

PROGRAMME SPECIFICATION – FD/HND COURSES

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| 1 | Awarding institution/body University of Worcester |
| 2 | Teaching institution Bournville College and University of Worcester |
| 3 | Programme accredited by N/A |
| 4 | Final award HND |
| 5 | Programme title HND in Biomedical Science |
| 6 | Pathways available N/A |
| 7 | Mode and/or site of delivery Full-time and part-time options are available. Most learning will take place at Bournville College, delivered by Bournville College staff (75%) and University of Worcester staff (25%). Some learning will take place at University of Worcester in each year of the course. |
| 8 | Mode of attendance Full-time over two years or part-time |
| 9 | UCAS Code W80 009C |
| 10 | Subject Benchmark statement and/or professional body statement QAA Subject Benchmark Statement for Biomedical Science (QAA, 2007) |
| 11 | Date of Programme Specification preparation/revision September 2009 |

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| 12 | Educational aims of the programme |
| 1 | Provide students with the opportunity to build on existing knowledge and experience and to further develop specific knowledge, skills and values relevant to the context of biomedical science. |
| 2 | Provide opportunities for students to develop key skills to prepare for further study and/or employment and lifelong learning. |
| 3 | Develop students' appreciation and application of the core values underpinning scientific practice |
| 4 | Promote critical reflection and reflective practice. |
| 5 | Develop an analytical and critical approach to problem solving |
| 6 | Enable students to assess, plan, implement and make sound judgements |
| 7 | Develop students' interpersonal and communication skills and enable students to identify, use and communicate relevant information effectively |
| 13 | Intended learning outcomes and learning, teaching and assessment methods |
| | 1. Understand the principles of scientific enquiry and the process of research |

2. Develop a knowledge of the structure and function of the human body relevant to the practice of biomedical science
3. Through organised work placement, acquire competency in the determination and use of appropriate laboratory techniques
4. Become independent in the ability to analyse and evaluate the results of laboratory investigations
5. Use reflective practice to develop the knowledge and skills required for good scientific practice
6. Establish and maintain trust and confidence of service users and the general public
7. Demonstrate accountability for the quality of their work and take responsibility for maintaining and improving their knowledge and skills while working within the parameters of their role
8. Work in collaboration and partnership with others across a range of different agencies and disciplines within the biomedical science sector
9. Communicate effectively through a range of media and in a range of contexts
10. Develop key skills for lifelong learning

The primary aim of teaching, learning and assessment strategies is to equip students with the necessary subject knowledge skills to make a contribution within biomedical science following the completion of their course. Despite the modular nature of the course, cross-referencing between topics in different modules will be made clear to ensure effective teaching and learning. All teaching strategies employed are designed to be enriching, stimulating, challenging, effective and enjoyable.

The nature of teaching and learning will progress throughout the HND to encourage transition from dependent to independent learning, so that students gradually become more responsible for their own learning. In order to motivate and challenge students, a balance of teaching and learning methodologies are employed during the course, such as:

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| <p><i>Knowledge and understanding:</i></p> | <p><i>Examples of learning, teaching and assessment methods used:</i> Lectures (which may be traditional, interactive or virtual), tutorials, seminars, laboratory practicals and demonstrations, self-directed learning via the use of on-line learning and assessment including Blackboard and/or Moodle, presentations, group work, peer assessment, case-studies and problem-based learning, practical and traditional examinations, essay writing, practical report writing, critical analysis of scientific articles and papers, use of IT to record and analyse data, and project work</p> |
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| <i>Cognitive and intellectual skills:</i> | <i>Examples of learning, teaching and assessment methods used:</i> Presenting arguments written and orally to others, analysis of information, contributing own point of view and listening to others, evaluating processes, procedures and arguments |
| <i>Practical skills relevant to employment:</i> | <i>Examples of learning, teaching and assessment methods used:</i> In-class assessment of practical skills, visits to real work environments, work placements, use of technical equipment |
| <i>Transferable/key skills:</i> | <i>Examples of learning, teaching and assessment methods used:</i> Communicating information and presenting arguments to others, use numerical and IT skills in the recording, interpretation and presentation of information, report writing, problem-solving, managing of own learning and personal development planning, working with others, becoming independent learners. |

14 Assessment Strategy

A wide range of formative and summative assessment methods are in place throughout the course and form an integral part of each module. Students are assessed under real-work conditions in some modules and methods used place students in situations they will encounter in the work settings, such as analysing a sample and drawing a valid conclusion from the outcome, which then must be presented in a timely fashion to a service user.

