Programme Specification for BSc (Hons) Forensic and Applied Biology

This document applies to Academic Year 2019/20 onwards

| 1. | Awarding institution/body | University of Worcester | | | |
|-----|---------------------------------|--|--|--|--|
| 2. | Teaching institution | University of Worcester | | | |
| 3. | Programme accredited by | The Chartered Society of Forensic Sciences | | | |
| 4. | Final award or awards | BSc. Hons | | | |
| | | | | | |
| 5. | Programme title | Forensic and Applied Biology | | | |
| 6. | Pathways available | Single honours only | | | |
| 7. | Mode and/or site of delivery | Face to Face delivery of theoretical and practical work with some | | | |
| | | blended learning via Blackboard. All modules delivered on the sites | | | |
| | | of the University of Worcester. | | | |
| 8. | Mode of attendance and duration | FT & PT | | | |
| 9. | UCAS Code | FC 41 | | | |
| 10. | Subject Benchmark statement | QAA Benchmark for Biosciences 2015. | | | |
| | and/or professional body | https://www.qaa.ac.uk/docs/qaa/subject-benchmark- | | | |
| | statement | statements/sbs-biosciences-15.pdf?sfvrsn=4eef781_18 | | | |
| | | The Chartered Society of Forensic Sciences QAA benchmark skills | | | |
| | | for Crime Scene Investigation and Interpretation, Evaluation and | | | |
| | | Presentation of Evidence component standards are adhered also to | | | |
| | | https://www.qaa.ac.uk/docs/qaa/subject-benchmark- | | | |
| | | statements/subject-benchmark-statement-forensic- | | | |
| | | science.pdf?sfvrsn=659ef781_10 | | | |
| 11. | Date of Programme Specification | March 2013/updated May 2014/ amended regulations August 2014 | | | |
| 11. | preparation/ revision | and October 2014. | | | |
| | preparation, revision | Sept 15 updated of title for BIOS2107 | | | |
| | | November 15 updated pre-reg for BIOS3106 commence 16/17. | | | |
| | | November 15 updated to Personal Academic Tutors and hyperlink | | | |
| | | | | | |
| | | update to Taught Courses Regulatory Framework. Dec 15 update to hyperlinks following CSFS reaccreditation | | | |
| | | June 16 update to pre-reg for BIOS3010 | | | |
| | | To be implemented from 2017/2018: | | | |
| | | January 2017: removal of BIOS3051, BIOS2024, BIOS2040, | | | |
| | | BIOS2106, BIOS2107, ARCH2121, BIOS1211 | | | |
| | | addition of BIOS1203, BIOS2112, BIOS2100, BIOS2110, BIOS3113, | | | |
| | | BIOS3012, BIOS3301, BIOS3014, SUST1001 | | | |
| | | March 2017: general updates to template | | | |
| | | August 2017 - AQU amendments | | | |
| | | Jan 18 BIOS3012 pre-reqs updated | | | |
| | | August 2018 – AQU amendments | | | |
| | | October 2018 – updates to Level 4 Award Map | | | |
| | | December 2018 – BIOS3106 becoming optional | | | |
| | | November 2018 – update to general text and transfer to new | | | |
| | | template | | | |
| | | December 2018 – AQU amendments to template June 2019 - BIOS3301 title corrected | | | |
| | | August 2019 – AQU amendments to Section 19 | | | |
| | | October 19 - update to Independent Study title to be implemented | | | |
| | | Sept 20. | | | |
| | | December 19 – removal of optional modules PSYCH1434, BIOS3014, | | | |
| | | BIOS3301, BIOS3114, BIOS3010. | | | |
| | | DIO33301, DIO33114, DIO33010. | | | |

12. Educational aims of the programme

Forensic and Applied Biology at Worcester is a specialist course that is accredited by The Chartered Society of Forensic Sciences. It offers a number of specialist modules along with a number of modules taken from our Biology programme at Worcester. The course is very practical offering students the opportunity to gather practical skills in both Biology and in some aspects of Forensic Science. Students also have the opportunity to gather some skills in Archaeology. There is also an opportunity to undertake an independent project in their third year, which is not offered by all Forensic-based courses in the UK. The emphasis on the development of 'hands on' practical skills provides students with useful skills for their future careers. The unique Worcester science personal development planning (PDP) scheme is designed to support student personal and career development.

