

PROGRAMME HANDBOOK

for

BSc Honours Medical Biosciences

(Programme Code: 6495)

Information you will need is distributed between this Programme Handbook (page number given), the 'Studying in the Faculty of Biology' handbook (SFB), the 'University Guide to Students' handbook (UGS) and the module handbooks associated with each module (M).

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WELCOME

Welcome (or welcome back) to the Faculty of Biomedical Sciences for the current session.

This **programme handbook** contains information you will need for your degree programme and is supplementary to the information contained in the 'Studying in the Faculty of Biology' handbook. Even if you don't sit down and read it now, please keep it to hand - many of the questions you will ask in the coming year are answered here. Any further information can be sought from the staff in the Faculty Undergraduate Office or from the Faculty web site (www.facbiol.uow.ac.uk).

There is a Staff-Student Committee which will meet three times per year. Nominations for the positions will be sought early in semester 1 and I would encourage you to contribute to this. You should also be aware that some members of the Staff-Student Committee attend the Faculty's Learning & Teaching Committee meetings and are thus in a position to influence decisions made by this committee. In addition, there are other ways in which we collect feedback: module and programme questionnaires are particular examples. Please complete them when asked.

I hope you enjoy studying for your degree and being part of the Faculty. Should you encounter any problems do not hesitate to discuss things with either your personal tutor, the Faculty Welfare Officer or undergraduate office staff, who will try to help or direct you to someone who can.

Good luck in your studies with us.

Dr P.D. Tomkins
Director of Learning and Teaching

PROGRAMME STAFF

Listed below are the staff involved in the teaching & administration of your programme this session, together with specific duties which may be relevant to undergraduates. All e-mail addresses are completed by @uow.ac.uk

STAFF	E-MAIL ADDRESS	RESPONSIBILITY
Dr Jean Arrow	j.e.arrow	
Mrs Ruth Anderbeck	r.anderbeck	
Professor Ian Hughes	i.e.hughes	Programme manager

Links to individual staff web pages may be found at <http://www.facbiol.uow.ac.uk/staff/>



UNDERGRADUATE STUDY

Notes

A **semester** is a period of teaching and assessment. There are two semesters in the academic year. Each semester consists of 11 teaching weeks, a revision period and an examination period.

A **term** is a period of residence in the University. There are three terms in the academic year.

Students are required to be in residence throughout the session and may not absent themselves without permission from the Director of Learning & Teaching.

CALENDAR – 2004/2005 SESSION (*deleted to save you time*)

OTHER IMPORTANT SOURCES OF INFORMATION

University Guide to Students handbook	Gives advice and information about important student matters, explaining what some of the University's services can offer and where you can find them. It also sets out the Regulations and Codes of Practice which apply to taught students on taught programmes of study.
University Web Pages http://www.uow.ac.uk/	Provides general information about the University and links to Faculty pages.
Faculty of Biology Web Pages http://www.facbiol.uow.ac.uk/	Provides specific information about the Faculty of Biology and links to the virtual learning environment which is integrated into all teaching and support activities.

UNDERGRADUATE PROGRAMMES OF STUDY

The Faculty of Biology is the parent department for students registered on various single subject degree programmes. These programmes follow a common first semester in the first year.

A **programme of study** consists of a set of units called **modules** which makes up the requirements for a degree. Each programme of study is administered by a **programme manager** (*see staff list for names*).

A module is a self-contained unit of study. A summary of its objectives, a syllabus, a scheme of assessment, the timetable, practical schedules etc., are given in the **module book** which is normally given out at the first lecture, but is also usually available on the VLE.

At levels 1, 2 and 3 students attempt a total of 120 credits and each level.

REGISTRATION AND ENROLMENT

Before Registration students will receive a copy of the University Guide to Students Handbook.

ATTENDANCE

Attendance at lectures is expected, and staff will maintain registers. Under University regulations, permission to take examinations may be refused if lecture attendance is unsatisfactory.

DISCIPLINARY MATTERS

If you miss lectures or practical classes or do not hand in coursework, or if your conduct is not satisfactory in any other way, you will receive an email from or on behalf of the module or programme manager.

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Based on a work at www.bioscience.heacademy.ac.uk.



