

PROGRAMME SPECIFICATION FOR AN AWARD OF THE UNIVERSITY OF EAST ANGLIA

| Course name | Course code <i>note</i> <i>PS</i> | Year |
|-------------|--------------------------------------|---------|
| BIOMEDICINE | U1C930302 | 2017/18 |

NOTE: Whilst the University will make every effort to offer the modules listed, changes may sometimes have to be made for reasons outside the University's control (e.g. illness of a member of staff) or because of low enrolment or sabbatical leave.

COURSE SUMMARY

| | | | | |
|---|---|---|---|---|
| S1 | a | SCHOOL(S) OF STUDY | Biological Sciences | |
| <i>note S1c</i> | b | FACULTY or FACULTIES | Science | |
| | c | JOINT COURSE? (ie owned/taught by more than one School) | YES | |
| | | | NO | X |
| d | NAME OF COURSE DIRECTOR (Home School) | Professor Vince Ellis | | |
| | e | NAME OF DEPUTY COURSE DIRECTOR (partner School, for Joint Courses only) | N/A | |
| S2 | a | COURSE TITLE | Biomedicine | |
| | b | COURSE CODE | U1C930302 | |
| <i>note S2c & S2d</i> | c | AWARD | BSc (Hons) Biomedicine | |
| | d | EXIT AWARD(S) AND TITLE(S) | Certificate of Higher Education, Diploma of Higher Education | |
| | e | FULL/PART-TIME (please specify) | Full-Time | |
| | f | LOCATION (UEA Norwich, Distance Learning) | UEA Norwich | |
| | g | AVAILABLE FROM: | 2017/18 | |
| S3 <i>note S3a</i> <i>note S3b</i> | a | PROFESSIONAL AWARD (if any) | N/A | |
| | b | ACCREDITING/VALIDATING BODY (if relevant) | | |
| | | Website (URL) | | |
| | | Date when accreditation/validation may take place | | |
| S4a <i>note S4a</i> | LEVEL | Sub-degree (e.g. Cert. Dip.) | Level 4: Certificate of Higher Education; Level 5: Diploma of Higher Education, | |
| | | Undergraduate | Level 6: Honours degree; | |
| | | Integrated Masters | N/A | |
| | | Masters | N/A | |
| | | Other postgraduate (please specify) | N/A | |
| S4b <i>note S4b</i> | FHEQ STATEMENT | Please detail how the programme meets the relevant qualification descriptor from the Framework for Higher Education Qualifications (FHEQ) | The C930 programme is guided by the FHEQ qualification descriptors and the QAA Biomedical Science benchmark statement. In common with other programmes in the Biosciences, C930 provides students with a solid foundation of the underlying principles and concepts | |

| | | | | | | |
|------------------------------|---|--|---|----|-----|--|
| | | | <p>of biological science, with a strong focus on biomolecular science and the chemistry and biophysical chemistry that support this area of biology. This is done in the context of human biology and disease mechanisms. The programme allows students to develop skills in the presentation, evaluation and interpretation of experimental and other data. Students will be able to demonstrate an ability to access and make use of the primary scientific research literature relevant to molecular and cellular aspects of contemporary biomedicine and its translation into the clinical setting, and to apply this knowledge in order to solve problems and develop coherent arguments.</p> <p>This is achieved through a structured programme of lectures, seminars, practical laboratory classes and an independent research project at Level 6.</p> | | | |
| S5 <i>note S5a</i> | a | DURATION (years or months) | 3 Years (BSc) | | | |
| <i>note S5b</i> | b | MODE OF ATTENDANCE (full-time, part-time, distance, other) | Full-time | | | |
| S6 <i>note S6</i> | PLACEMENT(S)/WORK-BASED LEARNING REQUIRED | YES | | NO | X | |
| | | If YES, does this conform with the UEA's code of practice on placements? | | | N/A | |
| S7 <i>note S7</i> | RELEVANT SUBJECT BENCHMARK STATEMENT(S) and details of how the Programme Specification aligns with these | | <p>The 2007 benchmark statement for Biomedical Science recognises that there are three types of biomedical science degrees, of which C930 is of the type not accredited by the IBMS (Institute of Biomedical Science), the professional body for health service biomedical scientists. It is stated that this type of programme is also guided by the benchmark statement for Bioscience. This allows our programme to be adopt research-led teaching and is of the type generally offered by comparable research-intensive universities.</p> <p>The benchmark statement recognises that biomedical science programmes will achieve the goals set for standards in various ways and this will be demonstrated in individual programme specifications. The benchmark statements are divided</p> | | | |

