

## Programme Specification for BSc (Hons) Biomedical Science

<b>This document applies to Academic Year 2019/20 onwards</b>
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<b>1.</b>	<b>Awarding institution/body</b>	University of Worcester
<b>2.</b>	<b>Teaching institution</b>	University of Worcester
<b>3.</b>	<b>Programme accredited by</b>	Institute of Biomedical Science
<b>4.</b>	<b>Final award or awards</b>	BSc (Hons)
<b>5.</b>	<b>Programme title</b>	Biomedical Science
<b>6.</b>	<b>Pathways available</b>	Single
<b>7.</b>	<b>Mode and/or site of delivery</b>	Standard taught programme at University of Worcester.
<b>8.</b>	<b>Mode of attendance</b>	Full time only
<b>9.</b>	<b>UCAS Code</b>	B900
<b>10.</b>	<b>Subject Benchmark statement and/or professional body statement</b>	<a href="#">QAA Benchmark Statement Biomedical Sciences 2015</a>
<b>11.</b>	<b>Date of Programme Specification preparation/ revision</b>	Approval March 2017, August 2017 - AQU amendments January 2018 – update to mode of attendance (section 8 and 18). June 2018 – to be implemented Sept 19, change of title for BIOS2106 September 2018 AQU amendments and minor updates throughout. October 2018 Level 4 requirements no change December 2018 AQU template amendments February 2019 AQU corrections April 2019 update to Entry Requirements (Section 18) August 2019 AQU amendments to Section 19. September 2019 Update to Award Map for BIOS2106 pre-reqs. October 19 - update to Independent Study title to be implemented Sept 20. Jan 20 BIOS3404 update to title.

### **12. Educational aims of the programme**

The Honours degree programme in Biomedical Science is accredited by the Institute of Biomedical Science (IBMS) and aims to enable students to develop the knowledge, practical and intellectual skills necessary for a career in biomedical science, along with the theoretical and philosophical underpinning required to support professionalism, independent thought, personal responsibility and decision making during a period of rapid change and increasing accountability. Biomedical Scientists are at the forefront of supporting the diagnosis and treatment of disease through laboratory and scientific testing. Biomedical Science graduates can go on to pursue careers as registered Biomedical Scientists (after a period of training in an accredited laboratory and the completion of the IBMS Registration Training Portfolio) in a range of NHS laboratory based roles in medical screening and diagnosis. Alternatively, graduates could choose to progress into research or in laboratory, support and technical roles in the pharmaceutical and biotechnology industries. Teaching and learning focuses on practical skills and diagnosis based on simulations of real life scenarios.

The educational aims of the programme are:

1. to enable students to understand the biology of human health and disease and to equip students with practical and laboratory skills in order to carry out diagnostic investigations relevant to the role of a biomedical scientist;
2. to make students aware of industry standards and good practice, and to develop an awareness of, responsibility for, and a positive attitude towards Health and Safety at work;
3. to develop team working and leadership skills, as well as skills of time management and task prioritisation;
4. to support students in the development of intellectual skills of critical evaluation, scientific analysis and synthesis of ideas in order for them to be able to optimise their thinking and reflection skills;
5. to foster a spirit of enquiry and scientific discipline to enable students to design and undertake an independent research project;
6. to develop a range of skills to enable students to communicate their ideas effectively and appropriately in a variety of media;
7. to develop personal and interpersonal skills; self-awareness, personal responsibility and reflection on the ethical, social and economic implications of professional decisions;
8. to develop highly motivated, employable students with the intellectual and practical skills necessary to succeed in a changing and challenging environment;
9. to provide the opportunity for students to train as accredited Biomedical Scientists, as conferred by the Institute of Biomedical Science, in recognition of their competencies in this subject.