Students are assessed as independent learners and also in a group situation, where in the latter case an individual's contribution and the effectiveness of the team overall can both be assessed independently. Formative assessment will inform students of their progress within modules and will allow time for them to reflect on feedback and make improvements within the timescale of completing a module. Students will engage in peer assessment in some modules, which will enable them to consider the work of others' and reflect on their own practice.

Students are required in some modules to undertake formal (unseen or open book) examinations, thereby demonstrating acquisition of knowledge and understanding; in some cases they will be required to apply former learning to a novel or unfamiliar situation, again encouraging them to use a range of skills in determining the solution to a problem.

Assessment methods may include essays, laboratory reports, project reports, analytical exercises, poster presentations, oral presentations, learning logs, diaries and personal development plans, abstract writing and journal article reviews, although this list is not intended to be restrictive.

15 Programme structure and requirements

Mapping of Course Level Learning Outcomes

Whilst it is intended that all the units cover the course level learning outcomes, particular

modules are more closely linked to specific outcomes as indicated in the award map.

Title: ...HND in Biomedical Science

Year:09/10

Last Updated:June 09

(Subject to Approval)

| AWARD MAP HND in Biomedical Science - LEVEL FOUR | | | | | | |
|---|--|----------------|-----------------|---------------|--------------------------|----------------------------------|
| Module Code | Title | Credits | Semester | Status | Pre/Co-requisites | Link to learning outcomes |
| HSPR1001 | Scientific Study Skills | 15 | 1 | M | None | 1,4,5,9 |
| BIOS1100 | Cell Biology 1 | 15 | 1 | M | None | 2,4 |
| BMED1001 | Introduction to Microbiology | 15 | 1 | M | None | 4,7 |
| BIOS1003 | Technical Skills in Biological Science | 15 | 1 | M | None | 1,4,7 |
| BIOS1101 | Cell Biology 2 | 15 | 2 | M | None | 2,4,9 |
| BIOS1010 | Human Anatomy and Physiology | 15 | 2 | M | None | 2,4 |
| HSPR1003 | Simulated Work Experience | 15 | 2 | M | None | 1,3,4,6,8 |
| BMED1002 | Genetics | 15 | 2 | M | None | 2,4 |

Requirements at level 4

Students must take all the mandatory modules. Students must successfully complete 120 credits in total at level 4.

| AWARD MAP HND in BioMedical Science - LEVEL FIVE | | | | | | |
|---|--------------------------------------|----------------|-----------------|---------------|--------------------------|----------------------------------|
| Module Code | Title | Credits | Semester | Status | Pre/Co-requisites | Link to learning outcomes |
| BIOS2004 | Research Methods | 15 | 1 | M | None | 1,4,5 |
| BIOS2020 | The Human Nervous System | 15 | 1 | M | BIOS1010 | 2,4,9 |
| BMED2001 | Immunology, Microbiology and disease | 15 | 1 | M | BMED1001 | 2,4,9 |

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|----------|--|----|---|---|----------------------|-----------|
| BMED2003 | Imaging Systems in Biomedical Science | 15 | 1 | M | None | 2,4 |
| HSPR2001 | HND Independent Study | 15 | 2 | M | None | 1,4,5,7 |
| BMED2002 | Haematology and Cellular Pathology | 15 | 2 | M | BMED1001 BIOS1100 | 2 |
| HSPR2002 | Work Experience | 15 | 2 | M | HSPR1003 | 6,1,3,8,7 |
| BMED2004 | Laboratory Analysis and Automation Systems | 15 | 2 | M | BIOS1100 | 4,9,7 |

Requirements at level 5

Students must successfully complete 120 credits in total at level 5.

