Undergraduate pathways

Life & Medical Sciences

Biochemistry
Biological Sciences
Geography
Molecular Biology
Nutrition
Pharmaceutical Sciences
Psychology
Sports

(Guardian University League Table 2017)
Stage 1: University Foundation

Intakes
September and January

Duration
Two semesters

Modules
Semester one
• Interactive Learning Skills and Communication (ILSC)
• Chemistry A
• Principles of Computing
• Maths 1

Semester two
• Biology A
• Biology B
• Chemistry B
• Maths 2

Progression rule to Stage 2
Minimum 50% pass mark in all modules except ILSC which is 50% with minimum 85% attendance required across all modules.

Stage 2: First Year of Degree

Intake
September

Duration
Two semesters

Modules
HIC provides subject specialist skill progression classes during integrated First Year Degree.

Students need to pass all modules to progress. All students study a collection of modules, totalling 120 credits.

More information about the University’s degree modules can be found on their website: www.herts.ac.uk/apply/schools-of-study/schools/life-and-medical-sciences.

Progression rule to Stage 3
Minimum 40% pass mark in all modules with minimum 85% attendance required.

Stage 3: Second & Final Year Degree

Intake
September

Duration
Two semesters

Modules
More information about the University’s degree modules can be found on their website: www.herts.ac.uk/apply/schools-of-study/schools/life-and-medical-sciences.

Employment & career options
Previous graduates have gone to work in a variety of roles such as Agronomist, Anatomist, Animal Scientist, Biochemist, biomedical engineering. Some employers of our life science graduates have been BUPA, Johnson Matthey, Ministry Of Defence, NHS, RAF.
Foundation in Life & Medical Sciences (Two Semesters)

Life & Medical Sciences

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Module Name</th>
<th>Credit Points</th>
<th>% Examination</th>
<th>% Coursework</th>
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<tbody>
<tr>
<td>ILS001</td>
<td>Interactive Learning Skills and Communication</td>
<td>15</td>
<td>30%</td>
<td>70%</td>
</tr>
<tr>
<td>BUS107</td>
<td>Principles of ICT</td>
<td>15</td>
<td>60%</td>
<td>40%</td>
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<tr>
<td>SCI104</td>
<td>Mathematics 1</td>
<td>15</td>
<td>50%</td>
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<tr>
<td>SCI124</td>
<td>Chemistry A</td>
<td>15</td>
<td>60%</td>
<td>40%</td>
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<table>
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<tr>
<th>Semester 2:</th>
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<tr>
<td>SCI125</td>
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<td>SCI120</td>
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<tr>
<td>SCI121</td>
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<td>SCI002</td>
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Undergraduate Stage 1: Health, Human and Life Sciences 120 Credit Points

Interactive Learning Skills & Communications (ILS001)
The aims of this module are to develop a range of academic and communicative skills necessary for successful study in Higher Education; to develop independent learning and encourage students to take responsibility for their personal, academic and professional development; and to develop the knowledge and ability to use a range of digital technologies.
Assessment: 30% examination and 70% coursework

Principles of ICT (BUS107)
This Principles of ICT module attempts to deliver an accurate snapshot of the state of ICT as it exists currently, as well as to equip the student with a useful set of skills in the use of common productivity software and Internet based applications. The module introduces candidates to the interesting challenges that ICT presents today and covers many anchor points that may serve as a bridge to their interests and lifestyles. These bridges include the technology in their mobile telephones, computing equipment, home appliances, motor vehicles, shopping, movies and entertainment software.
Assessment: 60% examination and 40% coursework

Maths 1 (SCI104)
The aims of this module are to explain the fundamental aspects of numerical processes and develop the knowledge and skills to apply these techniques and to explain basic mathematical processes to ensure a strong platform when applying to further mathematical problems such as differentiation/integration and the concepts of discrete mathematics.
Assessment: 50% Coursework and 50% Examination

Chemistry A (SCI24)
During this module you will study: Chemical equations and empirical formulae; Atomic mass and mass number; The definition and application of the mole in chemical calculations; Structure and bonding in elements and ionic compounds; Intermolecular forces and van de Waals forces; The kinetic and molecular theory of gases and the gas laws, Dalton’s law of partial pressures; Energetics and the calculation of entropy; Hesse’s law in thermochemical calculations, Born-Haber cycles, Intellectual/Cognitive Skills, use chemical and numerical formulae to support chemical calculations and carry out mole calculations; the basic principles of atomic structure; the presence of bonding types within compounds, distinguish between types of intermolecular forces and use them to predict the physical properties of compounds, and qualitative and quantitative principles to physical and chemical phenomena.
Assessment: 40% Coursework and 60% Examination
Maths 2 (SCI002)
During this module you will study: Integration techniques involving, products and quotients, exponential, logarithmic and trig functions; General and particular solutions of homogeneous and inhomogeneous differential equations of the first and second order; Numerical techniques for the manipulation of matrices, the law of matrices. The identity matrix and its function; The determinant of a matrix, cofactors and minors, conditions for trivial and non-trivial solutions; The augmented matrix and its row echelon form. Solutions of a system of equations via Gaussian elimination/ and Matrix algebra techniques; Eigenvalues and associated eigenvectors for non-trivial solutions of a system of equations; Three-dimensional Cartesian coordinates. The unit vectors. Direction cosines; and The vector and scalar products rules and definitions.
Assessment: 30% Coursework and 70% Examination

Chemistry B (SCI25)
During this module you will study: Patterns and trends in the Periodic Table; Trend in 1st ionization energy, atomic radius, melting point and electronegativity of elements; Bonding and reactions of chlorides and oxides across and period; Characteristics, reactions and trends in reactivity Groups I – III, V and the transition metals; Reaction rates and equilibria; Acids and bases; The name, structural formula and typical properties of hydrocarbons; The name, structural formula and typical properties of homologous series and the properties of functional groups; The reactions of free radical, electrophilic addition and nucleophilic substitution; Key processes in the production of organic chemicals; and Key processes of spectroscopic techniques.
Assessment: 50% Coursework and 50% Examination

Biology A (SCI1120) & Biology B (SCI1121)
During this modules you will study: The scientific process; laboratory protocols & safety; characteristics of living organisms; cells & organelles; cell membranes; introductory microscopy; principle biological molecules; separation and analytical techniques; protein determination; enzyme action; metabolism; molecular Biology; genetics; cell growth & specialisation; cell cycle & division; stem cells; communication & coordination in mammals; role of hormones; organs; nutrition; digestive system; cardiovascular system; respiratory system; urinary system; human nervous system; health & disease; microorganisms; immune response; vaccination & antibodies; variation; adaptation & evolution; classification; and biodiversity & conservation.
Assessment: 60% Coursework and 40% Examination