1. **Title of the module**

BIOS5140 (BI514) – Pharmacology

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 5

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**

BIOS3070 Human Physiology and Disease

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

BSc (Hons) Biochemistry and related programmes

BSc (Hons) Biomedical Science and related programmes

1. **The intended subject specific learning outcomes.  
   On successfully completing the module students will be able to:**
2. Demonstrate a critical understanding of receptors, ion channels, enzymes and carrier molecules as drug targets.
3. Describe drug-receptor interactions at the molecular level.
4. Demonstrate a critical understanding of systems pharmacology – e.g. cardiovascular and central nervous systems – and the action of therapeutic agents in diseased states.
5. Demonstrate theoretical and applied knowledge of pharmacological techniques.
6. **The intended generic learning outcomes.  
   On successfully completing the module students will be able to:**
7. Extract and interpret information at an intermediate level.
8. Analyse and evaluate data at an intermediate level.
9. Have acquired skills in written communication and receiving critique.
10. Have acquired skills in working as a team to solve problems.
11. **A synopsis of the curriculum**

Introduction and basic principles of drug action: key drug targets including major receptor subtypes, ion channels, transporters, and structure-function relationships

Systems pharmacology: the biological basis of diseases states affecting different physiological systems, therapeutic approaches to treating these diseases, and the cellular/molecular mode of action of drugs used. Indicative diseases may include hypertension, asthma, Parkinson’s disease, schizophrenia, infertility, depression and anxiety.

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

Required Reading:

* Neal MJ, Medical Pharmacology at a Glance, 8th Edition, Blackwell Pub., 2015
* Rang and Dale's Pharmacology, 8th Edition, Churchill Livingstone, 2015

1. **Learning and teaching methods**

Total contact hours: 29

Private study hours: 121

Total study hours: 150

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

Data analysis (one problem question and five short answer questions) – 20%

In-class clinical case study (3 hours) – 20%

Examination (2 hours) – 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** |  |  |  |  |  |  |  |  |
| Private Study | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| *Lectures* | **X** | **X** | **X** | **X** | **X** | **X** |  |  |
| *Workshops* | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Assessment method** |  |  |  |  |  |  |  |  |
| *Data analysis* | **X** |  |  | **X** | **X** | **X** | **X** |  |
| *Case study* |  | **X** | **X** |  | **X** | **X** | **X** | **X** |
| *Examination* | **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 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.

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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) |
| 28 Jan 2019 | Minor | September 2020 | 13-14 | No |
| 20/05/2021 | Minor | January 2021 | 13 | No |

Revised FSO Jan 2018