16 QAA Academic Infrastructure

The QAA **Subject Benchmark Statement for Biomedical Science** (2007) has been referred to in the determination of the learning aims and objectives for this course, although it should be noted that these specifically define the subject area of biomedical science relating to BSc Honours Degrees, incorporating this title, offered by UK Universities. Nevertheless, the statement provides an overview of recommended content of biomedical science courses and as such has been used in determining the broad and varied content of the proposed HND course and the nature of its assessment. The Institute for Biomedical Science is the professional body for biomedical scientists, it also accredits degree courses. The IBMS website has been referred to in the production of some modules.

17 Support for students

Students will receive a formal induction for both University of Worcester and Bournville College. Since Bournville College has a number of established HE courses in existence, those on HE programmes at the college will receive, alongside their course-specific induction, a general induction to all students studying HE courses at the college. A personal tutor will be allocated to each student at Bournville College, in addition to there being a course tutor who will oversee the day to day running of the course and who will act as a central contact for all students on the course. This may, or may not be, a student's personal tutor. A tutor will be allocated to each student to act as their contact and visit whilst on work experience.

All students at Bournville College are required to undertake personal development planning and review, via their Individual Learning Plan. This is an on-line document which is accessed regularly and independently by the student and his/her personal tutor. The setting up of an initial action plan for individualised

learning and development, together with its on-going monitoring and review throughout the year, is an essential feature of the course.

Bournville College has established services for student support and welfare. All students undertake an initial diagnostic assessment which will inform them whether or not there is a recommendation for some form of support which will enhance their learning and experience on the course. In addition, general learning support is available to all students at the college in the form of study skills development, IT skills development and access to Learning Advisors in the Learning Resource Centre.

18 Admissions policy, criteria and procedures

Admissions policy

The University and its partner colleges are committed to providing equal opportunities for all student members of their community. The University recognises that the provision of equal opportunity encompasses learning and teaching, curriculum issues and the manner in which staff and students and all service users are treated within the institution.

The admissions policy for the HND in Biomedical Science is designed to encourage access to higher education through a policy of equal opportunity regardless of race, gender, disability, sexual orientation, religious belief or age.

Students with Disabilities:

The University welcomes disabled students and those with specific learning difficulties to our courses. If you suspect that you have a disability that will impact on your learning experience you are urged to contact the service at Bournville College to discuss the nature and range of adjustments that may be necessary. You may also contact services at the University (Disability and Dyslexia Service on 01905 85 5531 email: disability@worc.ac.uk).

Entry requirements and Admissions Procedures

Applicants will require at least 80 UCAS points, which must include a six unit award (e.g. a full A level or a full BTEC National Award). Students will be expected to have studied Biology and/or Chemistry to at least AS level standard or equivalent. Typical entry requirements are:

- At least 5 GCSEs at grades A* to C, including mathematics, English and science, plus one of the following:
- one GCS A level or and AVCE single award at grade C or above
- two GCE A levels or and AVCE double award at grade E or above
- a BTEC National Award at merit or above
- a BTEC National Certificate or Diploma at pass or above

Admission will be via an interview at Bournville College

Successful applicants for the course are selected on the basis of meeting entry criteria at the levels specified above and the outcome of the interview.

Applicants for this programme will be considered on the basis of experience and/or previous certificated learning, for example NVQ (Level c), 1 A level (Grade A-E with 3 GCSE Grade C or above) or equivalency of any other relevant qualifications.

Candidates are encouraged to apply if they feel they can benefit from the programme.

All applications follow the University of Worcester full-time admissions regulations and procedures, and:

- All applicants complete the on-line UCAS application form
- Each application will be considered by UW Registry Admissions and the appropriate Course Leader at Bournville College
- Evidence of qualifications will be checked
- References and personal statements will inform the selection of candidates;
- Applicants are required to provide two referees (where possible one from their last place of study).

