Course Information Form (CIF)

The CIF provides core information to students, staff teams and others on a particular course of study.

<table>
<thead>
<tr>
<th>Section 1 - General Course Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Course Title</strong></td>
</tr>
<tr>
<td><strong>Qualification</strong></td>
</tr>
<tr>
<td><strong>Intermediate Qualification(s)</strong></td>
</tr>
<tr>
<td><strong>Awarding Institution</strong></td>
</tr>
<tr>
<td><strong>Location of Delivery</strong></td>
</tr>
</tbody>
</table>
| **Mode(s) of Study and Duration** | Full-time over 3 years  
Part-time pathway typically over 6 years |
| **Core Teaching Pattern** | Core Teaching Pattern 1 and 2 |
| **FHEQ Level** | Level 6 |
| **Professional, Statutory or Regulatory Body (PSRB) accreditation or endorsement** | Institute of Biomedical Science (IBMS) |
| **PSRB Renewal Date** | 2019 |
| **University of Bedfordshire Employability accreditation** | N/A |
| **Route Code (SITS)** | BSBMD-S |
| **Subject Community** | Life Sciences |
| **UCAS Course Code** | BC99 |
| **Relevant External Benchmarking** | The benchmarking standards are provided by the QAAs’ Biomedical Science benchmarking  
[http://www.qaa.ac.uk/Publications/InformationAndGuidance/Documents/Biomedicalscience07.pdf](http://www.qaa.ac.uk/Publications/InformationAndGuidance/Documents/Biomedicalscience07.pdf) and by the Level Descriptors in the UK Quality Code for Higher Education (2014). These can be found at:  
Section 2 - Published Information

Material in this section will be used on the course web site to promote the course to potential students. The text should be written with this potential audience in mind.

Course Structure

The Units which make up the course are:

<table>
<thead>
<tr>
<th>Unit Code</th>
<th>Level</th>
<th>Credits</th>
<th>Unit Name</th>
<th>Core or option</th>
</tr>
</thead>
<tbody>
<tr>
<td>BHS001-1</td>
<td>4</td>
<td>30</td>
<td>Essential Skills in Biosciences</td>
<td>Core</td>
</tr>
<tr>
<td>BHS002-1</td>
<td>4</td>
<td>30</td>
<td>Microbiology and Biochemistry</td>
<td>Core</td>
</tr>
<tr>
<td>BHS004-1</td>
<td>4</td>
<td>30</td>
<td>Human Anatomy and Physiology</td>
<td>Core</td>
</tr>
<tr>
<td>BHS006-1</td>
<td>4</td>
<td>30</td>
<td>Chemistry and Molecular Genetics</td>
<td>Core</td>
</tr>
<tr>
<td>BHS001-2</td>
<td>5</td>
<td>30</td>
<td>Human Metabolism and Genetics</td>
<td>Core</td>
</tr>
<tr>
<td>BHS002-2</td>
<td>5</td>
<td>30</td>
<td>Medical Microbiology and Immunology</td>
<td>Core</td>
</tr>
<tr>
<td>BHS006-2</td>
<td>5</td>
<td>30</td>
<td>Skills and Cellular Pathology</td>
<td>Core</td>
</tr>
<tr>
<td>BHS008-2</td>
<td>5</td>
<td>30</td>
<td>Physiology, Haematology and Transfusion Science</td>
<td>Core</td>
</tr>
<tr>
<td>BHS001-3</td>
<td>6</td>
<td>30</td>
<td>Clinical Biochemistry and Biology of Disease</td>
<td>Core</td>
</tr>
<tr>
<td>BHS004-3</td>
<td>6</td>
<td>30</td>
<td>Molecular Biology and Human Genetics</td>
<td>Core</td>
</tr>
<tr>
<td>BHS005-3</td>
<td>6</td>
<td>30</td>
<td>Applications of Immunology and Microbiology</td>
<td>Core</td>
</tr>
<tr>
<td>BHS013-3</td>
<td>6</td>
<td>30</td>
<td>Biomedical Science Research Project</td>
<td>Core</td>
</tr>
</tbody>
</table>

Why study this course

Biomedical Science course provides a sound theoretical and practical foundation in a range of laboratory sciences used to aid the diagnosis of, or investigate human diseases.

The course offers practical training in well-equipped laboratories, and development of key biomedical science skills for employment within academic or government research, the pharmaceutical or biotechnology industry, You will also receive lectures from guest speakers from hospitals and other associated areas.

