

Programme Specification

BSc (Hons) Applied Biosciences

BSc (Hons) Applied Biosciences (Health Informatics)

Valid from: May 2016

Oxford Brookes University
Faculty of Health & Life Sciences

and

Solihull College
School of Science and Built Environment

SECTION 1: GENERAL INFORMATION

Awarding body:	Oxford Brookes University
Teaching institution and location:	Solihull College, Blossomfield Campus, Solihull B91 1SB
Final award:	BSc Hons
Programme title:	Applied Biosciences Applied Biosciences (Health Informatics)
Interim exit awards and award titles:	BSc Ordinary
Brookes course code:	SH26
UCAS/UKPASS code:	
JACS code:	C700 Molecular Biology, Biophysics and Biochemistry
Mode of delivery:	Face to face
Mode/s and duration of study:	FT (1 year), PT (2 years)
Language of study:	English
Relevant QAA subject benchmark statement/s:	QAA Subject Benchmark Statements: - Biosciences (2015)
External accreditation/recognition: <i>(applicable to programmes with professional body approval)</i>	N/A
Faculty managing the programme:	Health and Life Sciences
Date of production (or most recent revision) of specification:	July 2016

SECTION 2: OVERVIEW AND PROGRAMME AIMS

2.1 Rationale for and/or Distinctive features of the programme

The Applied Biosciences BSc (Hons) top-up degree programme is designed to enable people who have successfully completed a Level 5 qualification in related studies to upgrade their qualifications to a relevant BSc (Hons) qualification. It has been developed to support demand from prospective local employers, including two NHS trusts, and provides students with a coherent, integrated programme of study that will prepare them for entering the bioscience workforce. Health informatics is an upcoming area for which the NHS trusts have expressed a need for inclusion into a degree programme. The college has recently spent £250 000 on equipment and refurbishment of laboratories for HE students.

The FdSc in Applied Biosciences and Applied Biosciences (Health Informatics) pathways develops an understanding of modern, relevant aspects of the human biosciences, underpinned by wider theoretical knowledge and integrated with the development of essential skills and their application in present-day employment situations. The BSc (Hons) programme develops these aspects of learning, offering students the opportunity to expand their knowledge in specific areas, and consider the role of research in the biosciences and their applications.

The programme extends student expertise in diverse areas of medically-relevant topics including cancer biology, pharmacology and the essential area of evidence-based medicine. Depending on their prior qualifications, students can also study infectious diseases or health informatics to graduate standard, and will pursue a research-based project in a relevant area.

The Applied Biosciences (Health Informatics) pathway is designed for students who have successfully completed a Level 5 qualification in related studies, which has included at least 30 credits relating to Informatics. It has been developed to support demand from prospective employers requiring in Biosciences with a specific or enhanced understanding of informatics.

Graduates will be equipped with the knowledge and skills required to pursue employment in a range of health-related employment roles, including laboratory-based positions within NHS trusts at Band 5. The curriculum allows for continued progression into level 7 (Masters) courses and also for careers in research.

2.2 Aims of the programme

The BSc programme seeks to enable students to:

- Build on existing knowledge through the development of graduate level bioscience or informatics skills, which will enable students to progress into a range of health-care related careers.
- Develop the ability to think and argue in an integrated and logical manner, enabling the student to develop arguments based on theoretical and practical sources.
- Apply knowledge from current research to enhance the development of critical, academic and professional skills.
- Become independent learners and self-critical reflective thinkers with the desire to continue their personal and professional development.

Students on the BSc degree in Applied Biosciences will have the opportunity to develop subject-specific knowledge, professional skills and personal qualities that will make them valuable employees within the health care industries. They will be able to undertake further training or engage with higher level (post-graduate) studies following graduation from the programme.

