Addendum to the Programme Specification

4423 MPhys Physics with Nanotechnology

This Addendum has been produced to highlight the key changes made to the existing Programme Specification as a result of the University's response to the Covid-19 Pandemic. You should read it in conjunction with the relevant Programme Specification from the year you started your programme.

Programme Specification for entry in 2020-21
Programme Specification for entry in 2019-20
Programme Specification for entry in 2018-19

University level information

In view of COVID-19, the University has had to make changes to some elements of programme delivery for 2020-21. These changes have included the method of delivery, such as face-to-face and online, and the number of modules available.

The University aims to provide as much of a face-to-face component to your education as prevailing conditions at the time allow, combined with its new blended approach that will develop active independent and group online learning.

As the COVID-19 pandemic develops, the University's response to this and other issues may likewise need to evolve. The University will consult with student representatives as necessary and appropriate and will communicate changes to you as soon as practicable so that you have the information you need to understand how a change may impact you and what steps you need to take next. The University remains committed to supporting you as you learn.

Programme Information

In light of Covid-19, some laboratory elements of the programme will be modified during 2020-21. Lab sessions will be adapted to ensure they meet current social distancing requirements. Where written examinations are unable to take place due to social distancing measures, an alternative form of assessment will be offered.

In order to focus our programme we have moved options from the first semester of 1st year to second semester of 1st year. This made place for the Physics Skills - Programming and Data Analysis module (PHYS1201) to move to the first semester to ensure that our students have a strong foundation of computing knowledge from the beginning. Intro to Photonics (PHYS1004) moves to semester 2 and remains core for this programme.

Programme Structure

Where optional modules have been specified, the following is an indicative list of available optional modules, which are subject to change each academic year. Please note that, in some instances, modules have limited spaces available.

Programme:	MPhys with Nano - 4423
Term:	2020-2021 Academic Session (202021)

Area title:	4423-1 - MPhys w Nanotechnology Part 1

Compulsory Modules
You must complete the following modules:

Module	Module Title	Credit	Core?	Semester / Term
MATH 1006	Math Method for Phys Sci 1a	15	Yes	Semester 1
MATH 1007	Math Meths for PhysSci 1b	15	Yes	Semester 2
PHYS 1004	Introduction to Photonics	15	Yes	Semester 2
PHYS 1011	Wave, Light and Quanta	10	Yes	Semester 2
PHYS 1013	Energy and Matter	10	Yes	Semester 2
PHYS 1015	Motion and Relativity	10	Yes	Semester 1
PHYS 1017	Physics Skills 1	10	Yes	Semester 1
PHYS 1019	Physics Skills 2	10	Yes	Semester 2
PHYS 1022	Electricity and Magnetism	10	Yes	Semester 1
PHYS 1028	Personal Tutorial (Physics)	0	No	Full Academic Year
PHYS 1201	Phys Skills Prog & Data Analys	15	Yes	Semester 1

Programme:	MPhys with Nano - 4423
Term:	2020-2021 Academic Session (202021)
Area title:	4423-2 - MPhys w Nanotechnology Part 2

Compulsory Modules
You must complete the following modules:

Module	Module Title	Credit	Core?	Semester / Term
PHYS 2001	Electromagnetism	15	Yes	Semester 2
PHYS 2003	Quantum Physics	15	Yes	Semester 2
PHYS 2006	Classical Mechanics	15	Yes	Semester 1
PHYS 2022	Physics from Evidence I	15	Yes	Semester 1

PHYS 2023	Wave Physics	15	Yes	Semester 1
PHYS 2024	Statistical Mechanics	15	Yes	Semester 2
PHYS 2031	Introduction to the Nanoworld	15	Yes	Semester 1

Optional Modules
You must choose from the following modules:

Module		Credit	Semester / Term
Rule 1	**Select 15 credits** **Select 15 credits from the following:-**		
PHYS 2007	Medical Physics	15	Semester 2
PHYS 2009	Practical Photonics	15	Semester 2
PHYS 2015	Introduction to Energy in The Environment	15	Semester 2

Programme:	MPhys with Nano - 4423
Term:	2020-2021 Academic Session (202021)
Area title:	4423-3 - MPhys w Nanotechnology Part 3

Compulsory Modules
You must complete the following modules:

Module	Module Title	Credit	Core?	Semester / Term
PHYS 3002	Nuclei & Particles	15	Yes	Semester 2
PHYS 3003	Light & Matter	15	Yes	Semester 1
PHYS 3004	Crystalline Solids	15	Yes	Semester 2
PHYS 3007	Theories of Matter, Space&Time	15	Yes	Semester 1
PHYS 3008	Atomic Physics	15	Yes	Semester 1
PHYS 6009	Dissertation	15	Yes	Semester 1

Optional Modules
You must choose from the following modules:

Module		Credit	Semester / Term
Rule 1	**Select 1 module** **You must select one of the following modules. The module will be compulsory for your programme.** **Select 1 module from the following:-**		
PHYS 6008	Physics from Evidence II	15	Semester 2
PHYS 6017	Computer Techniques in Physics	15	Semester 2
Rule 2	**Select 1 module** **Select 1 module from the following:-** **Please select an even split of credits overall by Semester including your compulsory modules.** **There may be other modules across the university that interest you but do not appear in the list below. If you would like to take a module that does not appear in the list below please contact the relevant module leader and inform the Faculty Student Office of your proposed change.** **It is the responsibility of each student to ensure that the combination of modules they have selected is valid, inc pre-requisites and co-requisites, and meets the requirements of their programme of study. Students changing their selection after the options deadline (end of semester week 2) are responsible for checking there are no timetable clashes** **Please be aware that you must take at least 90 credits at the appropriate level and satisfy the progression criteria e.g. It is not possible to backtrack optional modules as well as take Language**		

	modules.		
ANTH 2001	Cosmology, Ritual and Belief	15	Semester 2
LANG XX15	Language Module	15	Show Electives
MATH 2038	Partial Differential Equations	15	Semester 2
PHYS 2007	Medical Physics	15	Semester 2
PHYS 2009	Practical Photonics	15	Semester 2
PHYS 2015	Introduction to Energy in The Environment	15	Semester 2
PHYS 3009	Applied Nuclear Physics	15	Semester 2
UOSM 2017	Intercultural Communication in a Global World	15	Semester 2
UOSM 2031	Engineering Replacement Body Parts	15	Semester 2

Programme:	MPhys with Nano - 4423
Term:	2020-2021 Academic Session (202021)
Area title:	4423-4 - MPhys w Nanotechnology Part 4

Compulsory Modules
You must complete the following modules:

Module	Module Title	Credit	Core?	Semester / Term
PHYS 6003	Advanced Quantum Physics	15	No	Semester 1
PHYS 6006	MPhys Project	30	Yes	Full Academic Year
PHYS 6012	Coherent Light, Coherent Matte	15	No	Semester 1
PHYS 6014	Nanoscience: tech and adv mat	15	No	Semester 2
PHYS 6015	MPhys Final Year Synoptic Exam	15	No	Semester 2

Optional Modules
You must choose from the following modules:

Module		Credit	Semester / Term
Rule 1	**Optional modules**		

	Students wishing to take Part 4 of this Programme should consult with the Programme Coordinator in order to select your optional modules. **There may be other modules across the university that interest you but do not appear on the list of optional modules below. If you would like to take a module that does not appear in the list below please contact the relevant module leader for further information and inform the Faculty Student Office of your proposed change of module so they can record this accordingly.** **Please note that any proposed changes will be subject to meeting the required pre-requisites and co-requisites of the module as well as timetabling constraints.**		
Rule 1 GROUP 1	**Select up to 2 modules** **Select up to a maximum of 2 modules from the following:-**		
OPTO 6002	Advanced Lasers	15	Semester 2
OPTO 6008	Optical Fibres	15	Semester 1
OPTO 6010	Advanced Fibre Telecommunication	15	Semester 2
OPTO 6011	Optical Fibre Sensors	15	Semester 2
PHYS 6011	Particle Physics	15	Semester 2
PHYS 6024	Lasers	15	Semester 1
Rule 1 GROUP 2	**Select up to 2 modules** **Select 0 modules up to a maximum of 2 modules from the following:-**		

ISVR 3061	Human Responses to Sound and Vibration	15	Semester 2
ISVR 6130	Signal Processing	15	Semester 1
ISVR 6138	Biomedical Application of Signal and Image Processing	15	Semester 2
LANG XX15	Language Module	15	Show Electives
MATH 3006	Relativity, Black Holes and Cosmology	15	Semester 2
MATH 3018	Numerical Methods	15	Semester 1
OPTO 6007	Silicon Photonics	15	Semester 1
PHYS 3003	Light and Matter	15	Semester 1
PHYS 3009	Applied Nuclear Physics	15	Semester 2
PHYS 6071	Physics of the Early Universe	15	Semester 2