1. **Title of the module**

BIOS6430 (BI643) - Neuroscience

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

Biosciences

1. **The level of the module (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)

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

Spring

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

Prerequisites:

BIOS5130 Human Physiology and Disease II

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

BSc Biomedical Science and related programmes (optional)

BSc Biology and related programmes (optional)

BSc Biochemistry and related programmes (optional)

MSc Biomedicine (optional)

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

8.1 Demonstrate a systematic understanding of the cellular and molecular functions of the nervous system gained through knowledge of how nerve cells communicate at synapses.

8.2 Demonstrate a systematic understanding of sensory and cognitive processes.

8.3 Demonstrate a systematic understanding of acquired and inherited neurological diseases.

8.4 Demonstrate an appreciation of the significant achievements of research in neuroscience and the many unanswered questions (limits of our knowledge).

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

9.1 Comprehend complex scientific topics.

9.2 Source, read and evaluate scientific literature.

9.3 Analyse and evaluate data

9.4 Communicate effectively in writing.

1. **A synopsis of the curriculum**

The module deals with basic neuroanatomy and molecular and cellular neurobiology, such as transmission of signals within the nervous system and sensory perception. It explores more complex functions of the nervous system, e.g. behavioural and cognitive functions including learning, memory, emotions and appetite control. Throughout the module both the normal nervous system and disorders that arise as a consequence of abnormalities will be covered.

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

* Principles of Neural Science, Kandel, Schwartz, Jessel, Siegelbaum, Hudspeth, 5th ed (2012)
* Fundamental Neuroscience, Squire, Berg, Bloom, du Lac, Ghosh, Spitzer, 4th ed (2012)
* Neuroscience, Purves, Augustine, Fitzpatrick, Hall, La Mantia, White, 5th ed (2011)

Research articles available from Templeman Library journal collections.

1. **Learning and teaching methods**

Total contact hours: 26

Private study hours: 124

Total study hours: 150

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

Data analysis exercise (20%), max 1500 words

Test with multiple choice questions, 45 min (20%)

Exam, 2 h (60%)

13.2 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* | *8.3* | *8.4* | *9.1* | *9.2* | *9.3* | *9.4* |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |
| Lectures | **X** | **X** | **X** | **X** | **X** | **X** | **X** |  |
| Workshops | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| Private study | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Assessment method** |  |  |  |  |  |  |  |  |
| Data analysis exercise | **x** | **x** | **X** | **X** | **X** | **X** | **X** | **X** |
| Test with MCQs | **X** | **x** | **x** | **X** | **X** | **X** | **X** | **X** |
| Examination | **X** | **X** | **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

1. **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/or research collaboration.

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**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) |
| 24/01/20 | Major | Sep 2020 | 8-11, 13 | No |
|  |  |  |  |  |

Revised FSO Feb 2020