### 13. Intended learning outcomes and learning, teaching and assessment methods

#### Knowledge and Understanding

LO no.	On successful completion of the named award, students will be able to:	Module Code/s
1.	Demonstrate a detailed knowledge and understanding of the biology of human health, disease and disease processes to support an understanding of biomedical science.	BIOS2106, BIOS2110, BIOS3116, BIOS3401, BIOS3403, BIOS3404
2.	Discuss the science of the causes, progression, investigation and diagnosis of disease to facilitate management and treatment.	BIOS2023, BIOS2110, BIOS3113, BIOS3116, BIOS3400, BIOS3401, BIOS3403
3.	Demonstrate an in-depth knowledge of the basic principles of laboratory based bioanalytical diagnostic techniques used in clinical pathology and biomedical science in order to select analytic techniques appropriate to given scenarios.	BIOS2023, BIOS2106, BIOS2110, BIOS2201, BIOS3116, BIOS3400, BIOS3401, BIOS3403

#### Cognitive and intellectual skills

4.	Use skills of reflection, evaluation and critical thinking in problem solving and decision making to support the effective management of practical skills.	BIOS2106, BIOS2201, BIOS3002, BIOS3116
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5.	Analyse and critically evaluate research evidence, information and data from a variety of sources in the context of current theory and practice, and use it to develop a research proposal.	BIOS2110, BIOS2201, BIOS2400, BIOS3002, BIOS3404
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6.	Demonstrate independence of thought in the formulation, development and testing of hypotheses in biomedical science.	BIOS2110, BIOS2400, BIOS3116, BIOS3404
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7.	Apply professional judgement and ethical considerations to solve clinical problems.	BIOS2400, BIOS2401, BIOS3400, BIOS3401
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8.	Reflect on own learning and practice to develop personally and professionally.	BIOS1400, BIOS2106, BIOS2401
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9.	Use a wide range of laboratory equipment to perform common biomedical laboratory techniques and investigations competently and in compliance with current good laboratory working practice, exercising personal responsibility for health and safety and ethical issues.	BIOS2023, BIOS2110, BIOS2201, BIOS3400, BIOS3401, BIOS3403
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10.	Accurately collect, describe, manage and interpret scientific data from a range of sources, demonstrating skills of numeracy, data processing and analysis relevant to biomedical science.	BIOS2201, BIOS2400, BIOS3002, BIOS3116 BIOS3402
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11.	Design and conduct an independent research project with minimal supervision.	BIOS3002
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12.	Write clear and appropriately referenced laboratory and scientific reports.	BIOS2106, BIOS2023, BIOS3403
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13.	Exercise professionalism and demonstrate personal responsibility for good working practices and decision-making as needed for employment in biomedical science.	BIOS1400, BIOS2401, BIOS3002, BIOS3401, BIOS3403
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14.	Demonstrate an awareness of and adherence to relevant legislation and maintain rigorous ethical standards.	BIOS2400, BIOS2401, BIOS3002
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<b>Transferable/key skills</b>
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15.	Demonstrate competence in a range of information management skills; for example, in written and verbal communication, the use of information technology in the workplace, managing library resources.	BIOS2106, BIOS2201, BIOS2401, BIOS3002, BIOS3116, BIOS3401
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16.	Work effectively with a wide range of individuals and groups and as part of a team, establishing professional and ethical relationships using a variety of means.	BIOS2106, BIOS2401, BIOS3113, BIOS3116, BIOS3403
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17.	Demonstrate independent problem solving skills in a variety of theoretical and practical situations, the ability to work on one's own initiative, and manage one's own time to meet deadlines.	BIOS2110, BIOS2401, BIOS3002, BIOS3402
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18.	Reflect on, analyse and evaluate own academic, vocational and professional performance, taking responsibility for personal independent working and professional learning and development.	BIOS1400, BIOS2106, BIOS2401, BIOS3002,
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19.	Understand career opportunities, manage change effectively and begin to plan a career path.	BIOS1400, BIOS2401
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Practical skills for employment are also addressed through the Biosciences skills passport, where students on all levels of the course will have the practical skills they gain recorded. Note that in order to be awarded the BSc Honours in Biomedical Science, students will need to achieve all of the above learning outcomes, as specified for both non-honours and honours.

