Programme Specification

MPhys Physics with a Year of Experimental Research (2020-21)

This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities that are provided.

Awarding Institution	University of Southampton
Teaching Institution	University of Southampton
Mode of Study	Full-time
Duration in years	4
Accreditation details	Institute of Physics (IOP)
Final award	Master of Physics (MPhys)
Name of award	Physics with a Year of Experimental Research
Interim Exit awards	Bachelor of Science with Honours (BSc (Hons))
	Certificate of Higher Education (CertHE)
	Diploma of Higher Education (DipHE)
FHEQ level of final award	Level 7
UCAS code	N/A
Programme code	4426
QAA Subject Benchmark or other external reference	Physics, Astronomy and Astrophysics 2019
Programme Lead	Hendrik Ulbricht

Programme Overview

Brief outline of the programme

Physics is a dynamic subject that is continually being developed by new discoveries and innovations. In choosing to study quantum, light & matter physics at Southampton you will benefit from being taught by research-active physicists who enjoy an outstanding international reputation in all areas of research carried out within Physics & Astronomy. We assign a high priority to the continual development and improvement of our teaching methods and curriculum design in order to guarantee students a highly stimulating, as well as enjoyable and fruitful, learning experience.

Quantum, Light & Matter physics is one of Southampton's strongest research areas, bridging fundamental principles of quantum physics to the very latest nanoscale structures and devices that stem from and underpin their experimental study, and students benefit greatly from extensive contact with staff involved with this cutting-edge research. The aims of this programme are to develop your knowledge and understanding of the field, and to let you develop corresponding research skills by participating in one of the many research projects – principally experimental, although theory is also possible - pursued by our Quantum, Light & Matter research group. This research varies from condensed matter, cold atom, semiconductor, magnetism and superconductor physics to nanostructures, nanomaterials and nanofabricated devices, optoelectronics, polymer and semiconductor chemistry; many projects are cross-disciplinary collaborations across the physical, biological and medical sciences, with colleagues in Southampton, elsewhere in the UK, and overseas. Your research work will therefore introduce you not only to the latest challenges in quantum, light & matter physics, and to a wide range of highly applicable experimental and theoretical techniques, but also to leading British and European research groups.

The first three years of this programme comprise our core physics courses, which cover all the key components of a modern physics degree, together with additional courses each year that are tailored to the principles of, and current research in, quantum, light & matter physics. In the fourth year of this programme, students then spend 30 weeks working with one of our research teams, within either the Quantum, Light & Matter group itself or one of its collaborations elsewhere in Southampton or beyond. During this period, students are under the immediate supervision of a member of the Quantum, Light & Matter group or one of its collaborating colleagues elsewhere; in the latter case, a member of staff from Southampton will visit the student within the first three months to ensure satisfactory progress. At all stages, both the Personal Tutor and Southampton programme co-ordinator will remain in active contact.

We recognise the potential diversity of our students both at home and internationally and thus this document has been written in accordance with the University's Diversity Policies and and current anti-discrimination legislation.

Please note: Exit awards are only available under exceptional circumstances. Note that students must meet the standard criteria for progression to these awards before they can be granted. In the case of the CertHE and DipHE, core modules for the BSc Physics are treated as compulsory modules for the purpose of deciding whether progression to these awards has been accomplished.

*The BSc exit award for MPhys Physics with a Year of Experimental Research cannot be guaranteed if PHYS6009 Dissertation was not selected as an optional module in Semester 1 of Part 3.

Your contact hours will vary depending on your module/option choices. Full information about contact hours is provided in individual module profiles.

Learning and teaching

Core knowledge and understanding are acquired substantially via lectures, supported by tutor-led tutorials, laboratory practical classes, problem classes, as well as guided independent study and research. Students are strongly encouraged to attend all the lectures for the courses on which they are registered and are required to attend all the supporting sessions.

Assessment

Assessment in the first, second and third years is a mixture of unseen written examinations, marked problem-based coursework, computer-based exercises and laboratory work. The year-long project that forms the fourth year of the programme is assessed via written and oral reports and an oral examination.

Special Features of the programme

Students can transfer easily between the BSc (Physics) and MPhys programmes until the end of Part II. High-performing students on both programmes are also eligible to apply to one of our "flagship" programmes, which are not available for direct entry, including this one. These programmes can only be entered at the end of second year. Space on these programmes is strictly limited, and only students achieving first class marks are eligible to apply for entry onto these programmes.