| | | |
|--|--|---|
| | | <p>into three groups: those that are subject-specific and apply more specifically to either basic knowledge or clinical laboratory specialities, and those that are generic and pertain to all areas of biomedical science.</p> <p>The C930 programme adopts a multidisciplinary approach, blending complementary aspects of the biological and chemical sciences to the study of human health and disease, and contemporary molecular medicine.</p> <p>Generic skills: Graduate and transferable skills are developed throughout the programme and are embedded into the majority of modules. Level-4 (Year 1) studies are particularly focused on developing key intellectual (BIO-4008Y Skills for Biologists, BIO-4012Y Introduction to Biomedicine), practical (BIO-4013Y Molecules, Genes and Cells) and numeracy skills (BIO-4008Y Skills for Biologists). Communication and presentation skills are developed in BIO-4012Y (Introduction to Biomedicine) and BIO-4008Y (Skills for Biologists). Interpersonal and teamwork skills are developed through various activities in BIO-4008Y (Skills for Biologists), BIO-40013Y (Molecules, Genes and Cells) and BIO-4012Y (Introduction to Biomedicine).</p> <p>Basic knowledge: The areas of basic knowledge specific in the benchmark statement are listed, together with the modules that are particularly focused on these areas of knowledge. Level-4 and -5 modules are compulsory for C930 students.</p> <p>Human Anatomy & Physiology – These topics are introduced in BIO-4009Y (Introduction to Chemistry & Physiology) and developed in BIO-5004A (Human Physiology). Physiology is also a key component of BIO 5016B (Investigation of Human Disease) and BIO-6021B (Translational Biomedicine).</p> <p>Cell Biology - BIO-4013Y (Molecules, Genes and Cells) introduces students to the fundamentals of this area. This is developed in BIO-5005B (Cell Biology), and is also embedded in BIO-5016B (Investigation of Human Disease). Students can further develop knowledge in this area by taking BIO-6006B (Cell Biology & Mechanisms of Disease) and it</p> |
|--|--|---|

| | | |
|--|--|--|
| | | <p>is an important aspect of the compulsory BIO-6021B (Translational Biomedicine) and the optional BIO-6009A (Cancer Biology).</p> <p>Biochemistry - BIO-4013Y (Molecules, Genes and Cells) introduces students to the fundamentals of this area. Knowledge is enhanced in BIO-5002A (Biochemistry) and is also embedded in BIO-5016B (Investigation of Human Disease). Students can further develop knowledge in this area by taking BIO-6001A (Molecular Enzymology in Biology & Medicine).</p> <p>Genetics – BIO-4013Y (Molecules, Genes and Cells) introduces students to the fundamentals of this area. This is developed in BIO-5011A (Clinical Genetics). Students can further develop knowledge in this area by taking BIO-6013A (Genes, Genomes and Genomics).</p> <p>Molecular Biology - BIO-4013Y (Molecules, Genes and Cells) introduces students to the fundamentals of this area. Knowledge in this area is also developed in several other modules, including BIO-5011A (Clinical Genetics) and BIO-5016B (Investigation of Human Disease). Students can further develop knowledge in this area by taking BIO-6013A (Genes, Genomes and Genomics).</p> <p>Immunology - BIO-4013Y (Molecules, Genes and Cells) introduces students to the fundamentals of this area, with selected aspects also covered in BIO-5005B (Cell Biology). Students can further develop knowledge in this area by taking BIO-6010B (Infection & Immunity).</p> <p>Microbiology – Students are introduced to this area in BIO-4013Y (Molecules, Genes and Cells). This is developed in BIO-5015B (Microbiology) and students can take BIO-6004A (Microbial Biotechnology).</p> <p>Clinical laboratory specialities: The research-led nature of the C930 programme puts a lesser emphasis on this area, guided by the benchmark statement. Nevertheless, the seven specialities defined in the benchmark statement are addressed in the programme. An introduction to all of the specialities is provided in BIO-4012Y (Introduction to Biomedicine). Specialist knowledge is developed further, as below:</p> <p>Cellular pathology – This is a major focus of BIO-6021B (Translational Biomedicine). Students can further develop knowledge in this topic by taking BIO-6006B (Cell</p> |
|--|--|--|

| | | |
|--|--|---|
| | | <p>Biology & Mechanisms of Disease)and/or BIO-6009A (Cancer Biology).</p> <p>Clinical biochemistry - Knowledge of this area is developed in BIO-5016B (Investigation of Human Disease).</p> <p>Clinical immunology – Students can develop knowledge of this area by taking BIO-6010B (Infection & Immunity).</p> <p>Haematology – Haemostasis, thrombosis, haemoglobinopathies and thalassaemias are covered in depth in BIO-5016B (Investigation of Human Disease), and haematopoiesis in BIO-6021B (Translational Biomedicine).</p> <p>Transfusion science - Selected aspects covered in BIO-6021B (Translational Biomedicine).</p> <p>Clinical genetics - Covered in BIO-5011A (Clinical Genetics).</p> <p>Medical microbiology – Selected aspects covered in BIO-5015B (Microbiology) which students can further develop in BIO-6010B (Infection & Immunity) and BIO-6004A (Microbial Biotechnology).</p> |
|--|--|---|