### **Learning, teaching and assessment**

The BSc (Hons) in Biomedical Science aims to provide supportive, student-centred learning environments that acknowledge and respond to the diversity of student backgrounds and experiences. The structure of the course enables students to move towards increasing independence in their studies from level 4 to level 6 in line with the Framework for Higher Education Qualifications (FHEQ) and University policies for assessment and curriculum design. Level 4 modules offer students structured tutor support for their learning, whilst at level 5 this support becomes less structured, although the extent to which this occurs varies with the difficulty of the task. At level 6, modules offer students opportunities for more independent learning, although specific tutor help will always be available. Module learning outcomes, and hence assessments will always be more demanding at level 6.

Students will participate in a wide range of learning experiences. Teaching, assessment and private study are interlinked in that they are all aspects of each student's personal and academic development.

A list of the range of learning experiences that may be encountered on the course are given below:

Lectures, practical laboratory sessions, practical demonstrations, seminars, student-led seminars, self-instructional workbooks, workshops, tutorials, visits, directed reading, independent study, group projects, web conferencing, self-directed study, reflective accounts of own work, group work, self-study packages, blended learning with the Blackboard VLE, laboratory investigations, class discussions, computer simulations, case studies, independent research, role-play, visiting speakers, reflective learning, interviews.

The course employs a variety of assessment methods. For more details, please see section 14 of this programme specification.

### **Student skills**

Students will be able to obtain a wide range of skills on this course, e.g. a range of subject-specific, professional and transferable skills appropriate to graduate employment and/or postgraduate study in Biomedical Science. In particular, students will gain the knowledge and skills needed to train to become accredited Biomedical Scientists.

The Biological Sciences tutors at the University of Worcester have developed a Personal Development Planning scheme based on QAA Biosciences/Biomedical Sciences graduate and transferable skills. It contains a number of elements which run from induction through to level 6 and is compulsory for all Biological Sciences students. It was developed with three main aims in mind: to help students to reflect on the skills that they need in order to attain the next step in their studies, to make more effective use of the opportunities provided by academic tutorials to give the necessary individual support and guidance, and to increase the students' employability. Each of the PDP skills is linked to appropriate assessments. Practical and fieldwork skills and attributes are also recognised in the PDP

scheme in order to increase employability. For more information, please see the Biomedical Science programme student handbook.

### **PDP Skills and Attributes for Biomedical Science (based on QAA benchmark skills)**

<b>Skills and Attributes</b>	<b>PDP Skills Code</b>	<b>Statement</b>
<b>1. Subject knowledge and understanding</b>	1.1	Engage with the essential facts, major concepts, principles and theories.
	1.2	Understand the broader context and appropriate multidisciplinary aspects of the subject.
	1.3	Knowledge of the processes and mechanisms that have shaped the natural world.
	1.4	Competence in basic experimental skills and/or survey skills
	1.5	Understanding of information and data, set within the theoretical framework.
	1.6	Critical analysis and assessment of data and information.
	1.7	Familiarity of terminology, nomenclature and classifications of systems.
	1.8	Methods of acquiring, interpreting and analysing biological information.
	1.9	Critical understanding of the appropriate contents for the use of methods through the study of texts, original papers, reports and data sets.
	1.10	Awareness of the contribution of their subject to the development of knowledge about the diversity of life and its evolution.
	1.11	Knowledge of a range of communication techniques and methodologies relevant to the particular discipline, including data analysis and the use of statistics.
	1.12	Engagement with some of the current developments in the biosciences and their applications, and the philosophical and ethical issues involved.
	1.13	Awareness of the contribution of biosciences to debate and controversies, and how this knowledge and understanding forms the basis for informed concern about the quality and sustainability of life.
	1.14	Understanding the applicability of the biosciences to the careers to which graduates will be progressing.
<b>2. Subject specific skills</b>	2.1	Recognition that much of what is taught is contested and provisional particularly in the light of continuing scientific advances.
	2.2	An appreciation of the complexity and diversity of life processes through the study of organisms, their molecular, cellular and physiological processes, their genetics and evolution, and the interrelationships between them and their environment.
	2.3	The ability to read and use appropriate literature with a full and critical understanding, while addressing such questions as content, context, aims, objectives, quality of information, and its interpretation and application.
	2.4	The capacity to give a clear and accurate account of a subject, marshal arguments in a mature way and engage in debate and dialogue both with specialists and non-specialists, using appropriate scientific language.

