

## 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
Andrew Evans	Y
Kenneth Ritchie	
Gaynor Bresnen	
Mark Cronin	
Christopher Rostron	

**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 authoritative 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 mutagenesis 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 surveillance. 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 development and regulatory process and the evaluation of drug efficacy, safety and surveillance in man. Special areas of focus are mechanisms of carcinogenesis, adverse drug reactions and interactions and pharmacogenomics.

## References

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

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

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

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

## **Notes**

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

Top 100 Drug Interactions 2016. Philip D. Hansten. 4.4 out of 5 stars 11. Stockley's Drug Interactions provides concise, accurate, and detailed clinically relevant information on individual and related drug interactions in the form of monographs. Each monograph covers clinical evidence, mechanism, importance and management. It is based on all available published sources and is fully referenced. Why is it that sometimes, interactions information in the Checker does not appear in Stockley's Drug Interactions? The vast majority of messages in the Checker are derived from the monographs in Stockley's Drug Interactions, and currently, the interactions content/publication/47224905. Stockley's drug interactions 2009 pocket companion. Article in Canadian family physician *Médecin de famille canadien* January 2008. Source: PubMed Central. 2009 pocket companion, but even at the time of. print a number of new interactions, companion such as reduced efficacy of clopidogrel with proton pump inhibitors or selective serotonin reuptake inhibitors interfering with tamoxifen, have appeared in Lexi-Interact 1 Lambeth High St, London updates and the Canadian version SE1 7JN, United Kingdom of The Medical Letter on Drugs and Therapeutics.1,2 FAX 44 (0)20 7735 9141 Therapeutics.1,2 FAX 44 (0)20 7572. "Stockley's Drug Interactions Pocket Companion 2009" draws on the wealth of clinically evaluated, evidence-based information on drug-drug, drug-herb and drug-food interactions that is presented in the full reference work, "Stockley's Drug Interactions". This compact reference provides practitioners with ready access to clinically relevant evidence-based information on interactions among pharmaceuticals, several herbal products, and dietary supplements. More than 1500 monographs are cross-referenced alphabetically according to nonproprietary names and US approved n Start by marking "Stockley's Drug Interactions Pocket Companion" as Want to Read: Want to Read saving... Want to Read. Let us know what's wrong with this preview of Stockley's Drug Interactions Pocket Companion by Karen Baxter. Problem: It's the wrong book It's the wrong edition Other. Original Title. Stockley's Drug Interactions 2009 Pocket Companion. ISBN. 0853697957 (ISBN13: 9780853697954).