| | | |
|----------------------------------|---|--|
| S8 <i>note</i> S8 | ENTRY REQUIREMENTS | https://www.uea.ac.uk/study/undergraduate/degrees |
| S9 | JACS Subject Level Code(s) Consult Planning Office | C930 |
| S10 | UCAS ADMISSION CODE / COURSE CODE Consult Planning Office | U1C930302 |
| S11 <i>note</i> S11 | FURTHER INFORMATION (web link to further information) | https://www.uea.ac.uk/study/undergraduate/degree/detail/bsc-biomedicine https://www.uea.ac.uk/polopoly_fs/1.109161!Biochemistry%20and%20Biomedicine.pdf |
| S12 <i>note</i> S12 | COURSE HIGHLIGHTS (for publication in University Prospectus / Website /HEAR) Include succinct comments about employability, key skills and learning outcomes | |
| | <p><u>BSc Biomedicine</u></p> <p><i>I was attracted to UEA because of the reputation of the Biomedical Research Centre and the campus itself. I really enjoy my lectures as the academics are enthusiastic and knowledgeable.”</i></p> <p>- Sarah Wise, BSc Biomedicine Student</p> <p>This course is designed to allow you to develop skills in the medically-related biological sciences. It adopts a multidisciplinary approach, blending the complementary aspects of the biological and chemical sciences relevant to modern medicine.</p> | |

| | |
|--|---|
| | <p>The study of biomedicine is an active and advancing area of research within the School of Biological Sciences, ensuring the relevance and up-to-date content of our degree course. It has proved to be an extremely popular programme for students who are keen to apply cellular and molecular research techniques to the understanding and treatment of human diseases.</p> <p>Leading academic researchers carry out much of the teaching, while biomedical scientists and consultants from Norfolk and Norwich University Hospital contribute to the teaching of clinical aspects of the course. Alongside benefitting from the expertise of medical professionals and academics, you will also have access to the incredible facilities across our affiliated institutions, including the Biomedical Research Centre and the Norwich Medical School which is based on campus.</p> <p><u>Course Structure</u></p> <p>This three-year degree programme introduces you to aspects of biomedicine alongside biochemistry and molecular and cellular biology. You will continue to study core material through compulsory modules, with opportunities to specialise through optional modules in your final year alongside your final year project.</p> <p><u>Year 1</u> During this year you will receive an introduction to many aspects of biomedicine, biochemistry and molecular and cellular biology through compulsory core modules. You will also receive training in essential scientific methods and techniques, such as applied maths and statistics.</p> <p><u>Year 2</u> During your second year you will study a range of core subjects, designed to further the knowledge and skills you developed in your first year; these include Microbiology, Human Physiology, Clinical Genetics and Investigation of Human Disease.</p> <p><u>Year 3</u> During your final year of study, you will have the chance to specialise according to your own interests, with a list of up to ten modules to choose from. As well as developing key skills such as data analysis, you will also have the opportunity to undertake a substantial independent research project.</p> |
|--|---|

| | | | | | |
|------------|--|-----|--|----|---|
| AC1 | COURSE MANAGEMENT INFORMATION | | | | |
| AC1.1 | REGULATORY FRAMEWORK | | | | |
| | Undergraduate Regulations (including Integrated Masters) | | | X | |
| | Postgraduate Taught Regulations | | | | |
| | Graduate Diplomas | | | | |
| | PGCE | | | | |
| AC1.2a | Is the course as a whole assessed on a pass/fail basis? | YES | | NO | X |
| AC1.2b | Are any modules assessed on a pass/fail basis? | YES | | NO | X |

| | |
|--------|--|
| AC1.2c | If so, how many modules and what is the credit volume for each module? |
| | N/A |

| | | | | | |
|-----------------------------|--|----------------|------------|-------------------------|---------------------------------|
| AC2 <i>note</i> AC2.1 | YEAR WEIGHTINGS AND PROGRESSION REQUIREMENTS (For undergraduate or integrated masters courses only) | | | | |
| | Please select only from the permitted options - see UG/PGT regulations | | | | |
| Stage <i>Note AC2.2</i> | Level | Year of course | Weightings | Progression requirement | Exit Award <i>Note AC2.3</i> |
| Stage 0 | Level 3 | N/A | N/A | N/A | N/A |
| Stage 1 | Level 4 | 2017/8 | 0 | 40 | Cert HE |
| Stage 2 | Level 5 | 2017/8 | 40 | 40 | DipHE |
| Year Abroad / in Industry | | N/A | N/A | N/A | N/A |
| Stage 3 | Level 6 | 2017/8 | 60 | 40 | DipHE |
| Stage M | Level 7 | N/A | N/A | N/A | N/A |

| | |
|-------|--|
| AC3 | BOARD OF EXAMINERS |
| AC3.4 | EXTERNAL EXAMINERS (see web link below for names, positions and institutions of External Examiners) |
| | (For Admin use only – to be added by LTS Web Administrator) |

| | |
|--|-----------------|
| PS1 COURSE PROFILE <i>For updates to Programme Specifications, copy and paste course profile from eVision</i> | <i>note PS1</i> |
|--|-----------------|

