**SECTION 1: MODULE SPECIFICATIONS**

1. Title of the module

**BIOL1042 Advanced Laboratory/Industry Skills**

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

**Medway School of Pharmacy**

1. Start date of the module

**Summer 2013**

1. The cohort of students (onwards) to which the module will be applicable

**2012**

1. The number of students expected to take the module

**10-30 per cohort**

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 Modules to be withdrawn on the introduction of this proposed module and consultation with other relevant Schools and Faculties regarding the withdrawal

**N/A**

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

**I**

1. The number of credits which the module represents

**15 credits**

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

**The module is part of the Foundation Degree in Applied Bioscience Technology which is being delivered primarily through e-learning on a part-time basis over three years.**

1. Prerequisite and co-requisite modules

**Basic Laboratory/Industry Skills**

1. The programme(s) of study to which the module contributes

**Foundation Degree in Applied Bioscience Technology**

1. The intended subject specific learning outcomes and, as appropriate, their relationship to programme learning outcomes

* Demonstrate a range of higher level laboratory/industry skills (including cell culture techniques as well as spectrometric methods) with an aptitude to develop others in the future (**POs: A10, C20, C22, C24)**
* Demonstrate an ability to generate, evaluate, critically analyse and present practical work (**POs: A2-A4, A8, A10, B14, B15, B19, C21, C22, D28, D29**)
* Show an understanding of the role of the laboratory technician/process operator in industry (**POs: A9, D33)**

1. The intended generic learning outcomes and, as appropriate, their relationship to programme learning outcomes

* The development of practical laboratory-based skills (**POs: C20-C22, C24**)
* An ability to analyse, evaluate and correctly interpret data (**POs: A2-A4, B14, B15, B19, C21, C22, D28, D29**)
* An ability to present and communicate data (**POs: D26, D27**)
* An ability to obtain and use information from a variety of sources as part of self-directed learning (**POs: D25, D32, D33**)
* Time-management and organisational skills within the context of self-directed learning (**POs: D31-D33)**

1. A synopsis of the curriculum

* Animal cell culture including: key terminology; culture media; types of primary cell cultures.
* Major items of equipment, laminar flow hoods, microscopy, techniques for counting cells.
* Methods for cryo-preservation and retrieval of cells.
* Health and Safety and risks associated with human cell culture.
* Gel electrophoresis, ion exchange and gel filtration
* Genetic engineering techniques.
* UV/Vis spectrophotometry
* A basic understanding of chromatography and chromatographic methods

1. Indicative Reading List

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ISBN number** | **Author** | **Date** | **Title** | **Publisher** |
| 0471348899 | Ian Freshney | 2000 | Culture of Animal Cells: A Manual of Basic Technique | Wiley-Liss |

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 learning outcomes.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Activity** | **e-learning** | **e-activities/**  **Practicals / Work activities** | **MSCL / CAL** | **Total hours** | **Learning Outcomes** |
| Teaching | 25 | 10 | 5 | **30** | **A2-A4, A10, B13, B15, B19, C21, C22, D28, D29** |
| Private study |  | 20 |  | **20** | **A2-A4, A10, B13, B15, B19, C21, C22, D28, D29** |
| Work-based experience |  | 85\* |  | **85\*** | **A2-A4, A8, A10, B13-B16, B19, C20-C22, C24, D25-D29, D31-33** |
| Formal assessment |  |  |  | **5** |  |
| **Total hours** |  |  |  | **150** |  |

\* It is anticipated that many of the practical/industry skills will be covered in the work place. However, it is recognised that a number of these will be covered during a residential summer school at the University of Kent.

**Online e-learning** is intended to present the key information directly relating to the learning objectives.

**E-activities, practicals and work activities** will be used specifically to enhance the practical/industry skills required by the students in their current and future roles in the work place.

**MSCL** serves to reinforce and support materials presented in the above forms in the students’ minds. They also form part of the self-directed learning for the student.

**Private study** provides the opportunity to explore and read more widely around specific topics.

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Method of assessment** | **Learning outcomes assessed (POs & SSLOs)** | **Weighting** | **Outline details** |
| Continuous assessment (1) | A2-A4, A8, A10, B13, C20-C22, C24, C25, D27-D29, D33 | 50% | Production of a relevant work-based report |
| Practical Examination | All subject specific learning outcomes (SSLOs) | 50% | 2 hour practical examination |

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

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

**The programme will be delivered using Moodle as a Virtual Learning Environment (VLE) and myFolio will be used to hold all Reflective Portfolio entries and Personal Development Plans.**

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 disability/dyslexia support service, and specialist support will be provided where needed.**

***If the module is part of a programme in a Partner College or Validated Institution, please complete the following:***

1. Partner College/Validated Institution: **N/A**
2. University School (for cognate programmes) or Faculty (for non-cognate programmes) responsible for the programme:

**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"

|  |  |
| --- | --- |
| BOApampa  Director of Learning and Teaching  Dr Buge Apampa  Print Name | 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  Professor Iain Cumming  Print Name | Date October 2011 |