

## **Introduction to B.Sc. (Hons) Biochemistry and Microbiology**

As award leader for B.Sc. (Hons) Biochemistry and Microbiology, I am pleased to welcome you to the Biological Sciences at Staffordshire University.

A lot of the information you need is generic and applies to all our Biology awards. This information is covered in the next section of this handbook. This first section is specifically about your chosen degree and includes specific aims and structure of the Biochemistry and Microbiology award. If you have any questions about any aspects of your studies or any problems please see me. My contact details are

- office S413 (Mellor Building)
- telephone 01782 294783
- email p.gowland@staffs.ac.uk

Good luck in your studies.

Dr. Pauline Gowland

## **Aims of B.Sc. (Hons) Biochemistry and Microbiology**

- To provide students with an understanding of the biochemical underpinning of microbiology
- To provide students with a knowledge of core areas of biochemistry and microbiology and an understanding of the integration between the two

## BSc (Hons) Biochemistry & Microbiology Learning Outcomes by Level

	<b>Level 4 (Cert HE)</b>	<b>Level 5 (Dip HE)</b>	<b>Level 6 (BSc (Hons))</b>
Knowledge & Understanding	Define & explain fundamental biochemical and microbiological terminology and concepts	Use biological terminology accurately and in an appropriate context, and demonstrate knowledge and critical understanding of key biological concepts and theories	Demonstrate advanced knowledge & understanding of a complex body of biological principles, concepts & theories, which extends beyond the directly taught programme, at least some of which is at the forefront of the disciplines
Learning	Recognise how knowledge and understanding has developed within the biological sciences	Recognise some of the current limits of knowledge in aspects of biochemistry and microbiology	Recognise and take account of the ambiguity and provisional nature of knowledge when drawing conclusions and evaluating information
Analysis	Evaluate and interpret biological concepts and principles	Critically analyse biological information using a range of established techniques	Describe and comment upon research or advanced scholarship, and critically evaluate arguments, assumptions etc. to make judgements
Communication	Describe and explain in a coherent and well structured manner fundamental biological concepts	Communicate using a range of formats a set of biological ideas and/or explain and substantiate a viewpoint	Communicate effectively and confidently, in various formats, complex ideas and reasoned arguments
Enquiry	Demonstrate competence and safe working practices in basic practical techniques, manipulate and interpret data	Apply a range of standard biochemical, microbiological and data analysis methods and techniques in order to conduct and interpret laboratory investigations	Select, evaluate & apply appropriate techniques to conduct investigations safely and ethically, and interpret, evaluate & present the data produced
Application	Understand how biological knowledge and skills can be applied to real-world problems	Apply biological principles, concepts and practical skills outside the context in which they were first studied, including their application in an employment context	Integrate and apply advanced knowledge, understanding, methods and techniques, some of which are at the forefront of the disciplines
Problem Solving	Consider and choose between approaches to solving well defined problems	Develop and implement appropriate strategies to solving problems	Develop questions to achieve a solution (or identify a range of solutions) to a complex problem or series of problems
Reflection	Reflect on their knowledge and skills development	Critically evaluate their strengths and weaknesses and demonstrate personal responsibility in order to advance their personal and professional development	Demonstrate personal responsibility, manage their own learning, & exercise initiative in complex & unpredictable circumstances

**NB** For the award of a BSc Ordinary Degree, students must achieve the learning outcomes for Level 5 (Dip HE), plus demonstrate the following Level 6 outcomes: knowledge and understanding, learning, analysis, communication and application. In effect this means that students on the Ordinary Degree will not take the 30-credit Honours Project module.

## Structure of B.Sc. (Hons) Biochemistry and Microbiology

The following is a detailed structure of the structure of your degree. You will study 120 credits per year, which is a maximum of 8 modules. Most modules are 15 credits but some, including Bioskills and the Project are 30 credits. As you will see from the grids below, some modules are core (ie compulsory) and others are Specific Options where you will choose from a specified list of modules. Further choice is available through General Option modules.

Details about time-tables, room and module codes will be provided separately.

Your studies at **Level 4** are generally broad. The core modules are:

Bioskills which is a combination of laboratory/field based activities and tutorials. The module will enable you to develop basic practical skills and key (transferable) skills.

Genes & Genomes and Cell Biology provide key concepts of molecular biology, biochemistry and cellular structure and function which underpin all forms of life

Diversity of Life looks at the structural diversity across the various kingdoms including structural diversity within microorganisms.

Disease introduces the biology of disease by examining different types of disease in humans.

Generic skills are further developed at **Level 5** in the modules Research Skills & Professional Development particularly in the context of career development and research.

The remaining core and specific options at Level 5 provide more specialist material relevant to your degree. The core modules are:

Metabolism and Microbial Physiology which builds on the fundamentals of biochemistry and Microbiology covered at Level 4.

Biomedical Analysis and Clinical Molecular & Microbiology are lab based modules and will enable you to further develop your practical and data interpretation skills in these specialist areas.

At **Level 6** the Project module is core. The project allows you to apply the practical, intellectual and key skills developed at Levels 4 and 5. As it is 30 credits it contributes a significant weighting to your final degree classification.

Work Placement module is also core. This provides the opportunity to experience work at or near graduate level. Although a Level 6 module it is carried out at the end of your second year (after the end of year exams).

Your knowledge of biochemistry is strengthened by studying the core module Biomedicine, whilst Biology of Microorganisms looks in detail at the structure and function of microorganisms.

The rest of your programme comprises Specific Options chosen from biochemistry and microbiology modules. You can select a balanced diet of modules or you can concentrate more in one or other of the two disciplines.

The grids below show the structure of the award. Numbers in brackets indicate the Teaching Block in which the modules are delivered. However, this information is subject to change as it is occasionally necessary to change the delivery pattern of the modules.

#### LEVEL 4 (Certificate)

SHS80100-4 Bioskills (30 credits)	SHS80105-4 Genes and Genomes	SHS80101-4 Cell Biology	SO	GO
	SHS80102-4 Disease		SHS80103-4 Diversity of Life	

**Specific Options:** SHS80104-4 Ecology (1), SHS80400-4 Fundamentals of Human Physiology (1+2)

**General Option (GO):** You can choose a Level 4 general option from the University's list, or you can choose another specific option from the list above. It can be taken in either semester

#### LEVEL 5 (Intermediate)

SHS80228-5 Biomedical Analysis	SHS80215- 5 Res Skills & Prof Dev	SHS80212-5 Metabolism	SHS80213-5 Microbial Physiology	SHS80207- 5 Human Infectious Disease
SHS80204-5 Clinical Molecular & Microbiology		Specific Option	General Option	

**Specific Option:** SHS80201-5 Applied Genetics (2), SHS80500-5 Disease Health & Environment (2), SHS80210-5 Human Physiology (2), SHS80214-5 Pathology Science (1 & 2)

**General Option:** Any other Level 4 or Level 5 Biology module or any module from the University-wide General Option list, subject to meeting specified admission requirements. It can be taken in either semester.

**LEVEL 6 (Honours)**

SHS80301-6  
Work  
Placement

SHS80300-6 Project (30 credits)	SHS80315-6 Biology of Microorganisms	Specific Option	General Option
	SHS80304-6 Biomedicine	Specific Option	

**Specific Options:**

SHS82310-6 Advanced DNA Profiling (1), SHS80303-6 Applied Health Perspectives (2), SHS80305-6 Biotechnology in Healthcare (2), SHS80307-6 Emerging & Re-emerging Disease (1), SHS80308-6 Human Molecular Genetics (1), SHS80312-6 Tumour Biology (1)

**General Option:** Any other Biology module or any module from the University-wide General Option list, subject to meeting specified admission requirements. It can be taken in either semester

**Award Management**

This degree is managed by the Biology Field and the Biology Field is responsible for the learning, teaching and assessment associated with the degree. As the award leader I am responsible for the smooth running of the award and am available to help with any general academic issues you may have.

We have a Staff-Student Consultative Committee (SSCC) into which you can feed comments about the course (details are in the General Information section of this handbook).

