1. **Title of the module**

BIOS6440 (BI644) - The Biology of Ageing

1. **School or partner institution which will be responsible for management of the module**

School of Biosciences

1. **The level of the module (e.g. Level 4, Level 5, Level 6 or Level 7)**

Level 6

1. **The number of credits and the ECTS value which the module represents**

15 Credits (7.5 ECTS credits)

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

Spring

1. **Prerequisite and co-requisite modules**

Pre-requisite:

Compulsory Stage 1 and 2 Biosciences modules as well as BI501 Gene expression and control and/or BI549 The Genome (optional modules).

1. **The programmes of study to which the module contributes**

Module will be optional for 3rd year students undertaking:

Biochemistry and related programmes

Biomedical Science and related programmes

Biology and related programmes

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

Demonstrate:

* 1. Demonstrate knowledge of the major processes underlying the ageing process.

8.2 Demonstrate practical and data handling skills associated with analysing lifespan and age-related decline data sets.

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

9.1 Interpret and retrieve information

9.2 Analyse and evaluate data

9.3 Demonstrate written communication skills

1. **A synopsis of the curriculum**

The module provides a detailed molecular basis for the ageing process. It reviews the organisms and experimental methods used to study ageing, and discusses the findings of this work to provide both knowledge and context to the process of ageing.

**Topics may include:**Importance and principles of ageing research

Why do organisms age and theories of ageing

Overview of processes and pathways controlling ageing

How ageing and lifespan is measured.

Signalling pathways that control ageing

Diseases of ageing

Ethics of ageing research

There will be two workshops:Workshop 1: Data analysis session (whole class or 2-3 groups).

Workshop 2: Group discussion of key ageing research paper(s) (small groups).

1. **Reading List (Indicative list, current at time of publication. Reading lists will be published annually)**

Suggested reading will consist of review articles and primary research publications. The emphasis of this course will be to read and interpret the scientific literature first hand.

Some extracts or reading will also be recommended from “Biology of Aging” first edition CRC press by Roger B McDonald.

1. **Learning and Teaching methods**

Total Contact Hours: 26

Independent Study Hours: 124

Total Study Hours: 150

1. **Assessment methods**
   1. Main assessment methods

Assignment 1: Data analysis and interpretation, 40%, Maximum 1500 words.

Examination, 2 hr, 60%

* 1. Reassessment methods

Like-for-like

1. **Map of Module Learning Outcomes (sections 8 & 9) to Learning and Teaching Methods (section12) and methods of Assessment (section 13)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Module learning outcome** | *8.1* | *8.2* | *9.1* | *9.2* | *9.3* |
| **Learning/ teaching method** |  |  |  |  |  |
| *Private Study* | **x** | **x** | **x** | **x** | **x** |
| *Lectures* | **x** |  | **x** |  |  |
| *Workshop (data handling)* | **x** | **x** | **x** | **x** | **x** |
| *Workshop (group discussion)* | **x** | **x** | **x** | **x** | **x** |
| *Revision Workshop* | **x** |  |  |  |  |
| **Assessment method** |  |  |  |  |  |
|  |  |  |  |  |  |
| *Assignment 1: Data analysis and interpretation.* | **x** | **x** | **x** | **x** | **x** |
| *Examination* | **x** | **x** | **x** | **x** | **x** |

1. **Inclusive module design**

The School 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

1. **Campus(es) or centre(s) where module will be delivered:**

Canterbury

17. **Internationalisation**

Biosciences is an international discipline. This module presents subject-specific knowledge, research approaches and techniques, generated, developed and refined by scientists around the world. Mastery of the learning outcomes will equip students to apply the theories and techniques of the module in a wide range of international contexts. In compiling the reading list, consideration has been given to the range of texts that are available internationally and a selection has been identified to complement the delivery of the material. The School of Biosciences is an international community of students and staff. Group activities e.g. in practicals, tutorials, workshops and self-study will naturally draw on the international make-up of the student body; the module teaching team includes members with international experience of teaching and research collaboration.

**FACULTIES SUPPORT OFFICE USE ONLY**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date approved | Major/minor revision | Start date of the delivery of revised version | Section revised | Impacts PLOs (Q6&7 cover sheet) |
| 12/12/19 | Major | Sep 2020 | 10, 11, 13, 14 | No |
|  |  |  |  |  |

Revised FSO Feb 2020