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MODULE DESCRIPTOR

Module Title

Drug Analysis And Toxicology

Reference	ASM032	Version	1
Created	June 2017	SCQF Level	SCQF 11
Approved	February 2018	SCQF Points	30
Amended		ECTS Points	15

Aims of Module

To enable the students to critically evaluate the principles, applications and limitations of instrumental analysis in Drug Analysis and Toxicology and to select and implement a range of appropriate analytical techniques to solve a given analytical problem.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

1	Critically review the formulation and dosage forms of abused and common pharmaceutical drugs and evaluate instrumental methods for their analysis.
2	Critically appraise in a confident and professional manner; the sources, route, distribution and excretion of toxins or poisons.
3	Critically review and plan proposed analytical work on a problem involving a toxin or an abused or common pharmaceutical drug. Carry out the work as a member of a group, interacting confidently and effectively, demonstrating appropriate negotiating and leadership skills and present the findings in a professional setting.

Indicative Module Content

Drug screening and confirmation. Analytical procedures for the determination of drugs of abuse in biological matrices e.g. blood, serum, plasma, saliva, urine etc. Structure elucidation, Pharmaceutical drug analysis, drug formulation, use of general pharmaceutical monographs for formulated preparations. Measuring toxicology: LD50, exposure limits, thresholds, reversibility, sensitivity. Toxicokinetics: absorption, distribution, metabolism and excretion. Solution of an analytical problem appropriate to Drug Analysis or Toxicology requiring a combination of Laboratory techniques.

Module Delivery

Full-time and Part-time; the module is delivered by formal lectures and some external speakers. Mandatory attendance for 5 days of laboratory work as part of a designated group solving a drug analysis or toxicology problem.

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Indicative Student Workload	Full Time	Part Time
Contact Hours	70	50
Non-Contact Hours	230	250
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	300	300
Actual Placement hours for professional, statutory or regulatory body		

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type:	Practical Exam	Weighting:	50%	Outcomes Assessed:	3
Description:	Demonstrate competent laboratory planning & analysis of an abused or common pharmaceutical drug and individual performance in a PowerPoint presentation.				

Component 2

Type:	Coursework	Weighting:	50%	Outcomes Assessed:	1, 2
Description:	Critical review and assessment of analytical techniques for the analysis of a given abused or common pharmaceutical drug or toxin. Consideration of pertinent formulation, pharmacokinetics, regulations and legislation will be emphasised.				

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

To pass this module the student must achieve a grade D or better. The grading criteria are:-

Module Grade	Minimum Requirements to achieve Module Grade:
A	All components must have a minimum of 50% and the overall total (by weighting) must be equal to or greater than 70%
B	All components must have a minimum of 40% and the overall total (by weighting) between 60-69%
C	All components must have a minimum of 35% and the overall total (by weighting) between 50-59%
D	All components must have a minimum of 35% and the overall total (by weighting) between 40-49%
E	MARGINAL FAIL. All components must have a minimum of 35% and the overall total (by weighting) between 35-39%
F	FAIL. Any component is less than or equal to 34%
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	None.
Corequisites for module	None.
Precluded Modules	None.

INDICATIVE BIBLIOGRAPHY

1	AULTON, M.E., Current edition. Pharmaceutics, The Design and Manufacture of Medicines. Churchill Livingstone Elsevier.
2	WATSON, D.G., Current edition. Pharmaceutical Analysis. Churchill Livingstone Elsevier.
3	ANSEL, H.C., Current edition. Pharmaceutical Dosage Forms and Drug Delivery Systems. Wolters Kluwer Health.
4	CREAN, A., Current edition. The physiochemical basis of Pharmaceuticals. Oxford University Press.
5	SKOOG, W. CROUCH, S. WEST, D and HOLLER, F. Current edition. Skoog and West. Fundamentals of Analytical Chemistry. Cengage Learning