The Departments’ extensive modern facilities foster an environment in which cross-fertilisation of ideas and multi-disciplinary research collaborations in this area can thrive, and where integrated training can be achieved. You should develop essential transferable skills, such as team-working through group laboratory work, group discussions, and various learning activities throughout the course. You should also demonstrate effective time-management and organisational skills to meet deadlines, and develop your confidence in tackling novel tasks and in presenting clear summaries of your understanding in both oral and written form.

You will also be expected to present your findings in the broader context of published work within this field. You will be given the opportunity to consider your learning in the context of employability, not only through the Skills research proposal and research project units, but also through guest lectures from relevant employers and from the University’s careers service.

Course Summary – Educational Aims

The IBMS accredited BSc (Hons) Biomedical Science course provides a wide-ranging education in the field of biomedical sciences, elements of which include the structure and function of the human body, the biological basis of disease, and the practical skills necessary for a career as a biomedical scientist.

The specific aim of the Biomedical Science award is to produce highly-trained scientists with flexible career opportunities, and individuals able to make valuable contributions to medical knowledge and the development of future diagnostic techniques. Our graduates are well equipped in pursuing careers not only in biomedical science and other laboratory-based careers but also in a much wider range of employments such as teaching, scientific publishing, quality assurance, food and drink industry, sales/marketing etc.

Laboratory based practical skills are an essential part of this degree course and you will develop a range of practical techniques relevant to pursue a career specifically in the biomedical sciences area in the hospital pathology service, in various biomedical industries and in biomedical research. Through the Level 4 and Level 5 Skills units (BHS001-1 and BHS006-2) and the Biomedical Science Research Project (BHS013-3) you will demonstrate knowledge of research design, data interpretation and appropriate use of statistical techniques.
The chart below describes how the compulsory core areas of biomedical science study are comprised in the Biomedical Science course.

### Entry requirements

**Biomedical Science applicants should possess:**

- 280 UCAS tariff points including an A2 Science subject.
- GCSE Maths at C or above.

**Further details about applying can be found at:**

- Students from the UK – [http://www.beds.ac.uk/howtoapply/ukugentryreqs](http://www.beds.ac.uk/howtoapply/ukugentryreqs)
- Students from the European Union - [http://www.beds.ac.uk/howtoapply/eu/guides](http://www.beds.ac.uk/howtoapply/eu/guides)
- International students - [http://www.beds.ac.uk/howtoapply/international/apply](http://www.beds.ac.uk/howtoapply/international/apply)

### PSRB details

The Biomedical Science Award is accredited by the Institute of Biomedical Science (IBMS) and covers a range of biological and molecular science areas that underpin modern medicine. The multidisciplinary approach allows investigation of normal life processes and the study of pathological changes that occur in human disease. The course also provides a sound theoretical and practical foundation in a range of laboratory sciences that are
used to investigate and aid the diagnosis of human disease.

Graduate Impact Statements

The course has been designed to develop you as a graduate able to:

- Apply a thorough understanding of the four main biomedical disciplines, namely cellular pathology, microbiology, haematology and transfusion science, and clinical biochemistry and a range of laboratory practical skills to address novel research hypotheses.
- Demonstrate independence and initiative in your research activities whilst working effectively within a collaborative environment.
- Review developments within the scientific literature and incorporate these ideas or technologies into your working practice.

Higher Education Achievement Report - Additional Information

None

Learning and Teaching

The course is delivered by a Blended Learning approach in line with other courses in this Field.

- Scheduled teaching combines lectures to deliver new ideas and subject material; seminars that typically involve students-led discussions and activities to support your learning; and laboratory practicals in which you apply your learning to experimental science and develop technical skills relevant to the field of biomedical sciences.
- For the scientific proposal assignment (Level 5 Skills – BHS006-2) and the Biomedical Science Research Project (Level 6 – BHS013-3) where you will develop your own novel hypotheses and proposals, you will be further supported through scheduled individual and/or small-group tutorials.

An essential component of BSc (Hons) degrees highly valued by employers is the development of independence. This course therefore involves a considerable emphasis on Guided and Independent Learning which develops across the course.

