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Department of Pharmacy
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Introducing a Toxicology Perspective in a Pharmaceutical Analysis Course

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Introduction



- Pharmacists are knowledgeable in disciplines such as:

- Pharmacology
- Pharmaceutical analysis
- Pharmacotherapeutics



- Pharmacists are in ideal positions to take on roles in Clinical Toxicology

Introduction



- Aspects of toxicology are usually addressed in subjects such as Pharmacology and Clinical Pharmacokinetics.
- Incorporating a greater number of lectures on Toxicology in the Pharmacy curriculum enhances student learning in Pharmacotherapy.¹

1. Brown SD, Pond BB, Creekmore KA. A case-based toxicology elective course to enhance student learning in pharmacotherapy. *Am J Pharm Educ.* 2011; 75(6): 118

Aims



- To elaborate a study unit offered for 3rd year pharmacy students on pharmaceutical analysis which includes a toxicology perspective
- To focus unit on toxicology and on the analysis of drugs from biological fluids
- To attain student feedback about the developed course

Methodology



Topics covered:

- Measuring toxicity
- Exposure and effects of toxic substances
- Biotranformation
- Mutagenesis, carcinogenesis and teratogenesis
- Treatment
- Drugs of abuse
- Drug testing



Methodology



- Students were asked to rate the course
- 29 questions- divided into 6 sections:
 - (i) General questions
 - (ii) Study-unit description and delivery
 - (iii) Lecturing methodology
 - (iv) Lecturer
 - (v) Method of assessment
 - (vi) Administration and resources

Results



For the topics covered:

- General overview of topic
- Clinical and pharmacological relevance
- Importance of any related bioanalysis
- Quiz and case studies



Results



Student feedback about newly developed study unit (N=18)

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Agree
The study unit was of help in strengthening the knowledge relevant to my area of study	11	7	0	0	0
The content of the study unit met my initial expectations	10	8	0	0	0
The study unit was well organised	15	3	0	0	0
Lectures were understandable and stimulating	15	3	0	0	0

Discussion



- Updated course:
 - introduction of toxicology perspective
 - application of bioanalysis
 - positively evaluated by students

