



School of Applied Sciences

Course Guide

for

**BSc (Hons) Biomedical Science
BSc (Hons) Applied Biomedical Science
BSc (Hons) Biomedical Science (workbased)**

2012-2013

**SCHOOL OF APPLIED SCIENCES
COURSE GUIDE**

**BSc (Hons) Biomedical Science
BSc (Hons) Applied Biomedical Science**

Page

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Welcome

On behalf of the Course Management Team I should like to extend to you a very warm welcome and we would like to take this opportunity to wish you every success in your studies at the University of Wolverhampton, and trust that your time at the University of Wolverhampton will prove to be enjoyable, stimulating and rewarding.

Biomedical Science is one of many courses run by the School of Applied Sciences which has established an excellent reputation for the quality of its courses, for an innovative approach to teaching and learning, and for the friendliness of its staff.

We believe it is important that you are encouraged to make your own contribution to the effective operation and development of your chosen course. We are therefore keen to hear your views and would welcome any suggestions that you may have about ways of improving any aspect of your course and / or the student experience here at the University. In practice, you will have the opportunity to do this through our *student voice* processes.

Remember that the outcome of your studies could affect the whole of your future career and therefore study should certainly be your priority. In resolving to work hard however, do not forget to have time for recreation and social activities. Do take full advantage of the University facilities at your disposal

<http://www.wlv.ac.uk/Default.aspx?page=8246>

Dr Ruth Shiner, Head of Department
Dr Jan Martin, Placement Manager
Dr Petula Nurse, Student Manager

Section 1: Course-specific information

1. About this guide

This **course guide** will help you plan your Biomedical Science course. It tells you which modules you must study and pass. The guide also offers you brief descriptions of each module, including general information about assessment tasks, and an overview of how the course can be used for future career choices.

You should read this course guide in conjunction with the **undergraduate student guide** <http://www.wlv.ac.uk/ugguide>

This booklet contains information about where to obtain information and advice about your studies at the University. It also explains how you will be taught and how your assessed work will be graded. It contains an academic calendar of key dates. It is important that you read this guide in conjunction with your own subject course guide.

A full version of the **academic regulations** is available on the University website, <http://www.wlv.ac.uk/polsregs>

It includes an explanation of how the credit system operates, and carefully defines the number of credits that must be studied and passed, at different levels, in order to qualify for the different awards offered by the University. Your tutor can also advise you about regulations. The regulations may change from time to time in accordance with University and national policy. The regulations that pertain to you will normally be those that were in effect when you commenced your studies on your award.

Together these documents should provide you with all the basic information that we think you will need for your period of study here.

You are encouraged to read this course guide through now. It will be a considerable advantage to you to be familiar from the outset with the various aspects of your studies that are described. It may be that the relevance of some of the sections will not be immediately obvious. Keep it accessible, so that you can refer to it as needed. The answers to many of the questions that you will want to ask are contained in it.

2. Module Guides

At the commencement of each module that you study, you will be told where to access a module guide which will normally give full details of the **teaching programme**, the staff team responsible for the module, guided reading, and the assessment schedule for the module. These guides are valuable sources of information that will help you to plan your studies and most are published on-line via **WOLF**.

3. Student Support

3.1 Student Support Office

Obviously even in a document like this we have not covered every query and problem that you might have about the course. If you find that there is something you need to know, please check on [SAS Student Support Portal in WOLF](#) and do not hesitate to approach the School of Applied Sciences **Student Support Office**, in **MA104**. You can also consult the University's Student Support and Guidance Services [Student Services Gateway](#) as appropriate. We are pleased to hear your views and welcome suggestions for ways of improving the operation of the course.

The Student Support Office in MA104 is open 09:30 – 17:00hrs Monday – Friday during term time.

If you have queries or need advice relating to your studies such as requiring an extension to the submission deadline for coursework, leave of absence, procedures for internal / external transfers or mitigation, please contact:

Student Support Assistant
SASStudentsupport@wlv.ac.uk
Phone 01902 322129

Your School Student Support Office is:	Student Support Office Room: MA104 Tel : 01902 322129 Email: sasstudentsupport@wlv.ac.uk
Your local <i>HERE 2 HELP</i> is:	Ground floor MD Building, City Campus (South) Tel: 01902 322487 Fax:01902 322185

3.2 Equality & Special Needs Adviser

If you have a problem regarding equality of treatment, or a disability, or special needs related to your mobility, health or studies you must arrange to meet the School's Equality & Special Needs Adviser (Dr Nick Musgrove) as soon as possible to discuss your requirements. Discussions are confidential.

Dr Nick Musgrove
Room MA123b
01902 322191
email N.J.Musgrove@wlv.ac.uk

3.3 Contacting Academic Staff

For contacting academic staff, we operate an electronic booking system, 'SAMS', you will be fully introduced to this during welcome week, and it can be accessed at the following address: <http://sams.wlv.ac.uk>

Please enter the contact details for your Personal Tutor for your future reference:	
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The name of your Personal Tutor will be given to you at the beginning of your course and can be checked via e:Vision.

Please note that in order to develop and improve the course, it may be necessary on occasions to amend or revise the details given in this course guide.

4. About the course

Biomedical Science may be studied as a **specialist** or an **applied** degree, and this guide outlines the modules which are available, and also the teaching and learning styles and assessment tasks.

Distinctive Features of the Course (Specialist)

This course involves the study of a variety of biomedical science disciplines and takes place at an institution where fellow students are undertaking programmes in other disciplines and vocational courses in a wide variety of medicine-related subjects. As such students will mix and learn with students with a wide interest and experience of medically-related subjects and disciplines, providing the opportunity for cross-subject interaction and learning.

The BSc (Hons) Biomedical Science award will be of interest to you if you wish to study how the body functions and also how disease in humans is diagnosed through the rapid technological advances currently being made in laboratory diagnosis and treatment.

Biomedical Science staff undertake research in the areas of diabetes, physiology, molecular medicine, cancer, brain tumours, microbiology and molecular immunology and maintain close links with local and regional NHS Trusts to ensure that the skills you gain are in line with professional working methods.

On the Biomedical Science course you will be able to gain research experience firsthand by managing your own research project in your final year of study with dedicated research active staff. Our first-rate facilities include specialised equipment

for microscopy, cell culture, protein synthesis and analysis, immunology, molecular oncology, diabetes, microbiology and molecular pharmacology research.

You will be very much in demand because the nature and breadth of our degree in Biomedical Science develop skills that are valued by employers across the country. The integral course skills in diagnosis, medical research, laboratory analysis, scientific reasoning, instrumentation and report writing are particularly relevant to growing career sectors like education, scientific research in the public and private sectors.

Distinctive Features of the Course (Applied)

The Standards of Proficiency outlined by the Health Professions Council (HPC) play a central role in gaining admission to the Register for Biomedical Scientists and thereby gain the right to use the protected title of the profession. The role of the Institute of Biomedical Science (IBMS) in this process is as an awarding body for the Certificate of Competence, by which individuals can provide evidence that they have met the competency required of the HPC standards of proficiency, are 'fit to practise' as Biomedical Scientists and are therefore eligible to apply for professional registration with the HPC. These standards are reproduced in their entirety in the IBMS Registration Training Portfolio. The IBMS's Certificate of Competence will only be awarded if there is supporting evidence that competence has been achieved. This evidence is presented using the Registration Training Portfolio, cross-referenced to the relevant competence or standards it supports.

One of the distinctive features of this course is that all of the coursework, where appropriate, addresses the HPC competencies and students may use their coursework as evidence when constructing their Registration Portfolio. Students will receive a copy of the Supplementary Guide which details which piece of coursework can be used as evidence for which standard.

For the BSc (Hons) Applied Biomedical Science Award the course combines university-based learning designed to allow students to gain the knowledge and understanding-based competencies, plus work-based learning designed to enable students to gain the practical competencies required by the HPC Standards of Proficiency. The curriculum of the work-based learning will be tailored to the laboratory in which students undertake their training ensuring that the programme addresses the requirements of both the IBMS and HPC.

A further distinctive feature of this course is that during the placement year, students attend University for workshops. These workshops are delivered by Professionals in Practice and are integrated with the placement year to reinforce basic lab skills e.g. pipetting and setting up a microscope, etc. They will also assist you in developing your understanding of the importance of a number of different laboratory topics e.g. Health and Safety, Quality Control/Quality Assurance and Accident Reporting. You will receive a Certificate of Attendance for each workshop and completion of a reflective report about the workshop can be used as evidence for your portfolio.

The Biomedical Science degree course has been designed to allow students to follow a number of different *routes*, or ways of studying. These degrees are accredited by the Institute of Biomedical Science (IBMS). Before working in the profession, all Biomedical Scientists are required to be registered with the Health Professions Council (HPC). An accredited Biomedical Science Honours degree (but **not** a non-honours or aegrotat degree) **and** successful completion of the IBMS Registration Training Portfolio for the Certificate of Competence are prerequisite for entry onto the Register. It is vitally important for you to recognise that **ONLY** students who have followed and successfully completed all elements of the Applied Route will fulfil this requirement, whereas those who have followed the Specialist Route will need to undertake further training within an approved pathology laboratory to complete the Training Portfolio.

The four main routes are listed and explained below:

Specialist routes

4.1 BSc (Hons) Biomedical Science (full-time)

Students study six 20-credit modules per year and finish their degree in three years. **Further training** in an NHS laboratory will be necessary to support completion of the Registration Training Portfolio for those wishing to practise as a Biomedical Scientist. This course is accredited by the Institute of Biomedical Science (IBMS). The course is **NOT** an HPC approved course.

4.2 BSc (Hons) Biomedical Science (Sandwich) (full-time)

Students study six 20-credit modules per year and spend a year on a laboratory-based industrial placement after their second year before returning to complete their studies at University. They finish their degree in four years. While **this placement does not support completion of the IBMS Registration Training Portfolio**, it does provide an excellent opportunity for students to gain valuable laboratory experience within laboratories in industry. Students must register for and pass an additional sandwich placement module. This course is accredited by the Institute of Biomedical Science (IBMS). The course is **NOT** an HPC approved course.

4.3 BSc (Hons) Biomedical Science (part-time) work based

Students study the equivalent of four 20-credit modules per year along with workbased modules. This enables students to complete the degree within five years while spending one day a week at the University on day-release.

Those who are unable to study full-time but are not employed in an NHS laboratory may be able to study for the BSc (Hons) Biomedical Science degree on a part-time basis. This should be discussed with the Award Team in advance. This course is accredited by the Institute of Biomedical Science (IBMS). The course is **NOT** an HPC approved course.

Applied route

4.4 BSc (Hons) Applied Biomedical Science (full-time)

Students study six 20-credit modules per year and spend a year on placement in an NHS laboratory after their second year during which they gain work experience and work towards completion of their IBMS Registration Training Portfolio. They then return to complete their studies at University. They finish their degree in four years. Successful completion of the Training Portfolio affords eligibility to apply for HPC registration. Students must register for and pass an additional integrated placement module. This course is accredited by the Institute of Biomedical Science (IBMS). The BSc (Hons) Applied Biomedical Science (full-time) course is an HPC approved programme.