- Guided Learning involves you being provided with directed reading or research activities to consolidate your learning; formative assessment which is marked to provide feedback but is not graded; and guided assessment where you will be graded on the work you produce based upon detailed guidance provided by your lecturers. You will also be supported by peer-assisted learning from Level 5 students during your first year.
- Independent Learning requires that you read around the topics of your study using the essential and recommended reading resources (or through finding your own learning materials – Autonomous Learning) to consolidate your understanding. You must also demonstrate independent research and learning in your scientific proposal assignment (Level 5 Skills – BHS006-2) and Level 6 Research Project (BHS013-3).

Developing your employability

The majority of lecturing staff are actively engaged in scientific research, and have previous experience in academic, government, charity or industry research laboratories. Our teaching and the course are therefore directly informed by our research knowledge and activities. Some key aspects of the course that emphasise employability of our graduates include:

- Training in key laboratory techniques relevant to employment within the biomedical science field, including awareness of relevant health and safety, legal and ethical considerations.
- Training and practice in the scientific method that underpins all scientific research (developing novel hypotheses, testing these by experiment, accurately interpreting data and understanding error, and drawing valid conclusions).
- Practice in professional standards of reporting including laboratory reports using the standards of professional research publications, preparation of scientific conference posters, and written and oral presentations.
- Maintenance of laboratory diaries and research diaries following standard practice within the field.
- Guest lectures from employers and from the University’s careers service to provide employability and career guidance, also offers work-based/voluntary opportunities.

**Department(s)**

Department of Life Sciences

**Assessment**

A range of assessment types are used across this course.

- Practical reports are a key assessment type used throughout the course as they reinforce professional standards of presenting scientific reports, practice your ability to interpret data and to place experimental results within a broader scientific context, develop your ability to relate experimental results to theory, and teach you to apply the scientific method.

- End of year exams are also included in most units with an emphasis on knowledge retention at Level 4; short essay questions demonstrating understanding and application at Level 5; and long essay questions focussed on integration and evaluation of understanding at Level 6.

- As you become practiced in these core skills we begin to introduce other assessment methods including oral presentation to small groups or to examiners in a viva voce setting; scientific research/business proposal (reflecting research development or commercialisation of science); poster presentation (a standard style of scientific conference presentation); and a research dissertation (to develop and evaluate your own novel hypotheses).

- Case studies are used within assessments where appropriate to provide real-world and employment-centred context to the assignments.

**After Graduation**

On completing this course you are likely to progress into one of the following areas:

**Career:**

Research and development in government laboratories or the Health Service.
Biomedical sciences; clinical science; healthcare management.
Pharmaceutical or biotechnology industries; clinical trials coordinator/manager.
Medical writing, publishing or medical sales.
Further training, e.g. medicine, dentistry, care practitioner, clinical dietician.
Other allied healthcare professions.

**Further study:**

MSc by research – a practical, research based masters’ degree.
MSc – a taught master’s degree in a related area. Within the Department of Life Sciences, we run MSc courses in Biotechnology, Pharmacology, Biomedical Engineering and Environmental Management.
PhD research in biological science. Within the Department of Life Sciences, we have recent PhD students working in cancer research, autoimmune disease, protein biochemistry and neurobiology.

**Student Support during the course**

You will be given a full induction week programme in the week prior to starting your course, during which you will be introduced to the Department of Life Sciences’ academic, technical and administrative staff. You will be given information about how the department operates, and you will undertake some formative laboratory work and receive health and safety training. You will also be given specific information relating to the delivery of your
course, and will be shown how to access your timetable. Other presentations during the induction week will be given by representatives from the Student Information Desk (SID), the Learning Resources Centre (LRC), the Professional and Academic Development (PAD) team, and the Student Union.

You will continue to receive transferable skills training relevant to biomedical science through the Essential Skills units at level 4 (BHS001-1) and level 5 (BHS006-2), and the research project unit at level 6 (BHS013-3). This training will include further guidance from representatives of the Learning Resources Centre (LRC) and Professional and Academic Development (PAD) team to help improve information literacy, referencing and report writing skills. We also provide PAL (Peer Assisted Learning) to you in your first year of undergraduate study. Peer advisers are current level 5 or 6 students who will be working with you on a 1:1 and/or small group basis. Providing you with additional support to enhance your communication/interpersonal skills, problem solving, confidence and organisational skills.

BREO (the University’s Blackboard based Virtual Learning Environment - VLE) provides a great deal of help and back-up material such as lecture notes, additional background information on all units, revision material and formative assessments, as well as containing all the administrative material you need such as the Unit Information Forms and regular announcements. For some units, BREO may also contain discussion boards or other e-learning activities.