Course Profile for 2017/8

| | |
|---------|-------------------------|
| Course: | Biomedicine (U1C930302) |
|---------|-------------------------|

| | |
|---------|---------------------|
| School: | Biological Sciences |
|---------|---------------------|

| | |
|-----------|-----------------------|
| Director: | Professor Vince Ellis |
|-----------|-----------------------|

Year 1U

Students at the appropriate level will be transferred from BIO-4008Y Skills for Biologists to BIO-4010Y Skills for Biologists with Higher Maths during the Autumn Semester.

Compulsory Modules (120 credits)

| Module | Description | Assessment | Credits | Period | Sub-slot |
|---------------------------|--|------------|---------|--------|----------|
| BIO-4008Y | SKILLS FOR BIOLOGISTS | WW | 20 | YEAR | AA |
| BIO-4009Y | FOUNDATIONS FOR CHEMISTRY AND PHYSIOLOGY | CW | 20 | YEAR | E |
| BIO-4013Y | MOLECULES, GENES AND CELLS | WW | 40 | YEAR | BB |
| BIO-4012Y | INTRODUCTION TO BIOMEDICINE | CW | 40 | YEAR | CC & DD |

Year 2U

Compulsory Modules (120 credits)

| Module | Description | Assessment | Credits | Period | Sub-slot |
|---------------------------|------------------|------------|---------|--------|----------|
| BIO-5002A | BIOCHEMISTRY | WW | 20 | SEM1 | AA |
| BIO-5004A | HUMAN PHYSIOLOGY | WW | 20 | SEM1 | DD |
| BIO-5005B | CELL BIOLOGY | WW | 20 | SEM2 | DD |

| Module | Description | Assessment | Credits | Period | Sub-slot |
|---------------------------|--------------------------------|------------|---------|--------|----------|
| BIO-5011A | CLINICAL GENETICS | WW | 20 | SEM1 | CC |
| BIO-5015B | MICROBIOLOGY | WW | 20 | SEM2 | BB |
| BIO-5016B | INVESTIGATION OF HUMAN DISEASE | WW | 20 | SEM2 | AA |

Year 3U

Students can choose either **BIO-6019Y** or **BIO-6023Y**, but if choosing **BIO-6019Y** may be moved to **BIO-6023Y**, based on stage 2 results.

Compulsory Modules (60 credits)

| Module | Description | Assessment | Credits | Period | Sub-slot |
|---------------------------|---------------------------|------------|---------|--------|----------|
| BIO-6019Y | RESEARCH PROJECT | PR | 40 | YEAR | U |
| BIO-6021B | TRANSLATIONAL BIOMEDICINE | WW | 20 | SEM2 | AA |
| BIO-6023Y | BIOLOGY RESEARCH SKILLS | PR | 40 | YEAR | U |

Options Range A

Students will select 20-60 credits from the following modules:

| Module | Description | Assessment | Credits | Period | Sub-slot |
|---------------------------|--|------------|---------|--------|----------|
| BIO-6003A | CELLULAR SIGNALLING | WW | 20 | SEM1 | EUG |
| BIO-6006B | CELL BIOLOGY AND MECHANISMS OF DISEASE | WW | 20 | SEM2 | BS |
| BIO-6009A | CANCER BIOLOGY | WW | 20 | SEM1 | BGL |
| BIO-6010B | INFECTION AND IMMUNITY | WW | 20 | SEM2 | DL |
| BIO-6013A | GENOMES, GENES AND GENOMICS | WW | 20 | SEM1 | DD |
| BIO-6017A | EVOLUTION IN HEALTH AND DISEASE | WW | 20 | SEM1 | AJL |

Options Range B

Students will select 0-20 credits from the following modules:

| Module | Description | Assessment | Credits | Period | Sub-slot |
|---------------------------|--|------------|---------|--------|----------|
| BIO-6004A | MICROBIAL BIOTECHNOLOGY | WW | 20 | SEM1 | BGJ |
| BIO-6012A | EMBRYO DEVELOPMENT AND STEM CELL BIOLOGY | WW | 20 | SEM1 | BGJ |

