Module Title **Applied Pharmacology** **Keywords** Cell signalling, Biomarker, Pharmacokinetics	Reference AS3904 SCQF Level SCQF 9 SCQF Points 15 ECTS Points 7.5 Created May 2014 Approved August 2014 Amended Version No. 1

This Version is No Longer Current

The latest version of this module is available here

Prerequisites for Module

Successful completion of AS2910 Principles of Pharmacology (or equivalent).

Corequisite Modules

None.

Precluded Modules

None.

Aims of Module

To develop an understanding of pharmacological principles which underpin clinical biochemical and toxicological screening.

Learning Outcomes for Module

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

Mode of Delivery

Lectures, coursework sessions (which include problem solving exercises, data collection and analysis), tutorial sessions and directed study (including use of pharmacological computer packages, directed reading and self-assessment exercises).

Assessment Plan

	Learning Outcomes Assessed
Component 1	1,2
Component 2	3

Component 1 is a written 2 hour closed book examination held at the end of the module. The examination will consist of both objective short answer and essay type questions.

1. Recognise and discuss the pharmacological targets that may modulate biomarkers used in biochemical and toxicological screening.
2. Utilise knowledge and understanding acquired from LO1 to underpin the integration of pharmacological principles in the context of drug absorption, drug distribution, drug metabolism and excretion.
3. Manipulate, present, interpret and discuss experimental data based on knowledge from LO's 1 & 2.

Indicative Module Content

Pharmacodynamics and pharmacokinetics of drugs of abuse using selected examples (including recreational drug use and performance enhancing drugs). Drug-receptor interactions outlining the roles of biotransformation and genetic polymorphisms in ADME. Biomarkers and drug metabolism, in clinical/toxicological screening.

Indicative Student Workload

Contact Hours	Full Time
Case study assessment	18
Laboratory practical	30
Lectures	15

Component 2 requires the completion of 2 independent case studies each contributing 30% to the final module grade.

Indicative Bibliography

1. BORON, W.F. and BOULPAEP, E.L. 2004. Medical Physiology. Oxford: Saunders-Elsevier Science.
2. GOLAN,D.E et al. 2012. Principles of Pharmacology (3rd Ed.). Baltimore: Lippincott, Williams and Wilkins.

Tutorial	6
Directed Study	40
Private Study	41