



University of Central Lancashire

## Course Handbook

### **B.Sc. (Hons) Applied Science (Foundation Entry)**

Leading to awards in:

BSc (Hons) Archaeology, BSc (Hons) Biology, BSc (Hons) Chemistry,  
MChem (Hons) Chemistry, BSc (Hons) Environmental Science,  
BSc (Hons) Forensic Science  
MSci (Hons) Forensic Science & Molecular Biology,  
MSci (Hons) Forensic Science & Chemical Analysis, BSc (Hons) Geography,  
BSc (Hons) Neuroscience, BSc (Hons) Policing (and similar),  
BSc (Hons) Psychology (and similar)  
BSc (Hons) Biomedical Science, BSc (Hons) Physiology & Pharmacology, BSc (Hons)  
Pharmacology  
**2019-2020**

**Course Leader: Tina Gornall**  
**School of Forensic & Applied Sciences**



Please read this Handbook in conjunction with the University's Student Handbook.

All course materials, including lecture notes and other additional materials related to your course and provided to you, whether electronically or in hard copy, as part of your study, are the property of (or licensed to) UCLan and MUST not be distributed, sold, published, made available to others or copied other than for your personal study use unless you have gained written permission to do so from the Dean of School. This applies to the materials in their entirety and to any part of the materials.

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## 1. Welcome to the course

Welcome to the B.Sc. (Hons) Applied Science (Foundation Entry) Degree Programme. The course team wish you every success and is committed to making your time of study a happy and rewarding experience.

The course is taught by the School of Forensic and Applied Sciences at the University of Central Lancashire, but students can progress onto a range of other courses provided by a number of schools throughout the university.

The primary purpose of this handbook is to provide sufficient basic information to allow you to safely negotiate the rules and regulations governing the B.Sc. (Hons) Applied Science (Foundation Entry) Degree Programme.

The course structure and outlines of the modules are provided in brief and you will be given more information on these at a later date. Progression is also covered in the handbook but will be dealt with in more detail into your foundation year.

We have tried to draw together a range of important information, in an attempt to:-

- provide an outline of the course, including its aims, syllabus and assessment pattern
- explain student support and course monitoring arrangements

Additional information, specific to individual modules will be provided by module tutors.

### 1.1 Rationale, aims and learning outcomes of the course

All university courses have overall aims and learning outcomes which describe what you will achieve on your course of study.

It is important that both you and your teaching team are clear about what you are striving to achieve over the next two years of your studies, and so we have listed our aims here.

The aims of the Foundation Entry Degree in Applied Science are:

- To provide students with an interesting and stimulating grounding in science and enable students to possess the necessary skills to support study at university.
- To provide a foundation in the essential knowledge and understanding of theoretical and practical science skills to facilitate study at degree level at university.
- To support and encourage students to appropriately apply a range of basic scientific concepts and techniques and to build the necessary skill set to enable students to become university learners.
- To develop in students a range of skills to support information gathering at degree level and the ability to present information in an appropriate format.
- To encourage students to develop systematic and critical thinking skills necessary for university level study.
- To build self-confidence through self-assessment and reflective practices and allow students to develop and build on their employability skills.
- To give students the confidence and competence to apply a range of skills to subject related topics that will underpin their development towards university level study.

The course aims to give you the skills and knowledge to progress onto one of a range of science courses at the University.

## **What are the Learning Outcomes of the Course?**

At the end of your Foundation year it is intended that you will have the knowledge and understanding to:

- Describe and apply basic theoretical and practical generic science.
- Apply relevant mathematical techniques.
- Explain specific scientific topics needed for progression.

At the end of your studies it is intended that you will have the following subject specific skills and be able to:

- Work safely and competently in the laboratory.
- Analyse practical results and given data.
- Prepare scientific reports.
- Work as part of a team.

At the end of your studies it is intended that you will have the following thinking skills and be able to:

- Select and collate information from a range of sources.
- Describe the differences between qualitative and quantitative data and be able to select the appropriate methodology.
- Formulate and test selected scientific concepts and hypotheses, interpretation and application of concepts.
- Plan, conduct research, carry out independent analysis and present the results both orally and in an appropriate written format.

At the end of your studies it is intended that you will have developed the following transferable skills relevant to employability and personal development: -

- Research and reflect on a range of sources of information from books, scientific reports and journals and the internet.
- Write reports in a concise, coherent format.
- Demonstrate personal organisation and time management skills.
- Take lecture notes, plan and write essays and reports.
- Reflect and review as part of on-going professional development.
- Undertake effective examination revision and data analysis and interpretation.
- Communicate and present information effectively, using relevant IT skills.
- Work to high standards independently and as part of a team.

### **1.2 Course Team**

#### **School of Forensic and Applied Sciences**

The course team consists of the academic and technical staff who contribute to your course. The academic staff take responsibility for the delivery of the content of your modules, but they also have other many roles including research, overseas development, marketing and publicity, etc.

Your course is also supported by a number of technicians who induct you into the laboratories and the use of technical resources and/or assist individual students with the production of work. They are a team of well-qualified individuals who assist students across a range of courses.

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### 1.3 Expertise of staff

The academic staff that will be teaching you are all highly qualified and specialists in the areas that they teach. All staff are engaged in research and/or scholarly activity which helps enrich your experiences with cutting-edge knowledge.

### 1.4 Academic Advisor

You will be assigned an Academic Advisor who will provide additional academic support during the year. They will be the first point of call for many of the questions that you might have during

the year. Your Academic Advisor will be able to help you with personal development, including developing skills in self-awareness, reflection and action planning.



### 1.5 Administration details

Campus Admin Services provides academic administration support for students and staff and are located in the following hubs which open from 8.45am until 5.15pm Monday to Thursday and until 4.00pm on Fridays. The Hub can provide general assistance and advice regarding specific processes such as extenuating circumstances, extensions and appeals:

#### Foster Building

Forensic and Applied Sciences  
Pharmacy and Biomedical Sciences  
Psychology  
Physical Sciences and Computing  
telephone: 01772 891990/891991  
email: [FosterHub@uclan.ac.uk](mailto:FosterHub@uclan.ac.uk)

### 1.6 Communication

The University expects you to use your UCLan email address and check regularly for messages from staff. If you send us email messages from other addresses they risk being filtered out as potential spam and discarded unread.

**We will only use your designated UCLan email address.** Learn how to use remote access to your email address so that you can check your UCLan emails from your home, or any other computer off-campus. Teaching material and assessment grades will be posted on Blackboard (you will be shown during Welcome Week how to access this).

The School of Forensic and Applied Sciences try to respond to e-mails within one working day. We may also correspond with you by post so it is essential you ensure your address is always up-to-date.