**GENERAL  
INFORMATION  
FOR ALL  
BIOLOGY AWARDS**

## **GENERAL AIMS AND OUTCOMES OF THE BIOLOGY AWARDS**

### **SPECIFIC AWARD AIMS**

### **YOUR LEARNING EXPERIENCE**

### **EMPLOYABILITY AND PERSONAL DEVELOPMENT PLANNING**

### **STAFF**

### **STUDENT SUPPORT AND GUIDANCE**

**Personal Tutors**

**Others sources of support and guidance**

**E-Mentoring**

**Support for students with disabilities**

### **COMMUNICATION CHANNELS**

**From us to you**

**From you to us**

**What we expect from you and you can expect from us**

### **THE MANAGEMENT OF YOUR AWARDS**

### **ASSESSMENT**

**Types and amounts of assessment**

**Deadlines**

**Submission and return of assignments**

**Academic misconduct**

**Citing other people's work**

**General criterion referencing scheme**

**Level 4 exam criterion referencing scheme**

**Level 5 exam criterion referencing scheme**

**Level 6 exam criterion referencing scheme**

### **RESOURCES**

**The learning resource centre**

**IT suites**

**Library**

### **STUDENT CALENDAR      2011/2012**

### **HEALTH & SAFETY**

**APPENDIX 1      Teaching, Learning and Assessment Strategy**

**APPENDIX 2      HSE Guidance on the use of visual display units**

## **GENERAL AIMS AND OUTCOMES OF THE BIOLOGY AWARDS**

During your period of study at Staffordshire University you will be exposed to a wide range of teaching and learning experiences. Your award has been created with more than biology in mind; it has embedded within it a wide range of activities designed to help develop subject-specific as well as more general 'key' or transferable skills (more on this later).

### **AIMS**

Aims are a way of describing what we as a Field are trying to achieve with our awards. It gives an idea of the 'flavour' of our awards.

**The Generic Aims of the Undergraduate Biology SCHEME** are to provide, in the context of modern biology:

- A well structured, stimulating educational experience, which is informed by developments at the forefront of the discipline
- Opportunities for the students to develop the practical skills and theoretical knowledge relevant to their awards, to their development as professional biology practitioners, and their potential for further study
- A supportive environment within which students will be able to develop as independent and lifelong learners
- The development of key (transferable) skills which will be applied within students' awards and in their future careers
- The opportunity for students to make informed choices on the selection of their programme of study, within the discipline of biology, in accordance with their interests and ambitions
- Opportunities for students with different abilities and previous educational experiences of biology to reach their potential

### **SPECIFIC AWARD AIMS**

In addition to the above, each award has specific aims, which are listed below. This should give you some idea of the flavour of the different awards, and it's a useful starting place if you're contemplating changing awards.

The following awards are on offer:

### **BSc (Hons) Animal Biology and Conservation**

- To enable students to develop their knowledge and understanding of those aspects of biology and ecology relevant to the management and conservation of animals
- To provide the opportunity for students to develop the survey and identification skills valued by employers

### **BSc (Hons) Biochemistry and Microbiology**

- To provide students with an understanding of the biochemical underpinning of microbiology
- To provide students with a knowledge of core areas of biochemistry and microbiology and an understanding of the integration between the two

### **BSc (Hons) Biology**

- To integrate the flexibility of the modular system with individual student's interests to allow breadth of study or sub-discipline focus in Biology.

### **BSc (Hons) Biology with Forensic Science**

- To provide a flexible means of combining a study of selected areas of biological sciences with a specialisation in the biological and criminalistic aspects of forensic science.
- To provide an insight into forensic science whilst maintaining career options in the biological sciences.

### **BSc (Hons) Biomedical Science**

There are three routes within the BSc (Hons) Biomedical Science award:

#### **The BSc (Hons) Biomedical Science route**

Students following this route must complete the IBMS Registration Training Portfolio for the Certificate of Competence (referred to as the Registration portfolio) by undertaking a period of work-based training after graduation. Students following this route graduate with B. Sc (Hons) Biomedical Science.

#### **The BSc (Hons) Applied Biomedical Science route**

This route provides an opportunity for students to complete the Registration portfolio by undertaking work-based training alongside their academic studies. Students following this route graduate with BSc (Hons) Applied Biomedical Science.

#### **The part-time route**

This is distinctive in that it is based on a day-release system. It is designed specifically for people already working in a laboratory setting.

Students who are part time and employed in an NHS laboratory are able to complete the Certificate of Competence Portfolio alongside their academic studies.

All three routes aim:

- To produce graduates with an accredited degree, appropriate for a career in biomedical sciences.
- To satisfy the requirements of Section 3a.1 of the Health Professions Council standards of proficiency
- To provide you with an understanding of human health and disease, including the principles of diagnosis and treatment
- To provide you with the opportunity to integrate a wide range of biological subjects to understand the biology of disease.

Applied route only:

- To provide an opportunity for you to complete the IBMS Registration Training Portfolio for the Certificate of Competence by undertaking work-based training alongside their academic studies.

### **BSc (Hons) Forensic Biology**

- To provide students with knowledge and understanding of the key biological concepts and practical skills applicable to forensic investigations involving evidence of a biological nature
- To provide students with knowledge and understanding of the fundamental principles of investigating crime scenes, including aspects of the UK legal system and the rules for the collection and presentation of evidence

### **BSc (Hons) Human Biology**

- To develop multidisciplinary knowledge and understanding of human biology through an awareness of the importance of other contributing disciplines.
- To produce graduates with knowledge of current human biology research and therefore capable of contributing to public debate on scientific and ethical issues.

### **BSc (Hons) Human Biology and Psychology**

- Provide students with a knowledge and understanding of Human Biology and Psychology and the opportunity to integrate these disciplines.
- Provide Human Biology and Psychology students with the option of gaining the British Psychological Society's Graduate Basis for

Registration (GBR) status, thus fostering a breadth of career opportunity.

## **YOUR LEARNING EXPERIENCE**

You will almost certainly find that your degree studies are different from your previous educational experiences. Study for a higher degree means taking an active part in your own education with lecturers managing, guiding and supporting your learning. What does this mean exactly? Well, you will be encouraged to find out information rather than simply being told it. You will also need to manage and prioritise your time effectively. In essence, you will have a lot of *responsibility for your own learning*.

If you adopt a passive approach you will not be fully exploiting your potential. If taking a greater responsibility for your learning sounds too daunting don't worry, the staff are here to help and your studies are designed to give you the skills and confidence to succeed.

Remember, being new to University life there is a learning curve both in terms of your subject knowledge and understanding, and your ability to become a more effective learner. At Level 4 we provide carefully structured guidance on study and learning skills (e.g. writing effectively, the different types of reading, avoiding plagiarism, using the library). You might also find it useful to use the study skills information found at:

<http://www.staffs.ac.uk/uniservices/infoservices/studyskills/>

This contains access to several useful web-based resources related to developing your study skills. You can also visit the Study Skills Centres based at the Stoke and Stafford campuses.

As you progress in your studies more onus will be placed on you to develop the skills and attitudes necessary for successful study at university and the workplace. You will have to find out information for yourself (especially as scientific information soon becomes out of date), be self-motivated and be able to continue learning throughout your life. Besides self-motivation, learning is most effective when it is an active process (i.e. learning by doing) and when helpful feedback is given on your performance to enable you to improve.

## **EMPLOYABILITY AND PERSONAL DEVELOPMENT PLANNING**

There is a core strand running through all the awards that focuses on the development of employability and Personal Development Planning (PDP). Of

course, awards in the biological sciences are by their very nature vocationally orientated, with the development of practical skills being a key aspect of this. We also use practitioners as guest speakers to further enhance the relevance of what you learn to the workplace.

However, we aim not just to develop technical skills *per se*, but also to develop within you the idea of being a 'reflective practitioner'. For example, in Level 4, in the 30-credit Bioskills module, you will develop and reflect on key practical and generic skills. At Level 5, Research Skills and Professional Development includes the production of a CV and career action plan. These are then used when applying for your work placement. This module also includes a group-based activity on entrepreneurship. At Level 6 you will critically reflect on your work placement experience.