Options Range C

Students will select 0-20 credits from the following modules:

| Module | Description | Assessment | Credits | Period | Sub-slot |
|---------------------------|--|------------|---------|--------|----------|
| BIO-6001A | MOLECULAR ENZYMOLOGY IN BIOLOGY AND MEDICINE | WW | 20 | SEM1 | CC |
| BIO-6018Y | SCIENCE COMMUNICATION | CW | 20 | YEAR | CC |

PS2 MAPPING LEARNING OUTCOMES *note PS2*

| Mapping learning outcomes – please list learning outcomes and enter module code against assessment type Level 1 - learning outcomes | Assessment type | | | | | | | |
|--|------------------------|------------------------|-------------|-----------|-------------------------------|-------------------|------------------------|------------------|
| | Essay | Lab report | Course test | Exam | Project/ Dissertation/ Report | Oral Presentation | Assessment of practice | Other |
| To begin to gain knowledge and understanding of core knowledge subjects | BIO-4008Y BIO-4012Y | BIO-4012Y BIO-4013Y | | BIO-4013Y | | | | BIO-4012Y poster |
| To begin to gain knowledge and understanding in key subject areas: (Integrated study of a range of human disorders and disease processes and how they are investigated) | BIO-4012Y | | | | | BIO-4012Y | | BIO-4012Y poster |
| To begin to acquire requisite scientific skills (non-practical) - statistical analysis and maths chemistry and physics | | | | BIO-4013Y | | | | |
| To begin to acquire requisite scientific skills (laboratory/field based) - competence in methods/techniques and protocols plan and execute scientific investigations | | BIO-4012Y BIO-4013Y | | | | | BIO-4013Y | |
| To synthesise information using analysis of literature and collecting and/or analysing data | BIO-4008Y BIO-4012Y | BIO-4012Y BIO-4013Y | | BIO-4013Y | | | | |
| To communicate the above (oral and written) | BIO-4008Y BIO-4012Y | BIO-4012Y BIO-4013Y | | BIO-4013Y | | BIO-4012Y | BIO-4013Y | BIO-4012Y poster |
| To begin to appreciate the ethical issues and the impact and place of science in society | BIO-4008Y BIO-4012Y | BIO-4012Y BIO-4013Y | | | | BIO-4012Y | | BIO-4012Y poster |
| Other: please give details | | | | | | | | |

PS2 MAPPING LEARNING OUTCOMES - continued note PS2

| Mapping learning outcomes – please list learning outcomes and enter module code against assessment type Level 2 - learning outcomes | Assessment type | | | | | | | |
|---|-------------------------------------|---|-------------|--|-------------------------------------|----------------------|---------------------------|---|
| | Essay | Lab report | Course test | Exam | Project/ Dissertation/ Report | Oral Presentation | Assessment of practice | Other |
| To gain a deeper knowledge and understanding of core knowledge subjects. | BIO-5004A BIO-5005B BIO-5011A | BIO-5004A, BIO-5002A BIO-5015B | | BIO-5004A, BIO-5005B BIO-5002A, BIO-5011A BIO-5015B, BIO-5016B | | BIO-5005B | BIO-5015B | BIO-5002A- Poster BIO-5016B Workshops BIO-5011A- Workshops |
| To gain deeper knowledge and understanding in key subject areas. (Integrated study of a range of human, primarily monogenic, disorders and disease processes and how they are investigated) | BIO-5004A BIO-5005B BIO-5011A | BIO-5004A, BIO-5005B BIO-5002A, BIO-5015B | | BIO-5004A, BIO-5005B BIO-5002A, BIO-5011A BIO-5015B, BIO-5016B | | BIO-5005B | BIO-5015B | BIO-5002A- Poster BIO-5016B Workshops BIO-5011A- Workshops |
| To further develop critical analytical skills; to be able to test theories and concepts | | BIO-5004A, BIO-5002A BIO-5005B, BIO-5015B BIO-5011A | | BIO-5004A BIO-5005B, BIO-5002A, BIO-5011A BIO-5015B, BIO-5016B | | | BIO-5015B | BIO-5016B Workshops BIO-5011A- Workshops |
| To develop the skills to critically review and evaluate scientific literature | BIO-5004A BIO-5005B BIO-5011A | BIO-5004A, BIO-5005B BIO-5002A, BIO-5015B BIO-5002A | | | | | | BIO-5002A- Poster BIO-5016B Workshops BIO-5011A- Workshops |
| To apply and develop requisite scientific skills | | BIO-5004A, BIO-5002A BIO-5015B, BIO-5003B | | BIO-5004A, BIO-5002A BIO-5005B, BIO-5011A BIO-5015B, BIO-5016B | | | BIO-5015B | BIO-5016B-Workshops BIO-5011A -Workshops |
| To synthesise information using analysis of literature and collecting and/or analysing data | BIO-5004A BIO-5005B BIO-5011A | BIO-5004A BIO-5005B BIO-5002A BIO-5015B | | BIO-5004A BIO-5005B BIO-5002A, BIO-5011A BIO-5015B, BIO-5016B | | | BIO-5015B | BIO-5002A-Poster BIO-5016B- Workshops BIO-5011A- Workshops |
| To communicate the above (written and oral) | BIO-5004A BIO-5005B BIO-5011A | BIO-5004A, BIO-5002A BIO-5005B, BIO-5015B | | | | | | BIO-5002A- Poster BIO-5016B- Workshops BIO-5011A- Workshops |
| To appreciate specific ethical issues and the impact and place of science in society | BIO-5004A BIO-5005B BIO-5011A | | | | | | | BIO-5016B- Workshops BIO-5011A- Workshops |