5. Aims of the specialist and applied courses

The specialist degree programmes aim to:

- understand the factors and processes which contribute to human health and disease
- demonstrate their knowledge of human form and function, physiology, biochemistry, molecular pathology and the biology and investigation of disease
- apply their knowledge to critical analysis, interpret and critically evaluate biomedical data
- demonstrate laboratory skills and knowledge of planning and designing experiments and execute independent research based on data generation in challenging learning opportunities to take responsibility for their own learning, foster a spirit of enquiry, and develop attitudes and skills to underpin independent, life-long learning
- to take responsibility for their own learning, foster a spirit of enquiry, and develop attitudes and skills to underpin independent, life-long learning
- use effectively transferable skills in communication, IT, numeracy and data analysis, team working, critical thinking, setting tasks, problem solving and self-management and achieve to the maximum of their ability
- exercise professionalism, personal responsibility and decision-making as needed for employment or further studies and in situations requiring the exercise of professionalism, personal responsibility and decision-making
- demonstrate graduate attributes of Digital Literacy, Knowledgeable and Enterprising, and Global Citizenship.

In addition to the above, the Applied Biomedical Science degree programme aims to:

- integrate employer and professional body requirements, maximise vocational relevance and provide opportunities for learning in the placement workplace
- train and prepare students on placement for eligibility to apply for HPC Registration
- enable students to complete the Registration Portfolio in placement

Through the course of study students have the opportunity to:

- (a) develop scientific, intellectual and practical skills which provide them with the abilities to plan and carry out laboratory investigations in biomedical science and to evaluate evidence underpinning practice.
- (b) develop subject knowledge and understanding in the core areas of Biomedical Science whilst demonstrating the acquisition of the technical skills and competencies required for registration with the Health Professions Council.

The courses offer a multidisciplinary approach to the study of the human body in health and disease. Students develop expertise in normal human function and the development of diseases at molecular, cellular, tissue, organ and whole organism level. Graduates are equipped with the knowledge and skills that support research and professional practice in biomedical science, combined with a detailed understanding of diagnosis, treatment and prevention of diseases.

In order to benefit from your course, you will need to attend and participate in lectures, tutorials, practicals and workshops you will need to make use of the available technology-supported learning, you will need to spend time in guided and self-managed study, and you will need to make use of **feedback from assessments**. You will be required to apply the knowledge you have learned earlier in your course to solving problems, and to identifying relations between old and new knowledge; this will particularly be a feature of the final year honours project.

6. Blended Learning

The University has adopted a Blended Learning Strategy which promotes the integration of technology supported learning across all modules. The University believe this will improve the employability and, digital literacy, of our students and the effectiveness and efficiency of our learning and teaching practice.

There are six blended learning entitlements and these have been incorporated in the Biomedical Science and Applied Biomedical Science courses.

1. have access where possible to an electronic copy of all lecturer-produced course documents e.g. module guides, assessment briefs, presentations, handouts, and reading lists
2. formative assessment opportunities on line with appropriate meaningful electronic assessment feedback
3. have opportunities to collaborate on line with others in their learning cohort
4. have the opportunity to participate in electronic Personal Development Planning (ePDP)
5. submit all appropriate assessments online
6. opportunities to engage in interactive learning during all face to face sessions

7. Graduate Attributes

There are three Graduate Attributes:-

1. Digital Literacy
2. Knowledgeable and Enterprising
3. Global Citizenship

which have been integrated into the Biomedical Science and Applied Biomedical Science courses.

8. Professional Learning Mentors

The curriculum for the Biomedical Science and Applied Biomedical Science courses must remain relevant to current practice. One of the ways in which this is ensured is by having a Professional Learning Mentor for modules. The role of the Professional Learning Mentors is to review the content of modules to ensure that the content of their modules(s) remains relevant to current practice. Each Professional Learning Mentor is also a Professional in Practice within a hospital laboratory.

Another way in which the curriculum remains relevant to current practice is by Professionals in Practice delivering lectures throughout the Biomedical Science and Applied Biomedical Science courses.

9. Award Titles (*final and interim*)

Title (final award title)	BSc (Hons) Applied Biomedical Science BSc (Hons) Biomedical Science (Sandwich) BSc (Hons) Biomedical Science BSc (Hons) Biomedical Science (workbased)	Pathway Code	DS/ABM1 DS/ABM3 DS/BIOMED
InterimTitles	BSc Medical Laboratory Science DipHE Medical Laboratory Science CertHE Medical Laboratory Science		
Duration	3 year Full-time - BSc (Hons) Biomedical Science 5 year Part-time - BSc (Hons) Biomedical Science 4 year Full-time - BSc (Hons) Biomedical Science (Sandwich) 4 year Full-time - BSc (Hons) Applied Biomedical Science 5 year Part-time - BSc (Hons) Biomedical Science (workbased)		

10. Admission Requirements

10.1 BSc (Hons) Biomedical Science

- 240 UCAS points including a science subject at A-level or equivalent.
- GCSE English and Maths at grade C or above.

10.2 BSc (Hons) Biomedical Science (sandwich)

Students wishing to undertake a one-year industrial (sandwich) placement as part of their specialist degree should contact the Award Leader for the sandwich route at

the beginning of their second year of study. No guarantee can be made to provide placements for all students who wish to follow this mode of study, but every effort will be made by the Placement Manager to assist in finding a placement. Students must register their interest in a sandwich placement with the Placement Manager by 30th September of year 2.

10.3 BSc (Hons) Applied Biomedical Science

Candidates will only be eligible to apply to enter the Applied Biomedical Science degree course after successful completion (achievement of 120 credits) of level 1 of the BSc (Hons) Biomedical Science degree course. Offers of a placement are made following detailed consideration of each individual application by both the University and workplace tutors. Placements are **UNPAID** i.e. there is **NO FUNDING BURSARY** during a placement. Placements are for one year, commencing after the completion of year 2 of study. Students then return to the University to complete their third year of study. Further details on how to apply and prepare for placements are available in the **Information Booklet for BSc (Hons) Applied Biomedical Science (full-time)** and also in the **Placement Handbook** or by contacting **Dr Jan Martin** (Placement Manager).

10.31 Language entry requirement for international students for BSc (Hons) Applied Biomedical Science

The University accepts an IELTS score of 6.0 for entry to its degree courses.

However, in order to graduate with a BSc (Hons) Applied Biomedical Science degree you **must** be able to meet the English language requirements of the HPC Standards of Proficiency (1b.3).

In order to meet this HPC Standard of Proficiency you **must** have achieved level 7 in the IELTS test.

Therefore if you entered the University of Wolverhampton with an IELTS score of below level 7, you will be required to complete **both** of the following:

- study an extra module. This module is EG3005 Advanced IELTS Preparation. This module focuses specifically on the skills that you will require for the IELTS test
- achieve level 7 or above in an IELTS test.

N.B. You will **not** be able to graduate with a BSc (Hons) Applied Biomedical Science (full-time) degree until you have achieved level 7 or above in an IELTS test.

10.32 Placement

The BSc (Hons) **Applied Biomedical Science** (full-time) degree is a four-year course which involves the successful completion of an approved training programme including attendance at 5BM032 Biomedical Science Work Based Training Module. Full-time students undertake a one-year supervised work based training placement in an NHS laboratory. Training is undertaken within an NHS laboratory which has received approval for training from the Institute of Biomedical Science (IBMS). Work-based training in an appropriate clinical laboratory can allow completion of the Institute of Biomedical Science (IBMS) Certificate of Competence Registration Portfolio. The Institute of Biomedical Science (IBMS), as the professional body for biomedical scientists, verifies professional competence against the Health Professions Council's *Standards of Proficiency*. The Institute then awards a Certificate of Competence that can be presented as part of an application to the Health Professions Council (HPC) to register as a biomedical scientist.

The University accepts no obligation to provide placements for all students who wish to follow this mode of study, although every effort will be made by the Placement Manager to assist in finding a placement.

Choices for Placement

The delivery of placements is supported by several hospitals throughout the West Midlands region. Students have previously undertaken placements in the following hospitals:-

- Alexandra Hospital, Redditch
- Children's Hospital, Birmingham
- City Hospital, Birmingham
- Goodhope Hospital, Birmingham
- Heartlands Hospital, Birmingham
- New Cross Hospital, Wolverhampton
- Princess Royal Hospital, Telford
- University of Birmingham Medical School, Clinical Immunology
- Walsgrave Hospital, Coventry
- Women's Hospital, Birmingham
- Worcestershire Royal Hospital, Worcester.

Students need to be aware that selection for placements is very competitive.

Before taking up their placement, students will be given guidance as to the requirements of the placement training year and the details of the Registration Training Portfolio. More information is available in the Booklet for BSc (Hons) Applied Biomedical Science (full-time) and in the Placement Handbook. Both are available on WOLF for the 5BM032 Biomedical Science Work Based Training module. Alternatively you can contact **Dr Jan Martin** (Placement Manager).

Students should normally have achieved 120 credits at level 4 and at least 100 level 5 credits before permission is granted to undertake a placement. Successful

completion of the placement and Registration Training Portfolio will result in an Applied Biomedical Science Award on successful completion of their degree.

During the placement training period, students will normally be visited at least twice by a visiting tutor. The tutor will make a report after each visit and the training period will be monitored and supervised by appropriate personnel from both the training laboratory and the University.

11 Registration with the HPC

Biomedical Scientist is a legally protected title so you must be registered with the Health Professions Council (HPC), the profession's regulator in order to work as a Biomedical Scientist.

Registration requires completion of the following:

1. an academic programme
2. a period of training in an Institute approved laboratory to develop your practical skills and ensure your competence for patient safety.

The BSc (Hons) Biomedical Science degree, whether studied as a full-time, part-time or sandwich route allows you to complete the academic programme only. These routes do **not** have HPC approval and therefore graduates are NOT eligible to apply to the HPC register upon completion of the programme.

The BSc (Hons) Applied Biomedical Science degree course allows you to complete **BOTH** the academic programme and the period of training. It is only the BSc (Hons) Applied Biomedical Science (full-time) degree course which has HPC approval and therefore graduates from this programme would be eligible to apply for HPC registration.

