Module Specification

Module Summary Information

1	**Module Title**	Applied Toxicology
2	**Module Credits**	20
3	**Module Level**	6
4	**Module Code**	BMS6001

5	**Module Overview**

Toxicology is the scientific study of adverse effects that occur in living organisms due to chemicals. It involves observing and reporting symptoms, mechanisms, detection and treatments of toxic substances, in particular relation to the poisoning of humans. This module will develop your knowledge and skills gained in the level 5 module, Fundamental Principles of Pharmacology and Drug Development. The module will also develop your employability skills through sessions that develop your critical analysis, communication and academic writing skills.

Alignment with Programme Philosophy and Aims:
In line with the overall programme philosophy, this module will further develop your academic skills and transferable employability skills, such as problem solving, team working and time management The taught material will cover the latest concepts in Toxicological sciences and will also provide opportunities to develop your critical analysis skills. Your understanding of the toxicological knowledge will be used to appraise the impact of toxicants on the global society: this may include (but will be not limited to) impact on health care systems, specific populations or economic productivity.

Learning and Teaching Strategy:
This module will use a blended approach to facilitate your learning. Lectures will introduce fundamental knowledge, which will be supported by online resources provided via Moodle to prepare for practical sessions, facilitated discussions and small group tutorials. This site will also provide opportunities for discussion fora. Sessions will include the use of technology such as polling software that will test your understanding of concepts and allow for real time feedback to allow your skillset to be enhanced.

Facilitated discussions will focus on a particular aspect of the application of toxicological knowledge to contemporary issues impacting global communities. Tutorials will develop critical thinking skills and the ability to defend viewpoints.

Active and informed participation through pre- & post-sessional work will be an integral component of the module. Such engagement will allow for the development of learning communities to enhance the learning experience of you and your peers.

To achieve the required 20 credits for this module, you will need to dedicate at least 200 hours studying the module material. For this module, the time is broken down in an approximately 20:80 ratio (directed: self-directed). The scheduled learning activities will include lectures, tutorials, practical sessions and facilitated discussions; approximately 20% of this learning will take place in an online environment

Assessment Strategy: Assessment will be via a 3000-word written assignment. Self-directed study using the supporting online resources combined with formative feedback sessions will provide the opportunity to effectively prepare for this assessment.

6	**Indicative Content**
• Concepts in Toxicology • Xenobiotic Metabolism • Modes of Toxic action • Drugs of abuse • Ethical, legal and social consequences of toxicology • Clinical Toxicology • Molecular mechanisms of bacterial neurotoxins, enterotoxins & endotoxins • Molecular and cell biology of Shiga-like toxins	

7	**Module Learning Outcomes** **On successful completion of the module, students will be able to:**	
	1	Appraise the key principles that underpin mechanisms by which toxicants exert their effects on biological systems.
	2	Critically analyse relevant scientific literature to effectively communicate aspects of toxicology.
	3	Evaluate the impact of toxicology on wider society including legal, regulatory and ethical considerations.

8	**Module Assessment**		
Learning Outcome			
	Coursework	**Exam**	**In-Person**
1,2,3	X		

9	**Breakdown Learning and Teaching Activities**
Learning Activities	**Hours**
Scheduled Learning (SL) includes lectures, practical classes and workshops, peer group learning, Graduate+, as specified in timetable	40
Directed Learning (DL) includes placements, work-based learning, external visits, on-line activity, Graduate+, peer learning, as directed on VLE	50
Private Study (PS) includes preparation for exams	110
Total Study Hours:	200