### 1.7 External Examiner

The University has appointed an External Examiner to your course who helps to ensure that the standards of your course are comparable to those provided at other Higher Education institutions in the UK. The name of this person, their position and home institution can be found below. If you wish to make contact with your External Examiner, you should do this through your Course Leader and not directly. External Examiner reports will be made available to you electronically. The School will also send a sample of student coursework to the External Examiner(s) for external moderation purposes, once it has been marked and internally moderated by the course tutors. The sample will include work awarded the highest and lowest marks and awarded marks in the middle range.

The current External Examiner for BSc (Hons) Applied Science (Foundation Entry) is Dr Rosalind Wolstenholme, Senior Lecturer in Analytical Science, Sheffield Hallam University.



## 2. Structure of the course

### 2.1 Overall structure

Like most degree courses, this course is modular. This means that it is split up into particular areas of study, which are studied and assessed separately. To complete your Foundation Entry in Applied Science year and allow progression on to a science BSc. (Hons) degree programme, you must complete and pass four 30-credit modules.

Each module is a self-contained block of learning with defined aims, learning outcomes and assessment. The modules are compulsory and run year-long. To ensure you have a full course of modules, you must enrol on the following modules during your foundation entry year:

### 2.2 Modules available

A standard module is worth 20 credits. It equates to the learning activity expected from one sixth of a full-time undergraduate year. Modules may be developed as half or double modules with credit allocated up to a maximum of 120 credits per module.

### Applied Science Foundation Entry Year

The course generally consists of the following four modules, each of 30-credits:-

FZC015	Biology	(1.5)	Year Long
FZC016	Chemistry	(1.5)	Year Long
FZC017	Mathematics & Physics	(1.5)	Year Long
FZC013	Skills for Science	(1.5)	Year Long

#### **Biology [FZC015]**

This module is designed to support students in developing fundamental biological knowledge that will be needed to undertake university level studies in related areas. It is designed to provide a suitable level of knowledge and understanding of key concepts in biology and biochemistry that will provide a good foundation to enable students to progress to biologically related studies.

#### **Chemistry [FZC016]**

This module is designed to support students in developing fundamental chemical knowledge that will be needed to undertake university level studies in related areas. It is designed to provide a suitable level of knowledge and understanding of key chemical concepts that will provide a good foundation to enable students to progress to chemically related studies.

#### **Mathematics & Physics [FZC017]**

This module is designed to support students in developing fundamental knowledge and skills in the areas of mathematics and physics needed to undertake university level studies in related areas. It is designed to provide a suitable level of knowledge and understanding of key concepts in physics that will provide a good foundation to enable students to progress to relevant university courses, whilst also building the confidence and competence to apply a range of mathematical skills to appropriate areas of study.

## Skills for Science [FZC013]

This module is designed to help students develop the study skills that will be necessary to support undertaking degree programmes at university level. It is designed to not only develop the appropriate skills to enable students to successfully complete their studies but also to build confidence and competence to apply a range of skills to appropriate areas of study and to promote and build on their employability skills.

The module will concentrate on basic study skills and will develop and support key skills in areas such as literacy, ITC, information gathering and presentation of work to ensure students are ready to undertake university level studies. The module will also encourage students to develop and build on their personal skills in areas such as time management, organisation and reflective practice; to help them develop into independent learners and enhance their employability skills.



### 2.3 Course requirements

None specific to this programme

### 2.4 Progression Information

Discussions about your progression normally take place in February each year. It is an opportunity for you to make plans for your study over the next academic year. The course team will tell you about the various programmes and modules available and you will be able to decide on the most appropriate course of study for you.

Entry to Year-1 of most BSc programmes in the University will require you to obtain an Average Percentage Mark of 40%; entry to Year-1 of BSc (Hons) Biomedical Science, BSc (Hons) Physiology & Pharmacology will require you to obtain an Average Percentage Mark of 60%.

## 2.5 Study Time

### 2.5.1 Weekly timetable

The [online timetable](#) is your personal timetable which will include all your classes you need to attend, please check your timetable regularly as changes may sometimes occur.

### 2.5.2 Expected hours of study

How much work do you actually have to do? A lot depends on you. As a rough guide the normal amount of work involved in achieving a successful outcome to your studies is to study for 10 hours per each credit you need to take – hence for a standard 20-credit module this equates to 200 notional learning hours, including attendance at UCLan and time spent in private study.

On average, then, you should be planning to do between 36 and 40 hours per week. Any lesser commitment than this could affect your chances of progressing onto your chosen course. You should bear this in mind if you are going to undertake part-time employment. Your first commitment must be to the course: you are a full-time student, it means just that.





### 2.5.3 Attendance Requirements

You are required to attend all timetabled learning activities for each module. Notification of illness or exceptional requests for leave of absence must be made to:

Foster Hub 01772 891990 or 01772 891991

or e-mail [FosterHub@uclan.ac.uk](mailto:FosterHub@uclan.ac.uk)

Unauthorised absence is not acceptable and may attract academic penalties and/or other penalties. Authority will NOT be given for holidays during term times.

For International Students under the Visas and Immigration (UKVI) Points Based System (PBS) - you MUST attend your course of study regularly; under PBS, UCLan is obliged to tell UKVI if you withdraw from a course, defer or suspend your studies, or if you fail to attend the course regularly.

If you have not gained the required authorisation for leave of absence, do not respond to communications and if you are absent for 4 weeks or more you will be deemed to have withdrawn from the course. If this is the case then the date of withdrawal will be recorded as the last date of attendance.

During each taught session you are asked to register your attendance onto the SEAM system. You must remember that the University has a responsibility to keep information up-to-date and that you must only enter your own details on the system. To enter any other names would result in inaccurate records and be dishonest. Any student who is found to make false entries can be disciplined under the student guide to regulations.

## 3. Approaches to teaching and learning

### 3.1 Learning and teaching methods

*The Lecture* is the most formal teaching method and serves primarily to define the syllabus. It should not be regarded as providing all you need to know, but rather as the 'skeleton' of knowledge. The responsibility for providing the 'flesh' rests largely with you and this is discharged through private study.

*Laboratory classes* are a very important element of the course. They are primarily intended to train you in the principles and methods of empirical enquiry, and in the conventions of reporting investigations. You will receive comprehensive written guidelines in relation to the latter.

The major purpose of the *Seminar* is to encourage students to publicly discuss topics and issues, and through this develop the skills of criticism, argumentation and communication. As you will discover, several different seminar formats are employed.

*Tutorials* support the lectures and allow students to cover areas to a more in-depth level or gain support in learning in a less formal atmosphere than a lecture.

*Workshops* will provide opportunities for interactive or 'hands on' learning in a less formal setting than the lecture.

As with all higher level education *you* are responsible for your own learning; the lectures are merely the starting point and you will have to undertake a substantial amount of study in order to succeed.