LECTURES

Lectures usually start at five past and finish at five to the hour, so that you are able to get to the correct venue on time. Attendance at lectures is vital as they form the core of most modules. They are, in fact, the syllabus and they define what we think you should know. Although the lectures encompass the academic content of a module, they should not be your only encounter with it. You must read through your notes, expand them if necessary, make sure you understand everything and also read the relevant chapters of a recommended textbook. Regard this amount of work as a minimum if you wish to make reasonable progress. If you wish to do well you should do more; you are, to use the usual expression, "reading for a degree".

Many of your lectures have support material such as PowerPoint presentations, lecture notes etc. on the VLE. Make use of this but remember it is to be used in addition to lectures not as a substitute.

PRACTICAL WORK

Practical work forms an important part of your programme of study. Attendance at practical classes is compulsory (registers will be kept and attendance monitored). In the labs there are strict safety procedures which you must follow; you will need to wear a lab coat and, in some instances, safety spectacles for laboratory practicals. You should comply with safety regulations as specified in module books.

You will find that practicals serve different purposes in different modules. Some aim to reinforce the material taught in lectures. Doing things yourself often clarifies what you have learnt in theory. In addition, your understanding may be stretched; you may be asked to consider some aspects in greater depth, either during practical sessions or in your analysis of results, or by answering specific questions which are asked in the practical schedule. You will receive help in the lab from staff and postgraduate students, who play an important role as "demonstrators" in practical classes.

Other practicals aim at developing your skills as an experimental scientist. You will have to design experiments, justifying use of controls, ensuring reproducibility, and so on, so that eventually you can tackle a complete project rather than just an exercise.

In the final year students may have the opportunity to do a laboratory project and the allocation of the limited number of final year projects will depend on student marks from the whole of their first year and from semester one in their second year.

COURSEWORK

You will be required to produce high quality written work right from the start of your course. You will be given advice on how to do this in separate documentation. The Faculty has a standard format for written lab reports and you must follow it. The ability to write to a set of rules or instructions is an essential skill for scientists and many other occupations. Instructions are available on the VLE in a document called "Guidance for Authors".

PERSONAL TUTORIALS

All students are assigned a personal tutor. Level 1 single subject students meet their tutors individually on a regular basis once each semester to discuss examination/course performance and to produce a CV such as might be used for application for a PhD place. Level 2 and 3 students meet tutors less frequently, typically on an individual basis. Additional meetings between students and tutors may take place at the request of either party.

The personal tutor's role is to provide general academic support and advice. Module-specific academic issues should be raised in the first instance with the staff responsible for the module.

PERSONAL DEVELOPMENT PORTFOLIOS (PDP)

Students are supplied by the University with a blank PDP file and should record in it the codes, titles and results obtained in examination for each module taken in the appropriate section. Other material can be kept in the PDP at the student's discretion.

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SEMINAR PROGRAMME

The Faculty runs a research seminar program at which eminent scientists present an account of their current work to staff and students. ALL STUDENTS ARE EXPECTED TO ATTEND THESE SEMINARS.

TAKING A YEAR OUT

Students may take an additional year to complete their degree by taking a year out (a placement) in industry. This period is usually taken between the end of the second and beginning of the final year of study. During this year students are employed by the company with which they have taken a placement and are not registered students of this University.

COURSE REVIEW FEEDBACK

We are continually trying to improve our teaching and student opinion is an important factor which influences this. The School values feedback from students about the presentation, content and assessment of its teaching. At the end of the each module students may be asked to fill in feedback questionnaires. There are predetermined questions and there is the opportunity to add some written comments. This feedback is considered at our module review meetings which take place after each semester and any necessary action is taken. In addition to this, we keep a close watch on each module and your reactions to it and are often prepared to make rapid changes in response to your comments.

PROGRESSION

In order to progress to the next level of a programme of study and remain on the Honours degree a student must pass all modules and complete all coursework.

CAREERS SERVICE

The University makes advice on careers available to student through the Careers Service which is located at 17, University Walk and is usually open 0930-1630 each week-day. Over the last 3 years students graduating from this program have gone on to : further study (30%; mostly to do PhD in good universities. None of our graduates who registered for a PhD has every failed.); employment in laboratory work (15%, mostly medical bioscience-based labs); employment in science based non-laboratory work (15%); work involving non-science based jobs (35%). Only 5% were unemployed (mostly travelling by choice).