Please contact the Registry Admissions Office at University of Worcester for further information or guidance on 01905 855111. You may also contact Bournville College with any enquiries (0121 483 1000 Ext 1054).

Candidates are encouraged to apply if they feel they can benefit from the programme. Candidates with non-standard entry applications will be considered on the basis of relevant work experience and attainment of skills, which demonstrate an ability to study at this level. Students with non-standard qualifications may be asked to complete a written piece of work on a relevant subject and/or a learning needs assessment. Applications for Accreditation of Prior Learning (APL) and Accreditation of Experiential Learning (APEL) are welcomed in accordance with UW Admissions Policy. All candidates are able to access a learning needs assessment.

Students whose first language is not English must have a minimum standard of English at IELTS 6.

19 Methods for evaluating and improving the quality and standards of teaching and learning

Bournville College will apply to the HND its already existing procedures for the annual and interim monitoring of quality standards on courses. The annual course review is a self-assessment model which enables a thorough assessment of the quality of provision and which incorporates feedback from external examiners; student evaluation of modules, the adequacy of support for students in their personal development planning and on non-academic issues; feedback from course committees; scholarly activities by staff, their performance review and professional development, and feedback from employers and graduates of the course.

20 Regulation of assessment (FD/HND)

Students are assessed by a combination of course work, within module tests and examinations. The minimum pass mark is D- for each module.

Students at Level 4 may be permitted to progress to Level 5 when they have passed at least 90 credits at Level 4.

The following awards will be available to students who meet the following requirements:

| Award | Requirement |
|--------|---|
| CertHE | 120 credits at Level 4 or higher |
| HNC | 120 credits at Level 4 and at least 30 credits at Level 5 |
| HND | 120 credits at Level 4 and 120 credits at Level 5 |

These awards are not classified.

Institute Examination Boards review and confirm results for modules, and the Scheme Examination Board considers candidates' mark profiles to make decisions about progression, awards and degree classifications as appropriate.

The University requires Institutes and/or course teams to have a formally stated policy for internal and external verification and moderation of marking which meets the requirements of the University's Assessment Policy (<http://www2.worc.ac.uk/registry/pdf/AssessmentPolicy.pdf>).

Bournville College has an established Internal Moderation Policy and Procedure which will be adhered to for the purposes of moderation of students' work.

21 Indicators of quality and standards

The quality of the course will be maintained and monitored through a variety of means, such as annual and interim course reviews, feedback from external moderators or examiners, feedback from student satisfaction surveys and students' input to course reviews and development, external reviews and continuing reaccreditation of both University of Worcester and Bournville College by Investors in People. Progression rates into both employment and continuing higher education will inform the level to which the course is meeting its objectives.

In November 2005, the University was audited by the Quality Assurance Agency. The audit confirmed confidence in the University's management of the quality of its academic programmes and the standards of its awards. The QAA particularly commended the University's supportive ethos and range of departmental and central services provided to students and staff in support of its mission to deliver an excellent inclusive higher education.

22 Career Opportunities & Links with Employers

It will be possible for graduates of the HND in Biomedical Science to be able to top up their qualification to a BSc in Biology at the University of Worcester. Progression to top-up awards at other universities may also be possible.

Alternatively, graduates of the HND may progress directly into employment. Typical employers would be NHS or private Laboratories. However, alternative employers could be the Health Protection Agency, the National Blood Authority and the Medical Research Council. Biomedical scientists also have roles in areas such as veterinary services, the Health and Safety Executive, university laboratories, the pharmaceutical industry and product manufacturers. Biomedical scientists are also found increasingly in primary care settings, working with general practitioners in surgeries and community clinics, helping to deliver a diagnostic service to patients.

Through the requirement of students to undertake a period of work experience during the second year of the course, links with employers will be established and

maintained. Bournville College already has links with many employers, which are used to providing work experience and vocationally-orientated trips and visits for BTEC National Diploma in Applied Science students.

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 the module study guides and course student handbook. The accuracy of the information contained in this document is reviewed by the University and may be checked by the Quality Assurance Agency for Higher Education.

Programme Specification Template updated September 2008