1. KentVision Code and title of the module

BIOS3000 – The Molecules of Life

## Division and School/Department or partner institution which will be responsible for management of the module

Division of Natural Sciences (Biosciences)

## The level of the module (Level 4, Level 5, Level 6 or Level 7)

Level 4

## The number of credits and the ECTS value which the module represents

15 Credits (7.5 ECTS)

## Which term(s) the module is to be taught in (or other teaching pattern)

Autumn and Spring

## Prerequisite and co-requisite modules and/or any module restrictions

None

## The course(s) of study to which the module contributes

Compulsory for the following courses:

BSc (Hons) Biology (and all related variants)

BSc (Hons) Biochemistry (and all related variants)

BSc (Hons) Biomedical Science (and all related variants)

Not available as an elective module

## The intended subject specific learning outcomes.On successfully completing the module students will be able to:

8.1 Demonstrate a basic understanding of the composition, structure and function of the major groups of molecules in cells; nucleic acids, proteins, carbohydrates and lipids.

8.2 Demonstrate a basic understanding of the principles of purification, separation and characterisation of macromolecules.

## The intended generic learning outcomes.On successfully completing the module students will be able to:

9.1 Demonstrate competence in basic laboratory skills, calculations and problem solving.

## A synopsis of the curriculum

This module will provide an introduction to biomolecules in living matter. The simplicity of the building blocks of macromolecules (amino acids, monosaccharides, fatty acids and purine and pyrimidine bases) will be contrasted with the enormous variety and adaptability that is obtained with the different macromolecules (proteins, carbohydrates, lipids and nucleic acids). The nature of the electronic and molecular structure of macromolecules and the role of non-covalent interactions in an aqueous environment will be highlighted. The unit will be delivered though lectures, formative practicals and related feedback sessions to ensure students fully understand what is expected of them. Short tests (formative assessment) will be used throughout the unit to test students' knowledge and monitor that the right material has been extracted from the lectures.

## Reading list

## The University is committed to ensuring that core reading materials are in accessible electronic format in line with the Kent Inclusive Practices.

## The most up to date reading list for each module can be found on the university's [reading list pages](https://kent.rl.talis.com/index.html).

## Contact Hours

Private Study: 103

Contact Hours: 47

Total: 150

## Assessment methods

13.1 Main assessment methods

* Smart Worksheet (3 hours) – 20%
* MCQ Assessment (40 questions) – 20%
* Examination (2 hours) – 60%

13.2 Reassessment methods

* Like-for-like

## Map of module learning outcomes (sections 8 & 9) to learning and teaching methods (section 12) and methods of assessment (section 13)

**Module learning outcomes against learning and teaching methods:**

| **Module learning outcome** | 8.1 | 8.2 | 9.1 |
| --- | --- | --- | --- |
| Private Study | **x** | **x** | **x** |
| Lectures | **x** | **x** |  |
| Laboratory | **x** | **x** | **x** |
| Feedback | **x** | **x** | **x** |

**Module learning outcomes against assessment methods:**

| **Module learning outcome** | 8.1 | 8.2 | 9.1 |
| --- | --- | --- | --- |
| Smart Worksheet | **x** | **x** | **x** |
| MCQ Assessment | **x** | **x** | **x** |
| Examination | **x** | **x** | **x** |

## Inclusive module design

The Division recognises and has embedded the expectations of current equality legislation, by ensuring that the module is as accessible as possible by design. Additional alternative arrangements for students with Inclusive Learning Plans (ILPs)/declared disabilities will be made on an individual basis, in consultation with the relevant policies and support services.

The inclusive practices in the guidance (see Annex B Appendix A) have been considered in order to support all students in the following areas:

a) Accessible resources and curriculum

b) Learning, teaching and assessment methods

## Campus(es) or centre(s) where module will be delivered

Canterbury

## Internationalisation

Science is an international discipline with widely applicable international resonance. This module presents subject-specific knowledge generated, developed, and refined by scientists around the world. Mastery of the learning outcomes will equip students to apply the knowledge in a wide range of international contexts and these will be addressed in making the content relevant to current global issues. The Division of Natural Sciences is an international community of students and staff and group activities and teaching will provide a platform for internationally-focussed discussion.

**DIVISIONAL USE ONLY**

**Module record – all revisions must be recorded in the grid and full details of the change retained in the appropriate committee records.**

| Date approved | New/Major/minor revision | Start date of delivery of (revised) version | Section revised(if applicable) | Impacts PLOs (Q6&7 cover sheet) |
| --- | --- | --- | --- | --- |
| 20 Jan 2020 | Minor | Sep 2020 | 4, 11-13 | No |
| 09 Aug 2022 | Minor | Sep 2023 | 1 | No |

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| Revised FSO Feb 2020 |