In particular the course aims to:-

- a) provide a broad practical laboratory and field based Forensic/Applied Biology curriculum.
- b) give a supportive learning environment which acknowledges and responds to the diversity of student backgrounds and experiences, and which allow students the opportunity to realise their academic potential;
- c) provide students with the opportunity to study Forensic and Applied Biology at a depth and level appropriate to honours degree standard;
- d) develop to the appropriate pathway level the knowledge, skills and aptitudes of Forensic and Applied Biology, within an interdisciplinary, undergraduate degree scheme;
- e) enable students to work independently, analytically and critically;
- f) encourage students to develop a range of subject-specific and transferable skills appropriate to graduate employment and/or postgraduate study in Forensic and Applied Biology.

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

| Knowledge and Understanding | |
|-----------------------------|--|
| | |

| LO | On successful completion of the named award, students will | Module Code/s |
|-----|--|---|
| no. | be able to: | |
| 1. | demonstrate knowledge of material and an understanding of a range of biological and forensic concepts and principles at a variety of levels (from sub-cellular to whole organisms); | BIOS 1201, BIOS 2100, BIOS 1205, BIOS 1220, BIOS 3053, BIOS 1010, BIOS 1203 BIOS 3052, BIOS 2105, BIOS 2054, BIOS 3002, |
| 2. | communicate biological information and principles in an appropriate manner, employing skills of written, oral and visual communication, numerical analysis and information technology; | BIOS 3053, BIOS 2112, BIOS 3002 |
| 3. | have an understanding of ethical issues related to forensic and applied biology; | BIOS 2200, BIOS 1010, BIOS 3002 |

| Cognitive and Intellectual skills | | |
|-----------------------------------|--|--|
| | | |

| 4. | access information from a variety of sources and show | BIOS 1201, BIOS 2100, |
|----|--|-----------------------|
| | proficiency in assessing, evaluating, analysing, and | BIOS 2200, BIOS 3002, |
| | synthesising the scientific information and data; | |
| 5. | design, execute and critically evaluate the outcomes of | BIOS 1205, BIOS 2100, |
| | investigations carried out individually and in groups; | BIOS 3053, BIOS 3002 |
| 6. | plan, carry out and present a piece of hypothesis-driven | BIOS 2200, BIOS 3050, |
| | work for a research project. | BIOS 3053, |
| | | BIOS 3002, |

Skills and capabilities related to employability

| 7. | record data accurately, analyse and interpret those data and | BIOS 1201, BIOS 1220, |
|----|---|-----------------------|
| | test hypotheses; | BIOS 3052, |
| | | BIOS 3002, |
| 8. | have practical skills in laboratory and/or field work, and be | BIOS 1201, BIOS 1220, |
| | able to work safely and appropriately in these environments. | BIOS 3053, BIOS 2054, |
| | | BIOS 3050, |
| | | BIOS 3002, |
| 9. | develop specific skills in forensic work such as crime scene | BIOS 1220, BIOS 2054 |
| | analysis, problem solving, attention to detail, evidence | |
| | recording, evaluation and assessment, and laboratory and | |
| | field analysis techniques; | |

Transferable/key skills

| 10. | Work co-operatively with others, while demonstrating an | BIOS 1201, BIOS 1220, |
|-----|---|-----------------------|
| | increasing understanding of how to be an independent learner; | BIOS 2054, BIOS 3053 |
| | , | |
| 11. | Communicate complex scientific concepts to lay audiences | BIOS 3053, BIOS 3052, |
| | such as a court. | BIOS 3050, BIOS 1220, |
| | | BIOS 2112, BIOS 2105, |
| | | BIOS 2054 |

PDP Skills and Attributes for Forensic and Applied Biology (based on QAA benchmark skills)

| Skills and Attributes | Details |
|--------------------------|--|
| 1. Subject knowledge and | 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 |
| understanding | 1.2. Onderstand the broader context and appropriate mutudisciplinary 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 |
| | 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 classification of systems |
| | 1.8. Methods of acquiring, interpreting and analysing biological information. |
| | 1.9. Critical understanding of the appropriate contexts 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. |

| 2. Subject- specific skills | 2.1. Recognition that much of what is taught is contested and provisional, particularly in the light of continuing scientific advances | | |
|--|---|--|--|
| Specific Skills | 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 at mature way and engage in debate and dialogue both with specialists and non-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. | | |
| 3. Graduate and transferable skills: Intellectual | 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 | | |
| skills | 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. | | |