PDP is also incorporated as part the personal tutoring system at all three levels. Here you will discuss your development with your personal tutor throughout the year. More information on this will be provided during the Bioskills/Essential Bioskills module.

## STAFF

Academic Staff	Room	Telephone	Email
Dr Sue Bird	S516	294408	<a href="mailto:s.j.bird@staffs.ac.uk">s.j.bird@staffs.ac.uk</a>
Mr Ian Davies	S413	294783	<a href="mailto:j.i.davies@staffs.ac.uk">j.i.davies@staffs.ac.uk</a>
Prof. John Dover	S122	294021	<a href="mailto:j.w.dover@staffs.ac.uk">j.w.dover@staffs.ac.uk</a>
Dr Pauline Gowland	S413	29478	<a href="mailto:p.gowland@staffs.ac.uk">p.gowland@staffs.ac.uk</a>
Dr Peter Gowland	S409	294581	<a href="mailto:p.c.gowland@staffs.ac.uk">p.c.gowland@staffs.ac.uk</a>
Dr Stephen Merry	S503	294692	<a href="mailto:s.merry@staffs.ac.uk">s.merry@staffs.ac.uk</a>
Dr Paul Mitchell	S411	294572	<a href="mailto:p.mitchell@staffs.ac.uk">p.mitchell@staffs.ac.uk</a>
Dr Harry Mountain	S410b	294702	<a href="mailto:h.a.mountain@staffs.ac.uk">h.a.mountain@staffs.ac.uk</a>
Mr Paul Orsmond	S524a	294776	<a href="mailto:p.orsmond@staffs.ac.uk">p.orsmond@staffs.ac.uk</a>
Dr Angela Priestman	S412b	294845	<a href="mailto:a.a.priestman@staffs.ac.uk">a.a.priestman@staffs.ac.uk</a>
Dr Jon Ranford	S429	294892	<a href="mailto:j.r.ranford@staffs.ac.uk">j.r.ranford@staffs.ac.uk</a>
Dr Kevin Reiling	S413a	294746	<a href="mailto:k.reiling@staffs.ac.uk">k.reiling@staffs.ac.uk</a>
Dr Dave Skingsley	S518	295757	<a href="mailto:d.r.skingsley@staffs.ac.uk">d.r.skingsley@staffs.ac.uk</a>

Mrs Anne Turner                      S413                      294783                      [a.m.turner@staffs.ac.uk](mailto:a.m.turner@staffs.ac.uk)

**Technical and support staff you are likely to meet in the Applied Sciences Programme Area:**

<b>Technical Staff</b>	<b>Room</b>	<b>Area of expertise</b>
Sue Avery	S519	Physiology/Ecology
Liz Deakin	S529	Forensics
Denise Figgins	S510	Genetics/Cell biology
Ian Hopkins	S404	Microbiology/Ecology
Audra Jones Manager	S412a	Faculty Technical
Dr Rob Manning	S405	Biochemistry/Molecular
Mark Jennings	S429	Sciences IT support
Sue Collingwood	LRC	Learning Resources

**Relevant Administrative Staff in the Faculty Office**

Lindsay Dodd	Award Administrator
Jean Simpson	Student Guidance Advisor
Jackie Campbell	Extenuating Circumstances Officer
Lorraine Berks	Disability Support Officer

See the Faculty Handbook for more information on the Faculty Office.

**STUDENT SUPPORT AND GUIDANCE**

**Personal Tutors**

An important aspect of providing support and guidance to you comes in the form of personal tutors. You will be allocated a personal tutor as soon as you arrive. S/he will provide pastoral support as well as providing you with academic guidance. Please read the section on Personal Tutors in the Faculty Student Handbook for more information on what the personal tutoring system involves.

**Others Sources of Support and Guidance**

The faculty also has a student guidance advisor – Jean Simpson – who can provide advice and information on the academic side of your university life.

Information on University services for students (e.g. careers, childcare, counselling, disability advice, finances) can be found in the Faculty Student Handbook and also online - <http://www.staffs.ac.uk/uniservices/index.php>

The Students' Union also provides an advice centre (see the Faculty Handbook for details).

**E-Mentoring:**

All first year students in biological sciences are offered e-mentoring by their peers in the second and third years.

It has been created with two outcomes in mind:

- 1) To offer first year students an effective support system from people who understand from their perspective.
- 2) To provide second and third year students with training and experience of mentoring, which will enable them to use their experiences gained at university for the benefit of others and to enhance their CV. Details of the scheme and how it operates are provided during Induction.

### **Support for Students with Disabilities**

The University and Faculty provide a number of support mechanisms for students with disabilities. For more details, please see the Faculty Student Handbook.

The Disability Co-ordinator for Biological Sciences is Sue Bird.

## **COMMUNICATION CHANNELS**

### ***FROM US TO YOU***

- **In class.** Another good reason for attending them!
- **Biology noticeboards** on the 4th floor, outside Lab. 404. Check these frequently and regularly for course-related information.
- **Noticeboards outside the Faculty Office on the Ground floor.** This board sometimes contains important general information *e.g.* examination timetables.
- **Noticeboards for modules outside the Biology Field.** If you are doing a non-biology module ask the lecturer where module notices will be placed.
- **Student Pigeonholes** on the Fourth floor, Mellor (next to the toilets!). Check these frequently.
- Important information may be sent to your **term-time or home address** - for example, exam results and referral packages.

It is very important that our records of your addresses are accurate. It is your responsibility to inform the Faculty Office if you change your term-time or home address, change of name, telephone number etc.

- **Email.** Check your university email account regularly. Remember to delete old out-of-date messages otherwise your folders will become full and you will not be able to receive any more messages.
- **Blackboard™.** All modules have Blackboard support. This is a useful way to communicate module specific information to all students on a particular module.
- **MyPortal.** This is your personalised web page, with extra windows opening on to many of the systems and services you access in your studies. It enables you to:
  - Access your university email and library account
  - Access personal email
  - Access e-resources
  - Receive targeted news, announcements and events
  - Receive targeted links and RSS Newsfeeds
  - Update personal details such as contact address
  - View award and course information
  - Access Blackboard, learning resources, ASK and Live Help

#### ***FROM YOU TO US***

- **In class.**
- **Come and talk to us in our offices.** By far the best method is to either (a) email a tutor first, to arrange a time to come and see them or (b) sign up for a time to see them using the sheet (if they have one) attached outside their office detailing when they're available. If you can't find the member of staff you're after either leave a message on the sheet outside their office or email them.

Remember, just because a tutor is in their office, it doesn't necessarily mean they are available. They could be busy, or on the phone or eating lunch (yes, even lecturers need to eat!). If there is one, check on the sheet attached near the door first to see if they are available before disturbing them.

- **Email.** Simple enquiries can often be dealt with quickly by email, but please consult your student handbook or the subject/module information on Blackboard before requesting information from your tutors as in many cases the information can be found there.

## WHAT WE EXPECT FROM YOU AND YOU CAN EXPECT FROM US

Students can expect teaching staff:

- To behave in a professional and impartial manner
- To keep abreast of current developments in their discipline
- To treat them with respect and to take into account their individual needs
- To arrive for classes on time and to let them know as soon as possible if they are likely to be late or need to cancel
- To finish classes no later than 10 minutes to the hour
- To be available to help them at reasonable times during their 'office hours'
- Normally strive to respond to emails within two working days
- To mark and give feedback on their work in a reasonable time, and always within 20 working days

Tutors can expect you, as a student:

- To behave in a courteous and respectful manner to fellow students, staff and members of the outside community.
- To attend all of your teaching sessions
- To prepare for all teaching sessions following the instructions given by your module tutor and/or outlined in your module handbook, so that you can make meaningful contributions to the teaching session
- To arrive at lectures, tutorials and practical classes on time, and to let tutors know if you are likely to be late
- To enter the room as quietly and unobtrusively as possible if you do arrive late
- Not to disrupt the learning experience of other students (e.g in a lecture, through eating, holding a private conversation, using an MP3/4 player or other electronic devices, reading a magazine or newspaper)
- To turn off mobile phones in class (if you are expecting an urgent call please warn the tutor beforehand and sit near the door)
- To keep your tutors informed of any issues affecting your attendance or performance
- To.