SECTION 3: PROGRAMME LEARNING OUTCOMES

On successful completion of the programme, graduates will demonstrate the following Brookes Attributes:

3.1 Academic literacy

- Demonstrate a systematic knowledge of the knowledge base relating to Applied Biosciences and its interrelationship with other fields
- Apply professional knowledge including quality, ethics and regulatory affairs in unfamiliar situations
- Evaluate a range of scientific theories and practices relevant to bioscience professions and related disciplines
- Communicate efficiently and effectively complex topics, including those from unfamiliar contexts, by a range of accepted formats, using appropriate technical, practical and subject-specific nomenclature and terminology.

Graduates of the BSc Applied Biosciences (Health Informatics) will also demonstrate the following:

- Explore and evaluate new approaches to informatics-related practices as a laboratory professional in clinical environments.

3.2 Research literacy

- Apply research skills to evaluate a range of complex principles and concepts, including those from unfamiliar contexts, in order to judge the relevance of these to Applied Biosciences and related disciplines.
- Demonstrate confidence and flexibility in identifying and defining complex problems.
- Identifies, selects and uses investigative strategies and techniques to undertake a critical analysis, evaluating the outcomes.
- Independently carry out an extended piece of independent research relating to Applied Bioscience disciplines
- Evaluate new and complex data within accepted scientific and statistical techniques.
- Evaluate the reliability and validity of processes involved in the gathering and analysis of new and complex data.

3.3 Critical self-awareness and personal literacy

- Set goals, manage time and tasks, and reflect on own practice and feedback against self-selected performance criteria from all sources to ensure that learning and development goals are achieved.
- Work productively with others, taking leadership and supportive roles.
- Manage and evaluate their own performance against self-selected criteria in order to identify and develop key areas for their own professional development.
- Appraise a range of options regarding their own learning and development in order to develop and implement actions.

3.4 Digital and information literacy

- Select and creatively use IT resources, including the internet and library databases, to search for and retrieve reliable information.
- Demonstrate creative use of IT programmes for advanced word-processing to report information in an appropriate format, and for data manipulation, presentation and analysis.
- Develop an understanding of how the current and rapidly changing technologies can be used in novel situations within Applied Biosciences.

Graduates of the BSc Applied Biosciences (Health Informatics) will also demonstrate the following:

- Explore new approaches and applications for using data sets relevant to Applied Biosciences
- Explore how the practical application of decision support systems in a clinical laboratory environment may evolve with greater understanding and access to data.

3.5 *Active citizenship*

- Demonstrate critical awareness and consideration for global challenges and innovations relating to Biosciences.

SECTION 4: PROGRAMME STRUCTURE AND CURRICULUM

4.1 Programme structure and requirements:

The BSc (Hons) Applied Biosciences (and the Health Informatics pathway) programme of study spans a single year for full-time students, or two years for part-time students. You will study a double (30 credit) module at level 6 and modules amounting to 90 credits at level 6.

Full time

Module Code	Module Title	Credits	Level	Status*	Semester of delivery**
SB3001	Major Project	30	6	C	1&2
SB3002	Clinical Biochemistry	15	6	C	1
SB3003	Pharmacology	15	6	C	1
SB3004	Infectious diseases	15	6	CB	1
SB3005	Molecular Biology of Cancer	15	6	C	2
SB3006	Evidence based medicine and diagnostics	15	6	C	2
SB3007	Molecular medicine	15	6	CB	2
SB3008	Applications of health informatics 1	15	6	CH	1
SB3009	Applications of health informatics 2	15	6	CH	2

Part Time

Module Code	Module Title	Credits	Level	Status*	Semester of delivery**
Year 1 Part Time					
SB3002	Clinical Biochemistry	15	6	C	1
SB3004	Infectious diseases	15	6	CB	1
SB3005	Molecular Biology of Cancer	15	6	C	2
SB3007	Molecular medicine	15	6	CB	2
SB3008	Applications of health informatics 1	15	6	CH	1
SB3009	Applications of health informatics 2	15	6	CH	2
Year 2 Part Time					
SB3001	Major Project	30	6	C	1&2
SB3003	Pharmacology	15	6	C	1
SB3006	Evidence based medicine and diagnostics	15	6	C	2

*C – compulsory for both the BSc Applied Biosciences and BSc Applied Biosciences (Health Informatics) pathways.