The final year of this programme is spent performing a full time research project in an academic research group.

Please note: As a research-led University, we undertake a continuous review of our programmes to ensure quality enhancement and to manage our resources. As a result, this programme may be revised during a student's period of registration; however, any revision will be balanced against the requirement that the student should receive the educational service expected. Please read our Disclaimer to see why, when and how changes may be made to a student's programme.

Programmes and major changes to programmes are approved through the University's programme validation process which is described in the University's Quality handbook.

Educational Aims of the Programme

The aims of the programme are to: The aims of the programme are to:

- introduce you to the main branches of physics;
- help you to understand the principles of physics;
- provide you with a solid foundation for a successful career as a physicist, and opportunities to develop skills transferable to a wide range of other careers, and to prepare you for further studies in physics leading to a graduate degree such as a Ph.D.;
- offer you the opportunity to study some of the advanced concepts and techniques of contemporary quantum, light and matter physics;
- enable you to develop skills in problem solving and critical and quantitative analysis in physics;
- help you to develop a deeper insight into the theoretical framework underlying the principles of physics;
- show how mathematics has been used in unifying different physical phenomena and making precise predictions of physical quantities;
- enable you to develop advanced knowledge and practical skills in experimentation and measurement through undertaking laboratory work using a range of experimental techniques;
- provide you with the opportunity for a broader education by studying other subjects in addition to physics;
- provide you with a friendly and supportive environment and enrich your learning experience through interaction with staff engaged in internationally respected research;
- provide you with some of the basic computing and numeracy skills necessary for further study and employment, including word-processing, data analysis and internet-based research;
- enable you to develop computer programming skills and statistical techniques to support data analysis;
- help you develop key skills: personal organisation and teamwork, finding and using information, written and oral presentation;
- ensure that you become an increasingly independent learner and physicist as you progress through the programme.

Programme Learning Outcomes

Having successfully completed this programme you will be able to demonstrate knowledge and understanding of:

Knowledge and Understanding

On successful completion of this programme you will have knowledge and understanding of:

A1. Mathematics required for the description of the physical world;

A2. The breakdown of classical (19th century) physics and the revolution in physics at the beginning of the

20th century;

A3. Special relativity and its application in nuclear physics and high-energy particle scattering;

A4. The quantitative description of oscillating systems and wave-motion;

A5. Newtonian mechanics and its application to physical systems;

A6. Quantum theory, both from qualitative and quantitative (quantum mechanics) viewpoints;

A7. Application of quantum theory to describe the structure of atoms and nuclei;

A8. The laws of thermodynamics and their consequences for the behaviour of physical systems;

A9. Statistical mechanics as a basis for the microscopic description of thermodynamic systems;

A10. Electricity, magnetism and their unification through the laws of electromagnetism;

A11. The application of electromagnetism to the description of electromagnetic waves and optics;

A12. Advanced classical and quantum mechanics and electromagnetism;

A13. A wide range of physics experimental techniques;

A14. The classical and quantum interaction of light and matter, coherence, and applications;

A15. Physics, techniques and technologies of nanoscale structures and devices.

Teaching and Learning Methods

The topics listed above are taught mainly via lectures, directed reading and laboratory work as part of the core modules associated with this programme. Learning is reinforced via tutorials (in Part I), project work (particularly in the final year project), coursework and problems classes.

A12-A15 depend upon the choice of options and topic of the final year project.

Assessment Methods

The topics listed are assessed via a range of assessment methods. Assessment in the first, second and third years is a mixture of unseen written examinations, marked problem-based coursework, computer-based exercises and laboratory work. For assessment of the year-long project that forms the fourth year of the programme, students submit written reports, give a seminar, and undergo an oral examination.

Subject Specific Intellectual and Research Skills

On successful completion of this programme you will be able to:

B1. Apply knowledge of physics to the solution of theoretical and practical physical problems;

B2. Apply mathematical techniques in algebra, vectors, calculus and differential equations to the solution of physical problems;

B3. Program and use computers to assist in the solution of physical problems;

B4. Interpret data using statistical techniques and make decisions taking into account experimental errors;

B5. Search scientific literature for material relevant to dissertations and experimental studies;

B6. Assimilate new material independently;

B7. Undertake laboratory experiments independently and in collaboration.