PS2 MAPPING LEARNING OUTCOMES - continued note PS2

| Mapping learning outcomes – please list learning outcomes and enter module code against assessment type Level 3 - learning outcomes | Assessment type | | | | | | | |
|--|--|--|-------------|--|-------------------------------------|-------------------------------------|------------------------|---|
| | Essay | Lab report | Course test | Exam | Project/ Dissertation/ Report | Oral Presentation | Assessment of practice | Other |
| To gain a deeper knowledge and understanding of core knowledge subjects (with progression from Stage 2) | BIO-6001A, BIO-6003A BIO-6010B, BIO-6013A BIO-6017A, BIO-6018Y | BIO-6003A BIO-6001A BIO-6013A BIO-6012A | | BIO-6003A, BIO-6001A BIO-6004A, BIO-6010B BIO-6013A, BIO-6012A BIO-6017A, BIO-6006B | BIO-6018Y BIO-6019Y BIO-6020Y | BIO-6017A BIO-6019Y BIO-6020Y | BIO-6019Y BIO-6020Y | BIO-6004A- Data handle BIO-6006B- Practical Des BIO-6018Y- Webpage BIO-6010B- poster |
| To gain deeper knowledge and understanding in key subject areas. Integrated study of a range of complex human disorders and disease processes including epidemiology (with progression from Stage 2) | BIO-6010B | | | BIO-6010B | | | | BIO-6010B poster |
| To apply and develop requisite scientific skills; to frame and test hypotheses (applying quantitative and reasoning skills); to demonstrate competence in methods, techniques and protocols | | BIO-6001A BIO-6013A BIO-6012A | | | BIO-6018Y BIO-6019Y BIO-6020Y | BIO-6019Y BIO-6020Y | BIO-6019Y BIO-6020Y | |
| To synthesise and critically evaluate information using analysis of literature and collecting and/or analysing data | BIO-6001A, BIO-6003A BIO-6010B, BIO-6013A BIO-6017A, BIO-6018Y | BIO-6012A BIO-6001A BIO-6013A | | | BIO-6018Y BIO-6019Y BIO-6020Y | BIO-6017A BIO-6019Y BIO-6020Y | BIO-6019Y BIO-6020Y | BIO-6010B- Poster BIO-6006B-Practical Des BIO-6018Y- webpage |
| To communicate the above (written and oral) | BIO-6001A, BIO-6003A BIO-6010B, BIO-6013A BIO-6017A, BIO-6018Y | BIO-6013A BIO-6001A BIO-6012A | | BIO-6001A, BIO-6003A BIO-6004A, BIO-6010B BIO-6006B, BIO-6013A BIO-6017A, BIO-6012A | BIO-6018Y BIO-6019Y BIO-6020Y | BIO-6017A BIO-6019Y BIO-6020Y | BIO-6019Y BIO-6020Y | BIO-6010B- Poster BIO-6006B- Practical Des |
| To appreciate specific ethical issues and the impact and place of science in society | BIO-6003A, BIO-6001A BIO-6010B, BIO-6013A BIO-6017A, BIO-6018Y | | | BIO-6001A, BIO-6010B BIO-6003A, BIO-6013A BIO-6006B, BIO-6004A BIO-6017A, BIO-6012A | BIO-6018Y BIO-6019Y BIO-6020Y | BIO-6017A BIO-6019Y BIO-6020Y | BIO-6019Y BIO-6020Y | BIO-6010B- poster BIO-6006B- Practical Des BIO-6018Y- webpage |

| | |
|--|---------------------|
| PS3 PROGRAMME COHERENCE AND FEEDBACK CYCLES | <i>note PS3</i> |
|--|---------------------|

PS3.1 learning progression

How will progression in terms of skills, knowledge and understanding be reflected in the programme between modules in any one year and across the years as students progress through their course of study?

*note
PS3.1*

Year 1 All modules in the first year are compulsory, and aimed at giving students a broad grounding in the biomolecular sciences together with exposure to the range of specialist biomedical research and clinical laboratory topics they will encounter and build upon at Honours level. Students are introduced to practical laboratory skills, and receive training in essential scientific methods and techniques, including applied mathematics, statistics and research ethics. Emphasis is placed on developing generic skills, including essay writing, presentation and teamwork skills through seminars, workshops and practical laboratory sessions.