The aim of the School of Forensic and Applied Sciences is to promote deep and active learning and for the students to achieve an appropriate balance between (a) the accumulation of subject specific knowledge (b) the understanding of subject-specific concepts (c) the application of these, and (d) the development of general investigative and presentational skills.

### 3.2 Study skills

All degree courses incorporate study skills, either through activities designed to assist you to study at levels 4, 5 and 6, or through processes that lead to qualitative changes in your learning style – basically, by allowing you to become a more independent learner. This is our goal and we hope that you will quickly adopt a pro-active approach to expanding your learning. We encourage this through ‘open’ assignment briefs, ‘negotiated contracts of work’ and ‘live projects’. Don’t worry if these phrases don’t mean much to you now, it will make sense in time!

To support you, you may wish to consider how the following may help you at different stages of your learning:

**Informal Mentoring** - We recognise that a key aspect of your learning will be achieved through the contribution and support of others, both formally and informally. Where this support comes from other students, as opposed to teaching staff, we often refer to this as ‘informal mentoring’. This is achieved by sharing skills and techniques with students from your own year group and other year groups.

**Self-Evaluation; Peer & Group Evaluation** - Throughout your period of study, most courses will create opportunities for ‘peer’ and ‘group’ evaluation. This reflects your growing ability to criticise positively and to use evaluative techniques to effect positive outcomes in your creative work and the work of your peers. Thus, effective application of evaluative tools will be reflected in the grades awarded for presentations or ‘support’ material. However, to offer useful criticism to others relies on a genuine understanding of the processes that occur in the development of creative work; the ability to ‘self-evaluate’ is essential to this knowledge.

Your final degree classification is decided by the grades that you receive for the finished work that you submit for assessment. There are other areas of learning in your academic progress that are not so easily charted by end-of-semester or end of course grades. Consequently, throughout your period of study you should be asking yourself questions such as: What kind of approaches to study achieves good results? What approach to study do I have? How do I alter my approach to study to achieve more?

Educational research identifies two basic types of learning, and uncovers differences in students’ approaches to the learning process. They are described as ‘deep’ and ‘superficial’.

Students who have a deep approach to learning:

- Intend to understand material for themselves and interact vigorously and critically with the content
- Relate ideas to previous knowledge and experience
- Use organising principles to integrate ideas
- Relate evidence to conclusions
- Examine and challenge the logic of the argument.

Students who have a superficial approach to learning:

- Intend simply to reproduce parts of the content and accept ideas and information passively
- Concentrate only on assessment requirements
- Do not reflect on purpose or strategy
- Memorise facts and procedures routinely
- Fail to distinguish guiding principles or patterns.

If you think you are too regularly falling into the latter category, we recommend that you make an appointment to speak to your Academic Advisor. To change your learning pattern, you will find it much easier if you have the support of a tutor.

**Self-Evaluation documents and Viva Voces** - In some modules you will be studying, we may ask you to submit a written self-evaluation document or participate in a Viva Voce (a spoken evaluation) for assessment. You may worry about this, perhaps thinking that admitting to your faults will cause you to get a poor grade or even fail; equally you may be embarrassed about admitting that you did something very well!

Self-evaluation is not there to catch you out, but has two main functions:

1. to allow you consider your achievements and to establish a good working methodology for later assignments;
2. to allow your tutors to understand how and why you produced the work we have assessed and to guide you to replicate success or to avoid mistakes.

We want to ensure that you make the most of your achievements and place these within an effective critical framework or context that will help you achieve future successes. We will assist you, through seminars and tutorials, to prepare for self-evaluation, but, as a simple guide, you should consider the following:

As part of the process of considering your achievement avoid spending too long listing 'what' you did and 'how' you did things; concentrate at least as much on 'why' as well as 'what' and 'how'. In other words, always support what you did by understanding the reasons for your decision.

*The 'what I did was...' should always be linked to 'because...' or 'I achieved...X...through...Y...'* For instance, when you review your original ideas you should also consider why they were relevant to the assignment. When you evaluate how you began to turn ideas into practical output, you should also evaluate if the methodology you applied was appropriate. When producing finished work, you should also review the process and consider why your initial ideas changed and why the product was better (or worse) because of these changes.

In group projects it is important to evaluate your own contribution within the context of the creative process and the finished work. The self-evaluation process gives you the opportunity to consider subject-specific and key skill development, including;

- creative input (ideas and aesthetics);
- practical input (subject-specific and transferable skills);
- leadership, team contributions and time-management (project development).

All of the courses within the school have a study skills module to assist with the development of your academic and employability skills. There are a variety of other services that support schools and these include:

[WISER](#)

[LIS](#)

[Ask](#)



### 3.3 Learning resources

#### 3.3.1 Learning Information Services (LIS)

Extensive [resources](#) are available to support your studies provided by the university LIS – Library and IT staff. Take advantage of the free training sessions designed to enable you to gain all the skills you need for your research and study.

### 3.3.2 Electronic Resources

Use the library catalogue to search for material by **author**, **title**, or **subject**. The catalogue will tell you if items are in the Library's collections, and if so, on which floor, at which number, whether they are 'Oversize' (OS) and therefore shelved separately, and whether they are currently on loan. If they are on loan, you can place a reservation, using your library card. You can use the catalogue to look for publications devoted to particular **subject areas**, and to check whether the Library has particular **journals**.

To trace journal articles or other publications (including exhibition catalogues) *whether or not they can be found in the Library*, you can use bibliographies, including **indexes** and **bibliographic databases**. If you know a publication exists, and if you have details of it, the Library will usually be able to obtain a copy for you, if necessary by borrowing it from another library.

**Journals** (also called *magazines* or *periodicals*) are shelved separately at the back of the ground floor. The 700s are on the right hand side of the Library. Journals are not for loan.

**On-line resources** - The University provides access to the Internet from any network PC - in the library, these are on the 3rd floor. From the library home page there are links to external internet sites relevant to the subjects taught here.

**Library studio facilities** include: Drawing tables (2nd floor), Enlarger/visualiser (2nd floor), Photocopying, including a colour photocopier (Ground floor).

Course and module materials are not always provided in 'hard copy' format. However, wherever practicable, lecture notes and/or presentations, seminar materials, assignment briefs and materials and other relevant information and resources are made available in electronic form via Blackboard. This is the brand name for the on-line Virtual Learning Environment (VLE) that the University uses to support and enhance teaching and learning.

All students can access the Blackboard spaces for the course and modules that they are registered for. Once logged into your Blackboard area you can access material from the course and all of the modules you are studying without having to log in to each module separately.