Students who are disrupting a class will, in the first instance, be asked politely to stop their behaviour and advised that if they continue to disrupt the class they will be asked to leave and the incident reported to the Dean. If it becomes necessary to remove a student from class due to their disruptive behaviour and they refuse to go, the class will be suspended temporarily and Security will be called to remove the student in question. A written report of the incident, including the name of the student and the reasons for their exclusion will then be forwarded to the Dean who will take the appropriate action.

Please see the University's Student Behaviour Policy - [http://www.staffs.ac.uk/images/student\\_behaviour\\_policy.pdf](http://www.staffs.ac.uk/images/student_behaviour_policy.pdf) - for more details.

## **THE MANAGEMENT OF YOUR AWARDS**

### **AWARD LEADERS**

Every award has an Award Leader, whose responsibility is to help ensure that the award operates smoothly. The award leaders are listed below.

#### **Single honours**

BSc (Hons) Animal Biology & Conservation  
BSc (Hons) Biochemistry and Microbiology  
BSc (Hons) Biology  
BSc (Hons) Biology with Forensic Science  
BSc (Hons) Biomedical Science  
BSc (Hons) Applied Biomedical Science  
BSc (Hons) Forensic Biology  
BSc (Hons) Human Biology  
BSc (Hons) Human Biology & Psychology

#### **Award leader**

Kevin Reiling  
Pauline Gowland  
Kevin Reiling  
Kevin Reiling  
Pauline Gowland  
Pauline Gowland  
Kevin Reiling  
Pauline Gowland  
Pauline Gowland

In addition, the Biology Subject Area Leader – Angela Priestman – oversees the operation and development of all the awards offered by the Field, and also has responsibility for ensuring their quality.

Issues relating to the delivery of our awards are discussed at the Biological Science Field Board. The membership of the Field Board includes student representatives, and 'Student issues' is a standing agenda item. These meetings are also a good way by which students can keep informed of developments within the Field. The student reps are expected to report back relevant issues to their peers.

We have a Staff-Student Liaison Committee (SSLC) into which you can feed comments about the course (details are in the Faculty Student Handbook). We would like two volunteers from each level of the degree. Please speak to Angela Priestman if you are interested in taking part.

## **ASSESSMENT**

### **Types and Amounts of Assessment**

Modules differ in their pattern of assessment; the Module Handbooks give detailed information. Pieces of written coursework normally have an indication of the number of words. However, try not to become obsessed by 'word limits'. Unless specified otherwise, they are an approximate indication, so don't worry if they're a few words over or under. On the other hand, submitting a 500- or 3000-word essay when we suggest a 1500-word essay will result in marks being deducted.

The Total Learning Time for each single (15-credit) Level 4 module is **at least 150 hours**. This includes staff/student contact time (lectures, practicals, tutorials *etc.*) plus independent study (reading, doing assignments, revision, and assessment).

It isn't too difficult to pass a module: hand in all the coursework on time, plan your revision sensibly and turn up to the exam if there is one. It can be very inconvenient if you have resit exams in August. It means more work for you, it can interfere with your summer job or holiday, then there's the travelling and accommodation and, if you have quite a few resits, it may mean a delay in getting your grant for the following year. Surely enough reasons to convince you that it's in your interests to pass the modules at the first attempt.

More information on assessment and progression can be found in the Faculty Handbook, and the assessment regulations can be found at [http://www.staffs.ac.uk/images/ugrad\\_mod\\_fram\\_tcm68-12695.pdf](http://www.staffs.ac.uk/images/ugrad_mod_fram_tcm68-12695.pdf) , which you should consult for definitive answers.

### **Deadlines**

You will be given ample time to complete assignments; submission deadlines can be found in the module handouts available at the start of every module. Failure to meet deadlines set for assessed work will mean **that the work will not be marked and will be recorded as a non-submission**.

### **It is vital that you attempt ALL assessments for all your modules.**

You should ensure that the appropriate coursework is submitted on time and required timed assessments (including exams, class-tests, presentations, vivas) are attended.

**Your right to a second (referral) attempt at a failed assessment(s) will be conditional on whether you have or have not made a first attempt (unless a successful claim for extenuating circumstances has been made) at the assessment(s).** What does that mean? It means that in most cases, unless a successful claim for extenuation is made, students who have not attempted assessments will not be allowed a referral for the module, will therefore fail the module and if a core module, fail the award! **Attempting all assessments is therefore ESSENTIAL.**

This re-enforces the fact that it is always better **to submit a half-finished assignment than not submit anything or attempt an examination you are not confident about than not attend** – you may gain sufficient marks to pass the module or at least allow the possibility for compensation between modules.

If there are **extenuating circumstances** that prevent you from submitting/attending assessments then **ensure you gather evidence to**

**support an extenuating claim.** If you do not attend a timed assessment make sure as well that you **inform the Faculty at the earliest opportunity.** Again, submitting a draft assignment by the required deadline is better than nothing and if the extenuation claim is successful a further assessment opportunity can always be offered.

### **Submission and Return of Assignments**

You will generally be required to submit assignments to the Faculty Office. Exact details will be provided in your module handbooks. Most work is marked anonymously, so you must complete an assignment receipt form when you hand in your work. See the Faculty Student Handbook for more details on submitting assignments.

Marked assignments will usually be available for collection from the module tutor. This allows you to discuss the feedback if necessary. You will be informed about when the work can be collected.

Assessments should normally be returned to you within 20 working days. For some assessments the feedback period will be less than 20 working days. However, it may be the case that the 20-day rule for some assessments cannot be met for justified reasons (for example, modules on which a large number of students are enrolled, illness of a tutor). However, it is anticipated that this will apply to only a small number of modules on your award and, in those cases, the feedback return period will not exceed 25 days. The anticipated feedback return times for all assessments will be published in your Module handbooks.

In order to ensure that feedback is provided within 20 days, the marks for your work will often be provisional and will be subject to final ratification by the appropriate Assessment Board in due course.

### **Academic Misconduct**

Amongst other things, this includes plagiarism and collusion. Plagiarism is *copying someone else's thoughts or writings and passing it off as your own* (in other words it's a form of stealing). Not only is it **cheating**, but it is also unfair to those students who completed the assignment honestly, and will be severely penalised. It could also have implications when you applying for jobs, as many requests for job references and professional body membership ask us to comment on honesty and professional conduct

Please see the definitions of plagiarism in the University's Academic Award Regulations available at:

<http://www.staffs.ac.uk/current/regulations/academic/index.php>

You will note that when you submit coursework, you also sign to say that you have read and understood the University regulations on academic misconduct – so make sure you have read them!

One obvious form of plagiarism is when you copy another student's piece of work. Another form of plagiarism (possibly the commonest) is copying or downloading large chunks, word-for-word, from a textbook, web site or article (or maps, diagrams etc. without acknowledging the source). **Remember, merely changing the odd word or making slight alterations to the order of words in the book/article you're using without acknowledging the source still constitutes plagiarism** as it's still copying someone else's ideas (if not the exact words) and passing them off as you own.

Even using "more than a *single phrase* from another person's work without the use of quotation marks *and* acknowledgement of the source" constitutes plagiarism as defined in the university regulations.

### ***How can you avoid plagiarism?***

One simple way is by making sure **you always cite in the text the sources of the information used to write your essays and reports**. And remember to use quotation marks if you're using the actual words of the original author. Even if you include a reference at the end of a sentence or paragraph, it still constitutes plagiarism if you use the authors' exact words – unless you include them in quotation marks.

**NOTE:** avoid using too many or large quotations; it's a very lazy way of writing and it will not earn a good mark. You are supposed to distil the information into your own thoughts and words, rather than simply using someone else's words.

Visit any of the following websites, all of which go into more detail than is possible here. They give examples of what does and does not constitute plagiarism, some advice as to deciding what is and isn't an acceptable degree of paraphrasing, as well as some ways of avoiding plagiarism.