12. Interim and Transfer Awards

UNDERGRADUATE TAUGHT REGULATIONS 20 CREDIT STRUCTURE 2010 onwards (<http://www.wlv.ac.uk/polsregs>) specifies the Award Credit Requirements in SECTION H Single Honours Bachelors Degrees (http://www.wlv.ac.uk/PDF/aca_acregs_201011_20crdt_h_singlhons.pdf)

Section H.7 Award Credit Requirements is reproduced below

H7 Award Credit Requirements

H.7.1 To be eligible for an award having completed a course governed by Section H of the Regulations, a student will need to have met the following credit requirements:

Qualification	Total Credits required	Level 4	Level 5	Level 6
<i>Honours Degree</i>	<i>360</i>	<i>Normally 120</i>	<i>240 of which a minimum of 120 must be at level 6</i>	
<i>Degree</i>	<i>300</i>	<i>Normally 120</i>	<i>180 of which a minimum of 60 must be at level 6</i>	

H.7.2 To be eligible for an exit award from courses governed by Section H a student will need to have met the requirements contained in Section H.8 and the following credit requirements:

Exit Qualification	Total Credits required	Level 4	Level 5	Level 6
<i>Diploma of Higher Education</i>	<i>240</i>	<i>Normally 120</i>	<i>Minimum 120 at level 5/6</i>	
<i>Certificate of Higher Education</i>	<i>120</i>	<i>Minimum 120 at level 4/5</i>		<i>None</i>
<i>University Statement of Credit</i>	<i>20</i>	<i>Minimum 20</i>	<i>None</i>	<i>None</i>

Interim Awards

Where it is appropriate for students to receive an interim award, it is important that the title of the interim award does not refer to a protected title. Therefore the titles of interim awards that are available from the BSc (Hons) Applied Biomedical Science (full-time) are as follows:-

- BSc Medical Laboratory Science
- DipHE Medical Laboratory Science
- CertHE Medical Laboratory Science

Transfer Award

BSc (Hons) Applied Biomedical Science (full-time) students who fail to complete the 5BM032 Biomedical Science Work Based Training module will be **transferred** to the BSc (Hons) Biomedical Science course. In this circumstance this is not an interim award but is a transfer onto a separate programme. The BSc (Hons) Biomedical Science course does **NOT** have HPC approval and therefore students who are transferred from BSc (Hons) Applied Biomedical Science to BSc (Hons) Biomedical Science are **NOT** eligible to apply to the HPC register upon completion of the programme.

12. 1 Reference points

The national reference points for your course include:

- QAA Subject Benchmarks for Biomedical Sciences (2007)
- QAA Framework for Higher Education Qualifications (FHEQ): The framework for higher qualifications in England, Wales and Northern Ireland. Qualification descriptors for Intermediate (I) and Honours (H) levels. (October 2008)
- QAA Foundation Degree qualification benchmark (2010)
- IBMS Criteria and Requirements for the Accreditation and Re-accreditation of BSc (Hons) degrees in Biomedical Science
- NHS Modernising Sci Careers Programme: BSc (Hons), in Healthcare Science (Life Science)(Oct 2010)The Equality Act (2010)
- Special Education Needs Disability Act (2001)

13. The Health Professions Council (HPC)

The information in this section has been adapted from the HPC website which is at <http://www.hpc-uk.org/>

The job title Biomedical Scientist is protected by Law and before you can work as a Biomedical Scientist you must be registered with the Health Professions Council (HPC). The HPC is a regulator which keeps a register of health professionals who meet their standards.

The Standards of Proficiency are the professional standards which every registrant must meet in order to become registered, and must continue to meet in order to maintain their registration.

The HPC Standards of conduct, performance & ethics sets out the standards that the HPC expects from the health professionals that they register. Students need to be aware that these standards also apply to people who are applying to become registered and therefore students are required to understand the implications of the HPC Standards of conduct, performance & ethics and be familiar with the HPC guidance on conduct and ethics for students.

Students also need to be familiar with the HPC standards for the good character of health professionals and the standards for the health of the health professionals on the HPC register.

HPC website	http://www.hpc_uk.org/
HPC Student information	http://www.hpc-uk.org/apply/students/
HPC Standards of proficiency for Biomedical Scientists	http://www.hpcuk.org/assets/documents/100004FDSstandards_of_Proficiency_Biomedical_Scientists.pdf
HPC Standards of conduct, performance and ethics	http://www.hpc-uk.org/publications/standards/index.asp?id=38
HPC Guidance on conduct and ethics for students	http://www.hpc-uk.org/assets/documents/1000266BGuidanceonconductandethicsforstudents-consultationdocument.pdf
HPC Guidance on character	http://www.hpc-uk.org/aboutregistration/standards/character/
HPC Guidance on Health	http://www.hpc-uk.org/aboutregistration/standards/health/

14. Professional, Statutory and Regulatory Bodies (PSRB)

14.1 The Institute of Biomedical Science (IBMS)

The Institute of Biomedical Science (IBMS) is the professional body for biomedical scientists; the information in this section has been adapted from the IBMS website which is at <http://www.ibms.org/>

As a student who is studying on an accredited biomedical science degree course, you are entitled to free membership of the IBMS.

There are several benefits of IBMS student membership including:

- The Biomedical Scientist (monthly) - the major magazine for news and job adverts in the profession
- British Journal of Biomedical Science (quarterly) - largest circulation of all the journals covering biomedical science
- The President's Prize - any university participating in the scheme can award this prize
- Access to the Continuing Professional Development (CPD) scheme designed to help members improve and extend their scientific knowledge and skills
- Reduced fees at the IBMS Congress and other events
- Access to the members' area of the IBMS website.
- ...and more

Free student membership is available until December during the year in which someone joins the IBMS, after which a normal subscription fee is required. You can download an application form and Free Associate membership brochure from the IBMS website. Please note that up to one year's free Associate membership is only available once per individual.

14.2 Medical Education England

The information in this section has been adapted from the Medical Education England (MEE) website which is at <http://www.mee.nhs.uk/>

MEE is an Independent Advisory Non-Departmental Public Body for medical education and training and workforce planning.

One of the MME most recent key roles was to provide professional advice on the development of the "Modernising Scientific Careers (MSC)" programme - a programme to introduce a new simplified healthcare science training and career pathway; supported by appropriate education programmes, which will ensure that healthcare science staff have the skills required to meet the needs of patients. For further guidance on the new career pathway and structure for the healthcare science workforce please go to the MSC website at:

http://www.dh.gov.uk/en/Aboutus/Chiefprofessionalofficers/Chiefscientificofficer/DH_086661

15. Course Structures

15.1 BSc (Hons) Applied Biomedical Science Course Structure

Level 4			
Semester 1		Semester 2	
C	4BM011 Introduction to Biomedical Science	20 credits	
C	4PY013 Molecular Basis of Life	20 credits	
C	4BM003 Study and Professional Skills	20 credits	C
			4BM005 Microbes and Immunity
			20 credits
C	4BM004 Human Structure and Function	20 credits	C
			4BM006 Disease Biology and Public Health
			20 credits
Level 5			
Semester 1		Semester 2	
C	5BM008 Molecular Pathology	20 credits	
C	5BM009 Integrated Physiology	20 credits	
C	5BM004 Biology and Investigation of Disease 1	20 credits	C
			5BM006 Biology and Investigation of Disease 2
			20 credits
C	5BM005 Biomedical Science Practicals 1	20 credits	C
			5BM007 Biomedical Science Practicals 2
			20 credits
Level 5 Placement Year			
Semester 1		Semester 2	
C	5BM032 Biomedical Science Work Based Training Module	40 credits	
Level 6			
Semester 1		Semester 2	
C	6BM014 Honours Research Project	40 credits	
C	6BM006 Cellular Pathology & Clinical Genetics	20 credits	C
			6BM010 Medical Microbiology
			20 credits
C	6BM008 Haematology & Transfusion Science	20 credits	C
			6BM009 Clinical Biochemistry & Clinical Immunology
			20 credits

15.2 BSc (Hons) Biomedical Science

Level 4			
Semester 1		Semester 2	
C	4BM011 Introduction to Biomedical Science	20 credits	
C	4PY013 Molecular Basis of Life	20 credits	
C	4BM003 Study and Professional Skills	20 credits	C 4BM005 Microbes and Immunity
			20 credits
C	4BM004 Human Structure and Function	20 credits	C 4BM006 Disease Biology and Public Health
			20 credits
Level 5			
Semester 1		Semester 2	
C	5BM008 Molecular Pathology	20 credits	
C	5BM009 Integrated Physiology	20 credits	
C	5BM004 Biology and Investigation of Disease 1	20 credits	C 5BM006 Biology and Investigation of Disease 2
			20 credits
C	5BM005 Biomedical Science Practicals 1	20 credits	C 5BM007 Biomedical Science Practicals 2
			20 credits
Level 5 Yearlong Placement (Sandwich students only)			
Semester 1		Semester 2	
C	5BM031 Biomedical Science Sandwich Placement	40 credits	
Level 6			
Semester 1		Semester 2	
C	6BM014 Honours Research Project	40 credits	
C	6BM006 Cellular Pathology and Clinical Genetics	20 credits	C 6BM010 Medical Microbiology
			20 credits
C	6BM008 Haematology and Transfusion Science	20 credits	C 6BM009 Clinical Biochemistry and Clinical Immunology
			20 credits

15.3 BSc (Hons) Biomedical Science (workbased))

Year 1

Semester 1			Semester 2		
C	4PY013 Molecular Basis of Life				20 credits
C	4BM003 Study and Professional Skills	20 credits	C	4BM013 Microbes and Immunity (Work based)	20 credits
			C	4BM012 Human Health and Disease (Work based)	20 credits

Year 2

Semester 1			Semester 2		
C	4BM007 Introduction to Laboratory Science				20 credits
C	5BM004 Biology and Investigation of Disease 1	20 credits	C	5BM006 Biology and Investigation of Disease 2	20 credits
C	4BM004 Human Structure and Function	20 credits	C		

Year 3

Semester 1			Semester 2		
C	5BM008 Molecular Pathology				20 credits
C	5BM009 Integrated Physiology				20 credits
C	5BM027 Workbased Techniques for Investigating Disease 1	20 credits	C	5BM028 Workbased Techniques for Investigation Disease 2	20 credits

Year 4

Semester 1			Semester 2		
C	6BM006 Cellular Pathology and Clinical Genetics	20 credits	C	6BM010 Medical Microbiology	20 credits
C	6BM008 Haematology and Transfusion Science	20 credits	C	6BM009 Clinical Biochemistry and Clinical Immunology	20 credits

Year 5

Semester 1			Semester 2		
C	6BM014 Honours Research Project				40 credits

16. Timetables

Please note this timetable is provisional and is subject to change.

16.1 Level 4 timetable (full-time)

Semester 1

	Monday	Tuesday	Wednesday	Thursday	Friday
am		4BM003 Study and Professional Skills			4BM011 Introduction to Biomedical Science (9-11am) 4BM007 Introduction to Laboratory Science (9-11am)
pm	4BM004 Human Structure and Function	4PY013 Molecular Basis of Life			
ev					

Semester 2

	Monday	Tuesday	Wednesday	Thursday	Friday
am		4BM006 Disease Biology and Public Health	4BM005 Microbes and Immunity practicals		4BM011 Introduction to Biomedical Science (9-11am) 4BM007 Introduction to Laboratory Science (9-11am)
pm	4BM005 Microbes and Immunity	4PY013 Molecular Basis of Life			
ev					

- You should expect to spend around 6 hours per week studying on your own for each module.