You can expect that, on the Course page, you will be able to access:

1. Course Handbook
2. Student Guide to Assessment
3. Timetables
4. Minutes of SSLC Meetings
5. External Examiners Report

You can expect that, on each module space, you will be able to access:

1. Module Descriptor
2. Module Booklet
3. Assignment briefs (including a marking scheme), if not included in the module booklet
4. Generic feedback on coursework assignments
5. Handouts for tutorials and laboratory practicals
6. Lecture notes (no later than 48hrs **after** the date of the lecture).
7. A past exam paper (if there is an exam in the module)
8. Generic feedback on the examination paper.

### 3.4 Personal development planning

While you are at university, you will learn many things. You already expect to learn lots of facts and techniques that support your studies, but you will also learn other things of which you

might be unaware. You will learn how to study, how to work with other people, how to manage your time to meet deadlines, and so on. If you are to be an employable graduate it is vital that you can list in your CV the skills that employers value.

Employers are looking for skills such as:

- self-organisation
- team work
- good written communication
- good oral communication
- problem solving

To help you, we have introduced a system that aims to:

- help you to identify the skills you should be developing,
- help you to identify the ones you are weak in, and
- to take action to improve those skills.

This approach can broadly be described as Personal Development Planning, and can be defined as:

A structured and supported process undertaken by an individual to reflect upon their own learning, performance and/or achievement and to plan for their personal, educational and career development.

The University puts a high priority on your personal development, and so keeping a record of your achievements is encouraged and will help when you are applying for jobs. When you ask staff for a reference, they could use this information to help them provide more rounded detail.

Your future is important to us, so to make sure that you achieve your full potential whilst at university and beyond, your course has been designed with employability learning integrated into it at every level. This is not extra to your degree, but an important part of it which will help you to show future employers just how valuable your degree is. These “Employability Essentials” take you on a journey of development that will help you to write your own personal story of your time at university:

- To begin with, you will explore your identity, your likes and dislikes, the things that are important to you and what you want to get out of life.
- Later, you will investigate a range of options including jobs and work experience, postgraduate study and self-employment,
- You will then be ready to learn how to successfully tackle the recruitment process.

PDP starts at the beginning of the first year and will vary from course to course, but the aim on all courses is that on graduation you will be well prepared for industry, demonstrating your skills, knowledge and capabilities in a variety of settings.

As a student, it is important that you tie together the modules you are studying concurrently and to trace your progression throughout the levels of study. It is important that all students should reflect on their progress and identify successful changes to work or learning patterns that will assist you to become a ‘better’ student.

We aim to train you to take responsibility for your own learning and career development, to be able to evaluate your strengths and weaknesses and conduct a skills audit to develop a critical practice. This covers analysis of your key skills base (use of English, literacy and writing skills, numeracy, communication skills and use of IT) and you will be encouraged to evaluate your

strengths and weakness on a continual basis as you progress through different points during the course.



### 3.5 Preparing for your career

Your University experience is not only about achieving your chosen award, it is also about developing as a person and realising your potential. We want you to gain the skills and attitudes that will help you to achieve your goals and aspirations.

Your future is important to us, so to make sure that you achieve your full potential whilst at university and beyond, your course has been designed with employability learning integrated into it. This is not extra to your degree, but an important part of it which will help you to show future employers just how valuable your degree is. These “Employability Essentials” take you on a journey of development that will help you to write your own personal story of your time at university. To begin with, you will explore your identity, your likes and dislikes, the things that are important to you and what you want to get out of life. Later, you will investigate a range of options including jobs and work experience, postgraduate study and self-employment. You will then be ready to learn how to successfully tackle the recruitment process.

[Careers](#) offers a range of support for you including:-

- career and employability advice and guidance appointments
- support to find work placements, internships, voluntary opportunities, part-time employment and live projects
- workshops, seminars, modules, certificates and events to develop your skills.

A daily drop-in service is available from 09:00-17:00 for CV checks and initial careers information. For more information, come along and visit the team (in Foster building near the main entrance) or access our careers and employability resources via the Student Portal.

## 4. Student Support

Perhaps the most important thing that the School of Forensic and Applied Sciences will give you is support. We will guide you through your foundation year and instil in you the skills and knowledge required to progress to your chosen area of study.



### 4.1 Academic Advisors

You will be assigned an Academic Advisor who will provide additional academic support during the year. They will be the first point of call for many of the questions that you might have during your foundation year. Your Academic Advisor will be able to help you with personal development, including developing skills in self-awareness, reflection and action planning.

Your Academic Advisor is the first port-of-call should you encounter problems or need support. Every student is allocated an Academic Advisor from an area the same or similar to that of the study. As a minimum you will be met at the beginning of the course (normally within the first 4 weeks) and, thereafter, you will be offered formal opportunities to meet with them in each semester. If you have a problem at other times they are available for you to talk to; most staff have a weekly slot they allocate to academic advisor sessions, but if you have an urgent problem, please phone or e-mail your tutor to book an ‘emergency’ slot.

Your Academic Advisor will:

- offer academic advice throughout the year
- monitor your progress and attainment through the year
- advise you on your progress and answer questions in relation to your progression route
- refer you to other staff within the School who will be able to assist you in resolving any academic problems
- refer you to staff within the University support services, if appropriate
- advise on the best course of action if you have failed any aspect of your course, or feel that you are likely to do so.

You are expected to:

- make use of your Academic Advisor
- make sure you know where their office is and how to contact them
- watch out for emails, notices and memos asking you to make appointments or attend meetings with them.

Academic Advisors on the BSc (Hons) Applied Sciences (Foundation Entry) year are; Tina Gornall, Susan Jones, Karen Lupton, William Stockburn and Artur Witkowski.

You must meet with your Academic Advisor whether you are having any difficulties or not; please book a slot with them each semester. They are also available to help with any problems you may have at any stage during the year, and will be happy to provide you with the support and guidance you need to get over the immediate but temporary difficulties that most students face at some time in their academic careers. However, if you are unable to contact your academic advisor, and an urgent situation has arisen, or if you feel that you cannot discuss an issue with your academic advisor, then you are able to book an appointment with an Independent Academic Advisor within Student Services via the 'i'.

#### **4.2 Students with disabilities**

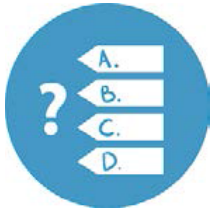
[The 'i'](#) is the central Student Information Centre and your first point of contact. You can obtain information on a wide range of topics including student administration such as Council Tax and letters to verify your status. The 'i' can also direct you to the right place to find information on Scholarships, Counselling, Student Finance, Mentoring, Studying Abroad, Disability Advice, Independent Academic Advice, International Advice, Multi Faith Centre, Pre School Centre, Medical Centre and general life in Preston/Burnley.

Student Engagement Assistants have recent experience of what it is like to be a student and can advise you of the support systems available. They work towards improving your student experience here at UCLan, more information about their role can be found on their web site.