Staffordshire University Study Skills site

<http://www.staffs.ac.uk/uniservices/infoservices/library/find/references/index.php>

Plagiarism: What it is and how to recognise and avoid it

<http://www.indiana.edu/~wts/pamphlets/plagiarism.shtml>

OWL Online Writing Lab – Avoiding Plagiarism

[http://owl.english.purdue.edu/handouts/research/r\\_plagiar.html](http://owl.english.purdue.edu/handouts/research/r_plagiar.html)

## Collusion

This is where students collaborate on an assessment and submit the work as though it was their own individual work. Although we encourage you to discuss your work with others, the final submission must be your own work. This is usually fairly easy to spot. Sometimes the same errors might be included in both submissions, or there are graphs that look identical.

The lesson here is simple:

- never lend your work to another student. If you do so, then you **both** would be guilty of collusion if essentially the same work is submitted by both students
- even if you're working together as a team, you must make sure any work you submit has been written independently by you – unless a group assignment is specifically requested by the tutor.

## Citing other people's work

The system used within many areas of science is known as the 'Harvard system'. Each time you include information obtained from someone else's work then you should just insert the name(s) of the author(s) and the publication date. There are two ways of doing this, which are best illustrated by using examples.

- In their study of transcriptional regulation of the WH12 gene in *S. cerevisiae*, Mountain & Sudbery (1990) found that...
- Field voles may defecate more than a thousand times in a 24 hour period (Matthews, 1952). Note that the full stop comes after the parentheses, not before.

Where there are more than two authors of a book or article then you may include the first author followed by *et al.* (a Latin abbreviation for 'and others' - note the full stop after the *al.*). For example: (Skingsley *et al.*, 2000). If you refer to more than one paper written by an author in the same year, then you would add a, b etc. For example: (Smith, 1990a, b).

As a general rule you should only cite references that you've actually read. Occasionally, however, this might not be possible to read the original article or book. For example, *Kitāb al-Hayawān*, the 'Book of Animals' written by the 9<sup>th</sup> century Arabic scholar al-Jāhiz is not widely available in English. In this case you would probably have to rely on the works of al-Jāhiz scholars such as Charles Pellat for things written by al-Jāhiz. In this case the in-text citation would then be (al-Jāhiz, undated; cited in Pellat 1967).

You don't normally need to cite authors for generally known information (DNA is the genetic material, green plants contain chlorophyll etc.).

### ***The reference list***

**All the authors cited in the text should be included in the reference list, and vice versa.** The key thing here is that you provide enough information to enable the reader to track down the reference. The authors cited in the text should be listed alphabetically. The assumption is that you've actually read the references listed – obscure or foreign language articles can raise suspicions that you've not.

There are lots of subtle variations around, in terms of the order of the information and punctuation etc., but the key pieces of information for journal articles are: author(s), date of publication, title of article, title of journal, volume and page numbers.

For example:

Skingsley, D.R., White, A.J., & Weston, A. (2000). Analysis of pulmonate mucus by infrared spectroscopy. *Journal of Molluscan Studies*, 66: 363 - 371.

Note that

- (i) in the reference list **all** the authors should be included (don't use *et al.*)
- (ii) the journal title is italicised and capitalised

Sometimes the author is unknown, in which case you would list them in the text and reference list as 'Anon.'

The key pieces of information regarding books in the reference list are: author(s), date of publication, title of book, publishers. If a book has gone through more than one edition then you should also say which edition you are referring to.

For example:

Mitchell, P. (2000). *Teach Yourself 101 Key Ideas: Ecology*. Hodder & Stoughton.

Note again the italicised and capitalised book title. Sometimes the place of publication is also stated.

Sometimes you might have referred to a specific chapter in an edited book (i.e. one in which different chapters are written by different authors). Here you need to specify the authors, title and page numbers of the chapter as well as the editors and title of the book. A typical way of referencing this is as follows:

Dover, J.W., Butt, K.R. & Pearson, D. (1998). Nodes and linear sections of field boundaries: plant species richness, soil nutrients and boundary width. In: *Key Concepts in Landscape Ecology* (Eds J. Dover & R. Bunce), pp 347 - 350. IALE (UK), Preston.

For web-based sources, you should still include author(s) and date in the text. The information included in the reference list would be something like this:

Woodward, S.L. (1997). Major Biomes of the World. Virtual Geography Department Project & Dept. of Geography, Radford University, <http://www.runet.edu/~swoodwar/CLASSES/GEOG235/biomes/main.html>

Sometimes you may have obtained information from somebody telling you something orally or in a letter or email. In this case you would cite them in the text as follows (Darwin, pers. comm) - an abbreviation of personal communication. Although these are not included in the reference list of journal articles, it's probably a good idea to include them (and their job title) in the reference list of undergraduate essays or reports.

### General Criterion Referencing Scheme

When marking assignments we use a general criterion referencing schemes as a guide to the sorts of things we are looking for in an assignment of a particular standard. The scheme outlined below has a certain flexibility. For example, it wouldn't apply to data handling assignments; and the nature of the referencing will change with Level (basic texts at Level 4 to increasing use of journal articles at Levels 5 and H). In general, lecturers will define the criteria within the context of the assignment.

### Academic Quality Criteria

[Each set of criteria includes the qualities, but not the defects, of those listed below it]

<b>Point</b>	<b>Grade</b>
Assignment as complete as could be asked for <i>within the constraints applied</i> . Evidence of achievement of high level objectives. Evidence of 'flair'.	15
High quality work, but with minor defects having limited impact on quality. Ability to consider conflicting arguments and present a considered and well argued opinion. Insight. Use of sources appropriate to Level and task, with full referencing where appropriate	14
High quality, factually accurate grasp of high order concepts. Key content present with relevant peripheral facts included and well-related to core. Use of relevant sources indicated. High standard of discussion in practical reports.	13
<hr/>	
Major factual content included and understood. Reasoned	12

argument and sequencing. Peripheral facts mentioned, though not necessarily well incorporated into concepts. In Practical reports 'methods' incorporate modifications used. 11

Discussion shows relationship to theory.

Major facts clearly known, though peripheral and supporting information may be absent or poorly understood. 10

The material presented forms a logical progression.

---

Work of moderate quality showing evidence of 9

understanding of basic concepts, though some errors and omissions with respect to central information.

Lacking depth, with no extension into peripheral areas. 8

Structure is broadly appropriate. Methods in Practical reports limited to that of schedule. Discussion present but limited to own results. 7

---

Many minor errors in central information, though with key 6

concepts given or alluded to. Evidence of weak understanding though lack of structure and sequence. 5

Often merely descriptive. In Practical reports Discussion is mere re-iteration of Results.

Sufficient evidence of knowledge and understanding but with confused structure and/or major factual information omitted or incorrect. 4

Some evidence of critical evaluation, although may be very limited or simplistic.

**Compensatable fail**

Some facts provided but are scant, anecdotal, confused 3

or poorly expressed. Little coherence or appropriate structure present to indicate understanding of the fundamental concepts. 2

---

**Non-compensatable fail**

Many major errors of fact. Much necessary material omitted.	1
No coherence and little/no evidence of understanding. Structure is inappropriate or missing	
Non-submission	0

---

In some instances specific assessment criteria will be provided for particular assignments (e.g. final-year projects). These will, however, always be compatible with the general criterion referencing scheme.