SUMMARY OF PROGRAMME

BSc Honours Medical Biosciences Programme Code: 6495

The objectives of this programme are to:

- Provide students with a comprehensive knowledge and understanding of the major areas of biomedical science, from cellular to systems in the first two years, with a more detailed appreciation of some specialist areas at Level 3. The latter will be research-led teaching, with the specific areas being determined by the current research expertise within the School.
- Provide students with knowledge of current biomedical science techniques and methodologies, with hands on practical experience of some of these.
- Ensure that, on graduation, students are able to: analyse, interpret and evaluate data; acquire and integrate information, and use information to solve scientific problems in medical bioscience.
- Manage student progress effectively.
- Provide high quality learning resources to support the objectives of the programme.

Year 1

Candidates will be required to study the following compulsory modules: all are associated with self-directed learning which will be undertaken outside formal timetabled hours.

Learning outcomes. By the end of the year the student will have basic knowledge and understanding of:

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- a) the anatomy, physiology and biochemistry of the human body with particular reference to cardiovascular and respiratory systems;
- b) some common laboratory methods and techniques used in bioscience;
- c) how to retrieve information from the scientific literature and other sources;
- d) how to communicate information in writing and by a variety of other methods;
- e) how to analyse and interpret quantitative scientific data;
- f) how to work effectively in a laboratory environment.

FBMS1101	<p>From molecules to cells</p> <p>3 lectures (covering the nature of biologically important molecules and how they are organised and function within the cellular unit) one 3hr lab based practical session per week. Assessment: 1 hour MCQ paper, 4 assessed lab write-ups and 1 assessed poster presentation.</p>	20 credits	Semester 1
FBMS1102	<p>How the body works</p> <p>3 lectures (covering the major functions of the organs in the body and how they are integrated) per week plus work sessions based in library and lab. Assessment: 1 hour MCQ paper, 3 assessed lab write-ups, 3 assessed information discovery/retrieval written exercises.</p>	20 credits	Semester 1
FBMS1103	<p>Basic Laboratory and Scientific Skills</p> <p>6 hours per week based around lecture, laboratory and library work (covering Health and Safety, GLP and GCP, and the basic laboratory skills used in bioscience labs). Assessment: 1 hour MCQ paper, 2 assessed laboratory write-ups + assessed performance in laboratory practical work.</p>	20 credits	Semester 1
FBMS1206	<p>Basic Gross Anatomy</p> <p>3 lectures per week (covering the whole of the body with special emphasis on the leg) plus 3hr practical session per week based round dissecting room work and work with models. Assessment: 1 hour MCQ paper and 3 in-course vivas related to practicals and models.</p>	20 credits	Semester 2
FBMS1207	<p>Cardiovascular, Respiratory and Exercise Physiology</p> <p>3 lectures (covering the basic mechanisms involved in the provision and control of these functions) and one 3 hour lab per week. Note the lab will involve human experiments. Assessment: 1 hour MCQ paper plus 4 assessed laboratory write-ups including one group write-up.</p>	20 credits	Semester 2
FBMS1208	<p>Fundamentals of Neuroscience</p> <p>3 hours of lectures (covering neuronal function, ions and ion channels) and a 3 hour session alternating between lab and library work each week. Assessment: 1 hour MCQ paper, 2 assessed laboratory write-ups and one assessed data interpretation exercise.</p>	20 credits	Semester 2

Year 2

Candidates will be required to study the following compulsory modules: all are associated with self-directed learning which will be undertaken outside formal timetabled hours.

Learning outcomes. By the end of the year the student will have knowledge and understanding of:

- a) molecular biology including its potential and actual applications;
- b) viruses and how they interact with the body;
- c) mechanism of cell signalling;
- d) selected areas of neuroscience and how research is carried out in these areas;

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- e) some more complex common laboratory methods and techniques used in bioscience;
- f) how to report and record scientific findings made in the laboratory;
- g) how to communicate information in writing and by a variety of other methods;
- h) how to analyse quantitative scientific data using appropriate statistical methods;
- i) how to work effectively and efficiently in a laboratory environment using elements of Good Laboratory Practice (GLP).