Year 2 All modules in the second year are also compulsory, again reflecting the breadth of the programme. The range of subjects develops the knowledge and skills developed in the first year; and includes two modules restricted to C930 Biomedicine students; Clinical Genetics and Investigation of Human Disease. Skills are developed through laboratory practicals of greater complexity (Biochemistry, Microbiology, Cell Biology, Human Physiology), seminars addressing aspects of the primary research literature (Cell Biology), data analysis seminars and problem-solving workshops linking clinical/physiological observations to basic science (Human Physiology, Clinical Genetics, Investigation of Human Disease).

Year 3 A major component of final year study is an independent research project, conducted either as an independent laboratory project or an independent literature-based review together with a group-based laboratory skills project. This builds on and further develops the data collection, investigative, analytical and problem-solving skills nurtured in earlier years. Specific knowledge at the cutting-edge of biomedical research is developed in the compulsory translational Biomedicine module. In this final year there is significant flexibility in the programme, as half of their credits are chosen as three from ten optional modules. This allows students to their specific biomedically-related interests in areas including Cancer Biology, Infection & Immunity, Evolution in Health & Disease, Cell Biology & Mechanisms of Disease and Molecular Enzymology in Biology & Medicine. There is a strong emphasis on research-led teaching and the use of the primary research literature.

PS3.2 feedback cycle

Please explain how assessments and feedback / feed forward support the coherence of the programme. Comment on number and types of assessment, both formative and summative; the types and format of feedback students will receive; and their sequencing. How will assessments and feedback impact on subsequent modules?

*note
PS3.2*

The programme uses a variety of feedback approaches consistent with the need to test a broad range of learning outcomes and reflecting the range assessment types used; formal examinations, workshop reports, course tests, practical reports, poster and oral presentations, essays and worksheets.

Current assessment at all levels is summarised as follows;

Level 1: BIO-4013Y (40 credits) is 50% Examination/Course Test, 50% Coursework; BIO-4012Y (40 credits) is 100% Coursework (30% being Course Tests); BIO-4008Y/10Y (20 credits) is 100% Coursework (60% being Course Tests); BIO-4009Y (20 credits) is 100% Coursework (Course Tests).

Level 2: 40% Coursework, 60% Examination

Level 3: 40% Coursework, 60% Examination (exceptions: compulsory 40-credit project-based modules are 100% coursework, students can also take BIO-6018Y Science Communication as an option which is also 100% coursework).

The majority of modules (except CW-only modules) have 2-3 items of coursework with summative assessment, and these are supported by formative assessment or exercises.

Specific examples include CW feedback for BIO-5016B Investigation of Human Disease. A formative workshop is held in Wk2 giving students the opportunity to become familiar with what is expected from them with direct verbal feedback. Two workshops are then held in Wks 3 and 6 which are geared towards the summative CW assignments and allow students the opportunity to discuss them. Students are given written feedback on these assignments, together with further workshop sessions (in Wks 8 and 10) in which verbal feedback is given, together with the opportunity for students to discuss this.

Assessment and feedback patterns are now reviewed annually via the School's Annual Review of Assessment & Moderation Meeting involving the BIO Director of Teaching, Course Directors and LTS staff.

| PS4 | EXAMINATIONS | | <i>note PS4</i> |
|---|--|---|-----------------|
| | Written | Practical (e.g. OSCES and OSPES) | |
| How many modules will include an exam element? | 10-11 (depending on Level-3 options) | | |
| How many hours of exams are there in Stage 0? (if applicable) | N/A | | |
| How many hours of exams are there in Stage 1? | 2 (University exams, excluding course tests) | | |
| How many hours of exams are there in Stage 2? | 12 | | |
| How many hours of exams are there in Stage 3? | 8-11 (depending on option choice) | | |
| How many hours of exams are there in Stage 4? (if applicable) | | | |
| How many hours of exams are there in Stage 5? (if applicable) | | | |
| How many hours does the programme (as a whole) include? | 22-25 | | |