| Skills and | Details |
|--------------------------------------|--|
| Attributes | |
| 4. Graduate and | 4.1. Undertake sufficient practical work to ensure competence in the basic |
| transferable | experimental skills appropriate to the discipline under study |
| skills: Practical skills | 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 |
| 5. Graduate and transferable | 5.1. Receive and respond to a variety of sources of information: textual, numerical, verbal, graphical |
| skills: Numeracy skills | 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 |
| 6. Graduate and | 6.1. Communicate about their subject appropriately to a variety of audiences using a range of |
| transferable | formats and approaches, using appropriate scientific language |
| skills: | 6.2. Cite and reference work in an appropriate manner, including the avoidance of plagiarism |
| Communication, | 6.3. Use the internet and other electronic sources critically as a means of |
| presentation and | communication and a source of information. |
| information | |
| technology skills | |
| 7. Graduate and transferable skills: | 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. |
| Interpersonal and teamwork skills | 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 |
| 8. Graduate and | 8.1. Develop the skills necessary for self-managed and lifelong learning (eg working |
| transferable | independently, time management, organisational, enterprise and knowledge transfer skills) |
| skills: Self- | 8.2. Identify and work towards targets for personal, academic and career development |
| management and | 8.3. Develop an adaptable, flexible and effective approach to study and work. |
| professional | |
| development skills | |

Teaching and Learning

The University places emphasis on enabling students to develop the independent learning capabilities that will equip them for lifelong learning and future employment, as well as academic achievement. A mixture of Research Project, teaching and academic support through the personal academic tutoring system enables students to reflect on progress and build up a profile of skills, achievements and experiences that will enable them to flourish and be successful.

Teaching

Teaching is delivered through a combination of lectures, practical work, field work, video presentations, group tutorials, discussions, directed reading, and formative assessments. The first year also includes study skills sessions. The course is very practical and offers the opportunity to undertake an independent project in the third year. The emphasis on the development of 'hands on' practical skills will provide useful skills for future careers.

In addition, meetings with personal academic tutors are scheduled on at least 4 occasions in the first year and three occasions in each of the other years of a course.

There is also opportunity to engage with an Erasmus scheme and spend a semester abroad, or to become involved in staff research through the Vacation Research Assistantship Scheme.

Contact time

In a typical week there will be 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 Research Project.

Typically class contact time will be structured around:

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

Independent self-study

In addition to the contact time, students are expected to undertake around 27 hours of personal self-study per week. Typically, this will involve going over lecture notes and reading around the topic in order to reinforce the content, completing online activities, reading journal articles and books, working on individual and group projects, undertaking research in the library and online, preparing coursework assignments and presentations, and preparing for examinations.

Independent learning is supported by a range of excellent learning facilities, including the Hive and library resources, the virtual learning environment, and extensive electronic learning resources.

Teaching staff

Students will be taught by a teaching team whose expertise and knowledge are closely matched to the content of the modules on the course, this will mainly involve senior academics, but visiting speakers with specialised expertise may deliver some sessions. Technicians support practical sessions.

Postgraduate research students who have undertaken teacher training may also contribute to the teaching of seminars under the supervision of the module leader. Teaching is informed by the research and consultancy, and 93 per cent of course lecturers in the Biological Sciences have a higher education teaching qualification or are Fellows of the Higher Education Academy. Twenty per cent also have Teaching Fellowships from the University of Worcester. Information about the staff is available via staff profiles https://www.worcester.ac.uk/discover/science-staff-profiles.html

Assessment

The course provides opportunities to test understanding and learning informally through the completion of practice or 'formative' assignments. Each module has one or more formal or 'summative' assessments which are graded and count towards the overall module grade.

Assessment methods include practical reports, presentations, posters, on-line activities, essays and examinations (which may be practical, written, data analysis, seen exams or open book exams).