	2.5	Critical and analytical skills: a recognition that statements should be tested and that evidence is subject to assessment and critical evaluation.
	2.6	The ability to employ a variety of methods of study in investigating, recording and analysing material.
	2.7	The ability to think independently, set tasks and solve problems.
	2.8	Make evidence-based decisions.
<b>3. Graduate and transferable skills: Intellectual skills</b>	3.1	Recognise and apply subject-specific theories, paradigms, concepts or principles.
	3.2	Analyse, synthesise and summarise information critically, including published research or reports.
	3.3	Obtain and integrate several lines of subject-specific evidence to formulate and test hypotheses.
	3.4	Apply subject knowledge and understanding to address familiar and unfamiliar problems.
	3.5	Recognise the moral and ethical issues of investigations and appreciate the need for ethical standards and professional codes of conduct.
	3.6	Evaluate published claims by interpreting methodology and experimental data and make judgements about the strength of the evidence.
<b>4. Graduate and transferable skills: Practical skills</b>	4.1	Undertake sufficient practical work to ensure competence in the basic experimental skills appropriate to the discipline under study.
	4.2	Design, plan, conduct and report on investigations, which may involve primary or secondary data (e.g. from a survey database). These data may be obtained through individual or group projects.
	4.3	Obtain, record, collate and analyse data using appropriate techniques in the field and or laboratory, working individually or in a group, as is most appropriate for the discipline under study.
	4.4	Undertake field and/or laboratory investigations of living systems in a responsible, safe and ethical manner.
	4.5	Demonstrate an awareness and knowledge of quality assurance and quality control principles as part of an understanding of the need for quality management systems and a culture of continued quality improvements of relevance to the subjects of study.
	4.6	Plan an experiment in terms of hypothesis, sample, test of observation, controls observable outcomes and statistical analysis.
<b>5. Graduate and transferable skills: Numeracy skills</b>	5.1	Receive and respond to a variety of sources of information: textual, numerical, verbal, graphical.
	5.2	Carry out sample selection; record and analyse data in the field and/or the laboratory; ensure validity, accuracy, calibration, precision, replicability and highlight uncertainty during collection.
	5.3	Prepare, process, interpret and present data, using appropriate qualitative and quantitative techniques, statistical programmes, spreadsheets and programs for presenting data visually.
	5.4	Solve problems by a variety of methods, including the use of computers.
	5.5	Demonstrate an understanding of statistical significance and statistical power.

<b>6. Graduate and transferable skills: Communication, presentation and information technology skills</b>	6.1	Communicate about their subject appropriately to a variety of audiences using a range of formats and approaches, using appropriate scientific language.
	6.2	Cite and reference work in an appropriate manner, including the avoidance of plagiarism.
	6.3	Use a range of media critically as a means of communication and a source of information
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<b>7. Graduate and transferable skills: Interpersonal and teamwork skills</b>	7.1	Identify individual and collective goals and responsibilities and perform in a manner appropriate to these roles, in particular those being developed through practical laboratory and/or field studies.
	7.2	Recognise and respect the views and opinions of other team members; negotiating skills.
	7.3	Evaluate performance as an individual and a team member, evaluate the performance of others.
	7.4	Develop an appreciation of the interdisciplinary nature of science and of the validity of different points of view.
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<b>8. Graduate and transferable skills: Self-management and professional development skills</b>	8.1	Develop the skills necessary for self-managed and lifelong learning (e.g. working independently, time management, organisational, enterprise and knowledge transfer skills).
	8.2	Identify and work towards targets for personal, academic and career development.
	8.3	Develop an adaptable, flexible and effective approach to study and work.
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<b>9. Graduate and transferable skills: Professional &amp; Commercial skills</b>	9.1	Build on knowledge and understanding of the role and impact of intellectual property (IP) within a research environment.
	9.2	Awareness of intellectual property (IP) and how scientific advances can be secured and progressed by the application of intellectual property rights (IPRS).
	9.3	An understanding of how to identify, protect and exploit intellectual property (IP) as part of the scientific innovation process.