16.2 Level 5 timetable (full-time)

Semester 1

	Monday	Tuesday	Wednesday	Thursday	Friday
am	5BM004 Biology and Investigation of Disease 1	5BM005 Biomedical Science Practicals 1	5BM008 Molecular Pathology (9-11am) 5BM009 Integrated Physiology (11-1pm)		
pm					
ev					

Semester 2

	Monday	Tuesday	Wednesday	Thursday	Friday
am	5BM006 Biology and Investigation of Disease 2		5BM008 Molecular Pathology (9-11am) 5BM009 Integrated Physiology (11-1pm)		
pm					5BM007 Biomedical Science Practicals 2
ev					

Please note the following:-

- You should expect to spend around 6 hours per week studying on your own for each module.

16.3 Level 6 timetable (full-time)

Semester 1

	Monday	Tuesday	Wednesday	Thursday	Friday
am				6BM008 Haematology & Transfusion Science	
pm			*6BM014 Honours Research Project	6BM006 Cellular Pathology and Clinical Genetics	
ev					

Semester 2

	Monday	Tuesday	Wednesday	Thursday	Friday
am				6BM009 Clinical Biochemistry & Clinical Immunology	
pm			*6BM014 Honours Research Project	6BM010 Medical Microbiology	
ev					

*This is a research module and will be timetabled by arrangement with the research supervisor.

Please note the following:-

- Students will be required to sign into laboratories when undertaking a project work.
- You should expect to spend around 6 hours per week studying on your own for each module.

16.4 BSc Biomedical Science (Workbased) Part time Year 1 timetable

Please note this timetable is provisional and is subject to change.

Semester 1

	Monday	Tuesday	Wednesday	Thursday	Friday
am		4BM003 Study and Professional Skills			
pm		*4PY013 Molecular Basis of Life			

Semester 2

	Monday	Tuesday	Wednesday	Thursday	Friday
am	***4BM012 Human Health and Disease (Long Distance)	**4BM013 Microbes and Immunity (Long Distance) Practical class			
pm	***4BM013 Microbes and Immunity (Long Distance)	*4PY013 Molecular Basis of Life			
eve		*4PY013 Molecular Basis of Life Practical class			

* 4PY013 Molecular Basis of Life

This module has additional practical classes that are provisionally shown on the timetable above. These can be scheduled at different times e.g. 4PY013 has practical classes that are expected to be held on Tuesday evenings from 17.30-20.30.

** 4BM013 Microbes and Immunity (Workbased)

This module has additional practical classes that are provisionally shown on the timetable above. These can be scheduled at different times e.g. 4BM013 has practical classes that are expected to be held on Tuesday mornings. You will attend university for 5 practical sessions (dates and time TBC). Otherwise the module will be delivered using the WOLF topic and occasional tutorials (dates and time).

*** 4BM012 Human Health and Disease (workbased) & 4BM013 Microbes & Immunity

These modules are student centred modules taken at a distance; However students are expected to attend scheduled class sessions at the University as appropriate. These modules can be scheduled at different times to suit the students. These modules will be

delivered using the WOLF topic and occasional tutorials (dates and time TBC).

16.5 BSc Biomedical Science (Workbased) Part time Year 2 timetable

Semester 1

	Monday	Tuesday	Wednesday	Thursday	Friday
am	5BM004 Biology and Investigation of Disease 1				4BM007 Introduction to Laboratory Science
pm	4BM004 Human Structure and Function				
eve					

Semester 2

	Monday	Tuesday	Wednesday	Thursday	Friday
am	5BM006 Biology and Investigation of Disease 2				4BM007 Introduction to Laboratory Science
pm					
eve					

16.6 BSc Biomedical Science (Workbased) Part time Year 3 timetable

Semester 1

	Monday	Tuesday	Wednesday	Thursday	Friday
am			5BM008 Molecular Pathology (9-11) 5BM009 Integrated Physiology (11-1)		
pm			*5BM027 Workbased Techniques for Investigating Disease 1 (work based)		

Semester 2

	Monday	Tuesday	Wednesday	Thursday	Friday
am			5BM008 Molecular Pathology (9-11) 5BM009 Integrated Physiology (11-1)		
pm			*5BM028 Workbased Techniques for Investigating Disease 2 (work based)		

***5BM027 Workbased Techniques for Investigating Disease 1**

***5BM028 Workbased Techniques for Investigating Disease 2**

Weekly attendance at university for these modules is not necessary as this module will be carried out in the workplace with occasional tutorials being held to support the module. The workbased practical module element of this module will be timetabled by arrangement with the laboratory supervisor.

16.7 BSc Biomedical Science (Workbased) Part time Year 4 timetable

Semester 1

	Monday	Tuesday	Wednesday	Thursday	Friday
am				6BM008 Haematology and Transfusion Science	
pm				6BM006 Cellular Pathology and Medical Genetics	

Semester 2

	Monday	Tuesday	Wednesday	Thursday	Friday
am				6BM009 Clinical Aspects of Biochemistry and Immunology	
pm				6BM010 Medical Microbiology	

16.8 BSc Biomedical Science (Workbased) Part time Year 5 timetable

Semester 1

	Monday	Tuesday	Wednesday	Thursday	Friday
am	*6BM014 BSc Honours Project (work based)				
pm	*6BM014 BSc Honours Project (work based)				

Semester 2

	Monday	Tuesday	Wednesday	Thursday	Friday
am	*6BM014 BSc Honours Project (work based)				
pm	*6BM014 BSc Honours Project (work based)				

***6BM014 BSc Honours Project (work based)**

This is a workbased practical research project module and will be timetabled by arrangement with the laboratory supervisor. Weekly attendance at university for these modules is not necessary as this module will be carried out in the workplace with occasional tutorials being held to support the module.

17. Course Management

Course Leader	Dr Ruth Shiner (Head of Department) Dr Jan Martin (Course Leader and Placement Manager for BSc (Hons) Applied Biomedical Science) Mrs Sara Smith (HPC Registered Programme Adviser for BSc (Hons) Applied Biomedical Science) Dr Petula Nurse (Student Manager)
Email	r.a.shiner@wlv.ac.uk j.martin@wlv.ac.uk s.smith2@wlv.ac.uk p.nurse@wlv.ac.uk

17.1 Student/Staff Liaison and Student Representatives

The Course Team holds at least two meetings per year with student representatives. Elections of student representatives are organized early in the academic year and you should ensure that you know who your currently elected representative is. Student representatives raise issues for discussion at the Committee and other students should inform their representative about items they want included. The aim of these meetings is to identify both good practice and problems. We attempt to resolve the problems by deciding on what action to take and the outcomes are reported in the notes of the meeting, which are posted on notice boards and also on the course WOLF pages. We can only help you with your problems if we know they exist. Please use your representatives.

These committees are the main avenue for you to influence the operation and development of the courses and you are therefore encouraged to participate as much as possible, either directly as a student elected member, or indirectly via your elected member. Training for student representatives is available from the Students' Union.

If you have an academic or personal problem let us know as soon as possible. Your personal tutor has an important role as they are familiar with the structure and regulations of the award and will advise you. If in doubt, do not hesitate to consult your tutor, the course leader or the Head of Department of Biomedical Science and Physiology.

17.2 Student Induction

All new and returning students need to attend a School induction programme, the majority of which take place during **Welcome Week**. Details are available via your e:vision account and on the University website.

17. 3 Staff involved with the Programme

Name	Title	e-mail
Dr Ruth Shiner	Head of Department, Principal Lecturer in Physiology	r.a.shiner@wlv.ac.uk
Dr Paul Barrow	Senior Lecturer in Physiology	p.a.barrow@wlv.ac.uk
Dr Gillian Condé	Senior Lecturer in Applied Human Physiology	g.l.conde@wlv.ac.uk
Professor John Darling	Professor of Biomedical Science and Dean of SAS	J.Darling@wlv.ac.uk
Dr Simon Dunmore	Senior Lecturer in Clinical Biochemistry	S.Dunmore@wlv.ac.uk
Dr Daron Fincham	Senior Lecturer Biochemistry / Forensics	d.fincham@wlv.ac.uk
Dr Janine Fletcher	Senior Lecturer in Human and Clinical Physiology	j.x.fletcher@wlv.ac.uk
Dr Peter Griffiths	Senior Lecturer in Anatomy and Developmental Physiology	p.j.griffiths@wlv.ac.uk
Dr Ken Kenward	Senior Lecturer in Microbiology	m.a.kenward@wlv.ac.uk
Dr Martin Khechara	Senior Lecturer in Microbiology	MPKhechara@wlv.ac.uk
Dr Jan Martin	Principal Lecturer in Oncology and Cellular Pathology	J.Martin@wlv.ac.uk
Prof Paul Nelson	Professor in Immunology	P.N.Nelson@wlv.ac.uk
Dr Iain Nicholl	Senior Lecturer in Clinical Biochemistry and Genetics	I.Nicholl@wlv.ac.uk
Dr Petula Nurse	Associate Head of Department Principal Lecturer in Biomedical Science	P.Nurse@wlv.ac.uk
Dr Elizabeth O’Gara	Senior Lecturer in Medical Microbiology	E.OGara@wlv.ac.uk
Dr Shantha Perera	Senior Lecturer in Immunology and Medical Microbiology	S.A.Perera@wlv.ac.uk
Mrs Sara Smith	Senior Lecturer in Cellular Pathology	s.smith2@wlv.ac.uk
Dr James Vickers	Senior Lecturer in Haematology and Serology	J.Vickers@wlv.ac.uk
Donna Brown	Demonstrator in Biomedical Science	D.Brown@wlv.ac.uk
Mr Tom Masters	Demonstrator in Physiology	tom.masters@wlv.ac.uk

18. Learning, Teaching and Assessment

18.1 Integrated Placement

Students studying the Applied Biomedical Science course have the opportunity to undertake a placement in a hospital laboratory. During this placement students will develop their technical and personal skills within the work environment. They will have the opportunity to formally record the work-based competencies to support professional recognition and Health Professions Council (HPC) registration. A structured programme of training is followed within the NHS laboratory incorporating workshops held at the University to support specific areas and assist in supporting and monitoring student progress. University placement tutors and workplace training mentors work closely together to ensure that the training programme complements the academic studies undertaken by the student and reflects the requirements of the HPC, preparing the student for the workplace. Academic studies, coursework and the placement training programme together ensure that on completion of the award, students have addressed the learning outcomes and competencies required by both the HPC and Institute of Biomedical Science.

Students studying for the Applied Biomedical Science award will integrate their work-based experience with their academic studies through the partnership of workplace training mentor and university workplace tutor. The University delivers "Training the Trainer" courses, undertakes regular visits to students at the workplace and offers workshops to support training. The support ensures that all those involved in supporting the student are provided with the information required to enable the laboratory training programme to complement and build upon the academic studies of each student.

18.2 Sandwich Students

Students studying the Biomedical Science (sandwich) course have the opportunity to undertake a placement in an industrial laboratory. They will undertake a programme of training which will be agreed at the beginning of the placement.

18.3 Exchange Details

For students on the Biomedical Science course there are exchange opportunities available. Details are available from the Exchange Co-ordinator at the International Centre (telephone 01902 32 2474) and from Dr James Vickers at SAS.