The precise assessment requirements for an individual student in an academic year will vary according to the mandatory and optional modules taken, but a typical formal summative assessment pattern for each year of the course is:

Year 1

- 1 Essay
- 1 Forensic statement
- 2 Practical tests
- 2 Practical files
- 5 exams

Year 2

- 2 forensic case notes and statements
- 2 in class tests
- 3 practical reports
- 3 exams of 1.5 or 2 hours duration
- 1 portfolio of evidence
- 1 data exercise
- 1 research proposal
- 1 CV and practice job interview

Year 3

- 1 research project
- 1 poster presentation
- 3 examinations of 1-2 hours duration
- 1 court room assessment
- 1 in class tests
- 3 forensic case notes / witness statement
- 1 portfolio
- 1 essay
- 1 online activity

Feedback

Feedback is provided for practice assessments and on formal assessments undertaken by coursework. Feedback on examination performance is available upon request from the module leader. Feedback is intended to support learning and students are encouraged to discuss it with personal academic tutors and module tutors as appropriate.

14. Assessment strategy

The Forensic and Applied Biology course aims to develop autonomous and independent learners who possess a broad range of intellectual and transferable skills. In order to achieve these aims, a range of methods is used to assess students. Assessment methods include examinations, practical tests, practical and field reports, in-class tests, presentations and poster presentations.

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 Academic Tutoring Programme for the course, in reflecting and acting on this feedback in order to support their academic development.

The emphasis on formative assessment gives more opportunities to provide feedback and this takes a variety of forms, for example the level 4 30-credit modules provide regular and rapid feedback by using personal response systems.

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 the module. The range of assessment tasks used and their weightings, together with a calendar of submission dates, is shown in the students' handbook.

The Biological Sciences follow the University of Worcester Assessment Policy http://www.worc.ac.uk/aqu/documments/AssessmentPolicy.pdf

All module outlines 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.

The Forensic and Applied Biology course employs the UW generic undergraduate assessment criteria (see University Handbook), specific interpretation and elaboration of which will be outlined in assessment briefs within each individual module handbook given to the students. A table showing how each of the modules is assessed can be found in section 1 of the Forensic and Applied Biology student handbook.

15. Programme structures and requirements

Course Title: BSc Forensic and Applied Biology

| Level 4 | | | | | |
|----------------|---|---------------------|---|---|---|
| Module Code | Module Title | Credits (Number) | Status (Mandatory (M) or Optional (O)) Single Hons | Pre- requisites (Code of Module required) | Co-requisites/ exclusions and other notes |
| BIOS 1010 | Introduction to Human Anatomy and Physiology | 15 | М | None | None |
| BIOS 1220 | Introduction to Forensic Sciences | 30 | М | None | None |
| BIOS 1201 | Cell Biology | 30 | М | None | None |
| BIOS 1203 | Health and Disease | 30 | 0 | None | BIOS1211 |
| BIOS 1205 | Introduction to Biological Chemistry | 15 | М | None | None |
| LANGxxxx | Optional modules offered by the Language Centre | 15/30 | 0 | - | - |

Single Honours Requirements at Level 4

Single Honours students must take 120 credits in total to include all mandatory modules, BIOS 1010, BIOS 1220, BIOS 1201 and BIOS 1205, and optional modules - which can include up to 15/30 credits drawn from a range of Language Centre modules in: Academic English for native and non-native speakers of English; Modern Foreign Languages; and Teaching English as a Foreign Language (TEFL). Details of the available Language Centre modules can be found on the Language Centre website: http://www.worcester.ac.uk/your-home/language-centre-module-options.html.

| Module Code | Module Title | Credits | Status | Pre-requisites | Co-requisites/ |
|-------------|---|----------|--|--|---|
| module oode | module Thic | (Number) | (Mandatory (M) or Optional (O)) | (Code of Module | exclusions and other notes |
| | | | Single Honours | required) | |
| BIOS 2003 | Work Experience | 15 | 0 | | BIOS 3003 |
| BIOS 2200 | Project and Career Development | 30 | М | None | BIOS 3114 excluded BIOS2200E excluded BIOS2400 excluded |
| BIOS 2023 | Microbiology | 15 | 0 | BIOS 1201 | None |
| BIOS 2100 | Molecular Genetics | 15 | M unless taking BIOS 2201as an Optional | BIOS 1201 | BIOS 2201 BIOS 2202 excluded |
| BIOS 2201 | Molecular and Cellular Biology | 30 | 0 | BIOS 1201 | BIOS2100 BIOS 2202 excluded |
| BIOS 2112 | Forensic archaeology and anthropology | 30 | M | BIOS1220 | None |
| BIOS 2054 | Crime Scene Investigation | 15 | M | BIOS 1220 | BIOS 3054 |
| BIOS 2104 | Human Genetics | 15 | 0 | BIOS 1201 | None |
| BIOS 2105 | Medical Forensic Science | 15 | М | BIOS 1010 or BIOS1102 or BIOS1203 or BIOS1211 | None |
| ARCH 2122 | Death & Burial | 15 | 0 | None | ARCH2014; ARCH3014 |
| BIOS 2110 | Immunology | 15 | 0 | BIOS1201, BIOS1212 or BIOS 1205 | BIOS 3108 excluded |
| LANGxxxx | Optional modules offered by the Language Centre | 15/30 | 0 | - | - |