#### Level 4 Exam Criterion Referencing Scheme

Grade Points	Criteria
13 - 15 (Excellent answer)	<p>A 1<sup>st</sup> class answer will excel in several (though not necessarily all) of the following. <i>It achieves all that could reasonably be expected in the time available.</i></p> <p>Shows depth of knowledge and understanding of the fundamental terminology/concepts. Highly focused and relevant with most essential information included. Possibly some minor errors/omissions towards lower end of the range.</p> <p>Well written. Clear, fluent English. May use appropriate material other than from core text(s). Effective use of relevant examples/diagrams to illustrate a point</p>
10 - 12 (Highly competent answer)	<p>Clear evidence of knowledge and understanding. Largely factually accurate. Some errors/ omissions/irrelevancies but most of the essential material is included</p> <p>Use of appropriate material from core text(s) in addition to lecture notes. Logically structured, with a balance of breadth &amp; depth. Appropriate use of diagrams and examples.</p>
7 - 9 (Competent answer)	<p>Shows knowledge &amp; understanding though may be patchy. Generally accurate but with some errors/irrelevant material and/or omissions</p> <p>May try to display knowledge they've learnt rather than what is required of the question. Answer almost totally based on lecture material.</p> <p>Generally clearly presented, but may lack fluency and balance. Limited and sometimes inappropriate use of examples/diagrams.</p>
	Sufficient evidence of fundamental knowledge to indicate general

4 - 6 (Pass)	<p>familiarity with subject area, though may be muddled/confused/unfocused with significant errors and omissions.</p> <p>Poor, possibly rambling, structure. Very superficial. Little or no use of (appropriate) examples</p>
2 - 3	Some evidence of basic knowledge but outweighed by its lack. Poor coverage of material with a lot of major errors/omissions. Muddled and confused structure
1	<p>Little or no knowledge evident. Contains numerous fundamental errors &amp; omissions.</p> <p>May have totally misinterpreted question.</p> <p>Little or no structure.</p>
0	Question not attempted

### Level 5 Exam Criterion Referencing Scheme

Grade Points	Criteria
13 - 15 (Excellent answer)	<p>A 1<sup>st</sup> class answer will excel in several (though not necessarily all) of the following. <i>It achieves all that could reasonably be expected in the time available.</i></p> <p>Shows detailed knowledge and understanding of the concepts/issues. Virtually no errors (gp 15), though possibly some minor ones towards lower end of the range.</p> <p>Highly focused and relevant, with most essential information included.</p> <p>Some attempt at critical evaluation/analysis. Good synthesis of material, with evidence of appropriate background reading (perhaps with some use of 1<sup>o</sup> literature), well incorporated into answer</p> <p>Well structured with clear, fluent English. Excellent choice of relevant examples well integrated into answer</p>
10 - 12 (Highly competent answer)	<p>Clear evidence of knowledge and understanding. Largely factually accurate though likely to be some relatively minor errors. Little irrelevance, with most of the essential material included.</p> <p>Limited (or unsuccessful) attempts at critical evaluation/analysis.</p> <p>Some attempt at synthesis and some evidence of background reading.</p> <p>Well written: logically structured, with a balance of breadth &amp; depth, and good selection of examples used appropriately to illustrate a point</p>
7 - 9 (Competent answer)	<p>Shows knowledge &amp; understanding though may be patchy. Generally accurate though with some errors, increasing towards the lower end of the band</p> <p>Some irrelevant material/omissions. May try to display knowledge (or background reading) they've learnt rather than what is required of the question.</p> <p>Little/no synthesis: answer based largely on lecture material &amp;/or required reading.</p> <p>Often merely descriptive and (bald) statements often not supported by evidence</p> <p>Generally clearly presented but may lack fluency &amp; be unbalanced. Examples used but some may not be appropriate, or do not illustrate the point appropriately</p>
4 - 6 (Pass)	<p>Sufficient evidence of knowledge and understanding to indicate familiarity with subject area. Some relevant material, but confused and/or unfocused, with some major omissions/errors. May not answer question directly.</p> <p>Poor, possibly rambling, structure. Very superficial. Limited use of examples and often inappropriate.</p>
2 - 3	<p>A very 'sketchy' answer. Some evidence of basic knowledge and understanding but outweighed by its lack. Some appropriate material but outweighed by poor coverage with a lot of major omissions/errors.</p> <p>Very poor structure; muddled and confused. Little or no use of (appropriate) examples.</p>
1	<p>Little or no evidence of knowledge or understanding. Numerous major errors and misconceptions. May have totally misinterpreted question</p> <p>Little or no structure. No appropriate examples given.</p>
0	Question not attempted

## LEVEL 6 EXAM CRITERION REFERENCING SCHEME

Grade Points	Criteria
13 - 15 (Excellent answer)	<p>A 1<sup>st</sup> class answer will excel in several (though not necessarily all) of the following. <i>It achieves all that could reasonably be expected in the time available.</i></p> <p>Shows detailed knowledge and a depth of understanding of complex concepts/issues. Highly focused and relevant with virtually no errors (gp15), though possibly some very minor errors towards lower end of the range.</p> <p>Able to critically evaluate/analyse material. Appropriate use of background reading, including good use of primary literature. Excellent choice of relevant examples well integrated into answer &amp; used effectively to support and develop the argument.</p> <p>Good appreciation of the wider implications. Well structured: propositions cogently argued; clear, fluent English</p>
10 - 12 (Highly competent answer)	<p>Clear evidence of understanding. Mostly factually accurate, though likely to be some minor errors. Little irrelevance, with most of the essential material included.</p> <p>Some attempt at analysis/critical evaluation (or evaluations may be derivative). Evidence of background reading, though use of primary literature limited. Good selection of examples used appropriately to illustrate a point</p> <p>Some appreciation of the wider implications Well written: logically structured, with a balance of breadth &amp; depth</p>
7 - 9 (Competent answer)	<p>Shows knowledge &amp; understanding though may be patchy. Some irrelevant material/omissions and may try to display knowledge they've learnt rather than what is required of the question. Generally accurate, though with some errors, increasing towards the lower end of the band.</p> <p>Limited (or unsuccessful) attempts at analysis/critical evaluation. Answer may lack depth and is often based largely on lecture material &amp;/or required reading (may be limited use of background reading at the upper end of the band).</p> <p>Arguments stated but not developed. Lack of originality and likely to contain assertions of derivative ideas. Some examples used but may not be appropriate, or are not used to support or develop the argument Little evidence of a wider appreciation of the subject. Generally clearly presented but may lack fluency &amp; be unbalanced.</p>
4 - 6 (Pass)	<p>Sufficient evidence of knowledge and understanding to indicate familiarity with subject area though may be confused and/or unfocused. Some relevant material but omits key points and/or contains significant errors. May not answer question directly.</p> <p>Little critical evaluation; answer often merely descriptive and superficial/simplistic with little subtlety of thought. (Bald) statements often not supported by (appropriate) evidence/examples. No evidence of background reading. Poor structure, possibly rambling.</p>
2 - 3	<p>A very 'sketchy' answer. Evidence of knowledge and understanding is very limited, and outweighed by its lack. Some appropriate material but outweighed by poor coverage with a lot of major omissions and errors. No critical evaluation.</p> <p>No evidence of background reading and little or no use of (appropriate) examples Structure is muddled and confused.</p>
1	<p>No evidence of knowledge and understanding, or may have totally misinterpreted question. No critical evaluation. No evidence of background reading. No appropriate examples given.</p>

	Numerous major errors and misconceptions. Serious lack of structure.
0	Question not attempted

## RESOURCES

### THE LEARNING RESOURCE CENTRE

In addition to equipment and laboratories available within the Division, the Faculty provides a Learning Resource Centre (LRC) on the 4<sup>th</sup> floor. The open-plan LRC is often used by students preparing group work. The LRC contains books, videos, maps, and article reprints. The reprints are generally held in module-specific box files, and are often there for supplementary reading. Because of the copyright laws, not all material available in the LRC can be photocopied by you.

You can also book one of the small rooms off the main LRC room to view videos, practise presentations etc. The LRC also contains a number of very useful guides on:

Choosing a Career; Essay Writing; Group Working; Literature Searching and Bibliography; Note-taking in Lectures; Poster Presentations; Oral Presentations; Report Writing; Time Management; Writing up a Lab Report

### IT SUITES

Also on the 4<sup>th</sup> and 2<sup>nd</sup> floors are over 120 modern networked PCs with associated generalist and specialist software. In addition, further IT facilities are provided centrally by the University (in the library, for example). The University has invested in hardware and learning management systems (Blackboard<sup>®</sup>) for technology-supported student learning. You will be provided with a password and training sessions at an early stage.

### BLACKBOARD™

Blackboard™ is a web-based 'Virtual Learning Environment' that is used to support all the modules you will be taking. This support can range from using it as a repository of lecture notes and the module handbook, to providing a base from which to access web-based learning resources, to constituting the main mode of teaching and learning within a module (e.g. Fundamentals of Human Physiology, and Disease Health and Environment). In the latter case you will be provided with clear guidance on how to use the system effectively at the start of the module.