### Contact time

In a typical week students will have around 16 contact hours of teaching. The precise contact hours will depend on the optional modules selected and in the final year there will normally be slightly less contact time in order to do more independent study.

Typically class contact time will be structured around:

- 8 hours of lectures
- 7 hours of supervised laboratory practicals
- 1 hour of group workshops
- 1 hour of Study Skills (first year only)

### 14. Assessment strategy

The Biomedical Science course aims to develop autonomous and independent learners who possess a broad range of intellectual, practical and transferable skills. In order to achieve these aims, a range of methods is used to assess students. Assessment methods include examinations, practical skills tests, practical reports, in-class tests, critical essays,

oral presentations, poster presentations, abstract writing, case study interpretation, project design and the production of a research project thesis.

Students have opportunities to develop the appropriate skills necessary for the particular assessment type used before summative assessment takes place. Extensive feedback is given on assessments and students are supported, through the Personal Academic Tutoring Programme for the course, in reflecting and acting on this feedback in order to support their academic development.

Formative assessment is a key part of the learning process and in this course, it takes a variety of forms, including: peer marked formative laboratory report, formative multiple choice examinations, regular formative clicker tests, formative practise for presentations, as well as more informal feedback on essays and reports.

As far as possible, the assessments have been spread throughout the modules. However, the skills and depth of understanding to be assessed take time to develop and consequently assessment deadlines do not generally occur in the first half of the module. The range of assessment tasks used and their weightings, together with a calendar of submission dates, is shown in the course handbook.

All module guides contain detailed assignment briefs and grading criteria which are, in most cases, specific for that particular assignment. Study Skills, which form part of the extended induction for level 4 students, as well as some modules, include sessions on how to make good use of this information.

## **15. Programme structures and requirements**

An award map template is appended to this document. This course is accredited by the Institute of Biomedical Science. In order to address the criteria of the QAA subject benchmark statement for Biomedical Sciences (2015), all modules at level 4 and 5 are mandatory.

## **16. QAA and professional academic standards and quality**

This award is located at level 6 of the FHEQ. The course has been developed with reference to the QAA Biomedical Sciences Benchmark Statement (2015) which has been used to inform course outcomes and skills. QAA and UW guidelines on work related learning and experience have also been followed.

## **17. Support for students**

Biomedical Science students experience a wide variety of learning and teaching methods detailed in section 13 above and these are frequently reviewed and adapted in order to enhance the students' experience.

In addition to the University induction week, Biomedical Science students have an induction programme extended throughout the year in one of the 30 credit modules and in the progression weeks in year 1. This extended induction allows the necessary study skills to be developed at the most appropriate time for the students.

All students have a Personal Academic Tutor who they see twice each semester and the requirement to do so is linked to a mandatory module. The tutorial sessions are structured to guide and support each student, on an individual basis, throughout their course and to help them to realise their potential. The personal academic tutors guide the students through completion of a Personal Development Plan related to the current QAA Biomedical Sciences benchmarks (2015) to enable students to plan the most appropriate path through their course and to increase employability. All tutors have an open-door policy.

The Disability and Dyslexia Service (DDS) provides advice and support to students who have a disability, medical condition or specific learning difficulty, including dyslexia. The DDS also provides support and advice to other departments and individual staff on how to ensure the needs of individual students are met. For more details see:



<http://www.worcester.ac.uk/student-services/index.htm> and  
<https://www2.worc.ac.uk/disabilityanddyslexia/>

There is a strong emphasis on practical and laboratory work in our excellent facilities, using specialist equipment. Our students are taught by academics whose biomedical research is nationally and internationally-recognised.

Students have access to a Virtual Learning Environment (Blackboard Learning System) to provide module-specific material, documents, activities, videos, etc. Students are given the Biomedical Science Course Handbook (published on an annual basis) to provide them with detailed course information, information on modules and options available, and details of how to access university support for their studies. Students are also given detailed module guides which include planned teaching activity, attendance requirements, assessment brief, assessment criteria and reading lists.

