

PROGRAMME SPECIFICATION (2013-14)

Programme Title	MSc Occupational Toxicology
UCAS/JACS Code	
School/Subject Area	LHS, Pharmacy
Final Award	MS.C
Interim Award(s)	Diploma and Certificate
Mode(s) of Study	FT
Normal Length of	
Programme	1 year FT
Total Credits	
Programme Accredited By	
	180
Dates Programme Specification Written and Revised	August 2013

Educational Aims of the Programme

The principal aim of the programme is to provide students with an understanding of the ba Occupational Toxicology, as well as an overview of the general area of Toxicology and its applications that are concerned with the scientific, professional and medical arenas.

The students should be able to fully understand basic concepts and contribute to all the napplications of the subject.

- 1. Provide students with an overview of the main tenets of toxicology as it relates to pharmacology, biochemistry, physiology, chemistry, chemotherapy and drug discovery.
- 2. Develop the students' understanding of the concept of 'change in structure leads change in function' in response to toxic pressure.
- 3. Outline the methods by which toxins exert their effects: the clear distinction will be drawn between direct and biotransformationally –mediated toxins.
- 4. Provide a comprehensive understanding of the role and processes concerned with biotransformation and their place in human toxicity.
- 5. Provide a focus for the application of toxicological theory and practice in some of t main areas of the subject, such as Regulatory, and Forensic toxicology, with particular emphasis on Occupational Toxicology, ranging from cellular mechanisms to clinical, personand social consequences.
- 6. Provide hands-on experience of some cellular toxicological assessment methods laboratory and the role of alternative methods in toxicological evaluation
- 7. Develop research and transferable skills relevant to toxicology in preparation for a career in any of the main sub-areas of toxicology.
- 8. Develop students' understanding of advanced research methodology to enable the carry out independent work of publishable standard

Relevant Subject
Benchmark Statements
and other current External
and Internal Strategies,
Policies or Research used
to inform programme
outcomes

Framework for Higher Education Qualifications

TAUGHT STAGE

Programme Structures and Requirem	ents: Lev	els, Mod	lules and Credi	its		
Module Title	Credits	Level	Module Code	Core/Option	Condoneable Y/N	Pre- requisite(s) Y/N
Research Methods 1: Professional Development	10	7	BI4001	core	n	у
Research Methods 2: Communication Skills	10	7	BI4002	core	n	у
Drug Discovery	20	7	PHM008	core	n	У
Chemotherapy and Selective Toxicity	20	7	PHM009	core	n	у
Introduction to tox	20	7	BI40028	core	n	у
Advanced tox	20	7	B140029	core	n	у
Stem Cell Biology	20	7		core	n	у
TOTAL	120					

DISSERTATION STAGE

Programme Structures and Require	ments: Lev	els, Mod	lules and Cred	its		
Module Title	Credits	Level	Module Code	Core/Option	Condoneable Y/N	Pre- requisite(s) Y/N
DIssertation	60	7	PHM012	core	n	У
TOTAL	. 60					

A. Knowledge and Understand				
On successful completion of their programme, students are expected to have knowledge and understanding of:	Learning, Teaching and Assessment Strategies to enable outcomes to be achieved and demonstrated			
understanding of.	Learning and Teaching Methods	Assessment Methods		
1 The basis for the selective action of anti-infective agents (Aim 1) 2 The basis for cancer chemotherapy (Aim 1) 3 Basic principles of toxicology (Aims 1&2) 4 An overview of the cross-disciplinary nature of drug discovery and toxicology (Aim 1) 5 Ability to recognise and address ethical issues relevant to conducting research (Aim 8) 6 Potential sources and techniques used for obtaining research funding (Aim 8) 7 The importance of communication skills to professional development (Aim 7) 8 The necessary constituents and presentation style for written and oral academic presentations (Aim 8) 9 The requirements and processes involved in publishing research (Aim 8)	Lectures, essay, CAL classes, seminar [PHM009]	Examination [PHM009] Essay [PHM009] Seminar [PHM009] Examination [PHM009] Essay [PHM009] Essay [PHM009] Examination, Profiles, practicals (TOX Examination [PHM008] Essay [PHM008] Essay [PHM008] Eshics Proposal [BI4001] Written CV [BI4001] Research Abstract [BI4002] Poster Presentation [PHM012] Research Abstract [BI4002] Critical Review [PHM012] Examination (TOX 1& 2) Coursework submission (TOX 1& 2)		