18.4 Professional Requirements

Anyone who wishes to be employed as a Biomedical Scientist within the NHS must be registered with the Health Professions Council. The requirements for registration are an accredited Biomedical Science degree and demonstration that individuals meet the standards that are set by the Health Professions Council for the profession. Demonstration of these competencies is achieved by successful completion of the Institute of Biomedical Science Registration Portfolio and award of the Certificate of Competence.

The practical training for the certificate may be undertaken following graduation for Biomedical Science students; however, it is incorporated into the Applied Biomedical Science award allowing graduates to be eligible to apply for HPC registration.

18.5 Health & Safety

During induction for year 1 semester 1 all students will have a Health and Safety Biomedical Science Master Class and School safety induction lecture.

Students will be expected to have the following items:

- Laboratory coat
- Science kit
- Indelible marker pen
- Safety goggles

18.6 Learning resources available at the University of Wolverhampton

The learning resources currently available to students in the Department of Biomedical Science and Physiology can be broadly broken down into two main categories consisting of online resources and offline resources. These combine to create a complete undergraduate blended learning environment that is available to all students enrolled on any programme of study in the Department.

The online resources available to students consist of web-based applications that provide essential information and support the student learning experience. The resources available include the main University of Wolverhampton website (<http://www.wlv.ac.uk>), online general and subject specific information, library catalogue searching and real-time assistance provided by the Learning Centre and library facility.

Resources also include web-based module specific learning and assessment material from the Wolverhampton Online Learning Framework (WOLF) and e- portfolio facilities through PebblePad allowing online collaboration and electronic submission of work. There are approximately 2,000 computers across the University for Staff and Students to use in

open access areas, school computer labs and Learning Centres. These facilities, along with wireless internet access provided by the 'Radiolan' network available in all university buildings including student accommodation, allow increasingly easy access to the various electronic resources as required. All of the online resources are also available to staff and students remotely from their home, place of work or indeed anywhere else there is an Internet connection.

The offline learning resources available to Biomedical Science students consist of the teaching facilities that comprise the infrastructure of University of Wolverhampton. These also include the equipment that provides for learning support within these spaces such as audio visual, information technology and laboratory equipment used in practical exercises and final year research projects. The offline learning resources available to students also include the University staff who administer the various Biomedical Science degree pathways who can be contacted via email or appointments made using the SAMS system.

For help and advice finding information in Biomedical Science contact the Harrison Learning Centre on City Campus.

Some shelfmarks for Biomedical Science books are:

Anatomy	611
Cell Biology	571.6
Haematology	616.15
Human Disease	616.07
Immunology	658.4038
Microbiology	579
Molecular genetics	572.8
Physiology	612
Transfusion	615.39

Applied Biomedical Science placement students will also have access to the hospital learning centre resources.

19 Employability and Your Personal Development Portfolio (PDP)

19.1 What is 'employability'?

'Employability' is concerned with the development of skills aimed at enhancing your employment prospects throughout your time here at the University of Wolverhampton. Developing specialist subject and academic knowledge is important for employers, but they also want to employ individuals who are able to:

- communicate effectively
- work in a team and have good interpersonal skills
- solve problems
- work on their own using their own initiative and are able to adapt to changing situations
- be self-confident

19.2 How will you develop your employment skills?

At the School of Applied Sciences we aim to provide you with the opportunity to develop these through the modules you will be studying. The assessments you do for your modules are designed to help you develop subject-specific skills through the research you undertake for the assignments. In addition, they are designed to help you develop other key skills such as written communication. Where you have formal presentations, this will build your self-confidence in addition to helping you develop your skills of verbal communication. Working as part of a team will develop vital group-work skills. Attending your classes regularly will further ensure that you have the opportunity to develop other skills.

Throughout your time at the University, you will develop and be able to demonstrate a number of skills, some of which are listed below:

- Working as part of a group
- Demonstrating teamwork skills and leadership skills
- Effective communication
- Written (via reports etc.)
- Oral (through formal presentations)
- Problem-solving
- IT skills (which include use of basic packages for word processing, spreadsheets, use of email etc.)
- Time management
- Punctuality (attending classes on time, etc.)
- Handing in assignments by the deadline

You may also be working part-time. The experience you gain within a work environment is a very worthwhile one and also helps you to develop key skills. This is another good way of developing skills which are valued by employers.

19.3 Career opportunities and future study

Biomedical science is a continually changing, dynamic profession with long-term career prospects including management, research, education and specialised laboratory work. UK Biomedical scientists are employed in National Health Service private sector laboratories but are also involved in other organisations such as the National Blood Authority which provides support to hospital blood banks and the Blood Transfusion Service. Biomedical scientists working for the Medical Research Council carry out research in the medical and biological sciences to help preserve health and combat and control disease.

Biomedical scientists are also employed in a variety of roles including the veterinary service, the Health and Safety Executive, university and forensic laboratories, pharmaceutical and product manufacturers, Her Majesty's Forces and various government departments.

There are also opportunities for biomedical scientists to use their training and skills in healthcare posts and projects around the world. They are involved in voluntary work in developing countries on behalf of international bodies such as the World Health Organisation and the Voluntary Service Overseas.

Biomedical science represents an opportunity to put scientific knowledge into practical use and perform a key role within medical healthcare that offers career satisfaction for many in the profession. Biomedical scientists learn skills and gain qualifications that can be transferred all over the UK and can be recognised worldwide.

20. Academic Regulations

This course adheres to the University's academic regulations for students undertaking an undergraduate degree. A full version of these regulations can be found on the University web site:

<http://www.wlv.ac.uk/polsregs>

These regulations govern your course and will be binding on you. It is therefore important that you read and become familiar with them.

21. HPC Regulations regarding External Examiner

External Examiners appointed to the BSc (Hons) Applied Biomedical Science (full-time) degree course must be HPC registered unless other arrangements have been agreed with the HPC.

22. Additional Information specific to your course: Prizes for Achievement

There are prizes available to reward outstanding performances by students during the course of their studies.

Paycare award

Awarded to the best Final Year student in Biomedical Science.

Paycare Charitable Trust Prize

Awarded to the best First and Second Year student in Biomedical Science.

Institute of Biomedical Science President's Prize

Awarded to the best Final year student in Biomedical Science

The Cell Pathology Prize

Awarded to the best student on the module entitled "Cellular Pathology and Clinical Genetics"

The Douglas Kimpton Memorial Prize

Awarded to the best part-time student

The RIHS Prize

Awarded for the best honours project report

Section 2: School-Specific Information

23. SCHOOL OF APPLIED SCIENCES STUDENT CHARTER

The University is a community of learning; each and every member, be they staff or students, have responsibilities to that community as well as to themselves. All students of the University have the right to study in an environment that promotes success. This means that no one should be distracted by the inconsiderate behaviour of others, for example by people who arrive late, or talk in lectures or the learning centre.

In order to help you achieve your objectives with us, we will strive to provide:

- effective impartial advice and guidance
- an effective introduction to the University, the School of Applied Sciences and your chosen course
- a welcoming environment with quiet places to study
- appropriate resources including books and computing resources
- qualified and professional tutors and staff
- stimulating and well planned learning opportunities
- well-defined and appropriate programmes of study
- opportunities to plan and review progress with tutors and student support workers
- access to learning support
- access to confidential counselling and careers advice

We will aim to ensure that

- timely and appropriate feedback will be provided on assessments
- you have a personal tutor
- you can book an appointment with your tutor using the on-line booking system
- you will have access to the information you need to progress on your course e.g. each module you study will be accompanied by a module guide, similarly your award / pathway will have a guide or handbook

The University expects and needs you to:

- make regular use of the electronic systems provided for your use e.g. e-Mail, e-Vision, WOLF and the student appointments system. If you do not make use of these resources you cannot perform well.
- attend regularly and punctually, this means for example, that you should not enter a teaching room after the session has started or miss appointments you have made to see staff.
- give in all your assessments on time (or they will not be marked)
- show courtesy and respect to staff and other students, this means for example, that cell phones should be turned off in all teaching sessions.
- ensure that you understand the requirements of your award / pathway
- ensure that you are aware of the requirements of each module you are studying and are aware which sessions to attend and what the assessment procedures are
- respect and abide by University Regulations, e.g. those governing Equal Opportunities Policy, ID Cards, quiet areas
- bring all the personal equipment that you require to classes / workshops
- show consideration to others by listening attentively and participating in class activities
- keep your tutor informed if you have personal problems that affect your work; if these problems make it necessary to seek extensions, to do so before the deadline
- identify for yourself what constitutes academic misconduct such as plagiarism and make every effort to avoid it.
- use the Student Support Office (Room MA104) to get quick answers to your queries without hunting for a lecturer
- seek approval for and confirm any change of programme within the deadlines
- inform the University when your address or other contact details change
- follow Health and Safety guidelines in laboratory and fieldwork settings
- behave appropriately as an ambassador for the University when working off campus

24. Student Support



We are keen to ensure that you have a fulfilling and productive time studying with us. Part of this experience in Higher Education involves taking a much greater responsibility for your studies than you may have done previously in your education. You will be expected to study independently, and to make sure that you are enrolled on the right modules and attend the appropriate classes. In order to facilitate this we operate a system of student support that you can turn to in the event of a problem or query.

Most information regarding your course of study can be accessed via the University electronic system, **e-vision**. You will be trained in using this system when you arrive. If however you have a query that cannot be resolved on-line, the School of Applied Sciences operates the **SAS Student Support Office**, which is staffed regularly throughout the week. You can drop in at this information point to ask questions about your course and modules. All students are allocated a personal tutor from the academic staff; you will be introduced to your tutor when you arrive at the University. You are required to meet with your Personal Tutor on at least 3 occasions during the year and attendance at these tutorials will be logged.

Alternatively, there is a central University Registry Office, called **Here-2-Help**, where you can also obtain advice about your course. This is where you hand in your assessed work. It is situated in MD building next door to the Learning Centre.

Further information is available electronically, via the University web site, the Wolverhampton On-Line Learning Framework (**WOLF**), and an interactive student support system known as **Pebble-Pad**. The Learning Centre also has a range of sources of academic student support.