## **18. Admissions**

### **Admissions Policy**

We welcome applications from people of all ages and backgrounds with an interest in studying Biomedical Science. The University aims to be accessible; it is committed to widening participation and encouraging diversity in the student population. The School of Science and the Environment works closely with central student support services, including the Admissions Office, the Disability and Dyslexia Service and the International team (student services), to support students from a variety of backgrounds. We actively encourage and welcome people from the widest range of economic and cultural backgrounds, and value the contribution of mature learners. Students entering via non-standard entry routes will be interviewed.

### **Entry Requirements**

The normal minimum entry requirement for undergraduate degree courses is the possession of 4 GCSEs (Grade C/4 or above) and a minimum of 2 A Levels (or equivalent Level 3 qualifications).

Applicants for this course must have an A Level pass in Biology, Human Biology or Chemistry and the study of another science, Maths or Statistics, plus another subject area will also be taken into account. Alternatively, applicants for this course must have an A Level pass in Biology, Human Biology or Chemistry plus the study of two other subject areas.

The current UCAS Tariff requirements for entry to this course are published in the prospectus and on the UW website <https://www.worc.ac.uk/journey/a-z-of-courses.html>

International students may apply for this course through the University of Worcester International College (UWIC) programme. Students who successfully complete UWIC Stage 1 will progress to UWIC Stage 2 Integrated Level 4 Programme which involves completing 120 credits of University of Worcester modules as set out in the award map in section 15, plus a year-long study skills programme with UWIC. Students will be required to successfully complete the UWIC study skills programme in addition to meeting the University requirements for progression to Level 5.

### **Mature Students**

We welcome applicants who hold alternative qualifications/experience and mature students who can demonstrate the ability to benefit from the course and show their potential to complete the course successfully. Although recent preparatory study at an appropriate level (e.g. an Access to Higher Education Diploma) is recommended, students may be considered on the basis of prior evidenced professional/work experience and/or other assessment procedures, and the assessment of personal

suitability. University Admissions office staff can offer information, advice and guidance on this process.

### **Recognition of Prior Learning**

Details of acceptable level 3 qualifications, policy in relation to mature students or applicants with few or no formal qualifications can be found in the prospectus or on the University webpages. Information on eligibility for recognition of prior learning for the purposes of entry or advanced standing is also available from the University webpages or from the Registry Admissions Office (01905 855111).

Further information on Recognition of Prior Learning can be found at:

<http://www.worcester.ac.uk/registryservices/941.htm>

### **Admissions procedures**

Applicants are considered on the basis of their UCAS application forms. It is not currently standard practice to interview candidates, but those entering via non-standard entry routes will be interviewed. Those who accept our offer will be invited to a Visit day to experience studying at Worcester.

Full-time applicants apply through UCAS B900.

### **Admissions/selection criteria**

Offers are made in line with the entry requirements specified above and demonstration, via the application form, of a strong interest in Biomedical Science. The reference provided as part of the application is also taken into account.

## **19. Regulation of assessment**

The course operates under the University's [Taught Courses Regulatory Framework](#).

### **Requirements to pass modules**

- Modules are assessed using a variety of assessment activities, which are detailed in the module specifications.
- The minimum pass mark is D- for each module.
- Students are required to submit all items of assessment in order to pass a module, and in some modules, a pass mark in each item of assessment may be required.
- Full details of the assessment requirements for a module, including the assessment criteria, are published in the module outline.

### **Submission of assessment items**

- Students who submit course work late, but within 7 days (one week) of the due date, will have work marked, but the grade will be capped at D- unless an application for mitigating circumstances is accepted.
- Students who submit work later than 7 days (one week) will not have work marked unless they have submitted a valid claim of mitigating circumstances.
- For full details of submission regulations, please see the Taught Courses Regulatory Framework.

### **Retrieval of failure**

- Students are entitled to resit failed assessment items for any module that is awarded a fail grade.
- Reassessment items that are passed are capped at D-.
- If a student is unsuccessful in the reassessment, they have the right to retake the module (or, in some circumstances, take an alternative module); the module grade for a re-taken module is capped at D-.

