Liverpool John Moores University

Title:	TOXICOLOGY AND DRUG INTERACTIONS
Status:	Definitive
Code:	**6000SBACAP** (113414)
Version Start Date:	01-08-2011
Owning School/Faculty:	Pharmacy & Biomolecular Sciences
Teaching School/Faculty:	Pharmacy & Biomolecular Sciences

Team	Leader
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Academic Level:	FHEQ6	**Credit Value:**	12.00	**Total Delivered Hours:**	30.00
Total Learning Hours:	120	**Private Study:**	90		

Delivery Options
Course typically offered: Semester 1

Component	Contact Hours
Lecture	20.000
Seminar	5.000
Workshop	3.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	AS2	Library Project - a one page literature review of a given topic (10%)	10.0	
Exam	AS1	Examination consisting of 15 MCQs(20%) and 3 from 5 essay questions (65%)	85.0	2.00
Presentation	AS3	Assessed presentation of a given topic (5%)	5.0	

Aims

To present the underlying mechanisms of toxicity of drugs and other toxicants. To examine and to promote an appreciation of the toxic effects of drugs and poisons and of detoxification and protection mechanisms. To discuss toxicity testing and the authoriative bodies with toxicological and regulatory responsibilities. To promote an understanding of the scientific, clinical and regulatory aspects of drug testing in human subjects and patients,that is of clinical trials. To facilitate development of a balanced overview of experimental and clinical toxicology through appraisal of relevant literature, comparative analysis and problem solving.

Learning Outcomes

After completing the module the student should be able to:

1 describe and explain the mechanisms of toxification/detoxification and of protection from toxic insult;
2 describe the differences between normal and malignant cells and evaluate the current theories of the mechanisms of mutagenises and carcinogenesis;
3 demonstrate knowledge and understanding of aspects of environmental toxicology especially in terms of chemistry and biochemistry;
4 summarise the regulatory aspects, the functions of the regulatory organisations and the testing and trials procedures associated with drug development and drug regulation including ICH/GCP and the EU Directive
5 search the scientific literature, critically appraise the scientific papers in toxicology; write a reasoned abstract and give an oral presentation;
6 demonstrate an understanding of the impact of pharmacogenomics on disease therapy.

Learning Outcomes of Assessments

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

CW one page literature review	5				
EXAM	1	2	3	4	6
CW presentation of given topic	5				

Outline Syllabus

Mechanisms of toxicity. Mutagenesis and carcinogenesis. Adverse drug reactions and interactions. Environmental and regulatory aspects of toxicology.Drug development. Clinical Trials and their regulation. Drug safety and surveillence. The role of NICE, EMEA, MHRA.Pharmacogenomics.

Learning Activities

An overview of the mechanistic, environmental and regulatory aspects of toxicology. An examination of the drug devevlopment and regulatory process and the evaluation of drug efficacy,safety and surveillence in man. Special areas of focus are mechanisms of carcinogenesis, adverse drug reactions and interactions and pharmacogenomics.

References

Course Material	Book
Author	Baxter, K.,
Publishing Year	2009
Title	Stockley's Drug Interactions 2009 Pocket Companion
Subtitle	
Edition	2009 edition
Publisher	Pharmaceutical Press
ISBN	0853697957

Course Material	Book
Author	Hansten, P.D., Horn, J.R
Publishing Year	1990
Title	Drug Interactions and Updates
Subtitle	
Edition	7th
Publisher	Lea and Febiger
ISBN	0812113810

Course Material	Book
Author	Timbrell, J.A.
Publishing Year	2008
Title	Principles of Biochemical Toxicology
Subtitle	
Edition	4th
Publisher	Taylor and Francis
ISBN	0850662214

Course Material	Book
Author	Boelsterl Urs A
Publishing Year	2007
Title	Mechanistic toxicology: the molecular basis of how chemical disrupt biological targets.
Subtitle	
Edition	2nd
Publisher	CRC Press
ISBN	

Notes

The module as a whole bridges the gap between laboratory / animal studies and clinical evaluation.