FBMS2103	Introduction to Molecular Biology 3 lectures (covering DNA, RNA and their manipulation) and one 3hr lab-based practical session per week. Assessment: 3 hour essay and short notes paper, 2 assessed laboratory write-ups together with assessed performance in laboratory practical work.	20 credits	Semester 1
FBMS2109	Basic Data Handling and Statistics 2 hours of lectures (covering the nature of biological data and how and why it requires processing) per week plus workbook-based practical sessions. Assessment: 1 hour data-handling paper plus assessment of the in-course workbook.	20 credits	Semester 1
FBMS2302	Experimental Techniques 1 This is an entirely lab-based course (covering laboratory methods used with enzymes) with a small amount of material delivered through lectures. Assessment: 6 lab write-ups and your performance in the laboratory classes.	20 credits	Semester 1
FBMS2303	Experimental Techniques 2 This is an entirely lab-based course (covering laboratory methods used with cells and tissues) with a small amount of material delivered through lectures. Assessment: 6 lab write-ups and your performance in the laboratory classes.	20 credits	Semester 2
BIOC2300	Biological Membranes and Cell Signalling 3 lectures (covering the nature and structure of membranes and how transmembrane signalling is accomplished) and one 3hr lab-based practical session per week. Assessment: 3 hour essay and short notes paper, 2 assessed laboratory write-ups together with assessed performance in laboratory practical work.	20 credits	Semester 2
FBMS2207	Topics in Neuroscience 3 lectures (covering topics in which the department has special research expertise) and one 3hr lab-based practical session per week. Assessment: 3 hour essay and short notes paper, 2 assessed laboratory write-ups together with assessed performance in laboratory practical work.	10 credits	Semester 2
MICR2040	Viruses and Virus-Host Interactions 3 lectures (covering the nature of viruses and how they interact with the human body) and two 1.5hr lab based practical session per week. Assessment: 3 hour essay and short notes paper, 2 assessed laboratory write-ups.	10 credits	Semester 2



Year 3

Candidates will be required to study 120 credits from the following modules: all are associated with self-directed learning which will be undertaken outside formal timetabled hours.

Learning outcomes. By the end of the year the student will have knowledge and understanding of:

- a) selected areas of biomedical science to the edge of current information;
- b) some advanced research laboratory techniques used in bioscience;
- c) how to report and record scientific findings made in the laboratory;
- d) how to communicate information in writing and by a variety of other methods;
- e) how to critically analyse scientific data and publications;

BIOC3500	Molecular Cell Biology and Structural Molecular Biology 3 lectures (covering topics in which the department has special research expertise) and one 3hr lab-based practical session per week. Assessment: 2 x 3 hour essay papers and assessment of your laboratory notebook.	20 credits	Semester 1
BIOC3600	Advanced Topics in Biochemistry I 4 lectures (covering topics in which the department has special research expertise) and one 2hr lab-based practical session per week. Assessment: 2 x 3 hour essay papers and assessment of your laboratory notebook.	20 credits	Semester 1
FBMS3101	Inherited Disorders 3 hours of lectures per week (covering the basis of inherited disorders and their nature) plus written assignments. Assessment: 2 x 3 hour essay papers and assessment of 2 written assignments.	10 credits	Semester 1
FBMS3104	Cognitive Neuroscience 3 lectures (covering topics in which the department has special research expertise) and one 3hr lab-based library session per week. Assessment: 2 x 3 hour essay papers and assessment of your laboratory notebook.	10 credits	Semester 1
FBMS3105	Reproduction and Fertility 6 hours of laboratory- and library-based exercises per week. Assessment: 2 assessed laboratory write-ups	20 credits	Semester 2
FBMS3106	Reproduction and Fertility (theory only) 3 lectures per week (covering the detailed biochemical mechanisms involved in these areas). Assessment: 2 x 3 hour essay papers.	10 credits	Semester 2
FBMS3107	Epithelial Transport and the Kidney 6 hours of laboratory- and library-based exercises per week. Assessment: 2 assessed laboratory write-ups.	20 credits	Semester 2
FBMS3000	Laboratory project 2 days of laboratory-based work per week chosen from areas of science where the department has research strength. Assessment: based on a 6000 word dissertation and a 10 minute presentation of the project work.	40 credits	Semester 2
FBMS3108	Epithelial Transport and the Kidney (Theory Only) 3 lectures per week (covering the detailed biochemical mechanisms involved in these areas). Assessment: 2 x 3 hour essay papers.	10 credits	Semester 2