Another key form of support is feedback provided on your assessments (both formative and summative). You will always receive feedback in the form of a grade and 2Q comments, but, where appropriate, may also receive additional feedback through class tutorials, annotation of your submitted work or meetings with lecturers. The 2Q feedback comments inform you about the strengths and the areas for improvement within your work and provide constructive advice for improving your skills and your assignments. It is expected that you read carefully and reflect upon the feedback you receive to enable you to incorporate this into future work and professional practice. Reflection on performance and developing your skills is an essential employability skill and is highly desired by employers.

The University has implemented a Personal Academic Tutor (PAT) scheme to provide pastoral support for students. At the start of your first year you will be assigned to an academic member of staff who will act as your tutor throughout your undergraduate degree. The PAT scheme has been devised to provide advice on varied matters – both general academic and non-academic – although specific issues relating to the teaching content of your units remains the domain of the academic lecturers. As part of the PAT scheme several meetings are scheduled during the year. In devising such a timetable of meetings the University hopes that individual problems will be spotted early and formal assistance can be provided. The meetings provide you with individual or small group contact with academic staff and should complement the activities of the STAR Board within the field.

All units will have specialised tutorial sessions when you can further explore subjects or issues related to assessment or other content of the unit. The Department also puts on extra tutorials when groups of students request them. In addition, all Unit Coordinators/Lecturers have at least two “office hours” sessions a week when you can book a time, through the Faculty Office to discuss unit-related issue(s). Each course also has two student representatives for each level that can convey any specific or general student issues that are not resolved through any of the above support mechanism or you wish to bring to the attention of staff through a third party. Lastly, if you have not managed to find the support necessary through any of the above Departmental or University processes (as detailed in the Course Handbook, Department of Life Sciences Community on BREO) then you can arrange to see the Course Coordinator and/or Portfolio Leader by booking a time directly or through the Faculty Office.

Students who require English Language Support:

It is recognised that some students entering the course, despite having the requisite English language entry qualification may require some extra support in their academic use of the English language. Students may be asked, at the discretion of the Course Coordinator, to undergo diagnostic testing for academic English language abilities, and may further be required, at the Course Coordinator’s discretion, to participate in academic English support workshops or classes laid on by the University. Such support can be obtained through the Professional and Academic Development (PAD) team, who run a number of workshops including language skills, writing practice and exam preparation. Further information on these services can be found at http://lrweb.beds.ac.uk/studyhub.

Students with disabilities

Students with a wide range of disabilities or health conditions can achieve the required standards of knowledge and skills to enable them to gain this Bachelor Degree in Biomedical Science, but it needs to be recognised that
each case is different and has to be viewed on its merits. The safety of students, staff, the public and other colleagues must always take priority.

Appropriate individual arrangements will be made for students with disabilities to enable their full participation in practical activities, field trips and laboratory work and other activities associated with the course wherever possible. However, learners with certain specific disabilities may be excluded from studying this course.

Some examples of support structures available at the University for various types of disability are shown below – though the specifics of the support provided will vary for each individual.

Further details can be found at the following site: https://www.beds.ac.uk/student-experience2/studying-at-bedfordshire/student-support

Dyslexia:
Staff at the University have experience of supporting learners with dyslexia and many students cope well with the amount of reading / writing required for Bachelor Degrees. Additional time can be given, for example, in written examinations.

Sensory Impairments:

Impaired vision: although students with colour blindness and monocular vision should be able to cope with the demands of the course, those with severe visual impairment are unlikely to be able to access this degree programme due to difficulty in utilising specialist and laboratory equipment.

Hearing Impairments: as long as the individual has developed appropriate coping strategies and makes use of appropriate aids they should be able to study on this programme. However, Admissions staff will need to consider the individual’s ability to communicate with others, as well as their ability to cope in a range of contexts so as not to be a danger to themselves or colleagues.

Physical Disabilities:

Absence or partial loss of a limb: On its own, this would not necessarily stop an individual from joining this course. However, the individual’s ability to handle equipment and chemicals safely will need to be considered by Admissions staff.

Wheelchair users: An individual who is permanently based in a wheelchair would have considerable difficulty in safely handling chemicals, reagents and equipment in the laboratory, for this practically-based course and whilst every reasonable accommodation will be made, access to the course will need to be considered by Admissions staff.