#### **4.3 Students' Union One Stop Shop**

If you have a disability that may affect your studies, please either contact the Disability Advisory Service - [disability@uclan.ac.uk](mailto:disability@uclan.ac.uk) - or let one of the course team know as soon as possible. With your agreement, information will be passed on to the Disability Advisory Service. The University will make reasonable adjustments to accommodate your needs and to provide appropriate support for you to complete your study successfully. Where necessary, you will be asked for evidence to help identify appropriate adjustments.

## 5. Assessment



### 5.1 Assessment Strategy

The Course Team recognise the main purpose of assessment as:

- the diagnosis of strengths and weaknesses of individual students;
- encouragement to students to be involved in determining their own performance;
- evaluation as to whether or not the student has met the learning outcomes of the module and programme in order to progress to the next level or achieve an exit award.

Assessment is continuous and uses both formative and summative methods.

**Formative assessment** relates to the continuing and systematic appraisal of the degree of learning. This helps you by providing feedback on the appropriateness of your study skills in meeting the learning objectives. It also assists the academic staff by providing information as to the appropriateness of the learning environment in facilitating student learning. Formative assessment includes assessment strategies that encourage the student and tutor to build on the student's strengths and to plan remedial help to correct identified weaknesses. Formative assessment encourages the development of personal self-awareness and self-evaluation such that corrective change can be instigated by the individual.

The nature of formative assessment varies between modules. In some there are short tests or essays, while in others there is informal feedback via activities such as tutorials or discussion of experimental results during laboratory sessions.

It is important that we try to match assessment to the learning outcomes of each module. Sometimes we need to assess how well you have assimilated facts, sometimes we need to assess your understanding, and at other times your application of the facts. Often we need to test all of these learning outcomes at once. In addition, we need to assess skills, such as your ability to communicate your ideas. The assessment methods and what we are trying to assess by the particular method are shown below:

Examinations	Short answer questions are usually looking for how well you have learned factual information. Essay questions are looking for your understanding and critical analysis skills.
Presentations	Your presentational skills under pressure are being assessed here, as is the ability to think on your feet using the facts that you have learned.
Essays	Non-examination situation essays assess your understanding of the subject as well as your research, written communication and critical analysis skills.
Case studies	These assess the application of theory to practical situations. They also assess either your written or oral presentation skills when communicating your deliberations to the class or marker.
Dissertation	This assesses the application of the information that you have gained and assesses your skills in bringing a large body of work together in a concise coherent report.



You will find a detailed breakdown of the assessments in the individual module booklets. The way in which you present your work will be taken into account when arriving at the final grade for the assessment. To assist you in this regard, refer to the Student Guide to Assessment, produced by the School, that accompanies this handbook.

## **5.2 Notification of assignments and examination arrangements**

We will try to spread the assessment load. Nevertheless, it is important that you plan your work around the assessment timetable. For this reason assessment dates are detailed in the module booklets. Hand-in times and dates will also be included in the Assignment Brief that accompanies every assessment. Once examination dates have been set you will be notified by your Course Leader and these will also be available on your Blackboard Virtual Learning Environment.

In the workplace you will be faced with many deadlines. Assessment deadlines will help you to develop a personal ethos, which will enable you to cope with tight work schedules. We expect work to be handed in on time. **A deadline is set at a particular time on a particular day and work submitted after this time without an extension granted by Foster Hub will be penalised.**

**If you have problems that prevent you meeting a deadline for submission, it is imperative that you contact the relevant Module Leader and Foster Hub before the deadline expires.**

This regulation is not intended to be draconian. However, since in most cases work will be returned to students with specimen answers and feedback, it would delay the return of coursework to the rest of the group if this regulation were not adhered to. Rather than disadvantage the majority of students for the sake of the few, **this regulation will be strictly implemented.**

Assignments must be submitted no later than the date on your assignment brief. If you anticipate that you will have difficulty in meeting assessment deadlines or you have missed or are likely to miss in-semester tests you must report this at the earliest possible opportunity to Foster Hub.

**Authorisation of the late submission** of work requires written permission. Your School is authorised to give permission for **one extension period of between 1 and 10 working days** where appropriate evidence of good reason has been accepted and where submission within this timescale would be reasonable taking into account your circumstances ([Academic Regulations](#)).

Further information is available on the Student Portal at:

<https://www.uclan.ac.uk/students/support/extensions.php>

We aim to let you know if the extension has been granted within 1 working day of the receipt of the request. If you are unable to submit work within 10 working days after the submission date due to verifiable extenuating circumstances, you may submit a case for consideration in accordance with the University's Policies and Procedures on Extenuating Circumstances ([Academic Regulations](#) and [Assessment Handbook](#)).

"Extenuating Circumstances" is a phrase which refers to exceptional factors outside of your control which have adversely affected your performance within your course. These factors may prevent you from attending examinations or other timed assessments or caused you to miss assessment submission dates. Examples are illness, accidents or serious family problems.

Some students face significant events in their personal life that occur after their course has started, which have a greater impact on their studies than can be solved by the use of an extension. If this applies to you, the University is ready to support you both with regard to your course and your personal wellbeing through a process called Extenuating Circumstances (see Academic Regulations and Assessment Handbook).

Normally extenuating circumstances will relate to a change in your circumstances since you commenced your course, which have had a significant, adverse effect on your studies. Everyday occurrences such as colds or known conditions such as hay-fever will not qualify unless the effects are unusually severe and this is corroborated by a medical note. The University does not look sympathetically on absences or delays caused by holiday commitments or by work commitments in the case of full-time students. The normal work commitments of part-time students would not constitute an extenuating circumstance. A disability or learning difficulty does not constitute an extenuating circumstance (see [Academic Regulations](#) :G5).

Further information about the submission process is available on the Student Portal: [https://www.uclan.ac.uk/students/support/extenuating\\_circumstances.php](https://www.uclan.ac.uk/students/support/extenuating_circumstances.php)

You can apply for extenuating circumstances online via myUCLan. You must apply no later than 3 days after any examination or assessment submission date. Do not wait until you receive your assessment results to submit a claim. It is in your own interests to submit the claim as soon as possible.

You will be expected to re-submit claims for extenuating circumstances for each imminent coursework/exam deadline. ECs do not run for a whole semester, but only cover upcoming assessment(s).

In determining assessment recommendations, Assessment Boards will consider properly submitted claims from students who believe their performance has been adversely affected by extenuating circumstances. N.B. Assessment Boards are not permitted to alter individual assessment marks to take account of extenuating circumstances ([Academic Regulations](#): G9 and [Assessment Handbook](#)).

Remember that extensions of up to 10 working days can be granted for coursework by Foster Hub on the production of documented evidence.

### 5.3 Referencing

Work submitted for an assessment must be in your own words. It is important that you acknowledge the source of material used in your assessments.