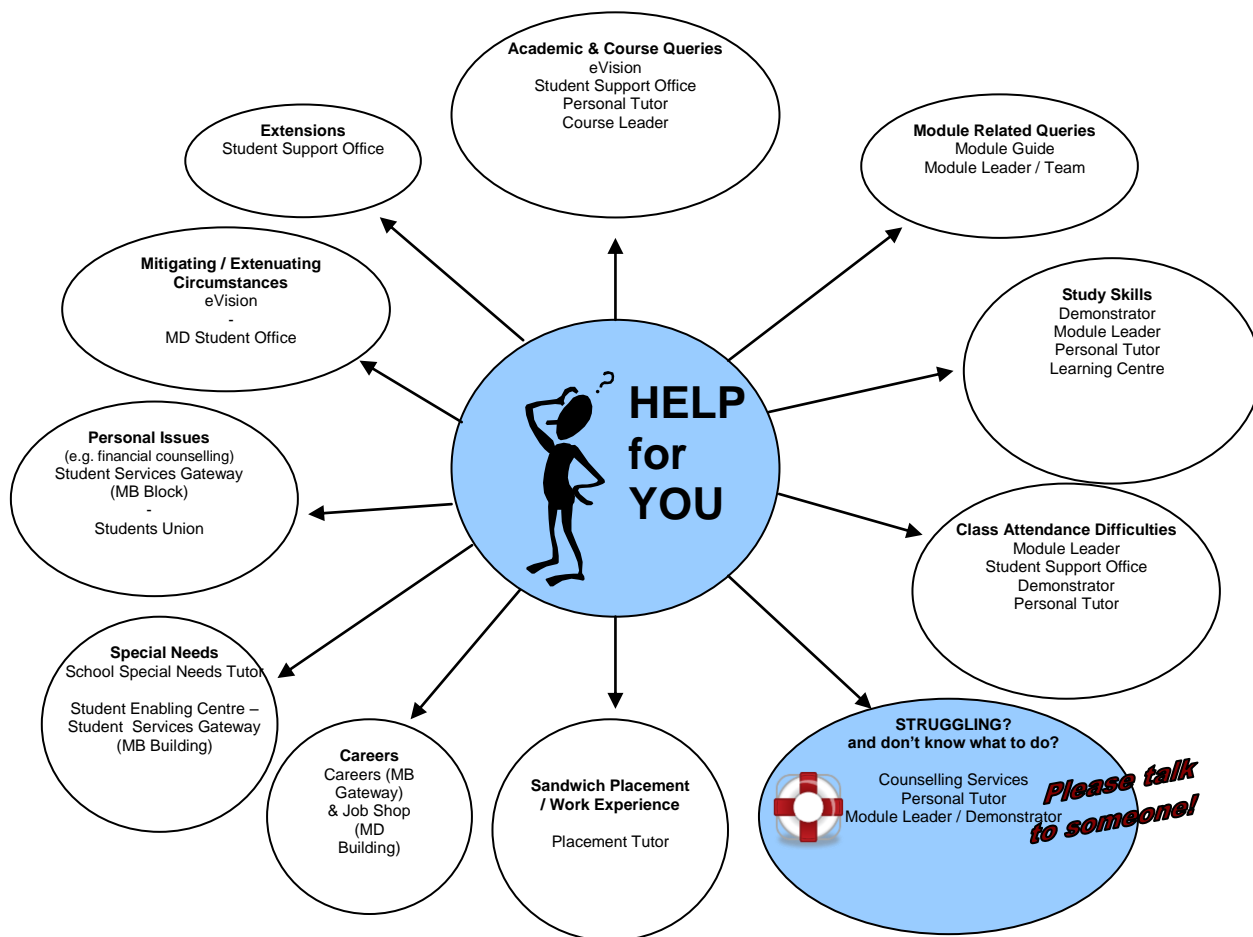
More detail regarding these support systems will be provided when you join the University, along with detail about the numerous types of learning and pastoral support provided by the central University departments.

Formal and informal meetings are held throughout the Course of the year to review the management of teaching and Courses. Formal meetings include course committees and **staff-student liaison meetings**. Students are invited to bring their views to these meetings. Student representatives are elected to represent your views. Student suggestions about how a module might be improved are welcomed.

Where to get help with your course

Student Support

Should you have any problems (personal or academic), the following diagram directs you to the appropriate department or staff member.



Attendance

Except when you are undertaking independent study, or specifically identified “remote / distance learning” components, attendance at **all** taught sessions is required. Persistent non-attendance may result in your being called in for an interview. Funding agencies and / or loan companies may refuse to finance students who attend only sporadically.

Applied Biomedical Science students are required to attend placement (see placement handbook for more details)

Your paid work and other responsibilities outside the University must not detract from your ability to study effectively and should not interfere with your ability to attend any field visits and other meetings or classes.

The School of Applied Science expects students to attend all classes. We know from experience that students whose attendance is good generally do very well on their course, while those students whose attendance is poor are very likely to fail.

Many science modules include practicals and workshops, and these generally require students to attend and complete all sessions. It is not possible to pass these modules without attending.

Attendance lists will regularly be taken in both lectures and practical classes, and students who are absent may be contacted and asked to explain their absence.

If you cannot attend your classes for genuine reasons (e.g. illness) you need to let staff know as soon as possible. A part-time job is not a valid reason for missing classes. If you have a part-time job, you must fit your job around your University course, not your course around your job.

Behaviour

The School of Applied Sciences expects that every student and member of staff should behave in a way that reflects the aims of the University as an equal-opportunity organisation that respects the rights of all people. If you are unhappy with the way that you have been treated, report the incident immediately to your tutor, or the School's Equal Opportunities Adviser (Dr Musgrove).

Staff and students are expected to treat each other respectfully and courteously. Any breach of good behavioural conduct will be viewed extremely seriously and formal action will be taken at the highest level against anyone breaking the rules of good conduct. A student causing disruption, significant offence to others, wilfully inflicting damage to property or hurt to a person is likely to be asked to leave the learning environment immediately. This could include University premises, a work placement, field visit or overseas exchange. If abroad, this could mean instant dismissal from the venue and it would be the student's responsibility to make their way back to the UK, incurring any necessary charges.

Students are reminded of the need to behave appropriately at all times and to be a good ambassador for the University particularly whilst away from University premises.

25. Learning, Teaching and Assessment: What can you expect?

Learning & Teaching Resources

There is a wide range of resources available for your learning, including on-line materials for each module (on WOLF), web-based information and, importantly, the online resources provided by the Learning Centres. Module information will direct you to specific information sources, but there is an expectation, particularly from level 2, that you will research your own sources in order to enhance your achievement of the learning outcomes for the programme.

Assessment

Types of assessment

The tutor, as part of the introduction to the module, will outline the assessment tasks. A more detailed briefing for each assignment will be available via the WOLF topic that supports the module. There is a wide range of assessment (further details can be found in the Undergraduate Student Guide), including:

- written assignments
- laboratory reports
- reports
- time-constrained assignments
- examinations (open book or closed book)

Marking of assessments

The marking and grading of your work, be it for example an assignment or an exam, is a comprehensive exercise involving first-marking by tutors, moderation by the tutors in the module team and the submission of assessments to independent external examiners who monitor and advise, thereby ensuring quality and standards.

The normal return period for feedback on your marked (summative) work is three weeks after the date of submission. You will receive a grade achieved and comments on whether and how you have achieved the learning outcomes.

The processing of grades is outlined in the *Undergraduate Student Guide*. Assessment grades follow the 'grade point scale' format outlined in the Guide; grades at levels 2 and 3 range from A16 to F0. Grades at level 1 range from A to F, with no subdivision. For the majority of modules the average achievement level will be in the C category which is 'average-good'; grades above this are 'above average-very good to outstanding', and grades below are from 'satisfactory' down to 'uncompensatable fail'. Thus, an 'upper' C grade (e.g. C10) is comfortably a 'good' grade within the A to F distribution.

- Module results will be recorded using a grading scheme:

- For modules at levels 3 and 4 results will be recorded using the following scheme:

Grade	Performance	Result
A	Outstanding performance	Pass
B	Above average – very good	Pass
C	Average - good	Pass
D	Satisfactory performance	Pass
#E	Pass by compensation	Pass
E	Compensatable fail	Defer
F	Uncompensatable fail	Defer (if first attempt) Fail (if following a second attempt)
ONS	Not submitted	Defer
OGA	Grade awaited	Held
OAM	Academic Misconduct	Held
M	Valid Extenuating Circumstances. May submit assessment not previously submitted (or failed) as if for the first time	Defer

- For modules at Levels 5 and 6 results will be recorded using the following scheme:

Grade	Performance	Result
A16	Outstanding performance	Pass
A15	Outstanding performance	Pass
A14	Outstanding performance	Pass
B13	Above average – very good	Pass
B12	Above average – very good	Pass
B11	Above average – very good	Pass
C10	Average - good	Pass
C9	Average - good	Pass
C8	Average - good	Pass
D7	Satisfactory performance	Pass
D6	Satisfactory performance	Pass
D5	Satisfactory performance	Pass
#E4	Pass by compensation	Pass
E4	Compensatable fail	Defer (if first attempt)
	Uncompensatable fail	Fail (if following a second attempt where the module cannot be compensated)
F3	Uncompensatable fail	Defer (if first attempt) Fail (if following a second attempt)
F2	Uncompensatable fail	Defer (if first attempt) Fail (if following a second attempt)
F1	Uncompensatable fail	Defer (if first attempt) Fail (if following a second attempt)
F0	Uncompensatable fail	Defer (if first attempt) Fail (if following a second attempt)
ONS	Not submitted	Fail
OGA	Grade awaited	Held
OAM	Academic Misconduct	Held
M4, M3,	Valid Extenuating Circumstances. May	Defer

M2, M1, M0	submit assessment not previously submitted (or failed) as if for the first time	
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What should you avoid? What should you seek to achieve?

- Remember that you are writing for another reader or readers. Do not assume that the reader will fill the gaps in your work.
- Use the introduction to establish what you are doing in your assignment.
- Use examples to support your analysis.
- Be objective and aim for reasoned argument. Phrases such as ‘in my opinion’ or ‘in my view’ are of little value because they are subjective. Do not use them. You should aim to support your points with evidence and reasoned analysis.
- Always acknowledge the use of someone else’s work, using the appropriate system of referencing. Also, it is a very serious offence to use someone else’s work, especially word-for-word or paraphrased contents of other’s work. Please see the section below on academic misconduct.
- Always keep copies of the sources or keep a note of each source as you use it, so that you can reference it in your bibliography at the end of your assignment.
- Plan your work in advance so as to meet the hand-in (submission) date. Writing up your research is often more time-consuming than you expect.
- Get help from tutors and mentors if you are unsure.
- Above all, do not ‘suffer in silence’; the course leader, student advisor and tutors will be able to provide guidance, so please use them.

Why are ethical considerations important when researching for assignments?

Research is an essential and vital part of teaching and learning. Much is literature-based, using books, journals, periodicals and web-based material. However, some research may involve interaction with organisations and people. You should ensure that you do **NOT** conduct research that could be intrusive or sensitive or could cause psychological harm or suffering to others.

For all modules that bring you into contact with organisations and people you will be required to follow appropriate ethical approval procedures. These will be explained to you by relevant module leaders. Where individuals or organisations have agreed to provide information to you, you may be required to produce evidence that permission has been given for access or contact.

What feedback can you expect?

What can you expect from your tutors whilst you are preparing your work?

- Normally tutors will advise you, as a group, on the assessment at or near the start of the module.
- Thereafter, you may consult your tutors by having a quick chat after a teaching session or arranging an appointment through SAMS <http://sams.wlv.ac.uk>

What should you not expect from your tutors?

