degrees are classified in accordance with University regulations

23	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.

24	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 a Combined Studies award (please see Regulation 1.61).

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 made to the programme since it was last published:

Level 7

- The module APPD07001 ASPIRE has changed to a single-term module in Term 1.
- The module PHYS07005 Skills for Physics has been replaced with MATH07008 Computational Methods.
- The module MATH07003 Calculus A will be replaced by MATH07011 Applied Mathematics. The new mould has the same content as the old module but the assessment weightings have changed, so a new module code is needed.
- The MATH07009 Calculus B will be replaced by MATH07009 Mathematical Analysis. This is just a change of title so the same module code is retained.

Level 8

- The module APPD08002 ASPIRE 2 has been changed to a single-term module in Term 2.
- The module PHYS08006 Mathematics for Physics 1 has been included.

Level 9

- The long-and-thin module PHYS0900X Nuclear Physics Research has been replaced with the new Term 2 module PHYS0900X Radiation Detectors and Lab Skills.
- The proposed long-and-thin module MATH0900X Mathematical Methods 2 has been replaced with the Term 1 module PHYS09012 Mathematics for Physics 2.

Level 10

- The module PHYS10001 Nuclear and Particle Physics has changed to PHYS1000X Principles of Nuclear Physics, with the particle physics content being moved to the new Level 9 Atoms, Nuclei, and Particles module.

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