Whenever you refer to, summarise or paraphrase information from another individual (e.g. a book or journal article) you must acknowledge the source of this information by correctly citing the author and publication. There are several different referencing formats, the most common being Harvard and Numeric. Individual modules may use different referencing formats relevant to the scientific discipline and tutors will advise you accordingly.

#### The Numeric System

The numeric system simply gives a running number to each citation as it is mentioned in the text, then lists the references numerically at the end. At every point in the text where the reference is made, a number is inserted, either in brackets or using 'superscript'.

e.g. *In a recent study (26) it was shown.....*

*In a recent study<sup>26</sup> it was shown....*

Each reference number points to a single reference only and if the same piece of work is referred to again later in the text it is given the same number as it was originally. The references are given in a list at the end of the text in numerical order. Instead of repeating complete references, *ibid.* and *op.cit.* can be used:

*ibid.* = the same as the one immediately preceding it

*op. cit.* = the same work by this author already cited

e.g.

1. Mullins, Laurie J. *Management and organisational behaviour*. London: Pitman, 1999, p.27
2. *ibid.*, p.105
3. Harrison, Rosemary. *Employee development*. London: Institute of Personnel and Development, 1992, p164
4. Watson, Tony J. *In search of management*. London: Routledge, 1994
5. Harrison, *op. cit.*, p.89

### **The Harvard System**

In the Harvard system, at every point in the text at which reference is made to a document, the author's surname and the year of publication are given. A direct quote is referenced by including the author, date and page number (NOT the title of the book or article) at the end of it.

Paraphrasing is referenced by putting the author and date (NOT title or page number) in brackets at the end of the sentence but before the full stop. However, if it's a very long sentence you might find that you feel it more appropriate to put the citation right after the thing you attribute to them rather than at the end of the sentence.

Sometimes you might attribute a concept to more than one publication in which case they all need to be included in date order (Gamble 1989; Mellars 1996).

If there are two authors of one paper it's usual to give both names; if more than two you can put the first author followed by the abbreviation *et al.*, which is short for "and the rest of them" (Stringer and Gamble 1993; Adcock *et al.* 2001). You must write out all the authors' names in the bibliography even if you use "*et al.*" in the text citation. If your list of citations includes two items published in the same year you should put them in alphabetical order and if two items are by the same person, you put their name once and dates of publications in date order separated by commas.

When the same author has published more than one cited document in the same year, distinguish between them by adding a lower-case letter after the year of publication (Handy 1989a).

The references are cited in a list at the end of the text and need to include, in this order: Author surname, initial, date, title, source (whether that be place and publisher [of a book] or the title, issue number etc. (of a journal)). The title of the book, or of the journal where an article appeared, are italicised. Second and subsequent authors have the initial before the surname. In addition to the citations in the text you must give a full reference to anything you have used at the end of the essay. There should not be any names in the citations in the text that do not appear in the reference list as full references.

You can put additional things in the bibliography – books you used for general background but which you didn't have need to cite in the text.

Adcock, G.J., E.S. Dennis, S. Easteal, G.A. Huttley, L.S. Jermiin, W.J. Peacock and A. Thorne 2001. Mitochondrial DNA sequences in ancient Australians: Implications for modern human origins. *Proceedings of the National Academy of Sciences* 98 (2): 537-542.

#### **5.4 Confidential material**

No specific information relevant to this programme.

#### **5.5 Cheating, plagiarism, collusion or re-presentation**

Please refer to the information included in section 6.6 of the University Student Handbook for full definitions. The University uses an online Assessment Tool called Turnitin. A pseudo-Turnitin assignment will be set up using the School space on Blackboard to allow students to check as many drafts as the system allows before their final submission to the 'official' Turnitin assignment. Students are required to self-submit their own assignment on Turnitin and will be given access to the Originality Reports arising from each submission. In operating Turnitin, Schools must take steps to ensure that the University's requirement for all summative assessment to be marked anonymously is not undermined and therefore Turnitin reports should either be anonymised or considered separately from marking. Turnitin may also be used to assist with plagiarism detection and collusion, where there is suspicion about individual piece(s) of work.

### **6. Classification of Awards**

The University publishes the principles underpinning the way in which awards and results are decided in [Academic Regulations](#). Decisions about the overall classification of awards are made by Assessment Boards through the application of the academic and relevant course regulations.



### **7. Student Feedback**

You can play an important part in the process of improving the quality of this course through the feedback you give.

In addition to the on-going discussion with the course team throughout the year, there are a range of mechanisms for you to feedback about your experience of teaching and learning. We aim to respond to your feedback and let you know of our plans for improvement.

The Students' Union can support you in voicing your opinion, provide on-going advice and support, and encourage your involvement in all feedback opportunities. They will be asking that you complete the National Student Survey (during semester 2 for students in their final year of study) or the UCLan Student Survey (all other students).

The Students' Union and University work closely together to ensure that the student voice is heard in all matters of student-life. We encourage students to provide constructive feedback throughout their time at university, through course reps, surveys and any other appropriate means.

The Union's Student Affairs Committee (SAC), members of Students' Council and School Presidents each have particular representative responsibilities and are involved with decision making committees as high as the University Board. Therefore, it is very important students engage with the democratic processes of the Students' Union and elect the students they see as most able to represent them.

### **7.1 Student Staff Liaison Committee meetings (SSLCs)**

Details of the Protocol for the operation of SSLCs is included in section 8.2 of the University Student Handbook.

The purpose of a SSLC meeting is to provide the opportunity for course representatives to feedback to staff about the course, the overall student experience and to inform developments which will improve future courses. These meetings are normally scheduled once per semester.

Meetings will be facilitated using guidelines and a record of the meeting will be provided with any decisions and / or responses made and / or actions taken as a result of the discussions held. The meetings include discussion of items forwarded by course representatives, normally related to the following agenda items (dependent on time of year).

The course team encourage student feedback in all areas and recognise that additional items for discussion may also be raised at the meeting

- Update on actions completed since the last meeting
- Feedback about the previous year – discussion of external examiner’s report; outcomes of National /UCLan student surveys.
- Review of enrolment / induction experience;
- Course organisation and management (from each individual year group, and the course overall);
- Experience of modules - teaching, assessment, feedback;
  
- Experience of academic support which may include e.g. Personal Development Planning, academic advisor arrangements;
- Other aspects of University life relevant to student experience e.g. learning resources, IT, library;
- Any other issues raised by students or staff.

