

Module Title:	Drug Actions and Uses 1
Language of Instruction:	English
Credits:	5
NFQ Level:	6
Module Delivered In	No Programmes
Teaching & Learning Strategies:	The material will be delivered in 2 one hour lectures per week for 30 weeks and 1 one hour practical/case study session per week for 15 weeks. All notes will be on blackboard. Students may be required to access the material via blackboard for both lectures. Students will be required to access lecture notes on blackboard before practical classes. Regular quizzes and MCQs will consolidate lecture material. Case studies (in lectures and practical classes) will allow students to apply what they are learning and explore it's relevance to practice. All issues which arise during lectures relevant to course material and practice will be discussed .
Module Aim:	On completion of this module, students will have gained knowledge, skills and competencies in principles of pathology (i.e. underlying mechanisms which cause disease) and pharmacology (i.e. how drugs work)
Learning Outcomes	
<i>On successful completion of this module the learner should be able to:</i>	
LO1	Give an account of drug development, nomenclature and regulation.
LO2	Describe basic principles of pharmacokinetics and pharmacodynamics and their impact on how drugs work and choice of route of administration.
LO3	Describe in simple terms the underlying pathology of a range of common diseases.
LO4	Outline/list drugs used to treat/manage a range of conditions and their basic mode of action. (Students should be familiar with both generic and trade names of drugs.)
Pre-requisite learning	
Module Recommendations <i>This is prior learning (or a practical skill) that is recommended before enrolment in this module.</i>	
No recommendations listed	
Incompatible Modules <i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module.</i>	
No incompatible modules listed	
Co-requisite Modules	
No Co-requisite modules listed	
Requirements <i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.</i>	
No requirements listed	

Module Content & Assessment

Indicative Content

Theory

Introductory pharmacology; overview of drug nomenclature, drug development and regulatory bodies. Routes of administration – advantages and disadvantages. Basic pharmacokinetics – drug absorption, distribution, metabolism and excretion. Factors which influence pharmacokinetics including age, liver and kidney function, polypharmacy, pregnancy, lactation and co-morbidities. Basic pharmacodynamics – including receptors, agonists and antagonists. Concepts such as bioavailability, half life and therapeutic index.

Theory

Autonomic and neuromuscular pharmacology; basic physiology of peripheral nervous system. Overview of neurotransmitters, focussing on action of acetylcholine and noradrenaline. Overview of drugs which affect the autonomic nervous system.

Theory

Cardiovascular system; basic pathology of cardiovascular system, with emphasis on cause of hypertension, coronary heart disease (including angina, myocardial infarction and dyslipidaemia), heart failure, arrhythmias and stroke. Overview of drugs used to treat/manage all above forms of cardiovascular disease; including antihypertensives, drugs used to treat heart failure, dyslipidaemias, arrhythmias, angina, myocardial infarction, stroke, anti-platelet agents, anticoagulants and fibrinolytics.

Theory

Neurosensory overview and therapeutics in neurodegenerative diseases; basic pathology and drugs used to treat parkinson's disease, epilepsy, headache, migraine and glaucoma. Classification of pain and drugs used to treat/manage it.

Theory

Drug abuse and addiction; overview of drug abuse, dependence and withdrawal. Overview of commonly abused drugs both legal and illegal. Overview of drugs used to manage dependence and withdrawal from opioids, alcohol and nicotine.

Theory

Infections and antibiotics; Principles of anti-microbial chemotherapy. Antibiotic resistance. Overview of antibiotics including mode of action. Overview of antiviral, antifungal, anti-malarial and anthelmintic agents.

Theory

Gastrointestinal, liver and renal systems; Basic pathology of peptic ulcer disease, gastro-oesophageal reflux disease, constipation, diarrhoea, irritable bowel disease and inflammatory bowel disease. Function, pathology and management of disease affecting liver and kidneys.

Theory

Miscellaneous; sunscreens

Practicals

Use of reference materials including BNF.

Practicals

Case studies on a range of relevant issues

Assessment Breakdown	%
Continuous Assessment	20.00%
Practical	30.00%
End of Module Formal Examination	50.00%

Continuous Assessment

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Other	No Description	1,2,3,4	20.00	n/a

No Project

Practical

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Practical/Skills Evaluation	No Description	1,2,3,4	30.00	Sem 1 End

End of Module Formal Examination

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Formal Exam	No Description	1,2,4	50.00	End-of-Semester

Module Workload

Workload: Full Time		
<i>Workload Type</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Lecture	30 Weeks per Stage	2.00
Laboratory	30 Weeks per Stage	0.50
Estimated Learner Hours	30 Weeks per Stage	1.67
Total Hours		125.00