Blackboard™ is quite simple to use and become familiar with, and you will be given guidance during Induction week. This approach also gives you a more flexible way to study, in terms of when you study, where you study and, to some extent, the pace of your study. You can study the online material and complete any activities at a time that suits you and when you feel ready to focus and concentrate.

As far as hardware is concerned, if working from home or the workplace you will need access to a computer (either a PC or a Mac) with the following specifications as a minimum:

- 1 GHz processor (or faster)
- 512 Mb of RAM
- At least 20 GB of hard disc space
- An internet service provider (ISP) with a broadband, cable or satellite internet connection ( or >56K modem dial-up in an emergency)

**Make sure that you comply with all of the guidance and advice (particularly that relating to the safe use of the equipment and any Health & Safety implications) provided by the computer manufacturers and/or your employers.** A HSE document related to using computers is appended at the end of this handbook.

As far as software is concerned, you will need to have pre-loaded a standard web browser such as Firefox or Internet Explorer. You will also need to have Acrobat Reader© installed on your computer – a freely available download. This program allows you to read the many web-based files to which you will be directed which are in 'portable document format' (PDF). You will be able to download one copy of some of these files if you wish, and save them on your local disc for off-line personal reading and study. You should also have access to Microsoft Word, Excel and PowerPoint, as some of the documents to which you will be directed during the modules are available in one or other of these formats. You would normally be expected to use MS Word or the Open Office equivalent for writing assignments and assessments.

## **LIBRARY**

The Thompson Library on the Stoke campus provides a comprehensive resource for students, staff and researchers in the Department of Biological Sciences. Library staff will provide information about opening times and how to get the most out of the library. The Nelson Library at the Stafford site houses a number of titles, particularly in the area of physiology and human biology.

In addition to the textbooks and journals available as hard copies in the library, you will also have access to several online resources. This includes:

### **E-Book Collections:**

The Library has 2 E-Book collections that provide texts for Biomedical Science

- NetLibrary: Includes titles specifically selected by staff to support courses. Titles includes books on the subject areas of biology, molecular biology, cell biology, immunology, genetics etc

- Ebrary: provides access to a full-text collection of over 18,000 electronic books covering most academic subject areas including the health and life sciences (biology, human anatomy, genetics, disease and molecular biology etc)

#### Online Databases:

##### Annual Reviews Online Database (on campus access only):

a multi-edition scientific review series. Full-text access is up-to-date for the following Annual Review series:

- Entomology
- Immunology
- Physiology
- Public Health

##### Blackwell Synergy (including Blackwell Science):

provides access to full-text and abstract only journal articles for the field of Sciences and Health.

##### Science Direct:

provides access to full-text e-journal articles from the year 2000 onwards, for the subject areas of science, technology, engineering and health. It is particularly useful for Biomedical Science students as the database includes articles on the following areas:

- Biochemistry
- Life & Health sciences
- Genetics
- Medicine
- Immunology and Microbiology etc.

##### MedLine:

provides access to scholarly research in the areas of biomedicine, life sciences, public health, and clinical care from 1950 onwards

SwetsWise: is one of the Library's major providers of full text electronic journals via the Internet. The service covers a vast range of subject areas but it is particularly useful for locating full text journal articles on various aspects of Biosciences.

##### Web of Science:

is a multidisciplinary database that provides access to current and retrospective information printed in over 8,000 international academic journals.

The Library staff are very helpful and run a number of training sessions showing you how to get the best out of the Library and its facilities. The Library's Biosciences page

(<http://www.staffs.ac.uk/uniservices/infoservices/library/learn/biosci.php>)

has more detailed information. The subject contact in the library for the biosciences is Kathleen Morgan ([K.Morgan@staffs.ac.uk](mailto:K.Morgan@staffs.ac.uk)).

## Student Calendar 2011 - 2012

Week Commencing	
19-Sep-11	Welcome Week
26-Sep-11	TEACHING BLOCK 1 (12 WEEKS)
03-Oct-11	
10-Oct-11	
17-Oct-11	
24-Oct-11	
31-Oct-11	
07-Nov-11	
14-Nov-11	
21-Nov-11	
28-Nov-11	
05-Dec-11	
12-Dec-11	
19-Dec-11	CHRISTMAS VACATION
26-Dec-11	
02-Jan-12	
09-Jan-12	Exams/Assessment Week
16-Jan-12	Teaching block 2 (10 weeks)
23-Jan-12	
30-Jan-12	
06-Feb-12	
13-Feb-12	
20-Feb-12	
27-Feb-12	
05-Mar-12	
12-Mar-12	
19-Mar-12	
26-Mar-12	NON TEACHING TIME
02-Apr-12	
09-Apr-12	
16-Apr-12	Teaching block 2 (2 weeks)
23-Apr-12	
30-Apr-12	Revision week
07-May-12	Assessment
14-May-12	
21-May-12	
02-Jul-12	Results published/Counselling
09-Jul-12	Award ceremonies
13-Aug-12	Reassessment
03-Sep-12	Reassessment results published/Counselling

## HEALTH & SAFETY

The University takes very seriously its responsibilities when it comes to health and safety. As members of Staffordshire University *we all* have a responsibility for Health & Safety. As a student you are responsible for:

- Conducting yourself in a manner conducive to your own safety and that of others
- Using equipment provided in the interests of Health & Safety (e.g., fire extinguishers) in a manner for which purpose it is intended
- Complying with University emergency evacuation procedures (e.g., fire drills)
- Reporting all accidents immediately whether injury has been sustained or not
- Reporting any defects in equipment or procedures which you feel may cause injury or ill health
- Adhering to safety rules, systems, guidelines\* and procedures in force within the university

**You will not be permitted in any of the labs unless you are wearing a fully fastened lab coat.**

The Biology Field has developed a number of safety guidelines (listed below). Copies of these guidelines can be obtained from the Q-Drive on the Sciences Server. Go to Documents – Biological Sciences – Biol Safety – Biology Safety Code.

SAF001	Laboratory safety general guidelines
SAF002	Precautions for all microbiological work
SAF003	Procedures for the disposal of microbiological waste
SAF004	Local rules for activities involving genetically modified organisms
SAF005	Safety guidelines for the use of insect rearing rooms
SAF006	Safety guidelines for physiology experiments using human subjects
SAF008	Safety guidelines for the use of the ozone fumigation facility
SAF009	Waste disposal
SAF010	Code of conduct for use of the roof
SAF011	Equipment within biology

Further detailed information will be provided as and when required, but if you have any queries regarding Health & Safety please do not hesitate to contact the Biology Safety Advisor, Audra Jones ([a.a.jones@staffs.ac.uk](mailto:a.a.jones@staffs.ac.uk)).

In addition, you will receive some training in general laboratory safety at a very early stage of your studies. This culminates in you carrying out a full risk

assessment for your final-year project in conjunction with your project supervisor.

## APPENDIX 1

### Teaching, Learning and Assessment Strategy

The overarching aim of the Biology Field's TLA strategy is to improve your learning experience.

To support this aim there are a number of key **principles** that the Biology Field has adopted. Included in each statement of the principle is a description of the relevant processes and procedures that cover aspects such as assessment learning, teaching and practices, quality assurance, monitoring and evaluation

#### Key Principles of the Biology Field's TLA Strategy

- You should be exposed to a variety of teaching, learning and assessment methods
  - Assessments are integral to the learning process, and prompt and effective feedback on your work is a vital aspect of this process
  - It is important that you know what is required of them for each assignment, module and level of study
  - In addition to testing knowledge and understanding, assignments also involve the use and development of certain skills, and it should be clear what skills are being assessed
  - Assessments used should be a valid measure of the attainment of the learning outcomes and should be valid, reliable, and fairly marked
  - The amount of assessment should be appropriate
  - The Field's TLA policy aims to be inclusive of students with disability
  - TLA methods and processes are regularly evaluated and adjusted where necessary
  - Biology is a practical subject and the development of practical skills is important
  - Good practice should be disseminated
- ***Students should be exposed to a variety of teaching, learning and assessment methods***

Using a range of methods provides the means of encouraging the development of a *broad range* of intellectual, key, and practical skills. Using a range of assessment methods should also mean that particular individuals or groups of students are not disadvantaged.