- A student will be notified of the reassessment opportunities in the results notification issued via the secure student portal (SOLE). It is the student's responsibility to be aware of, and comply with, any reassessment.

### Requirements for Progression

- A student will be permitted to progress from Level 4 to Level 5 if, by the time of the reassessment Board of Examiners, they have passed at least 90 credits at Level 4. Outstanding Level 4 credits must normally be studied in the following academic year.
- A student will be permitted to progress from Level 5 to Level 6 if, by the time of the reassessment Board of Examiners, they have passed at least 210 credits, including 90 credits at Level 5. Outstanding Level 5 credits must normally be studied in the following academic year.
- A student who, by the time of the reassessment Board of Examiners, has failed 90 credits or more during the academic year as a consequence of non-submission, will be required to withdraw from the University
- If a student has not passed 90 credits by the reassessment Board of Examiners, and is not withdrawn due to non-submission, they will be required to retake failed modules in the following academic year. Any passed modules will be carried forward.
- For students following the UWIC pathway see section 18 above.

### Requirements for Awards

<b>Award</b>	<b>Requirement</b>
Certificate of Higher Education Cert HE <b>Biomedical Studies</b>	In order to be eligible for the exit award of Certificate in Higher Education in Biomedical Studies, a student must have passed at least 120 credits in total including the mandatory modules for level 4 of the award as specified on the award map.
Diploma of Higher Education DipHE <b>Biomedical Studies</b>	In order to be eligible for the exit award of Diploma in Higher Education in Biomedical Science, a student must have passed at least 240 credits in total including the mandatory modules for level 4 and level 5 of the award as specified on the award map.
Degree (non-honours) <b>Biomedical Studies</b>	Passed a minimum of 300 credits with at least 90 credits at Level 5 or higher and a minimum of 60 credits at Level 6, as specified on the award map.
Degree with honours <b>Biomedical Science</b>	Passed a minimum of 360 credits with at least 120 credits at Level 5 or higher and a minimum of 120 credits at Level 6, as specified on the award map.

### Classification

The honours classification will be determined by whichever of the following two methods results in the higher classification:

Classification determined on the profile of the best grades from 60 credits attained at Level 5 and the best grades from 120 credits at Level 6. Level 5 and Level 6 grades count equally in the profile;

Classification determined on the profile of the best grades from 120 credits attained at Level 6 only.

For further information on honours degree classification, see the Taught Courses Regulatory Framework.

## **20. Graduate destinations, employability and links with employers**

### **Graduate destinations**

The IBMS-accredited degree in Biomedical Science at the University of Worcester delivers a diverse study programme and extensive experience of analytical and practical techniques that prepares graduates for employment in a wide range of laboratory-based roles. The honours degree will also equip students with the knowledge and skills that will give them the best possible start to their career and prepares graduates for a wide range of careers in biomedical science.

Studying Biomedical Science at Worcester will enhance students' knowledge of science and its practical application to healthcare and research.

Graduates of the honours programme will be able to go on to complete the IBMS Registration Training Portfolio and Certificate of Competence, which enables candidates to demonstrate that they meet HCPC standards of proficiency and apply for HCPC registration as a Biomedical Scientist.

Biomedical Scientists work in a range of healthcare areas, including:

- cancer
- diabetes
- blood disorders (e.g. anaemia)
- meningitis
- hepatitis
- AIDS
- screening for diseases

Graduates in Biomedical Science will also develop transferable skills at the forefront of advances in medical research and diagnostics and, as such, be able to progress to a wide range of careers in research and industry.

### **Student employability**

Careers and employability is embedded in the curriculum at all three levels. For example, the module BIOS 1400 Professional and Technical Development in Biomedical Science introduces students to possible careers in biomedical science and develops analytical and laboratory skills, as well as giving the students the opportunity to shadow a professional and connect with biomedical science professionals. This is followed up at level 5 in BIOS 2401 Professional Aspects of Biomedical Science, which looks at professional responsibilities and expectations, and enables students to try out different roles in a Biomedical Science project. At Level 4, students are introduced to the Careers Service in BIOS 1201 Cell Biology as part of the Science PDP scheme. Careers advice is given at all levels of the course. Students are given the opportunity in almost every module to develop practical and work-related skills (see PDP table above). Students will also record their practical skills in the Technical Skills Passport as a record to show prospective employers.

