Module Specification

Module Title	Introduction to Pharmacology				Module Code	BMD171	
Credit Value	15	Level	4	Mode of Delivery	On Campus		Semester B

Pre-requisite modules	Co-requisite modules	Overlapping modules

1) Content Description

Provide a description of the module, as it will appear in the Module Directory and on the Student Information System (approx. 70-80 words).

This module will introduce to the students the concept of the interaction of drugs and other exogenous chemicals with living organisms. It will introduce students to the basic pharmacological principles and concepts which will define drug activity within the body including pharmacokinetics and pharmacodynamics.
These introductory lectures will give students a broad overview into approaches used in drug discovery, medicinal chemistry, main drug targets, drug absorption and routes of administration, drug metabolism and elimination, phamacokinetics, drug treatment of major medical conditions and rationale for prescribing a particular drug, the role of biotechnology in drug discovery, preclinical pharmaceutical development, understanding of the use of animals in pharmacology and adverse drug reactions.
Lectures will be delivered by experts in both academia and industry. In addition to formal lectures and interactive seminars, we will provide practical workshop sessions to reinforce the lectures.

2) Module Aims

Specify the aims of the module, i.e. the broad educational purposes for offering this module.

Learn about the history of pharmacology, how pharmacology is studied and gain awareness into approaches used in drug design and development including medicinal chemistry.
An awareness of the main drug targets including receptors, enzymes and transporters.
An awareness of benefits, side effects, risks, contra-indications, and interactions of drugs.
A critical understanding of the rationale for prescribing a particular drug.
An understanding of the role of biotechnology in drug discovery, and the use of animals in pharmacology.

3) Learning Outcomes

Identify the learning outcomes for this module, i.e. knowledge, skills and attributes to be developed through completion of this module. Outcomes should be referenced to the relevant QAA benchmark statements and the Framework for Higher Education Qualifications in England, Wales and Northern Ireland (2008). The SEEC Credit Level Descriptors for Further and Higher Education 2003 and Queen Mary Statement of Graduate Attributes should also be used as a guiding framework for curriculum design.

Academic Content:	
A1	Demonstrate understanding and knowledge of pharmacological principles, concepts, terms, methods and to appreciate their importance.
A2	An analysis of the mechanisms of action of commonly used pharmacological drugs and drugs of abuse including how they work at the molecular and functional levels.

A3	An understanding of the routes of administration and factors that affect distribution and bioavailability of a drug.
A4	An understanding of the main drug targets and approaches used in drug discovery and development including aspects of medicinal chemistry.
A5	Gain exposure to the role of biotechnology in drug design and preclinical pharmaceutical development.
A6	Identify and critically appraise novel chemical and biologic agents being developed for the treatment of diseases

Disciplinary skills - able to:	
B1	Critically evaluate published research studies
B2	Conduct laboratory experiments safely with care and precision
B3	Write scientific reports and present scientific data
B4	Recognise safe and unsafe prescribing activities
B5	Demonstrate skill in critical appraisal and analysis of the scientific literature and the ability to judge and interpret findings

Attributes:	
C1	Have the intellectual curiosity to learn continuously from diverse sources of information
C2	Be able to explain complex scientific concepts clearly and logically
C3	Make judgements based on evidence
C4	Effective time management and independent learning
C5	Acquire and apply knowledge in the area of pharmacology & therapeutics rigorously in a research and medical prescribing environment
C6	Engage and communicate effectively with diverse communities including the lay public
C7	Use a critical approach to synthesis of information from a range of sources and technologies in evidence-based analysis and decision making

4) Reading List

Provide an indicative reading list for the module. This should include key texts and/or journals but should not be an exhaustive list of materials.

* Rang & Dale's Pharmacology: with STUDENT CONSULT Online Access by Humphrey P. Rang, Maureen M. Dale, James M. Ritter and R. J. Flower , Publisher: Churchill Livingstone; 7th Revised edition edition (25 Mar 2011), ISBN-10: 0702034711

* Oxford Textbook of Clinical Pharmacology and Drug Therapy by David Grahame-Smith and Jeffrey Aronson ISBN-10: 0192632345

Topical research papers in relevant journals, for example:

British Journal of Clinical Pharmacology

British Journal of Pharmacology

Lancet

New England Journal of Medicine

Current opinion in Pharmacology

Teaching and Learning Profile

Provide details of the method of delivery (lectures, seminars, fieldwork, practical classes, etc.) used to enable the achievement of learning outcomes and an indicative number of hours for each activity to give an overall picture of the workload a student taking the module would be expected to undertake. This information will form the Key Information Set for each undergraduate programme and will be used to populate the KIS widget found on the QMUL programme information pages. More information can be found online about KIS. You may also wish to refer to the QAA guidance on contact hours when completing this section.

Activity Type	KIS Category	Time Spent (in hours)
Lecture	Scheduled	22
Seminar	Scheduled	4
Practical Classes and workshops	Scheduled	9
Guided Independent Study	Independent	115
	Total	150

Specify the total module notional study hours. This should be a total of the hours given for each activity. The notional study hours for each academic credit point is 10. A 15 credit point module therefore represents 150 notional study hours.

Activity Type	Total Time Spent (in hours)	Percentage of Time Spent
Scheduled learning and teaching	35	23
Placement		
Independent Study	115	77
Total	150	100

Use the information provided in the box above to specify the total time spent and the percentage time spent in each category of teaching and learning activity.

Assessment Profile

Provide details of the assessment methods used to assess the achievement of learning outcomes.

Description of Assessment	Assessment Type	KIS Category	Duration / Length	Percentage Weighting	Final element of assessment?	Qualifying Mark
Examination	Written Exam	Written	1.5 h	75	Yes	

Coursework	Essay	Coursework	1000 words	10	No	
Oral presentation	Practical Skills assessment	Practical	15 min	15	No	

Qualifying mark: A specified minimum mark that must be obtained in one or more elements of assessment in order to pass a module. This is in addition to, and distinct from, the requirement to achieve a pass in the module mark to pass the module.

Reassessment

Provide details of the reassessment methods used, specifying whether reassessment is either standard reassessment or synoptic reassessment.

○ Standard Reassessment ◉ Synoptic Reassessment

Synoptic reassessment details (if you have indicated synoptic reassessment above, please give details)		
Brief Description of Assessment	Assessment Type	Duration / Length of Examination / Coursework
Synoptic written examination of module content	Written Exam	1.5 hours