Teaching and Learning Methods

Problem solving (items B1-B3) is at the heart of physics, and so it is emphasized throughout the learning and teaching process, in lectures, coursework and problem classes. Mathematics skills (item B2) are developed via core maths modules in Part I and the use the techniques learned there in physics core modules in Parts I-III. Computer skills (item B3) are developed via a core Part I computing module (PHYS1201), and part of the core laboratory module (PHYS2022) in Part II: they can also be developed via optional modules and are commonly developed further and exploited in the final year project. Data analysis, interpretation and associated decision making (item B4) are developed primarily via core laboratory modules, and usually developed further in the final year project.
Advanced research skills (B5-7) are principally developed during the final year project.

Assessment Methods

Problem solving and mathematical skills (items B1, B2) are assessed mostly via written examinations, but also via assessed coursework, especially in Parts I and II of the programme. The computing part of the core laboratory (B3) module in Part II is assessed via practical exercises. Data interpretation and related decision making (B4), are assessed via practical work, vivas and presentations in the Part I-II laboratory modules. Problem solving (B1) and advanced research skills (B5-B7) are key aspects of the final year project, which is assessed through written reports, seminars and oral examination.

Transferable and Generic Skills

On successful completion of this programme you will be able to:

C1. Communicate physical ideas in written form;

C2. Recognise the value of numeracy in the precise statement of ideas;

C3. Prepare and give an oral presentation using visual aids;

C4. Prepare a scientific report using appropriate computer tools for document preparation, data analysis and graphical display;

C5. Use information from a variety of sources including scientific journals, books and the internet;

C6. Manage a project with due attention to time and resource management;

C7. Work successfully as a team member;

Teaching and Learning Methods

Skills C1 and C2 are embedded throughout the curriculum, and taught through guided self-study, individual help and regular feedback through the Physics Skills / Physics from Evidence laboratory modules and throughout coursework and examinations. Skill C1 is further developed in the final year

project, through supervisor guidance and feedback on the mid-year report. Skill C3 is covered the Part II Physics from Evidence laboratory module, during which students give assessed presentations on their laboratory work at a mock scientific conference; and through individual supervisor help with the preparation of the seminar that forms part of the final year project. Skill C4 is covered throughout laboratory and project work, with guidance and exercises at the start of the Part I Physics Skills. Skills C5 and C6 are addressed through individual guidance by the supervisor during the final year project. Skill C7 is developed during all lab modules, which typically are done in pairs, and usually during the final year project, which is carried out within a research group.

Assessment Methods

Skill C1 is assessed with written reports on experimental work in laboratory modules, via the written report required for the final year project and through coursework and written examinations. Skill C2 is assessed in a variety of ways throughout the programme – it is an ingredient in everything from formal exams, to oral examinations, to written reports and presentations. Skill C3 is assessed via a presentation students give during a mock scientific conference which is part of the Part II Physics from Evidence laboratory module, and through the seminar delivered at the conclusion of the final year project. Skill C4 is assessed in the marking of written coursework and laboratory and project reports. Skill C5 is assessed as a component of the final year project reports, seminar and oral examination. Skills C6 and C7 are assessed implicitly via the assessors' marks on the final year project performance, and in marking collaborative laboratory work throughout the programme.

Subject Specific Practical Skills

On successful completion of this programme you will be able to:

D1. Use standard laboratory and observatory apparatus for physical measurements;

D2. Design and set up advanced experiments using apparatus similar to that found in research laboratories;

D3. Carry out a critical analysis of experimental data;

D4. Use computers for the acquisition, storage, and analysis of data, and problem solving

Assessment Methods

Skills D1-D4 are developed and assessed via the core Physics Skills computing and laboratory modules in Parts I-II, including the explicit computing component of the Part II Physics from Evidence module, and the final year research project.
Laboratory skills are assessed from laboratory notebooks, by the writing of lab papers and reports, and from conference presentations.

Programme Structure

The programme structure table is below:

Information about pre and co-requisites is included in individual module profiles.

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 in some instances modules have limited spaces available.

Part I

The following structure assumes entry via the MPhys programme, having taken the appropriate optional modules in Parts I and II.