Further guidance is available from the University’s current Disability policy at http://www.beds.ac.uk/student-experience2/studying-at-bedfordshire/student-support/disabilities2.
## Assessment Map

<table>
<thead>
<tr>
<th>Unit Code</th>
<th>C/O</th>
<th>Teaching Weeks</th>
<th>Reading weeks</th>
<th>Revision weeks</th>
<th>Exam weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>BHS001-1</td>
<td>C</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BHS002-1</td>
<td>C</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BHS004-1</td>
<td>C</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BHS006-1</td>
<td>C</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>BHS001-2</td>
<td>C</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BHS002-2</td>
<td>C</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BHS006-2</td>
<td>C</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>BHS008-2</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>BHS001-3</td>
<td>C</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BHS004-3</td>
<td>C</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BHS005-3</td>
<td>C</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BHS013-3</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Assessment deadlines are indicated by an X.
Feedback to students is released within 15 working days of their submission deadline, and grades within 20 working days of the submission deadline.
Section 3 - Academic Information
This section will be used as part of the approval and review process and peer academics are the target audience.

Course Learning Outcomes

Upon successful completion of this course, graduates should be able to:-

1. Demonstrate a thorough grounding in the theory and practice relating to human anatomy and physiology, molecular genetics, clinical immunology, medical microbiology, cellular pathology, clinical biochemistry, haematology and transfusion science.
2. Critically review biological information and data supporting conclusions, including reliability of the data, validity and significance.
3. Apply a breadth of knowledge in the subjects related to biomedical science and biology of disease and their social and ethical related issues.
4. Evaluate, select and apply different laboratory techniques to analytical problems and select the laboratory investigations needed in the study of representative diseases.
5. Access and evaluate biomedical science information from a variety of sources and to communicate the principles both orally and in writing (e.g. essays, laboratory reports and oral presentations) in a way that is well organised, topical and recognises the limits of current hypotheses.
6. Undertake a research project, with minimum guidance, transforming abstract data and concepts into a clear hypothesis that can be tested experimentally and can be reported in the form of a dissertation.
7. Understand the role of the accredited professional body and the career progression structure within biomedical science, including the registration portfolio, and acquire skills associated with biomedical laboratory practice including safe handling of specimens and aseptic techniques.

Course-specific regulations

None

Teaching, Learning and Assessment

In line with the Benchmarking statement for Biomedical Science, motivation and challenge of the student is achieved through a skilled and balanced selection of teaching and learning techniques, including:

- lectures
- practical classes
- workshops
- seminars
- tutorials
- IT-based teaching and learning
- guided/independent study
- team-working
- computer-aided learning
- case studies and problem-based learning and
- project work

You will also receive lectures and careers advice from a number of visiting lecturers from hospitals and other associated areas. Delivery of the course is also in line with the University's Blended Learning strategy with regards e-, or network-based learning which generally makes use of the BREO system. All units of the course have a BREO site containing unit and assessment documents and details, assessment results, announcements/notice, lecture notes, Powerpoint presentations etc. In order to help understanding the course material, the BREO site will also contain other support material such as clips showing a biological principle in drug action, live or in a model, journal articles or technical sites etc. You will be provided with training in presentation skills throughout the course during seminars and workshops. This translational skills training will equip you ahead of your case study presentation and description of research progress.

The accredited Biomedical Science course encourage a reflective, student-centred approach to learning and supports meaningful learning through a curriculum that is intellectually challenging and of practical relevance to those seeking a future career in areas of biomedical science.

The assessment strategies of this course conform to the assessment strategies of the Benchmarking statement for Biomedical Science. The Fields’ commitment to scientific report writing will be emphasised in all levels of the Biomedical Science Award where practical reports will form a significant proportion of the assessment as opposed to essay writing. The importance of oral communication skills are also
acknowledged in the award and will require all students to undertake oral and poster presentation as a part of their unit assessment at different levels of the course.

Examinations in the Biomedical Science Award remain a major part of the assessment vehicle in all levels. It is recognised that students require training in examination techniques and to this end examinations in level 4 are relatively few in number with a preference for short tests, which provides a rapid means of feedback to students and academic staff. The emphasis is then shifted from a short test based assessment to a more traditional examination scenario.

These assessment strategies are consistent with those of the field as a whole. The Biomedical Science Award supports the field’s stated philosophy of key skill development and assessment. The generic skills based units are included at level 5 and 6 of the awards. Units in level 4 will conform to the overall strategy of the field with oral presentations being absent from the units, though units are available in levels 5 and 6 to support oral presentation skills. The remaining units in the awards at levels 5 and 6 will support the core skills units in that an array of transferable skills are present which students may study to support their skill development and rectify any perceived weaknesses.