- It is not the role of a tutor to read drafts of your work and correct them with a view to your obtaining a ‘good mark’. An assignment should reflect

your effort and input, and the role of the tutor is to guide and advise. It is then your responsibility to assess this advice and guidance and use it accordingly. Tutors provide this in good faith, but its use - or lack of it - by you is not an automatic route to a good or a poor grade. Other factors, particularly those pertaining to your skills and efforts, will play a vital role in your achievement.

- You will not normally receive written feedback on formal University exams. However, should you wish to discuss your performance, you can make an appointment with the relevant module leader.

After completion of the assignment

- The main feedback is through a copy (to you) of the assessment feedback sheet from tutors.
- In some modules, additional feedback may be available through distribution of an “outline answer”, highlighting key points for guidance.

How you can comment on learning and teaching and assessment

We greatly value your feedback; students' views are collectively influential in how we deliver L&T and are gathered through staff-student meetings and via questionnaires, particularly the Course Evaluation Questionnaire that you will be asked to complete towards the end of the academic year. Such feedback is analysed for annual monitoring of modules, subjects and courses.

26. Accreditation of Prior Learning (APL)

Students may be admitted to the University with advanced standing where they have previously successfully completed relevant study at higher education level, in the UK or abroad.

Students may also be admitted with advanced standing on the basis of relevant prior learning which has occurred outside a formal course of study, which may include in-company training or relevant work experience.

Grades from previous study and / or APL are excluded from the final classification

There should be no need for you to repeat learning that you have already undertaken, provided that you have evidence of that learning and that it is at the appropriate academic level

If you consider that you have undertaken prior learning that could be credited towards your course, contact the Student Support Office in the first instance.

27. Appeals procedures

Student work submitted for assessment is normally subjected to a process of internal and external moderation by members of staff within the department and

external examiners. If, despite this process, students feel their work has not been fairly marked they should note the University's appeals procedures, and contact the Student Union for advice.

28. ACADEMIC MISCONDUCT

This can be defined as any of the following: -

Cheating is defined as any attempt to gain unfair advantage in an assessment by dishonest means, and includes e.g. all breaches of examination room rules, impersonating another candidate, falsifying data, and obtaining an examination paper in advance of its authorised release.

Plagiarism is the act of taking someone else's work and passing it off as your own. This includes incorporating either unattributed direct quotation(s) or substantial paraphrasing from the work of another or others. It is important to cite all sources whose work has been drawn on and reference them fully in accordance with the referencing standard used in each academic school.

Collusion occurs when two or more people combine to produce a piece of work for assessment that is passed off as the work of one student alone. The work may be so alike in content, wording and structure that the similarity goes beyond what might have been coincidence. For example, where one student has copied the work of another, or where a joint effort has taken place in producing what should have been an individual effort.

Penalties

Where an offence is admitted, or a panel decides that cheating, plagiarism or collusion has occurred, a penalty will be imposed. The severity of the penalty will vary according to the nature of the offence and the level of study. Penalties will range from failure of the assignment under investigation to a restriction of the award a student may ultimately achieve, or a requirement to leave the University. Further information can be found on-line on the University web pages or from the Students' Union.

http://www.wlv.ac.uk/Docs/aca_acad_misc.doc

What to do if you have a complaint.

If you are not happy with the standard of teaching or support you are receiving or have a complaint about the University, course or staff, the University of Wolverhampton has a specific student complaints procedure through which you may air your grievances. The relevant documentation and procedure for making complaints can be found on the University Web site on the following page under individual conduct <http://www.wlv.ac.uk/polsregs> . Please note that the procedure expects that you try to resolve the issue informally in the first instance. The Students' Union may also be able to help you should you have a complaint.

29. Module Descriptions

Every attempt has been made to ensure the accuracy of the module descriptions that follow, particularly with respect to the mode of assessment. The definitive statement of the assessment criteria for a module is that given in the current module guide

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4BM003 Study and Professional Skills

Credit value	20
Pre-requisites	None
Prohibited combinations	None
Module Leader	Dr. James Vickers
Module description	<p>This module introduces, reinforces and expands the study and key skills necessary for the successful study of disciplines in Health Care Science. Computer packages for word processing, electronic mail, document production, spreadsheets, databases, data analysis, information retrieval and scientific writing skills will be introduced. This module will also provide an awareness of professional accreditation and registration of various Health Care Science Professional Disciplines. The role of the relevant professional body will be described</p>
Assessment with weighting	1. Portfolio 100%

4BM004 Human Structure and Function

Credit value	20
Co-requisites	None
Prohibited combinations	None
Module Leader	Dr. Ruth Shiner
Module description	This module aims to develop knowledge of the way that the human body is structured through the subject of anatomy and the way in which the systems of the body function through the subject of physiology. It also aims to achieve an understanding of how human structure changes throughout the life of the individual and how malfunction of the body systems can lead to disease.
Assessment with weighting	<ol style="list-style-type: none">1. In class Test 50%2. Examination 50%

4BM005 Microbes and Immunity

Credit value	20
Pre-requisites	None
Prohibited combinations	None
Module Leader	Dr. Martin Khechara
Module description	<p>This module aims to introduce you to the world of microorganisms. This includes the structure and function of organisms from each kingdom, their uses in the environment, laboratory or industry and gives you a broad introduction to the field microbiology in general. Additionally, it also aims to highlight the impact of microorganisms on the human host that can lead to disease and show you how these aetiological agents can be controlled through chemical means or public health measures. Finally, the module will provide you with an introduction to the immune system in relation to its function in the disease process.</p>
Assessment with weighting	<ol style="list-style-type: none">1. Coursework 40%2. Exam 60%

4BM006 Disease Biology and Public Health

Credit value	20
Pre-requisites	None
Prohibited combinations	None
Module Leader	Dr. Petula Nurse
Module description	The aim of this module is to ensure that the student has the underpinning knowledge of pathology, epidemiology, public health medicine, pharmacology and the psychosocial dimensions of health to provide the foundations for study in the Life Sciences division of healthcare science.
Assessment with weighting	1. Coursework 30% 2. Examination 70%

4BM007 Introduction to Laboratory Science

Credit value	20
Pre-requisites	None
Prohibited combinations	None
Module Leader	Dr. Jan Martin
Module description	<p>The overall aim of this module is that the student understands the organisation of the life sciences into scientific and clinical specialties and their interrelationships, the nature of work performed in these specialties and gain experience of the basics of good laboratory practice as applied to pathology and laboratory medicine. The overall aim of the placements within this module is to provide students with a broad appreciation of the range of work undertaken within healthcare science. Students will begin the process of the development of the skills and attitudes relevant to the Healthcare Science Practitioner, building on learning in the academic environment including practical sessions, clinical skills sessions, reflection on development etc. Additionally the placements should help students learn in the context of practice and real life experience and provide a motivational element as they work towards a career in the NHS.</p>
Assessment with weighting	<p>1. Coursework 50% 2. Placement 50%</p>

4BM011 Introduction to Biomedical Science

Credit value	20
Pre-requisites	None
Prohibited combinations	None
Module Leader	Dr. Jan Martin
Module description	<p>The overall aim of this module is that the student understands the organisation of biomedical science into scientific and clinical specialties and their interrelationships, the nature of work performed in these specialties and gains understanding of the basics of good laboratory practice as applied to pathology and laboratory medicine. One of the overall aims of the module is to provide students with a broad appreciation of the range of work undertaken within biomedical science. Students will begin the process of the development of the skills and attitudes relevant to the Biomedical Scientist, building on learning in the academic environment including practical sessions, clinical skills sessions, reflection on development etc.</p>
Assessment with weighting	<p>1. Coursework 50% 2. Report 50%</p>

4BM012 Human Health and Disease (Work based)

Credit value	20
Pre-requisites	None
Prohibited combinations	4BM006 Disease Biology and Public Health
Module Leader	Dr. Petula Nurse
Module description	<p>The aim of this module is to ensure that the student has the underpinning knowledge of pathology, epidemiology, public health medicine, pharmacology and the psychosocial dimensions of health to provide the foundations for study in the Life Sciences division of healthcare science.</p> <p>This module will be taken by students who are employed in an NHS laboratory. It will be a portfolio based module taken at a distance whilst in the workplace. There will be specified face to face sessions/ tutorials throughout the module at the University which student are expected to attend.</p>
Assessment with weighting	<ol style="list-style-type: none">1. Portfolio 70%2. Exam 30%

4BM013 Microbes and Immunity (Work based)

Credit value	20
Pre-requisites	None
Prohibited combinations	None
Module Leader	Dr. Martin Khechara
Module description	<p>This module aims to introduce you to the world of microorganisms. This includes the structure and function of organisms from each kingdom, their uses in the environment, laboratory or industry and gives you a broad introduction to the field microbiology in general. Additionally, it also aims to highlight the impact of microorganisms on the human host that can lead to disease and show you how these aetiological agents can be controlled through chemical means or public health measures. Finally, the module will provide you with an introduction to the immune system in relation to its function in the disease process.</p>
Assessment with weighting	<p>1. Coursework 40% 2. Exam 60%</p>

4PY013 Molecular Basis of Life

Credit value	20
Pre-requisites	None
Prohibited combinations	None
Module Leader	Dr. Daron Fincham
Module description	The module studies cell biology, biochemistry and genetics through investigation of cell structure and organelles, enzyme action and metabolism and gene structure, function and expression.
Assessment with weighting	3. Practical 40% 4. Exam 60%

5BM004 Biology and Investigation of Disease 1

Credit value	20
Pre-requisites	4BM005- Microbes and Immunity 4PY013 Molecular basis of life 4BM004 Human Structure and Function
Prohibited combinations	None
Module Leader	Dr. Martin Khechara
Module description	This module aims to introduce important concepts in the biology and investigation of disease focusing on particular disciplines within pathology including microbiology, cellular pathology and genetics and provides a theoretical basis for the associated practical module.
Assessment with weighting	1. Coursework 40% 2. Exam 60%

5BM005 Biomedical Science Practicals 1

Credit value	20
Pre-requisites	4BM005 Microbes and Immunity 4PY013 Molecular Basis of Life
Prohibited combinations	5BM027 5BM028
Module Leader	Dr. Liz O’Gara
Module description	You will gain a practical experience in techniques commonly used in Clinical Microbiology, Cellular Pathology and Clinical genetics. Additionally, you will cover aspects of professional practice.
Assessment with weighting	<ol style="list-style-type: none">1. Coursework 90%2. Report 10%

5BM006 Biology and Investigation of Disease 2

Credit value	20
Pre-requisites	4BM007 Introduction to Laboratory Science
Prohibited combinations	None
Module Leader	Dr. Shantha Perera
Module description	<p>This module will enable students to understand the underlying biological principles of human disease in three subject areas: immunology, clinical biochemistry and haematology. The aetiology, biological basis, clinical symptoms and treatment of selected human diseases and the links between these will be covered. Additionally the module will enable students to understand the underlying biological and scientific principles of the methods involved in the laboratory diagnosis of the key diseases in the three subject areas</p>
Assessment with weighting	<ol style="list-style-type: none">1. Case Study 40%2. Examination 60%