It should be noted that it may not be possible to run some optional modules if the number of students registered on the module is very small. It should also be noted that optional module choice can be restricted by the University Timetable, which varies from year to year: some optional modules may clash with other optional or compulsory modules. Please be aware that many modules are shared between different cohorts; the class size depends on cohort size, which varies from year to year.

Programme details

This structure assumes entry via the MPhys programme, and optional modules in Parts I and II are the same as those available to MPhys students. Entry via other programmes, and with other optional modules, is possible.

The information in this programme specification is accurate at the time of writing, but may change in minor ways from year to year due to staff availability or other factors. Some of these modules are subject to pre- requisites and exclusions that, for brevity, are not given here; this information is available in the module specifications on the Physics & Astronomy Undergraduate Teaching website.

The module requirements for each programme are shown for each Part below; modules are either core (must be taken and passed), compulsory (must be taken) or optional (may be taken).

Part I Core

You will select one optional module and you must take the following core modules.

Code	Module Title	ECTS	Type
PHYS1022	Electricity and Magnetism	5	Core
PHYS1013	Energy and Matter	5	Core
MATH1006	Mathematical Methods for Physical Scientists 1a	7.5	Core
MATH1007	Mathematical Methods For Physical Scientists 1b	7.5	Core

PHYS1015	Motion and Relativity	5	Core
PHYS1201	Physics Skills - Programming and Data Analysis	7.5	Core
PHYS1017	Physics Skills 1	5	Core
PHYS1019	Physics Skills 2	5	Core
PHYS1011	Waves, Light and Quanta	5	Core

Part I Optional

You will be able to select 7.5 ECTS/15 CATS of optional modules in semester 1. These can include broadening options (LANGXXXX, UOSMXXXX, etc.) that may be chosen from the list of modules provided in the programme catalogue (online option choice system).

Recommended modules:
Semester 1: PHYS1004, PHYS1203 or MATH1052.

Code	Module Title	ECTS	Type
PHYS1004	Introduction to Photonics	7.5	Optional
PHYS1203	Linear Algebra for Physics	7.5	Optional

Part II

Part II Core

Code	Module Title	ECTS	Type
PHYS2006	Classical Mechanics	7.5	Core
PHYS2001	Electromagnetism	7.5	Core
PHYS2022	Physics from Evidence I	7.5	Core
PHYS2003	Quantum Physics	7.5	Core
PHYS2024	Statistical Mechanics	7.5	Core

PHYS2023	Wave Physics	7.5	Core

Part II Optional

You will be able to select 7.5 ECTS/15 CATS of optional modules per semester. These can include broadening options (LANGXXXX, UOSMXXXX, etc.) that may be chosen from the list of modules provided in the programme catalogue (online option choice system).

Recommended modules:
Semester 1: MATH2015
Semester 2: PHYS2009

Code	Module Title	ECTS	Type
PHYS2031	Introduction to the Nanoworld	7.5	Optional
MATH2015	Mathematical Methods for Scientists	7.5	Optional
PHYS2009	Practical Photonics	7.5	Optional

Part III

Part III Core

Code	Module Title	ECTS	Type
PHYS3008	Atomic Physics	7.5	Core
PHYS3004	Crystalline Solids	7.5	Core
PHYS6009	Dissertation	7.5	Core
PHYS3002	Nuclei and Particles	7.5	Core
PHYS3007	Theories of Matter, Space and Time	7.5	Core

Part III Optional

You will be able to select 7.5 ECTS/15 CATS of optional modules in semester 1 and 15 ECTS/30 CATS in semester 2. These can include broadening options (LANGXXXX, UOSMXXXX, etc.) that may be chosen from the list of modules provided in the programme catalogue (online option choice system).

The following modules are strongly recommended:

Semester 1: (PHYS3003, PHYS6012, PHYS6003 or PHYS6024)
Semester 2: (PHYS6017, PHYS3009, PHYS6008 or PHYS6014)

Code	Module Title	ECTS	Type
PHYS6003	Advanced Quantum Physics	7.5	Optional
PHYS3009	Applied Nuclear Physics	7.5	Optional
PHYS6012	Coherent Light, Coherent Matter	7.5	Optional
PHYS6017	Computer Techniques in Physics	7.5	Optional
PHYS6024	Lasers	7.5	Optional
PHYS3003	Light and Matter	7.5	Optional
PHYS6014	Nanoscience: technology and advanced materials	7.5	Optional
PHYS6071	Physics of the Early Universe	7.5	Optional

Part IV

Part IV Core

Code	Module Title	ECTS	Type
PHYS6018	Research and Thesis on Experimental Physics	60	Core

Progression Requirements

The programme follows the University's regulations for ***Progression, Determination and Classification of Results : Undergraduate and Integrated Masters Programmes*** and ***Progression, Determination and Classification of Results: Postgraduate Master's Programmes*** Any exemptions or variations to the University regulations, approved by AQSC are located in ***section VI of the University Calendar***.