CB – compulsory for BSc Applied Biosciences pathway.

CH – compulsory for BSc Applied Biosciences (Health Informatics) pathway.

Exit Qualification: BSc Applied Biosciences

To qualify for the award of a Bachelor of Science (i.e. without Honours), a student must, within 2 years of first registering, achieve 60 credits at level 6 in addition to 240 credits at level 4 and 5 on entry.

Exit Qualification: BSc Applied Biosciences (Health Informatics)

To qualify for the award of a Bachelor of Science (i.e. without Honours) for the Health Informatics pathway, a student must, within 2 years of first registering, achieve 60 credits at level 6, to include SB 3008 Applications of Health Informatics 1 and SB 3009 Applications of Health Informatics 2, in addition to 240 credits at level 4 and 5 on entry.

Final Award: BSc (Hons) Applied Biosciences

To qualify for the award of a Bachelor of Science with Honours, a student must, within 3 years of first registering, achieve 120 credits at level 6 in addition to 240 credits at level 4 and 5 on entry.

Final Award: BSc (Hons) Applied Biosciences (Health Informatics)

To qualify for the award of a Bachelor of Science with Honours, a student must, within 3 years of first registering, achieve 120 credits at level 6, including SB 3008 Applications of Health Informatics 1 and SB 3009 Applications of Health Informatics, in addition to 240 credits at level 4 and 5 on entry.

SECTION 5: PROGRAMME DELIVERY

5.1 Teaching, Learning and Assessment

Over the course of the BSc Applied Biosciences, students will study a total of 120 credits, through a combination of single modules (that for full-time students will run in a single semester) and double modules (that typically, run across the year for full-time students, with one exception). Part-time students will complete the programme over two years. All students will study four compulsory, 15 credit modules in Clinical Biochemistry, Pharmacology, Cancer Biology and Evidence Based Medicine and Diagnostics. Students will also study level 6 modules (including a 30-credit Major Project module) relevant to their chosen pathway within the degree, focusing on either Applied Biosciences or health informatics.

The teaching methods used on modules are varied and are informed by contemporary and industry-based practices. Most modules make use of interactive classroom lectures/ seminars (on average over 20 hours for a single credit module) to provide a framework for learning and for introducing more difficult concepts. Throughout the modules, case examples will be used to link the theory to real-life situations and students, alongside tutors, will be asked to share their work experiences with peers. Visits and guest speakers will also be used to ground the learning within the work environment and help students make links within the industry. Students have the opportunity to apply the knowledge gained from previous work experience, placements and prior learning to their academic studies. Practical (laboratory and computational) work is a feature of a number of the modules, enhancing learning and progressing advanced practical skills. Other teaching methods include seminar discussions or debates, one-to-one or small group tutorials and problem-solving workshops. Reflective learning is encouraged through use of self, peer and staff formative feedback on assignments and group work. All these activities develop critical self-awareness and personal literacy.

All modules make use of the Solihull College's Virtual Learning Environment (called Moodle) typically for locating module resources,

All modules use Solihull College's Virtual Learning Environment, Moodle. This supports delivery of the course through the sharing of programme and module resources. Submission of all coursework by learners is through the assignment upload links provided on Moodle (through Turnitin) and assessment feedback is by this route. In addition, learning is further supported on Moodle through the use of discussion forums, collaborative information gathering, journal logs and access to other supported learning packages.

Research literacy will be developed specifically in the Major Project module, where students will have the opportunity to pursue a guided, novel piece of research or development work linked to their degree stream and to the relevant industrial application of their knowledge. All modules will help advance skills of locating and evaluating suitable sources of information.

