

Module Title Principles Of Pharmacology	Reference AS3903 SCQF Level SCQF 9 SCQF Points 15 ECTS Points 7.5 Created March 2011 Approved May 2011 Amended Version No. 1
Keywords Drug metabolism, pharmacokinetics, drug action.	

Prerequisites for Module

Modules AS1901, AS2901 and AS2902 or equivalents.

Corequisite Modules

None.

Precluded Modules

None.

Aims of Module

To understand and apply principles of pharmacology in the context of disease processes and drug action.

Learning Outcomes for Module

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

1. Explain the basic principles of drug action.

Cholinergic and adrenergic agonists, gastrointestinal drugs, insulin, diuretics, antibacterial, antiviral, anticancer drugs, steroidal and non-steroidal agonists and antagonists.

Indicative Student Workload

<i>Contact Hours</i>	Full Time
Computer based exercises	6
Laboratory based practicals	12
Lectures	18
Tutorials	4
<i>Directed Study</i>	40
<i>Private Study</i>	70

Mode of Delivery

Lectures with associated tutorials, computer based exercises and

2. Explain the absorption, distribution, metabolism and elimination of drugs.
3. Discuss the mode of action of selected groups of drugs.
4. Manipulate and interpret experimental data and to select and apply appropriate statistical techniques.

Indicative Module Content

Routes of drug administration, uptake and transporter systems, bioavailability, neurotransmitters, endocrine and paracrine messengers, G-protein coupled receptors, nuclear hormone receptors, tyrosine kinase receptors, ligand-gated ion channels.

Pharmacokinetics, Phase I and Phase II metabolism, excretion, pharmacogenetics, single gene regulation, polymorphism, slow and fast metabolisers, N-acetyltransferase, cholinesterase, debrisoquine polymorphism, ageing effects.

computer-based exercises and laboratory practicals.

Assessment Plan

	Learning Outcomes Assessed
Component 1	1,2,3
Component 2	4

Component 2 is assessed by a formal laboratory report

Component 1 is assessed by a group presentation on a pharmacological case study.

Indicative Bibliography

1. HARVEY, R.A., CHAMPE, P.C., FINKEL, R., CUBEDDU, L. and CLARKE, M.A. *Lippincott's Ill. Lippincott's Illustrated Reviews: Pharmacology*. Current Edition. Wolters Kluwer
2. GOLAN, D.E., TASHIJAN, A.H. Jr., ARMSTRONG, E.J. and ARMSTRONG, A.W. *Fundamental Principles of Pharmacology: The Pathophysiologic Basis of Drug Therapy*. Current Edition. Wolters Kluwer.