Support for student learning

There are facilities and services to support your learning some of which are accessible to students across the University and some of which will be geared more particularly to students in your particular Faculty or discipline area.

The University provides:

- library resources, including e-books, on-line journals and databases, which are comprehensive and up-to-date; together with assistance from Library staff to enable you to make the best use of these resources

- high speed access to online electronic learning resources on the Internet from dedicated PC Workstations onsite and from your own devices; laptops, smartphones and tablet PCs via the Eduroam wireless network. There is a wide range of application software available from the Student Public Workstations.
- computer accounts which will connect you to a number of learning technologies for example, the Blackboard virtual learning environment (which facilitates online learning and access to specific learning resources)
- standard ICT tools such as Email, secure filestore and calendars.
- access to key information through the MySouthampton Student Mobile Portal which delivers timetables, Module information, Locations, Tutor details, Library account, bus timetables etc. while you are on the move.
- IT support through a comprehensive website, telephone and online ticketed support and a dedicated helpdesk in the Hartley Library.
- Enabling Services offering support services and resources via a triage model to access crisis management, mental health support and counselling. Support includes daily Drop In at Highfield campus at 13.00 – 15.00 (Monday, Wednesday and Friday out of term-time) or via on-line chat on weekdays from 14.00 – 16.00. Arrangements can also be made for meetings via Skype.
- assessment and support (including specialist IT support) facilities if you have a disability, long term health problem or Specific Learning Difficulty (e.g. dyslexia).
- the Student Services Centre (SSC) to assist you with a range of general enquiries including financial matters, accommodation, exams, graduation, student visas, ID cards
- Career and Employability services, advising on job search, applications, interviews, paid work, volunteering and internship opportunities and getting the most out of your extra-curricular activities alongside your degree programme when writing your CV
- Other support that includes health services (GPs), chaplaincy (for all faiths) and 'out of hours' support for students in Halls and in the local community, (18.00-08.00)
- A Centre for Language Study, providing assistance in the development of English language and study skills for non-native speakers.

The Students' Union provides
- an academic student representation system, consisting of Course Representatives, Academic Presidents, Faculty Officers and the Vice-President Education; SUSU provides training and support for all these representatives, whose role is to represent students' views to the University.
- opportunities for extracurricular activities and volunteering
- an Advice Centre offering free and confidential advice including support if you need to make an academic appeal
- Support for student peer-to-peer groups, such as Nightline.

Associated with your programme you will be able to access:

· All students have a personal tutor, with whom they meet regularly, particularly during the first year where small group tutorials are used to discuss the core physics courses and associated coursework/problem sheets. Tutors offer help on both academic matters, such as choice of option courses, and on pastoral matters.
· The Year Directors of Studies, the Director of Programmes, as well as the Senior Tutor are available to give help and advice as required.
· One of the primary functions of the Faculty Office is student support and guidance. The Faculty Office is able to provide information on wide range of topics, including programme regulations, special consideration procedures, appeals, and much more.
· The student physics society Physoc organizes a “parenting” scheme in which all new arrivals are looked after by senior physics students. Physoc also runs an academic mentoring scheme that aims to provide academic tutoring, help and advice for students by students.
· In the first and second year, each core module has an associated compulsory problems class where demonstrator provide individual help on the course material and/or coursework;
· Final year projects are supervised by a member of academic staff who is likely to be an internationally respected expert.
· Most modules provide printed lecture notes that are either distributed or are available online.
· Key transferable skills are embedded throughout our courses, particularly those which contain coursework or laboratory work.
· Provision is made for any student who specifically wishes to consult a female member of staff.
· We are proud of the friendly atmosphere in Physics & Astronomy. Members of staff are happy to be approached for help. The Faculty Office also provides support for students throughout their programmes.

