

Liverpool John Moores University

Title: SAFETY-BASED DECISION MAKING
Status: Definitive
Code: **7114PHASCI** (124938)
Version Start Date: 01-08-2021

Owning School/Faculty: Pharmacy & Biomolecular Sciences
Teaching School/Faculty: Pharmacy & Biomolecular Sciences

Team	Leader
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Academic Level: FHEQ7 **Credit Value:** 20 **Total Delivered Hours:** 42
Total Learning Hours: 200 **Private Study:** 158

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	20
Workshop	20

Grading Basis: 50 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Presentation	Oral pres	Oral presentation (typically 20 mins including questions)	50	
Exam	Exam	Exam	50	2

Aims

*To equip students with detailed knowledge and understanding of the regulatory framework covering chemical toxicity prediction in the UK, EU and worldwide.
To introduce the risk assessment process in industry and explain the role of the different organisations involved in the process.*

Students will gain knowledge of how weight of evidence can be used to combine a wide range of data sources to aid chemical toxicity prediction, without the use of animals, and how these approaches are used in industry to make decisions concerning the safety assessment.

Learning Outcomes

After completing the module the student should be able to:

- 1 Demonstrate knowledge of the key regulatory tests required in the EU and worldwide for chemical toxicity prediction
- 2 Critically assess and interpret chemical and biological data used in chemical toxicity prediction.
- 3 Critically evaluate strategies and approaches used in chemical toxicity prediction in the UK, EU and worldwide.
- 4 Demonstrate expertise to locate, evaluate and reference scientific literature relevant to animal and non-animal testing methods used in chemical toxicity prediction

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Oral presentation	1	2	3	4
Examination	1	2	3	

Outline Syllabus

The use of animal testing in regulatory toxicology.

Key legislation in the UK, EU, and elsewhere and its implications for animal usage in regulatory toxicology.

Alternative methods for chemical toxicity prediction; the importance of Next Generation Risk Assessment (NGRA), focusing on the use of novel chemical and biological approaches in regulatory toxicology.

The use of weight of evidence in bringing together data sources to aid chemical toxicity prediction.

Data analysis and results presentation – including dealing with experimental error in toxicity studies and conflicting data.

Learning Activities

Lectures (flipped or traditional) introducing/covering the topics identified in the module syllabus.

Workshops – extensive use will be made of workshops to demonstrate (computational) resources that are aligned with the topics delivered in the lectures and required for completion of the coursework exercise.

Notes

Students will acquire knowledge and understanding of the use of weight of evidence in chemical toxicity prediction and the relevant legislation in the UK, EU and elsewhere. Students will be expected to make use of different sources of data and information (drawn from their course and own reading) during the weight of evidence assessment element of the module. The material will be delivered in the context of how "21st century toxicology" approaches are used to assist safety-based decision making in industry; for example application of the ICHM7 guidelines. Delivery of the module will be supported by representatives from organisations involved in developing, using and promoting alternatives to animal testing (e.g. Lhasa Ltd, Unilever and NC3Rs). Lectures, workshops and/or practical sessions involving these organisations will enable students to learn from practitioners in the field.