5BM007 Biomedical Science Practicals 2

Credit value	20
Pre-requisites	4BM007 Introduction to Laboratory Science
Prohibited combinations	5BM027 5BM028
Module Leader	Dr. Shantha Perera
Module description	This module will enable the student to understand and gain experience of the principles, practice, quality assurance and application of selected methods and techniques commonly used in the fields of clinical biochemistry, haematology & clinical immunology.
Assessment with weighting	1. Practical 90% 2. Report 10%

5BM008 Molecular Pathology

Credit value	20
Pre-requisites	None
Prohibited combinations	None
Module Leader	Dr. Iain Nicholl
Module description	The molecular basis of disease will be discussed using key scientific papers and case studies. Critically important techniques used in investigating disease will be discussed.
Assessment with weighting	1. Portfolio 50% 2. Portfolio 50%

5BM009 Integrated Physiology

Credit value	20
Pre-requisites	4BM004 Human Structure and Function
Prohibited combinations	None
Module Leader	Dr. Gillian Conde
Module description	The module aims to provide knowledge and comprehension of the basic principles underlying human physiology.
Assessment with weighting	1. Portfolio 40% 2. Examination 60%

5BM027 Workbased Techniques for Investigating Disease 1

Credit value	20
Pre-requisites	4BM007 4BM005
Prohibited combinations	5BM005
Module Leader	Mrs Sara Smith
Module description	<p>This is a practical module which is available to students who are employed in an NHS pathology laboratory.</p> <p>You will document performance of selected laboratory techniques and develop an appreciation of the way in which the results of laboratory investigations contribute to improved diagnosis and treatment (Infection Sciences/Cellular Sciences/Genetic Sciences). The module also provides you with the skills and attitudes to work as a Healthcare practitioner</p>
Assessment with weighting	<p>1. Coursework 10%</p> <p>2. Portfolio 90%</p>

5BM028 Work Based Techniques for Investigation of Disease 2

Credit value	20
Pre-requisites	4BM007
Prohibited combinations	5BM007
Module Leader	Mrs Sara Smith
Module description	<p>This is a practical module which is available to students who are employed in an NHS pathology laboratory.</p> <p>You will document performance of selected laboratory techniques and develop an appreciation of the way in which the results of laboratory investigations contribute to improved diagnosis and treatment.</p> <p>You will complete practical exercises which involve carrying out laboratory-based procedures and assays, and collection, presentation and interpretation of data within blood sciences(Haematology/Biochemistry/Immunology)</p> <p>It also provides you with the underpinning knowledge of the importance of research, development and innovation across the NHS and support for the final year research project</p>
Assessment with weighting	<p>1. Coursework 10%</p> <p>2 Portfolio 90%</p>

5BM031 Biomedical Science Sandwich Placement

Credit value	40
Pre-requisites	Successful completion of Level 1 (120 credits) Sufficient credits to proceed at level 2 (90 credits)
Prohibited combinations	None
Module Leader	Dr. Jan Martin
Module description	Develop the students' technical and personal skills within the work environment.
Assessment with weighting	1. Placement 50% 2. Report 50%

5BM032 Biomedical Science Work Based Training Module

Credit value	40
Pre-requisites	Successful completion of Level 1 (120 credits) Sufficient credits to proceed at level 2 (90 credits)
Prohibited combinations	None
Module Leader	Dr. Jan Martin
Module description	This module is intended to develop the students' technical and personal skills within the work environment. This should fulfil the requirements for completion of the Institute of Biomedical Science Registration Portfolio leading to award of the Certificate of Competence to successful individuals, which can then be submitted to the HPC in support of an application for admittance onto the register.
Assessment with weighting	1. Report 30% 3 Portfolio 70%

6BM006 Cellular Pathology and Clinical Genetics

Credit value	20
Pre-requisites	5BM004 5BM006
Prohibited combinations	None
Module Leader	Mrs. Sara Smith
Module description	This module covers the pathological basis of disease and the techniques used within cellular pathology (Histology & Cytology) and clinical genetics to investigate disease within the clinical setting.
Assessment with weighting	1. Report 50% 2. Case Study 50%

6BM008 Haematology and Transfusion Science

Credit value	20				
Pre-requisites	5BM004 5BM006				
Prohibited combinations	None				
Module Leader	Dr James Vickers				
Module description	<p>This module aims to develop an understanding of the biology of haematological systems and the pathophysiology of haematological disorders. The course is divided into four sections: haemostasis, anaemia, malignant haematology and transfusion science. The first three cover the normal physiology and biochemistry of the haemostatic system, the erythron, and the myeloid and lymphoid tissues, and the pathology, diagnosis and treatment of disorders of these systems. Transfusion science covers the biology of blood groups and serology, and the preparation and use of blood components.</p>				
Assessment with weighting	<table><tr><td>1. Examination</td><td>50%</td></tr><tr><td>2. Examination</td><td>50%</td></tr></table>	1. Examination	50%	2. Examination	50%
1. Examination	50%				
2. Examination	50%				

6BM009 Clinical Biochemistry and Clinical Immunology

Credit value	20
Pre-requisites	5BM006 Biology and Investigation of Disease 2
Prohibited combinations	None
Module Leader	Dr Simon Dunmore
Module description	The module aims to provide an understanding of the disease mechanisms in common metabolic & immunological diseases and enable appreciation of the application of laboratory investigations in clinical biochemistry & clinical immunology in the diagnosis, monitoring and treatment of disease.
Assessment with weighting	1. Coursework 50% 2. Examination 50%

6BM010 Medical Microbiology

Credit value	20
Pre-requisites	4BM005 Microbes and Immunity, 4AB012 Microbiology with Immunology
Prohibited combinations	None
Module Leader	Dr Elizabeth O’Gara
Module description	Medical microbiology begins with a overview of the role of pathology laboratories, reference laboratories and the Health Protection Agency in the prevention and control of infectious disease. A system based approach is then used to study infectious diseases of the respiratory tract, urinary and gastrointestinal tracts, skin and central nervous system. Sexually transmitted infections and opportunistic infections of the compromised host will be covered. You will review and investigate aetiology, pathogenic mechanisms, clinical presentation, and diagnostic procedures for selected medically important microbial pathogens.
Assessment with weighting	1. Coursework 40% 2 Examination 60%

6BM014 Honours Research Project

Credit value	40				
Pre-requisites	Students must study 100 credits of BM coded modules at level 4 and at level 5 relevant to their programme of study, or equivalent.				
Prohibited combinations	None				
Module Leader	Dr Janine Fletcher				
Module description	Undertake a research project, in an area relevant to your discipline, from conception to completion.				
Assessment with weighting	<table><tr><td>1. Presentation</td><td>20%</td></tr><tr><td>2. Report</td><td>80%</td></tr></table>	1. Presentation	20%	2. Report	80%
1. Presentation	20%				
2. Report	80%				

30. Assessment criteria

Level 4 A6

Outstanding work of excellent quality. The student demonstrates a thorough knowledge and understanding of the issues involved, perceptive and well organised use of relevant material and an ability to sustain a coherent argument. Some evidence of coherent thought, originality and evaluation.

Level 4 B5

Best possible organisation of material and consideration of all the relevant issues. Demonstrates a sound ability to apply knowledge critically. Well written, completely relevant, coherent, good linking of ideas and paragraphs. B13/B12 always supports comments with appropriate references. B11 some comments are not justified but overall shows an ability to use evidence gleaned from independent reading.

Level 4 C4

The student demonstrates an ability to understand the issues involved and having read around the subject. There is some evidence of application of knowledge, ideas and theories. If work contains sweeping unjustified statements then a maximum of a C10 is appropriate even if there is some evidence of originality.

Level 4 D3

The student demonstrates knowledge and some understanding of the issues involved but does not utilise material to support their argument. There is evidence of reading and the student has correctly referenced their work and included an appropriate bibliography. The work, though relevant, is descriptive.

Level 4 E2

Poor English, poor structure, some irrelevant material but nevertheless shows some understanding of the task in hand. Little evidence of reading, most of the material emanating from taught sessions only. Possibly lacking in bibliography

Level 4 F1

Little or no evidence of knowledge or understanding of the task involved. No evidence of reading, no bibliography.

Level 5 A16 A15 A14

Outstanding work of excellent quality. Shows an exceptional ability to analyse and synthesise. There is considerable evidence of independent thought, originality and ability to evaluate.

Level 5 B13 B12 B11

Shows an ability to inter-relate concepts, ideas and theories with some evidence of independent thought, originality and evaluation.

Level 5 C10 C9 C8

Competent in terms of originality and independent thought, with evidence of sound, balanced critical thought. Adequate demonstration of an evaluative approach. (C8 if some analysis but has poor structure and lacks coherence.)

Level 5 D7 D6 D5

The student demonstrates a sound knowledge and understanding of the issues involved, an ability to apply knowledge, concepts and theories, and an attempt at evaluation. There is some evidence of critical thought but some difficulties at balancing and substantiating points. There is evidence of the reading and application of information from specialist texts and review papers where this is appropriate.

Level 5 E4 F3

Limited evidence of appropriate reading, shows some ability to apply knowledge, ideas and concepts, but work is lacking in critical thought and evidence of an

<p>evaluative approach.</p> <p>Level 5 F2 F1</p> <p>Little or no evidence of application of knowledge, ideas and concepts. Totally inadequate evidence of reading from appropriate sources. Mainly descriptive.</p>
<p>Level 6 A16 A15 A14</p> <p>Outstanding work of excellent quality. Demonstrates an exceptional ability to evaluate critically using a wide range of appropriate criteria, to inter-relate and synthesise concepts, ideas and theories with considerable evidence of independent thought and originality.</p>
<p>Level 6 B13 B12 B11</p> <p>Demonstrates considerable competence in terms of ability to analyse, synthesise and to evaluate, making balanced judgements. Clear demonstration of original thought.</p>
<p>Level 6 C10 C9 C8</p> <p>Sound ability to analyse critically and definite evidence of synthesis of ideas, concepts and theories. Shows competence in making independent judgements based on broadening criteria. Original thought is demonstrated.</p>
<p>Level 6 D7 D6 D5</p> <p>Shows evidence of reading a wide range of literature including specialist texts and original research papers where appropriate. Demonstrates an ability to analyse critically and to see relationships in what has been learned. There is some evidence of synthesis of ideas, concepts and theories but the work is limited in terms of originality. Some form of independent judgement has been attempted but this is limited in terms of the scope of the criteria applied.</p>
<p>Level 6 E4 F3</p> <p>Some evidence of appropriate reading for this level of study, but the work lacks originality of thought and any attempt to evaluate.</p>
<p>Level 6 F2 F1</p> <p>Little or no evidence of analysis, synthesis and evaluation of ideas, concepts or theories. Lacking in evidence of reading of original research papers or current developments in the chosen field or discipline where this is deemed to be appropriate.</p>

31. Disclaimer statement

This course guide was correct at the time of writing and whilst every effort has been made to ensure the accuracy of the information supplied herein. The University of Wolverhampton cannot be held responsible for any errors or omissions.