	On successful completion of their programme, students are expected to be able to:	Learning, Teaching and Assessment Strategies to enable outcomes to be achieved and demonstrated		
		Learning and Teaching Methods	Assessment Methods	
1	synthesise knowledge from a variety of disciplines (Aims 1, 2, 3 & 4) analyse critically the differences in biochemical processes between the host and infectious organisms or cancer cells. (Aim 2) identify appropriate data to be acquired and the corresponding appropriate methods (Aim 5) analyse data and apply statistics (Aim 5) analyse critically one's own and others' work (Aim 8) read critically and evaluate scientific literature.	Lectures [PHM009, PHM008, PHM010, TOX 1 & 2] CAL [PHM009, PHM008] Seminars [PHM009, PHM008, TOX 2] Lectures, CAL classes, essay and seminars [PHM009, PHM008] Lectures, practicals [TOX 1] Practicals [TOX 1] Discussions with supervisor during extended project [PHM012] Essay [PHM009] Focussed Occupational Toxin Profile [TOX 1] Assessed Case Histories [TOX 2] Seminar [PHM009, PHM008, Project [PHM012] Lecture, group discussion, directed and independent study at an individual level [BI4002]	Examination [PHM009, PHM008, PHM010, TOX 1 & 2] Essay [PHM009, PHM008] Seminar [PHM009, PHM008, TOX 2] Examination [PHM009, PHM008] Essay [PHM009, PHM008] Seminar [PHM009, PHM008] Examination (TOX 1) Practical reports (TOX 1) Seminar (TOX 2) Practical reports [TOX1] Poster presentation [PHM012] Project report [PHM012] Essay [PHM009, PHM008] Focussed Occupational Toxin Profile [TOX 1] Assessed Case Histories [TOX 2] Seminar [PHM009, PHM008] Project report [PHM012] Research Abstract [BI4002] Poster Presentation [PHM012] Critical Review [PHM012]	

On successful completion of their programme, students are expected to be able to:	Learning, Teaching and Assessment Strategies to enable outcomes to be achieved and demonstrated		
	Learning and Teaching Methods	Assessment Methods	
Design and interpret toxicological assessments either through practical research or literature review: write toxicological assessment reports suitable for use in UK Legal proceedings operate across the discipline boundaries in the field of drug discovery. (Aims 1, 2, 3, 4 & 5) write grant applications, conduct a risk assessments and complete an ethics proposal for submission to a review board. (Aims 6 & 7) communicate effectively to other academics and to students. (Aims 6 & 7)	Lectures/Practicals/Focussed Toxin profiles [TOX 1] Lectures/Practicals/Assessed Case Histories [TOX 2] Lectures [PHM009, PHM008,] Essay [PHM009, PHM008,] Seminars [PHM009, PHM008,] Seminar Group Discussion Group and independent study [BI4001] Seminar Group Discussion Directed and independent Study at an individual level [BI4002]	Focussed Toxin profiles [TOX1] Assessed Case Histories [TOX 2] Examination [PHM008] Essay [PHM008] Seminar [PHM008] Ethics Proposal [BI4001] Research Abstract [BI4002] Poster Presentation [PHM012]	

D. <u>Transferable Skills</u>		
On successful completion of their programme, students are expected to show:	Learning, Teaching and Assessment achieved and demonstrated	Strategies to enable outcomes to be
	Learning and Teaching Methods	Assessment Methods

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1	Effective written communication (Aim 6-8) Effective oral communication (Aim 7) Independent study, including good time management (all aims) Job interview skills (Aim 6) IT Skills / Powerpoint presentation (Aim 6)	Essay [PHM009, BI4001] Lecture, group discussion, directed and independent study at an individual level [BI4002] Focussed Toxin profiles [TOX 1] Lectures/Practicals/Assessed Case Histories [TOX 2] Seminar [PHM009, TOX 2, BI4001] Lecture, group discussion, directed and independent study at an individual level [BI4002] Directed reading (all modules). Seminar Group Discussion Independent Study [BI4001] CAL classes [PHM009, BI4011] Seminar Group Discussion Independent Study [BI4001, TOX 2]	Examination [PHM009, Essay [PHM009] Project report [PHM012] Poster presentation [PHM012, BI4002] Ethics proposal [BI4001] Written CV [BI4001] Research Abstract [BI4002] Focussed Toxin profiles [TOX 1] Lectures/Practicals/Assessed Case Histories [TOX 2] Seminar [PHM008, PHM009,TOX 2] D5 is assessed in all submitted coursework. Written CV [BI4001] Seminar [PHM008, PHM009, TOX 2]

Entry Requirements	Applicants must hold at least a 2nd class honours degree in a chemistry or biology-based subject e.g., pharmacology, chemistry, biochemistry, pharmacy, biomedical sciences or biological chemistry from a UK University, or when outside the UK a degree or qualification deemed to be at least of equivalent standing. Students whose first language is not English must demonstrate a satisfactory command of written and spoken English. For international students this is demonstrated by an IELTS (or equivalent) score of 6.5 or higher overall, but with no score below a 6.0.
Programme Regulations	The programme is governed by the General Regulations for Postgraduate Taught Prograr in addition the following Regulations also apply. Failure in modules
	Students who fail to pass 180 credits may be eligible for the award of Postgraduate Diplor Certificate if they have passed a minimum of 120 or 60 credits respectively.
Regulations for the programm there is a conflict. If there is	ww1.aston.ac.uk/registry/for-staff/regsandpolicies/general-regulations/) and the me (above) take precedence over other information sources such as student handbooks if a conflict between General Regulations and Programme Regulations then General e unless an exemption has been approved.
Further Information	

This specification provides a concise summary of the main features of the programme and the threshold learning outcomes that a student might normally be expected to achieve and demonstrate if they take full advantage of the learning opportunities that are provided. The individual modules included in the programme may differ from those listed in this programme specification as our programmes as our programmes are continuously reviewed. Information on admissions requirements and career opportunities is available in the relevant prospectus. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of each module can be found in the appropriate module specifications and programme handbook(s) which are available to students on enrolment.