The assessment strategy also reflects the skill development shown in the level descriptors of the QAA Framework for Higher Education Qualifications (FHEQ). Thus, at level 4, emphasis is placed upon your knowledge of underlying concepts and principles; ability to interpret these within a specific context; and your ability to present and interpret qualitative and quantitative data. To support this, level 4 assessment is predominantly based around traditional laboratory reports (which develop your ability to analyse data from various different experiment types, and to present that data and relate it to published literature and basic underlying principles within a standardised lab report framework that reflects the style of professional publications within this field), and around multiple choice question exams (which test knowledge of underlying principles and their application within a specific context).

At level 5, FHEQ expectations involve showing knowledge and critical understanding of established principles; to apply this knowledge outside the context in which it was learnt, such as in an employment context; and to understand the limits of this knowledge. Again, traditional laboratory reports play a key role in developing these skills by allowing you to build upon your learning from level 4, but introduce greater critical analysis of both the data obtained in the practical, and the information available in published primary sources, as well as greater reflection on the limitations of the experimental studies conducted and the published data. In addition, the BHS006-2 Skills unit requires you to develop a scientific proposal such as might be required of professional biomedical scientists. This assignment requires both application of knowledge outside the context in which it was learnt, as well as consideration of the ethical, health and safety, and professional requirements of qualified biomedical scientists when developing similar proposals. Examination is again a major assessment method used at level 5, but this time involving short and long (brief essay) style questions which give you the opportunity to show critical understanding of relevant scientific principles, and to interpret and present coherent explanations of these concepts.

At Level 6 students are expected to demonstrate an ability to integrate varied knowledge and to critically evaluate their understanding. Problem based learning through case studies and student-led group discussion is used in their clinical biochemistry and biology of disease unit and is assessed by in-class test. Students are also required to present an evaluation of disease and drug treatment through a scientific poster which is displayed publically within the Campus Centre, and which students must explain to examiners (and any interested passers-by) through a short oral presentation. Teaching throughout this year is more student focussed and students are expected to lead discussion topics in pathophysiology, and to devise their own research dissertation topic and assess literature to present a novel hypothesis in their dissertations which they defend in a viva voce. End of year exams are long essay based to enable students to demonstrate knowledge synthesis and critical evaluation. Level 6 assessment expectations according to FHEQ require systematic understanding of key aspects in the field of study; coherent and detailed knowledge at the forefront of the discipline; the ability to devise and sustain arguments using that knowledge; an appreciation of the uncertainty and limits of our scientific knowledge; and the ability to manage your own learning. To reflect this, there is less emphasis on traditional lab report assignments at this level. Instead broader dissertation writing, case study analysis and an in-class test provide you with the opportunity to integrate knowledge from multiple disciplines into coherent and critical evaluations of published knowledge in the field. A poster presentation assignment in the clinical biochemistry and biology of disease unit also allows you to critically evaluate the scientific and clinical data regarding a specified topic, and to discuss the limitations and uncertainty about this area with lecturing staff in an oral presentation. This is even more so the focus of
the research project assignments, in which you must take personal responsibility and apply decision making to a research activity relevant to your course that you will lead on. You must then present, both in writing and orally, a critical and reflective analysis of your data and published information, along with reasonable interpretive arguments integrating and incorporating that knowledge. Finally, the level 6 examination strategy provides you with the opportunity to present detailed and coherent arguments of key principles at the forefront of the discipline with critical analysis of the data and its limitations in long essay style exams.

In addition to written assessment, the importance of oral communication skills is also acknowledged, and your presentation skills will be developed during in-class discussions, and assessed through the course, including a formal oral presentation at level 5, and group discussions in a problem-based learning assignment, and oral presentations in both poster discussion and formal platform presentation formats at level 6.

Practical laboratory skills and good laboratory practice (including knowledge of health and safety procedures) are fundamental and introduced at the very beginning of the course during the Induction Week. These are then developed across all years of the course and with regards to a variety of experimental techniques. Independence and competence in laboratory skills is then expected by the time students start their level 6 research projects.