Single Honours Requirements at Level 5

Single Honours students must take 120 credits in total to include all mandatory modules BIOS 2200, BIOS 2100, BIOS 2054, BIOS2112 and BIOS 2105.

Single Honours students should also choose additional modules from the table above to the value of 30 credits. If BIOS1212 is chosen as an optional module, students cannot take BIOS 1205 as the first half of the module covers this content.

Optional modules can include up to 15/30 credits drawn from a range of Language Centre modules in: Academic English for native and non-native speakers of English; Modern Foreign Languages; and Teaching English as a Foreign Language (TEFL). Details of the available Language Centre modules can be found on the Language Centre website: http://www.worcester.ac.uk/your-home/language-centre-module-options.html.

| Level 6 | | | | | |
|-------------|--|------------------|--|---|---|
| Module Code | Module Title | Credits (Number) | Status (Mandatory (M) or Optional (O)) Single Honours | Pre-requisites (Code of Module required) | Co-requisites/ exclusions and other notes |
| DIOC 2002 | Decearch Project | 20 | | DIOC 2200 | |
| BIOS 3002 | Research Project | 30 | М | BIOS 2200 | |
| BIOS 3003 | Work Experience | 15 | Ο | none | BIOS 2003 |
| BIOS 3050 | Interpretation, Evaluation and Reporting of Evidence | 15 | M | BIOS 2015, BIOS 2054, BIOS 3052 | None |
| BIOS 3052 | Forensic DNA Analysis | 15 | М | BIOS 2201, 2202 or 2100 | None |
| BIOS 3053 | Biological Indicators for Crime Reporting | 15 | М | None | None |
| BIOS 3106 | Pharmacology | 15 | 0 | BIOS2100 or BIOS2201 or BIOS2202 | None |
| BIOS 3109 | Genomics & Bioinformatics | 15 | 0 | BIOS 2201, 2202 or 2100 | None |
| BIOS 3111 | Extension Module | 15 | 0 | Any Level 5 or Level 6 BIOS module in which the student has achieved a B- grade or above and has the support of the leader of that module | None |
| BIOS 3112 | Parasitology | 15 | 0 | BIOS 2201 or 2202 or 2100 | None |
| BIOS 3113 | Biochemistry of cancer | 15 | 0 | BIOS2201 | None |
| BIOS 3012 | Animal movement | 15 | 0 | None | None |

Single Honours Requirements at Level 6
Single Honours students must take 120 credits from the table above to include all mandatory modules BIOS 3002, BIOS 3050, BIOS 3053, plus three 15 credit modules from BIOS 3003, BIOS 3109, BIOS 3111, BIOS 3112, BIOS 3113, or BIOS3012

16. QAA and Professional Academic Standards and Quality

The course has been developed to follow, where possible, bioscience benchmarks and the component standards set out by the <u>The Chartered Society of Forensic Sciences</u>. (See section 1 of the Forensic and Applied Biology Student Handbook). Both sets of criteria have been used to inform course outcomes. We also follow the QAA and UW guidelines on work experience. The course operates at levels four, five and six of the Framework for Higher Education Qualifications.