| PS5 | EQUALITY & WIDENING PARTICIPATION | | <i>note PS5</i> |
|------------|--|--|-----------------|
| PS5.1 | How do the admissions criteria specifically for this course ensure equality of opportunity for all applicants? | | |
| | UEA Admissions Policy applies to this degree programme/course. | | |
| PS5.2 | What steps have been taken to ensure an inclusive curriculum? | | |
| | We aim to ensure an inclusive curriculum through our current Adviser-based system and offering other university-wide pastoral support through the Dean of Students office (DoS). These processes are also continually monitored through specific questions raised during Annual and Quinquennial Course Review in which we collate data on age, gender, disabilities and ethnicity balance in our degree programmes. Academically, the range of teaching methods and forms of assessment employed cater for students with a range of learning styles. | | |
| PS5.3 | In what ways do learning and teaching and assessment methods ensure inclusivity, reasonable adjustment and equality of opportunity? | | |
| | The course uses a diverse range of assessment methods and offers access to learning materials in a number of different forms, with electronic support in the form of Blackboard. Students will also have an allocated advisor and access to the Dean of Students office for support with respect to potential individual arrangements including allowance for disabilities. Fair adjustment for Extenuating Circumstances is dealt with either by the BIO Teaching Hub staff or in more complex cases by the School's Extenuating Circumstances Panel which also gives guidance and recommendations to the Board of Examiners. | | |

| | |
|--|--|
| | |
|--|--|

| PS6 | EMPLOYABILITY | <i>note PS6</i> |
|------------|---|-----------------|
| | <p>How is employability embedded into the delivery of the course?</p> <p>Led by the BIO Director of Employability, it has been decided that rather than offer an optional Employability module that will be taken by only a small proportion of students it will be more effective to enhance focus on the development of employability skills within the main curriculum, complementing that where possible with specific extracurricular activities. As a first step toward this the School has identified a lack of awareness among students of the skills that they acquire in the course of their studies. A structured skills audit, requiring Module Organisers to identify the different types of skills, both specialist and transferable, intellectual and practical, that are developed by participation in their modules, has therefore been completed and the results of this will be made available to students as a tool to support their personal and professional development. Module Organises also embed Case Studies of applied knowledge and alumnus career development in summary to a lecture series. This will be complemented by changes to the course evaluation mechanism to include questions relating to careers and employability. In addition, the recently introduced Annual Course Review process, currently being implemented for the first year in BIO, explicitly considers student feedback on employability skills and module learning outcomes in order to inform course management and development.</p> | |

KEY INFORMATION SET (KIS) DATA

SCI BIO Biomedicine UNU1C930302

| KIS | | KEY INFORMATION SET data (undergraduate courses only) | | | | | | <i>Note KIS</i> |
|-------------|--|---|--------|--------|--------|--------|--------|------------------|
| KIS1 | | Quantitative KIS data | | | | | | <i>Note KIS1</i> |
| | | Year 0 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | |
| 1.1 | Percentage of assessment by written exams | | 50 | 60 | 40 | | | |
| 1.2 | Percentage of assessment by practical exams | | 0 | 0 | 0 | | | |
| 1.3 | Percentage of assessment by coursework | | 50 | 40 | 60 | | | |
| 1.4 | Percentage of time in scheduled learning and teaching activities | | 25 | 28 | 13 | | | |
| 1.5 | Percentage of time in guided independent study | | 75 | 72 | 87 | | | |
| 1.6 | Percentage of time on placements | | 0 | 0 | 0 | | | |
| KIS2 | | Professional Accreditation | | | | | | <i>Note KIS2</i> |
| 2.1 | | Name of accrediting body (if applicable) | | | | | | |
| | | N/A | | | | | | |
| 2.2 | | Please give details, including any memberships, exemptions etc that the award confers. Please also give accrediting body website URL. | | | | | | |
| | | | | | | | | |
| 2.3 | | Is the accreditation dependent on specific module choices? If so, please include URL of web pages where these details are outlined. | | | | | | |
| | | | | | | | | |

| UP1 Programme Specification Update Record | | | | | | |
|---|--------|-------------|--------|--------|--------|--------|
| Faculty | SCI | | School | | BIO | |
| Academic Year | 2014/5 | 2015/6 | 2016/7 | 2017/8 | 2018/9 | 2019/0 |
| Degree Award (e.g. BSc/MA) | | BSc | | | | |
| Course Title(s) | | Biomedicine | | | | |
| Course Code(s) | | U1C930302 | | | | |
| Has the KIS data been changed? | Yes/No | | | | | |
| Course Director sign off | Name | Vince Ellis | | | | |
| | Date | 03/04/2017 | | | | |

| IM1 IMPLEMENTATION ACTIONS – ADMIN USE ONLY | | |
|--|--------------------------------|---------|
| ACTION | DATE | Name |
| Course Profile updated in Evison (LTS Team Leader) | 10 th February 2017 | |
| Programme Specification placed in shared drive folder (LTS Team Leader) | 03 rd April 2017 | Krissie |
| Web link to External Examiner information added (LTS Web Administrator) | | |
| Programme Specification uploaded onto website (LTS Web Administrator) | | |
| Planning Office informed of upload of Programme Specification onto website (copy of this page to cams.records@uea.ac.uk) (LTS Web Administrator) | | |
| Programme Specification Code (LTS Team Leader) (SCH/YEAR/Level/Sequence) | | |
| Full route code(s) covered by this Programme Specification (LTS Team Leader) | | |