Generic skills based units are included at level 4 and level 5, and in the research project unit at level 6. These support an array of transferable skills, in particular information retrieval and handling, communication and presentation. The skill areas regarding planning and problem solving and social development and interaction are less well defined in the individual units of the awards, but are generally developed in your practical work which is group orientated. Likewise, time management and personal responsibility are not directly assessed, but are required skills relating to assignment activities throughout the course. You will, therefore, experience these skills in individual units though they are not all specifically assessed in the individual units.

**Additional Academic Information**
**Peer-assisted learning (PAL)**

PAL sessions for Level 4 students are linked to the Essential Skills in Biosciences unit (BHS001-1)

**Initial Assessment**

Level 4 students carry out a laboratory practical and produce a formative laboratory report in the first few weeks of term, which is marked and feedback provided both through turnitin, and through small group tutorials. This allows tutors to assess and special learning needs of individual students, and enables all students to gain feedback on the expectations of practical report writing and the process of turnitin submission. Feedback is returned to students prior to the submission of their first summative assessment. This formative assessment forms part of the BHS001-1 Essential Skills in Biosciences unit.

**Improving students’ learning**

A fundamental aspect to University study is independent learning. Students will attend lectures for the primary explanation of theoretical concepts, and are expected to make their own comprehensive notes and to further read around the subject from the recommended textbooks in their independent learning. They are recommended to apply active learning techniques by applying their learning to such activities as answering practice exam questions, preparing summary diagrams or bullet point lists, or explaining concepts to someone else.

They will receive Tutor-supported seminars and practical activities to reinforce and apply their subject understanding. Under a Blended Learning approach lectures and seminars may include the use of videos or web sites, practice assessments, or interactive sessions designed to support student learning. Students should also search for and identify their own learning resources as appropriate.

It is expected that students identify their own areas of weakness and are proactive in seeking support and training to improve these. This may take the form of further independent learning, requesting tutorials or revision of the topic with their lecturers, or attending workshops and training with the Professional and Academic Development (PAD) Team.

Students should also maintain a laboratory diary of their practical work, and should reflect on the development of their skills throughout their course.

**Academic Integrity**

Guidance about academic integrity including plagiarism will be given during the induction week, and advice on correct academic practice will be available through the Academic Integrity Resource, a VLE-based training system. Further support about assessment requirements will be provided in the BHS001-1 Skills units and in the assignment briefings for each assessment. Where required additional training can be sought through the Professional and Academic Development (PAD) Team.

**HEAR implementation**

N/A

**Internationalisation**

Biomedical science laboratory techniques and the scientific method approach to research is identical in countries across the globe. Thus the fundamental basis of this degree course is inherently internationalised. Key employers, such as academic research laboratories, or the pharmaceutical or biotechnology industries are international, and employ the same practices of reporting, research skills, and critical evaluation that we develop through the course. Teaching also encourages awareness of internationalisation by considering such things as ethnic differences in predisposition to disease, and differential access to current treatments and novel therapy development in different countries around the world.
| Sustainability | N/A |
### Section 4 - Administrative Information

This section will be used as part of the approval and review process and peer academics are the target audience.

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Creative Arts, Technologies and Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portfolio</td>
<td>Undergraduate Life Sciences</td>
</tr>
<tr>
<td>Department/School/Division</td>
<td>Life Sciences</td>
</tr>
<tr>
<td>Course Coordinator</td>
<td>Dr Bushra Ahmed</td>
</tr>
<tr>
<td>Version Number</td>
<td>1/15</td>
</tr>
<tr>
<td>Approved by (cf Quality Handbook ch.2)</td>
<td>TQSC (transition review)</td>
</tr>
<tr>
<td>Date of approval (dd/mm/yyyy)</td>
<td>10/02/2015</td>
</tr>
<tr>
<td>Implementation start-date of this version (plus any identified end-date)</td>
<td>2015/16</td>
</tr>
</tbody>
</table>

Form completed by:

Name: ..........Dr Bushra Ahmed...................... Date: ...............30th December 2014

Authorisation on behalf of the Faculty Teaching Quality and Standards Committee (FTQSC)

Chair: .......................................................... Date: ....................................................

### Course Updates

<table>
<thead>
<tr>
<th>Date (dd/mm/yyyy)</th>
<th>Nature of Update</th>
<th>FTQSC Minute Ref:</th>
</tr>
</thead>
<tbody>
<tr>
<td>22/04/2015</td>
<td>Added a new cohort start date (core pattern 2).</td>
<td></td>
</tr>
</tbody>
</table>