Methods for evaluating the quality of teaching and learning

You will have the opportunity to have your say on the quality of the programme in the following ways:

- Completing student evaluation questionnaires for each module of the programme.

- Acting as a student representative on various committees, e.g. Staff/Student Liaison Committees, School Programmes Committee OR providing comments to your student representative to feedback on your behalf.
- Serving as a student representative on Faculty Scrutiny Groups for programme validation.
- Taking part in programme validation meetings by joining a panel of students to meet with the Faculty Scrutiny Group.

Further details on the University's quality assurance processes are given in the *Quality Handbook.*

Career Opportunities

We believe in helping our students gain the necessary experience for a future career, along with the skills to identify opportunities and make the most of them. At Southampton, you will have the opportunity to broaden your options by meeting employers, getting involved in volunteering activities, work placements and much more.

We work hard to help our students enter exciting careers. Our Academic Careers Team, supported by our student society (PHYSOC), put on over 40 hours a year of careers advice ranging from helping you write your CV, to advice on how to set up a small business, to mock interviews supported by real companies. We work with our students to find them placements and internships, which will help them to gain valuable work experience, preparing them for employment when they graduate. In 2012, 86% of our students began a career within six months of graduating.

We offer our top-performing students the chance to join one of our flagship programmes, such as this, which allow them for their final year to undertake research projects within leading research groups, in Southampton or at universities and research centres overseas, or to spend a semester working on physics-related topics in a company.

We are part of the South East Physics Network (SEPNet,) with which we work to organise eight-week paid internships for our students during the summer vacation. In previous years, students have been placed with a wide range of organisations, including The National Physical Laboratory, BMW, The Met Office, SELEX Galileo, QinetiQ, the Culham Centre for Fusion Energy. As well as offering employment opportunities, these companies offer advice to our students about how to become more competitive in the work place.

SEPNet has a dedicated Careers Adviser who our students can liaise with. We work with SEPNet to offer our students the chance to attend ‘meet the employer’ days as well as careers talks with speakers from industry.

External Examiner(s) for the programme

Name: Professor Haley Gomez - University of Cardiff

Name: Professor Simon Cornish - Durham University

Students must not contact External Examiner(s) directly, and external examiners have been advised to refer any such communications back to the University. Students should raise any general queries about the assessment and examination process for the programme with their Course Representative, for consideration through Staff: Student Liaison Committee in the first instance, and Student representatives on Staff: Student Liaison Committees will have the opportunity to consider external examiners' reports as part of the University's quality assurance process.

External examiners do not have a direct role in determining results for individual students, and students wishing to discuss their own performance in assessment should contact their Personal Academic Tutor in the first

instance.

Please note: This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if they take full advantage of the learning opportunities that are provided. More detailed information can be found in the programme handbook.

Appendix 1:

Students are responsible for meeting the cost of essential textbooks, and of producing such essays, assignments, laboratory reports and dissertations as are required to fulfil the academic requirements for each programme of study. In addition to this, students registered for this programme also have to pay for:

Additional Costs

Type	Details
Approved Calculators	Candidates may use calculators in the examination room only as specified by the University and as permitted by the rubric of individual examination papers. The University approved models are Casio FX-570 and Casio FX-85GT Plus. These may be purchased from any source and no longer need to carry the University logo.
Printing and Photocopying Costs	In the majority of cases, coursework such as essays; projects; dissertations is likely to be submitted on line. However, there are some items where it is not possible to submit on line and students will be asked to provide a printed copy.
Stationery	You will be expected to provide your own day-to-day stationary items, e.g. pens, pencils, notebooks, etc). Any specialist stationery items will be specified under the Additional Costs tab of the relevant module profile.
Textbooks	Where a module specifies core texts these should generally be available on the reserve list in the library. However due to demand, students may prefer to buy their own copies. These can be purchased from any source. Some modules suggest reading texts as optional background reading. The library may hold copies of such texts, or alternatively you may wish to purchase your own copies. Although not essential reading, you may benefit from the additional reading materials for the module.

In some cases you'll be able to choose modules (which may have different costs associated with that module) which will change the overall cost of a programme to you. Details of such costs will be listed in the Module Profile. Please also ensure you read the section on additional costs in the University's Fees, Charges and Expenses Regulations in the University Calendar available at www.calendar.soton.ac.uk.