**SECTION 1: MODULE SPECIFICATIONS**

1. Title of the module

**Analytical Techniques in Pharmacology**

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

**Medway School of Pharmacy**

1. Start date of the module

**January 2015**

1. The number of students expected to take the module

**30 students**

1. Modules to be withdrawn on the introduction of this proposed module and consultation with other relevant Schools and Faculties regarding the withdrawal

**None**

1. The level of the module (e.g. Certificate [C], Intermediate [I], Honours [H] or Postgraduate [M])

**C**

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

**15 credits (7.5)**

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

**Term 2**

1. Prerequisite and co-requisite modules

**Basic Laboratory Skill**

1. The programmes of study to which the module contributes

**BSc (Hons) in Physiology and Pharmacology**

1. The intended subject specific learning outcomes

On successful completion of this module, students will have demonstrated:

11. 1. Demonstrate a range of higher level laboratory and analytical skills relevant to pharmacology ( **POA1, POA4, POB1-5, POD1, POD2, POD3**)

11.2. Demonstrate an ability to evaluate, critically analyse and present laboratory data (**POA5, POB1-5**)

11.3. Show an understanding of the basic essentials of experimental design required to evaluate drug effects with emphasis on appropriate controls (**POB1**)

11.4. Show an understanding of basic inferential statistics (**POC5**)

1. The intended generic learning outcomes

12.1 An ability to work and communicate effectively with others (**POD1 & POD2**)

12.2 An ability problem-solve relating to quantitative data, calculations and numeracy (**POA5, POB2, POB3, POB4, POC5, POD2, POD3, POD4, POD5, & POD6**)

12.3 An ability to critically evaluate quantitative data (**POA5, POB2, POB3, POB4, POD2, POD3, POD4, POD5, & POD6)**

12.4 An ability to accurately retrieve and understand information as part of self-directed learning (**POD1,POD2,POD3,POD4,POD5,POD6)**

12.5 An understanding of the accepted ethical principals involved in the collection, use and interpretation of scientific data (**POB1, POB2, POB3, POB5, POB6**)

1. A synopsis of the curriculum

* Introduction to ligand-binding experiments: saturation versus competition radioligand binding experiments
* Introduction to use of recombinant receptor expression systems in pharmacology
* Introduction to the use classic isolated organ preparations in pharmacology
* Introduction to *in vivo* and animal models in pharmacology
* Introduction to analysis of concentration-response curves
* Introduction to basic inferential statistics to determine drug effects

1. Indicative Reading List

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ISBN number** | **Author** | **Date** | **Title** | **Publisher** |
| 0702034711 | Humphrey P. Rang, James M. Ritter, Rod J. Flower, Graeme Henderson. | 31 Mar 2011 | Rang & Dale's Pharmacology | Churchill Livingstone |

1. Learning and Teaching Methods, including the nature and number of contact hours and the total study hours which will be expected of students, and how these relate to achievement of the intended module learning outcomes

**Summary of Learning and Teaching Activities**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Lecture** | **Practical** | **MSCL/ CAL** | **Seminars** | **Private Study** | **Formal assessment** | **Total hours** |
| 26 | 12 | 50 | 6 | 54.5 | 1 x 1.5 hour exam | 150 |

**Lectures are intended to present the key points and relate directly to the learning objectives (above)**

**Practicals (laboratories/workshops) serve to reinforce material presented in the lectures and relate directly to the learning objectives.**

**MSCL serves to reinforce material presented in the lectures and practical components. They also form part of the self-directed learning for the student**

**Revision seminars offer the students an opportunity to ask further questions of the staff and reinforce key points.**

**Private study encompasses the revising all material presented in the lectures, laboratories, workshops, MSCL. Students should be able to work through the learning objectives (above) and identify key areas that require further revision**

1. Assessment methods and how these relate to testing achievement of the intended module learning outcomes

|  |  |  |  |
| --- | --- | --- | --- |
| **Method of assessment** | **Learning outcomes assessed (POs & SSLOs)** | **Weighting** | **Outline details** |
| Continuous assessment | SSLO 11.1, 11.2, 11.3, 11.4  All generic learning outcomes | 40% | Lab report |
| Examination | SSLO 11.1, 11.2, 11.3, 11.4 | 60% | 1.5 hour examination |

**The pass mark for this module is 40%. The aim of the continuous assessment is to assess the practical skills of the student.**

1. Implications for learning resources, including staff, library, IT and space

**Lab resources may be required for ligand-binding experiments. CAL and IT resources are in place.**

1. The School recognises and has embedded the expectations of current disability equality legislation, and supports students with a declared disability or special educational need in its teaching. Within this module we will make reasonable adjustments wherever necessary, including additional or substitute materials, teaching modes or assessment methods for students who have declared and discussed their learning support needs. Arrangements for students with declared disabilities will be made on an individual basis, in consultation with the University’s/Collaborative Partner’s (delete as applicable) disability/dyslexia support service, and specialist support will be provided where needed.
2. Campus(es) where module will be delivered:

**Medway School of Pharmacy, Medway Campus**

1. Partner College/Validated Institution:
2. University School responsible for the programme: **Medway School of Pharmacy**

**SECTION 2: MODULE IS PART OF A PROGRAMME OF STUDY IN A UNIVERSITY SCHOOL**

**Statement by the School Director of Learning and Teaching/School Director of Graduate Studies (as appropriate):** "I confirm I have been consulted on the above module proposal and have given advice on the correct procedures and required content of module proposals"

|  |  |
| --- | --- |
| ................................................................  Director of Learning and Teaching  Dr Buge Apampa | ..............................................  Date |

**Statement by the Head of School:** "I confirm that the School has approved the introduction of the module and, where the module is proposed by School staff, will be responsible for its resourcing"

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| --- | --- |
| .................................................................  Head of School  Prof I Cumming. | ..............................................  Date |

**SECTION 3: MODULE IS PART OF A PROGRAMME IN A PARTNER COLLEGE OR VALIDATED INSTITUTION**

(Where the module is proposed by a Partner College/Validated Institution)

**Statement by the Nominated Officer of the College/Validated Institution** *(delete as applicable)***:** "I confirm that the College/Validated Institution*(delete as applicable)* has approved the introduction of the module and will be responsible for its resourcing"

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| .................................................................  Nominated Responsible Officer of Partner College/Validated Institution  ………………………………………………….  Print Name  …………………………………………………..  Post | ..............................................  Date |

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Partner College/Validated Institution

Module Specification Template  
Last updated February 2013