Alongside researching skills, digital and information literacy will be progressed via the use of digital information sources and will be developed more generally via varied use of the VLE. In some modules in the health informatics stream, the use of specific types of software technology will be explored and used. Learners will be supported to learn how to use any new digital technology/ computer programme via tutorials and workshops.

Development of active citizenship attributes will form a part of the core ethos of the programme and will be considered in detail in discussions and debates around ethical and welfare topics concerning applied biosciences care and health informatics in national and global contexts.

The assessment for the Major project module is based on performance in coursework and for other modules, on course work and examination. Coursework assignments are diverse and support the

development of digital and information literacy. Assignments may include reports, essays, posters, case studies, presentations and literature reviews. Where assessments include examinations, these will be timetabled at the end of the module. The Major Project module requires a presentation, in addition to the written assessment.

Assessment is aligned to the University Assessment Compact, ensuring that students' progress towards meeting programme outcomes while experiencing a balance of assessments within and between modules and equity in module workloads. Within some assessments students are able to tailor their submission to their own vocational area of interest. Solihull College is committed to providing students with clear assessment criteria, and useful and timely feedback on all of their work.

Programmes are characterised by an appropriate breadth and depth of content that is informed by relevant benchmark statements, the requirements of accrediting bodies and the latest research.

The Health Informatics pathway includes advanced modules relating to applied Health Informatics as relevant to current industry practice.

The Brookes Assessment Compact is jointly prepared by students and staff of the University. It can be found at

http://www.brookes.ac.uk/services/ocslid/resources/assessment/assessment_compact_09.pdf

5.2 Assessment regulations

The programme conforms to the University Regulations for the Undergraduate Modular Programme (UMP) which can be found at:

<http://www.brookes.ac.uk/regulations/current/specific/b2/>

SECTION 6: ADMISSIONS

6.1 Entry criteria

Minimum offer:

Students will usually have achieved a grade average of 55% in a relevant bioscience-related level 5 qualification of 240 CAT points (e.g. FdSc), or equivalent (overall merit grade at HND).

English Language Requirements.

Applicants whose first language is not English must also demonstrate that their level of English is acceptable, by achieving a score in a recognised test such as:

- British Council IELTS: normally minimum level 6.0 overall with a minimum of 6.0 in the reading and writing components

Accreditation of Prior Learning (APL)

It may be possible, in certain situations, to gain accreditation of prior learning to enable students to enter the course with advanced standing or gain exemption from an element/ elements of the programme. This is assessed on an individual basis and is awarded in line with Oxford Brookes University's regulations on accreditation of prior learning, available at:

<http://www.brookes.ac.uk/regulations/current/core/a2/a2-5/>

Interviews

All applicants will be interviewed (telephone interviews may be carried out for international applicants if they cannot attend in person). Offers of a course place are dependent on a successful interview and a strong UCAS application with an appropriate reference.

6.2 DBS checks

May be applicable depending on the content and location of the individual Major Project completed. For full-time students, the major project is likely to be completed at the college, but if a DBS is required, this will need to be obtained by the student in conjunction with the organisation for which it is sought. For part-time students, it is envisaged that they will have any appropriate DBS clearance, but it will be the student's responsibility to adhere to all requirements of their employer.

6.3 Occupational Health Checks

Occupational Health Checks may be applicable, depending on the individual Major Project completed. This would include a review of vaccination records and, where necessary, additional immunisations may be required.

Students will be liable for any costs incurred in obtaining satisfactory DBS and Occupational Health Checks.

SECTION 7: STUDENT SUPPORT AND GUIDANCE

Students will be supported in the following ways:

- An induction programme before the start of formal teaching. Induction includes information on the programme structure and timetable, introduction to the library and College support services
- A personal tutor at the College to help with academic development, offer personal support and provide information about College support services.
- The College has an additional needs team to support students with a learning difference or disability. The personal tutor will provide the link between the additional needs team, the student and the HE teaching team to ensure coordinated support is provided.
- Students are provided with a programme handbook, and detailed module handbooks at the start of each semester.
- The college has the following other departments who are able to provide specific support in their areas of expertise: library staff including a named librarian to support the Land-based students; counsellors; a welfare officer; student services including finance and accommodation support; Open Access staff who support students in use of computers, the intranet and software packages.