## 8. Appendices

### 8.1 Programme Specification(s)

<b>UNIVERSITY OF CENTRAL LANCASHIRE</b>
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#### Programme Specification

This Programme 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 he/she takes full advantage of the learning opportunities that are provided

<b>1. Awarding Institution / Body</b>	University of Central Lancashire
<b>2. Teaching Institution and Location of Delivery</b>	Preston Campus
<b>3. University School/Centre</b>	School of Forensic & Applied Sciences
<b>4. External Accreditation</b>	N/A
<b>5. Title of Final Award</b>	BSc (Hons) Applied Science (recruiting to BSc (Hons) Applied Science (Foundation Entry ONLY)
<b>6. Modes of Attendance offered</b>	Full Time
<b>7. UCAS Code JACS Code</b>	ULASCI100 C000/F000
<b>8. Relevant Subject Benchmarking Group(s)</b>	Applied Science
<b>9. Other external influences</b>	N/A
<b>10. Date of production/revision of this form</b>	April 2018
<b>11. Aims of the Programme</b>	
<ul style="list-style-type: none"><li>To provide students with an interesting and stimulating grounding in science which will enable students to possess the necessary skills to support study at university</li></ul>	

<ul style="list-style-type: none"> <li>• To provide a foundation in the essential knowledge and understanding of theoretical and practical science skills to facilitate study at degree level at university</li> </ul>
<ul style="list-style-type: none"> <li>• To support and encourage students to appropriately apply a range of basic scientific concepts and techniques and to build the necessary skill set to enable students to become university learners</li> </ul>
<ul style="list-style-type: none"> <li>• To develop a range of skills to support information gathering at degree level and the ability to present information in an appropriate format</li> </ul>
<ul style="list-style-type: none"> <li>• To encourage students to develop systematic and critical thinking skills necessary for university level study</li> </ul>
<ul style="list-style-type: none"> <li>• To build self-confidence through self-assessment and reflective practices to develop and build on their employability skills</li> </ul>
<ul style="list-style-type: none"> <li>• To give students the confidence and competence to apply a range of skills to subject related topics that will underpin their development towards university level study</li> </ul>
<b>Learning Outcomes, Teaching, Learning and Assessment Methods</b>
<b>A. Knowledge and Understanding</b>
A1. Describe and apply theoretical and practical generic science A2. Apply relevant mathematical techniques A3. Explain specific scientific topics needed for progression
<b>Teaching and Learning Methods</b>
Lectures, tutorials, laboratory/practical session, directed reading, problem-solving, workshops, discussions
<b>Assessment methods</b>
In class and end of module tests; assignments; portfolio; practical and project reports
<b>B. Subject-specific skills</b>
B1. Work safely and competently in the laboratory B2. Analyse practical results and given data B3. Prepare scientific reports
<b>Teaching and Learning Methods</b>
Lectures, tutorials, laboratory/practical session, directed reading, problem-solving, workshops, discussions
<b>Assessment methods</b>
Practical reports and competence assessments; project report and group
<b>C. Thinking Skills</b>
C1. Select and collate information from a range of sources C2. Describe the differences between qualitative and quantitative data and be able to select the appropriate methodology C3. Formulate and test selected scientific concepts and hypotheses, interpretation and application of concepts C4. Plan, conduct research, carry out independent analysis and present the results both orally and in an appropriate written format

<b>Teaching and Learning Methods</b>
Lectures, tutorials, laboratory/practical session, directed reading, problem-solving, workshops, discussions
<b>Assessment methods</b>
Project/practical reports; poster presentation and tutorials/workshops and seminars
<b>D. Other skills relevant to employability and personal development</b>
D1. Research and reflect on a range of sources of information from books, scientific reports and journals, and the Internet D2. Write reports in a concise, coherent format D3. Demonstrate personal organisation and time management skills D4. Take lecture notes, plan and write essays and reports D5. Reflect and review as part of on-going professional development D6. Undertake effective revision and data analysis and interpretation D7. Communicate and present information effectively, using relevant IT skills D8. Work to high standards independently and as part of a team
<b>Teaching and Learning Methods</b>
Lectures, tutorials, laboratory/practical session, directed reading, problem-solving, workshops, discussions
<b>Assessment methods</b>
Assignments and portfolio, practical and project reports; performance in personal tutorials/seminars, timed essay, competence based checklist

13. Programme Structures*				14. Awards and Credits*
Level	Module Code	Module Title	Credit rating	
Level 6	FZ3601	Bioinformatics and Biotechnology	20	<b>Bachelor Degree with Honours in Applied Science</b>  Requires 360 credits including a minimum of 220 at Level 5 or above and 100 at Level 6.  <b>Exit Award Bachelor Degree in Applied Science</b>  Requires 320 credits including a minimum of 180 at Level 5 or above and 60 at Level 6.
	FZ3602	Ecotoxicology	20	
	FZ3801	Advanced Concepts in Chemistry	20	
	FZ3802	Chemistry Through Research & Innovation	20	
	FZ3699	Research Project	40	
	FZ3698	OR Group Research Project	40	
Level 5	FZ2601	Evolutionary Biology	20	<b>Exit Award Diploma of Higher Education in Applied Science</b>  Requires 240 credits including a minimum of 100 at Level 5 or above.
	FZ2602	Applied Molecular Biology	20	
	FZ2802	Chemical Concepts: Physical Techniques	20	
	FZ2803	Chemical Concepts: Developing Molecular Materials	20	
	NT2031	Research Theory and Practice	20	



	ELECTIVE	Level-5 Elective Module	20	
Level 4	FZ1601	Introduction to Cell Biology	40	<b>Exit Award Certificate of Higher Education in Applied Science</b>  Requires a minimum of 120 credits at Level 4 or above.
	FZ1802	Introduction to Chemical Concepts	40	
	FZ1603	Introduction to Biological Research	20	
	FZ1604	Science and Society	20	
Level 3 (Year 0)	FZC015	Biology	30	Successful completion of Foundation year entry allows progression to Year 1 of a named science programme (see section 16). Requires 120 credits.
	FZC016	Chemistry	30	
	FZC017	Mathematics & Physics	30	
	FZC013	Skills for Science	30	

### 15. Personal Development Planning

PDP is delivered and monitored through skills modules and the Academic Advisor system. Students are provided with a PDP handbook in electronic format and are introduced to the idea by their Academic Advisor (AA). Their AA will then guide them throughout their time at university, both in constructing their PDP and in making sure that they are developing the right skills, helping them to identify and address any issues.

Each student sees their Academic Advisor weekly (as part of their Study Skills tutorial), where the AA will discuss a particular skill or employability issue with the tutorial group. These tutorials help students to identify and develop their skills and also encourage a culture of confidence between tutee and AA, so that if any specific problems arise with a student the Academic Advisor will be in a position to assist.

The AA topics are constantly reviewed and updated in response to current practice in the workplace and to feedback from tutees. Academic Advisors insist on seeing a completed PDP before writing references.

### 16. Admissions criteria \*

(including agreed tariffs for entry with advanced standing)

*\*Correct as at date of approval. For latest information, please consult the University's website.*

#### **Foundation Entry year:**

Entry to this Programme requires:

- DDD or above at A2 including Biology or Chemistry.
- BTEC ND DMM-DDM Access to HE
- IB 25 - 27P including grade 5 in Biology or Chemistry.