17. Support for students

- Forensic and Applied Biology students experience a variety of learning and teaching methods
 detailed in section 13.1 above and these are frequently reviewed and adapted in order to
 enhance the students' experience.
- An induction programme extended throughout the first year of study in one of the 30 credit modules in year 1. This extended induction allows the necessary study skills to be developed at the most appropriate time for the student.
- 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 Biosciences benchmarks.
 All tutors have an open door policy.
- Science PDP scheme to develop student skills, to enable students to plan the most appropriate path through their course and to increase employability.
- Hyperlinks to Student Services and the Disability and Dyslexia Service are below:
 - http://www.worcester.ac.uk/student-services/index.htm
 - https://www2.worc.ac.uk/disabilityanddyslexia/
- A Virtual Learning Environment (Blackboard Learning System) to provide module-specific material, documents, activities.
- Detailed module outlines (module handbooks), which include planned teaching activity, attendance requirements, assessment brief, assessment criteria and reading lists.
- Student Handbook (published on an annual basis), to provide students with detailed course information.

The Forensic and Applied Biology students' handbook provides detailed information on all of the above points as well as information on modules and options available.

18. Admissions

We welcome applications from people of all ages and backgrounds with an interest in studying Forensic and Applied Biology. 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 Office, 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 may 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 must have studied Biology or Chemistry to at least AS level or equivalent, and normally applicants must have an A level pass in Biology, although applicants who have not

studied science for some time or do not have a science background will be considered. The study of other sciences such as, Maths or Physics would be an advantage.

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

See <u>Admissions Policy</u> for other acceptable qualifications.

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.

Disclosure and Barring Service (DBS) requirements

A satisfactory DBS may be required if a placement/WBL experience is a required element of the course.

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).

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 Biological Sciences. The reference 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 see <u>Taught Courses Regulatory Framework</u>.

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 reassessments.

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

| Award | Requirement |
|-------------------------|---|
| Degree (non-honours) | 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 | 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, including the mandatory modules for Level 5 and Level 6 of the award (not the Research Project module) 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.

20. Graduate destinations, employability and links with employers

Graduate destinations

An increasing number of our Forensic and Applied students go on to study for Masters or PhD awards (in Forensic <u>or</u> Biology related disciplines) and advice on following this pathway is included in our careers guidance within the School.

Some of our students have entered employment with direct links to their degree subject, for example Forensic Toxicology. Others have used their transferrable graduate skills to gain employment in seemingly unrelated areas.

Career opportunities (forensic) include:

- Independent forensic contractors such as Eurofins, Cellmark Forensic services, Key Forensic, Forensic Access, and Orchid Biosciences Europe (Independent DNA Testing)
- Police laboratories such as West Mercia Constabulary as Scene of Crime Officers and in laboratories
- Forensic Science Agency of Northern Ireland as the forensic science service but for Northern Ireland
- Horse racing Forensic Laboratory,
- The Home Office

Career opportunities (applied biology) include:

- Government Agencies (e.g. Environment Agency, MoD & English Nature)
- Non-governmental Organisations (e.g. Greenpeace & Local Wildlife Trusts)
- Local Government (e.g. Environmental Health)
- Technical Posts (e.g. Microbiological monitoring & medical technicians, water companies, hospital technicians)
- Education (e.g. teaching, lecturing & research)
- Other Graduate Professions (e.g. accountancy & management)
- Further Study: M.Sc., M.Phil or Ph.D.
- Scientific and medical sales

Student employability

Careers advice is embedded in the curriculum at all three levels. In Level 4, students are introduced to the Careers Service in BIOS 1201 Cell Biology as part of the Science PDP scheme. This is followed up in BIOS 2200, with a more substantial careers session which looks at careers options and strategies. In this module one of the assignments takes the form of an interview and submission of a CV. Careers advice is also given as a part of the university Worcester weeks at all levels of the course. Students are given the opportunity in most modules to develop work-based skills (see PDP table above) however; students also have the opportunity to take a Work Placement module at Level 5 or 6.

Links with employers

We have links with local police forces and forensic suppliers, Worcestershire and Herefordshire Wildlife Trusts and Birmingham Sea Life Centre, with whom staff liaise to arrange Independent Studies and employment opportunities. An employee of Worcestershire Wildlife Trust (and exstudent) also sits on the University Strategic Biodiversity Management Group, chaired by a member of the Biology staff. We also have links with West Mercia Police and Hereford and Worcester County Council. These links have provided work experience opportunities, facilities for Independent Studies, and careers advice from those in the relevant fields.

The involvement of The Chartered Society of Forensic Sciences in Course Development In the 2009/2010 period, Accreditation was awarded by The Chartered Society of Forensic Sciences. This has been maintained and expanded to include forensic archaeology competent standard. We consistently receive positive feedback from our accrediting body.

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.