Teaching and learning methods include lectures, tutorials, practicals (both lab and field based), guided independent study, group work, problem-based learning, virtual learning environments (e.g. Blackboard™ and independent projects. With all methods, the emphasis is on active learning. This is reflected in the time allocated to independent learning relative to formal contact time. At Level 4 you will use the independent study time to do a number of well-defined tasks; as students move through the levels, the amount of detailed guidance decreases as you develop your autonomous learning skills.

The range of teaching and learning methods is reflected in the range of assessment methods employed. These include those that focus on generic skills (e.g. group work, oral presentation, dissertations, reflective portfolios); those that focus on practical skills (practical reports, tests of practical skills, lab/field notebooks); and those that focus on knowledge and understanding (essays, class tests, formal examinations).

Of course, the above aren't mutually exclusive, and a given assessment normally tests more than one type of outcome.

- **Assessments are integral to the learning process, and prompt and effective feedback to student is a vital aspect of this process.**

All modules contain an element of formative assessment. You will receive feedback on coursework assignments in a variety of ways. These include:

(a) Written feedback: Usually from tutors, though it may include feedback from other students.

(b) Class feedback: A class-based activity designed to help you understand the assessed work you have just completed. This may include: discussing practical work, what happened and the theory as to why; running through a model essay answer and/or highlighting and discussing typical problems in the work handed in; illustrating how to work through a data handling exercise

(c) Post-Examination feedback:

You will have the opportunity to receive counselling on your overall performance. This is particularly relevant if you have referrals, where 'summer surgeries' are available. You also have the opportunity to receive oral feedback on examination performance via your personal tutor soon after the start of the academic year. This type of feedback will give general pointers on where improvements could be made and should also help prevent errors being perpetuated

Feedback to students should:

Relate explicitly to the learning outcomes and assessment criteria; balance negative with positive comments; include specific suggestions to improve the assignment; ask questions and/or suggest follow-up work and references to encourage reflection on the work; be prompt\*

\*the University guideline is that feedback should be given to students within 25 working of submission.

Individual pre-submission formative feedback will be given only once to any particular student on a given assignment, but such feedback can only be guaranteed if submitted at least two weeks before the submission date for the assignment. You will have access to the overall distribution of class marks. This will enable you to judge your performance relative to the group.

- **It is important that students know what is required of them for each assignment, module and level of study.**

The learning outcomes for each level of study, and every module are clearly defined. The assessment package is designed to measure the attainment of these learning outcomes.

You will be given clear and guidance in the module handbook on what is expected for each assignment: this would normally include a guide to word length where appropriate, submission date, submission process, and specific assessment criteria.

The Field uses a general criterion-referencing scheme that describes the attributes we would expect from work of different standards; included in this is the concept of progression. For example, a move from knowledge and comprehension at Level 4, to

greater emphasis on application and analysis at Level 5 to more synthesis and evaluation at Level 6.

Another criterion referenced scheme is used specifically for exams (one for each level of study). The concept of progression in the criterion referencing schemes is reflected in the structure of formal exam papers and nature of the questions between levels. Level 4 exam papers typically have a mixture of short-answer and essay questions - here the emphasis is on testing basic knowledge and understanding. Level 5 papers typically consist of structured essay questions that involve more integration and analysis. Level 6 papers require students to answer fewer questions; the extra time allotted to each question enables students to achieve more depth in their answers. The questions are also more 'open', synoptic and evaluative in nature.

Plagiarism ranges from malpractice (with the intent to deceive), to poor practice (arising through ignorance of what constitutes plagiarism). It is crucial, therefore, that you are made aware of the serious consequences of plagiarising, and are taught what plagiarism is, as well as the skills to avoid it at the earliest possible stage. This will be reinforced throughout your studies by providing information in award and module handbooks, assignment briefing sheets and tutorial activities in the first year.

- ***In addition to the development and testing of knowledge and understanding, learning and assessment also involve the use and development of certain skills, and it should be clear what skills are being assessed***

The development of a range of generic and practical skills is an important aspect of our approach to teaching and learning. Making it clear what skills are being assessed in assignments or modules should help you become more aware of the skills you are developing. Generic skills are developed in the context of a degree in biological sciences. For example, writing skills are generally (but not exclusively) developed by writing about biology; and communication skills by talking or writing about biology.

In addition, because Biology is by its nature a practical subject, the development and assessment of practical skills forms an important component of our assessment strategy. A balance of direct and indirect assessment of practical skills is used. Direct assessment (of practical competence) takes the form of practical tests; indirect assessment is usually via the assessment of practical reports.

- ***Assessments used should be a valid measure of the attainment of the learning outcomes and should be valid, reliable, and fairly marked***

The procedures used to help ensure this includes internal and external academic scrutiny when awards and modules are validated or altered and, once up and running, by regular external examiner comment and internal moderation of assessments.

We use various ways of ensuring fairness of marking, and to help ensure that the appropriate standards are being maintained. For example, all formal exams, class tests and, where appropriate, coursework assignments are marked anonymously; we use written criterion referencing schemes; we have a well defined second marking policy\*; and external examiners make valuable contributions to the process both before and after assignments are set. As is the case currently for formal exams, all summative class tests and coursework assignment briefings undergo internal scrutiny before being released to the students.

\* this mostly involves second marking as sampling/moderation using specially designed pro formas, although there is universal double-blind marking of all honours

projects, with all projects provisionally awarded a grade point 3 being marked by a third person. Where there is potential for a greater degree of subjectivity (e.g. when marking posters, oral presentations, vivas), then team marking is employed.

- ***The amount of assessment should be appropriate***

The time and effort spent on doing assignments, and the time spent marking them, should not be excessive, and should be broadly equivalent between modules at the same level. The Field considers that it is unrealistic to stagger assessments as Biological Science modules contribute to several awards in other fields, and several modules taken by Biological Science students are owned by other Fields. However, assessment deadlines are clearly stated at the start of each module, giving ample time for their completion. Where serious assessment bunching does occur (e.g. across fields) then we make adjustments to deadlines if necessary.

- ***The Field's TLA policy aims to be inclusive of students with disability***

Our aim is to compensate for any restriction imposed by the student's impairment/functional difference, without affecting the validity of the assessment process. *In other words, assessment should measure your academic achievement rather than your disabilities.* To this end, module learning outcomes and TLA methods aim to be as inclusive as possible, and will be scrutinised by members of the Field prior to their validation. Another key aspect is identifying and discussing your needs as soon as possible to allow time to make reasonable adjustments. Adjustments could include changing field visit venues, use of adjustable lab benches, extension of time in exams, frequent session breaks; and the use of assistive devices and support, such as use of computers, large print, Braille, amanuensis etc.

All students with an additional need arising from sensory impairment or a specific learning difficulty (e.g. dyslexia) will have their work double-marked. The aim of this is to help counteract the possible lack of anonymity arising from having a bright yellow sticker on submitted coursework and exams.

- ***TLA methods and processes should be regularly evaluated and adjusted where necessary***

It is important that teaching, learning and assessment methods are regularly evaluated. Evaluation is based on a variety of sources. For example:

- Students - in the form of informal discussions, module and award questionnaires, staff:student liaison committees, as well as comparing their performance relative to other assessments
- Via staff reflection as part of the annual monitoring process
- Via colleagues (e.g. peer observation) and external examiner comments

- ***Good practice should be disseminated***

There are a number of ways in which good practice is disseminated. The Applied Sciences Programme Area has a Teaching Learning and Assessment Committee, part of whose remit is to disseminate and develop areas of good practice. Staff participate in a peer observation process. Biological Sciences staff actively research and publish papers on aspects of teaching and learning. Finally, informal discussion between colleagues takes places, in which ideas are discussed.

## **APPENDIX 2**

### **HSE Guidance on the use of visual display units**

Please go to the link below for full details of the HSE guidance for the use of visual display units.

<http://www.hse.gov.uk/pubns/indg36.pdf>