### **Links with employers**

University of Worcester has established links with a range of employers related to biomedical science. These include:

- Worcestershire Acute Hospitals NHS Trust
- Wye Valley NHS Trust
- Gloucestershire Hospitals NHS Foundation Trust
- Severn Biotech

- Malvern Cosmeceutics
- Malvern Instruments
- National Pollen and Aerobiology Research Unit (NPARU)

These employers support both course development and delivery by informing course designers and teaching staff of the skills and competencies they require, by providing opportunities for student workplace visits, and by giving talks and demonstrations to students.

This course has been developed with the support and input of employers to ensure that it is designed with their needs in mind. In this way, the course will maximise the employment opportunities for its graduates.

**Please note:** This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of each module can be found in associated course documentation, e.g. course handbooks, module outlines and module specifications.

**Award map template for: Single Honours at Levels 4, 5 and 6**

**Course Title: BSc Hons Biomedical Science**

<b>Level 4</b>					
Module Code	Module Title	Credits (Number)	Status (Mandatory (M) or Optional (O))	Pre-requisites (Code of Module required)	Co-requisites/exclusions and other notes*
BIOS 1010	Introduction to Human Anatomy and Physiology	15	M	None	None
BIOS 1201	Cell Biology	30	M	None	None
BIOS 1203	Health and Disease	30	M	None	None
BIOS 1212	Introduction to Biological Chemistry and Genetics	30	M	None	None
BIOS 1400	Professional and Technical Development in Biomedical Science	15	M	None	None

**Single Honours Requirements at Level 4**

Single Honours students must take 120 credits in total drawn from the table above to include all mandatory modules

<b>Level 5</b>					
<b>Module Code</b>	<b>Module Title</b>	<b>Credits (Number)</b>	<b>Status (Mandatory (M) or Optional (O))</b>	<b>Pre-requisites (Code of Module required)</b>	<b>Co-requisites/ exclusions and other notes*</b>
BIOS 2023	Microbiology	15	M	BIOS 1201	None
BIOS 2106	Systems Physiology 1	30	M	BIOS 1201 & either BIOS 1010 or BIOS 1203	None
BIOS 2110	Immunology	15	M	BIOS 1201 & BIOS 1212	BIOS 3108 (exclusion)
BIOS 2201	Molecular and Cellular Biology	30	M	BIOS 1201	BIOS 2100 & BIOS 2202 (exclusions)
BIOS 2400	Project Development	15	M	None	None
BIOS 2401	Professional Aspects of Biomedical Science	15	M	None	None

### **Single Honours Requirements at Level 5**

Single Honours students must take 120 credits in total drawn from the table above to include all mandatory modules

Level 6					
Module Code	Module Title	Credits (Number)	Status (Mandatory (M) or Optional (O))	Pre-requisites (Code of Module required)	Co-requisites/ exclusions and other notes*
BIOS 3002	Research Project	30	M	BIOS 2400	None
BIOS 3116	Clinical Biochemistry	15	M	BIOS 2201	
BIOS 3400	Infection Science and Antimicrobial Resistance	15	M	BIOS 2023 & BIOS 2110	None
BIOS 3401	Haematology and Transfusion Science	15	M	BIOS 2110	None
BIOS 3403	Cell Pathology	15	M	BIOS 2110 & BIOS 2201	None
BIOS 3404	Neuroendocrinology	15	M	None	None
BIOS 3106	Pharmacology	15	O	BIOS 2201	None
BIOS 3113	The Biochemistry of Cancer	15	O	BIOS 2201	None
BIOS 3402	Diseases of the Ageing Brain	15	O	BIOS 2106	BIOS 3404 (Co-requisite)

### Single Honours Requirements at Level 6

Single Honours students must take 120 credits from the table above to include all mandatory modules