In addition applicants will be required to have Mathematics and English GCSE at Grade C or equivalent.

International Applicants will be required to have a minimum level of proficiency in English Language equivalent to IELTS grade 6 with no sub score lower than 5.5.

Please consult the UCLan admissions department for the most up to date requirements.

Successful completion (40%) of the Foundation entry year guarantees transfer onto one of the following programmes:

- BSc (Hons) Biology
- BSc (Hons) Chemistry
- MChem (Hons) Chemistry

- BSc (Hons) Environmental Science
- BSc (Hons) Forensic Science
- MSci (Hons) Forensic Science & Molecular Biology
- MSci (Hons) Forensic Science & Chemical Analysis
- BSc (Hons) Neuroscience

Successful completion (60%) of the Foundation entry year guarantees transfer onto one of the following programmes:

- BSc (Hons) Biomedical Science
- BSc (Hons) Physiology & Pharmacology
- BSc (Hons) Pharmacology

#### **17. Key sources of information about the programme**

- University web site ([www.uclan.ac.uk](http://www.uclan.ac.uk))
- UCAS web site ([www.ucas.ac.uk](http://www.ucas.ac.uk))
- School website ([www.uclan.ac.uk/forensic](http://www.uclan.ac.uk/forensic))
- Course Leader – Tina Gornall ([tgornall1@uclan.ac.uk](mailto:tgornall1@uclan.ac.uk)), 01772 894370
- Admissions Tutor - Tina Gornall ([tgornall1@uclan.ac.uk](mailto:tgornall1@uclan.ac.uk)), 01772 894370

Level	Module Code	Module Title	Core (C), Compulsory (COMP) or Option (O)	Knowledge And Understanding			Subject-specific Skills			Thinking Skills				Other skills relevant to employability and personal development							
				A1	A2	A3	B1	B2	B3	C1	C2	C3	C4	D1	D2	D3	D4	D5	D6	D7	D8
Level 6	FZ3601	Bioinformatics and Biotechnology	COMP	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	FZ3602	Ecotoxicology	COMP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	FZ3801	Advanced Concepts in Chemistry	COMP	✓	✓	✓		✓	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓
	FZ3802	Chemistry Through Research and Innovation	COMP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	FZ3699	Research Project	COMP*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	FZ3698	Group Research Project	COMP*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Level 5	FZ2601	Evolutionary Biology	COMP	✓	✓	✓		✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓
	FZ2602	Applied Molecular Biology	COMP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	FZ2802	Chemical Concepts: Physical Techniques	COMP	✓		✓		✓			✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
	FZ2803	Chemical Concepts: Developing Molecular Materials	COMP	✓		✓							✓	✓	✓	✓	✓	✓	✓	✓	✓
	NT2031	Research Theory and Practice	COMP	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓		✓
		ELECTIVE	COMP **																		
Level 4	FZ1601	Introduction to Cell Biology	COMP	✓		✓	✓	✓	✓	✓						✓	✓	✓	✓	✓	✓
	FZ1802	Introduction to Chemical Concepts	COMP	✓		✓			✓	✓						✓	✓	✓	✓	✓	✓
	FZ1603	Introduction to Biological Research	COMP		✓			✓	✓		✓	✓		✓	✓	✓	✓	✓	✓		✓
	FZ1604	Science and Society	COMP			✓				✓			✓	✓	✓	✓	✓	✓	✓		✓

\*Either FZ3699 or FZ3698 is taken as a compulsory module and not both

\*\*A 20-credit elective module is compulsory, though the module itself will be chosen from a range of elective modules across the School

## **19. LEARNING OUTCOMES FOR EXIT AWARDS:**

### **Learning outcomes for the award of:**

#### **Certificate of Higher Education in Applied Science**

- Describe and apply some elements of basic theoretical and practical generic science
- Apply a limited range of relevant mathematical techniques
- Explain a limited range of scientific topics needed for progression
- Work safely and competently in the laboratory
- Analyse practical results and given data
- Prepare simple scientific reports
- Select and collate information from a range of sources
- Describe the differences between qualitative and quantitative data and be able to select the appropriate methodology
- Formulate and test selected scientific concepts and hypotheses, interpretation and application of concepts
- Plan, conduct research, carry out basic analysis and present the results both orally and in an appropriate written format
- Research and reflect on a range of sources of information from books, scientific reports and journals, and the Internet
- Write reports in a concise, coherent format
- Demonstrate personal organisation and time management skills
- Take lecture notes, plan and write essays and reports
- Reflect and review as part of on-going professional development
- Undertake effective revision and data analysis and interpretation
- Communicate and present information effectively, using relevant IT skills
- Work to high standards independently and as part of a team

### **Learning outcomes for the award of:**

#### **Diploma of Higher Education in Applied Science**

- Describe and apply some elements of basic theoretical and practical generic science
- Apply limited range of relevant mathematical techniques
- Explain a limited range of scientific topics needed for progression
- Work safely and competently in the laboratory
- Analyse practical results and given data
- Prepare scientific reports
- Select and collate information
- Describe some of the differences between qualitative and quantitative data
- Formulate and test selected scientific concepts and hypotheses, interpretation and application of concepts
- Plan, conduct research, carry out analysis and present the results both orally and in an appropriate written format
- Research and reflect on a range of sources of information from books, scientific reports and journals, and the Internet
- Write reports in a concise, coherent format
- Demonstrate personal organisation and time management skills
- Take lecture notes, plan and write essays and reports
- Reflect and review as part of on-going professional development

- Undertake effective revision and data analysis and interpretation
- Communicate and present information effectively, using relevant IT skills
- Work to high standards independently and as part of a team

**Learning outcomes for the award of:**

**Bachelor Degree in Applied Science**

- Describe and apply some elements of theoretical and practical generic science
- Apply limited range of relevant mathematical techniques
- Explain a range of specific scientific topics needed for progression
- Work safely and competently in the laboratory
- Analyse practical results and given data
- Prepare scientific reports
- Select and collate information from a range of sources
- Describe some of the differences between qualitative and quantitative data and be able to select the appropriate methodology
- Formulate and test selected scientific concepts and hypotheses, interpretation and application of concepts
- Plan, conduct research, carry out independent analysis and present the results both orally and in an appropriate written format
- Research and reflect on a range of sources of information from books, scientific reports and journals, and the Internet
- Write reports in a concise, coherent format
- Demonstrate personal organisation and time management skills
- Take lecture notes, plan and write essays and reports
- Reflect and review as part of on-going professional development
- Undertake effective revision and data analysis and interpretation
- Communicate and present information effectively, using relevant IT skills
- Work to high standards independently and as part of a team