SECTION 8: GRADUATE EMPLOYABILITY

Currently there is considerable demand for graduates to take up roles within the NHS in the UK and in similar posts internationally. Graduates from both the Applied Biosciences and Applied Bioscience (Health Informatics) pathways will be equipped with advanced skills and knowledge to undertake a wider range of roles and responsibilities within their current or future employment, and to progress to senior or leadership positions within the NHS career structure. Many graduates undertake more specialised roles within the bioscience industry, including research, developmental and clinical pathways.

Graduates from the University's BSc (Hons) degree in Biological Sciences (which has close alignment with the degree, and therefore forms a good predictive model) have gone on to a wide range of careers in cell and molecular biology such as forensics, research scientists, medical writers, with many going into research and further study for PhDs as biological scientists and as this is a broad based degree some have gone into teaching. About a quarter of graduates go on to further study, such as Masters or PGCEs as well as entering onto medical or Dental courses, or embarking directly onto PhD studentship.

SECTION 9: LINKS WITH EMPLOYERS

Students may wish to gain further relevant work experience in a range of establishments during this year, which will be supported but is not compulsory. Staff at Oxford Brookes University and at the Partner have strong connections with bioscience-related organisations and businesses which can help students develop valuable networking and industry contacts. Visits to various organisations during the course and guest speakers also increase the industry links. Students are provided with opportunities to gain further careers advice during their course from their personal tutor and the college's Careers department.

SECTION 10: QUALITY MANAGEMENT

Indicators of quality/methods for evaluating the quality of provision

The programme adheres to the nationally accepted QAA BSc Degree qualification benchmarks and QAA subject benchmark statement for Biosciences (2015).

The quality of academic provision for students is assessed regularly by programme teams, principally through the annual monitoring report and quality improvement plan for the course via student evaluations of each module, regular student questionnaires, programme quality board meetings, and through critical evaluation of the annual external examiner report. Dissemination and encouragement of good practice is facilitated through staff development activities, peer lesson observations, regular staff team meetings, and support from the Teaching and Learning Coaches at Solihull College and the OCSLD (Oxford Centre for Staff and Learning Development) at Oxford Brookes University.

The main indicators of quality are:

- The annual scrutiny of the programme and assessment of students by an External Examiner to ensure consistency and comparability of standards across the HE sector;
- Employment success rate of current and past graduates;
- Feedback from students in the module and course evaluations, student surveys (including NSS) and via the programme quality boards
- Annual Review
- The University's Periodic Review of all courses
- Lecturers' extensive experience of teaching and working with the industry, plus their maintenance of subject currency via on-going annual CPD and academic scholarship.

The programme also conforms to the structure and regulations of the University's Undergraduate Modular Programme Framework.

The College has a number of Committees which ensure that quality management of higher education is at the heart of the work of the College. A Higher Education Strategy group chaired by the Principal steers the development of the higher education offer. A Quality and Standards Board meets twice termly, Chaired by the Vice Principal and manages cross College quality improvement. A Higher Education forum for HE teaching staff meets every half term and shares good practice and informs staff of key higher education developments including HE quality. The HE student council meets every term and is chaired by HE Heads of School in rotation. The overall quality of the programmes is managed in the curriculum Area by the relevant Head of School. Each Higher Education programme has a designated Course leader.

The quality of teaching and learning is assured and improved upon by the College's internal mechanisms. These include HE course SARs, which review every programme on a termly basis, followed by an Annual Monitoring Report. From the Annual Monitoring Report the College prepares and externally validates a Higher Education Self-Assessment Report.

The overall quality of programmes will be regularly reviewed within the College's and University's management structure via Course Team Meetings, Course Team Management Meetings, Partnership Meetings, Area Meetings and Programme and Quality Board meetings.