Course Outline (Higher Education)

School:	School of Science, Psychology and Sport
Course Title:	PHARMACOLOGY & TOXICOLOGY
Course ID:	SCMED3010
Credit Points:	15.00
Prerequisite(s):	(SCMED2011)
Co-requisite(s):	Nil
Exclusion(s):	Nil
ASCED:	019907

Description of the Course:

Pharmacology is the study of drugs and how they work and has its roots in therapeutics, which aims to reduce the adverse effects of disease. Drug action can only be understood in the context of what else is happening in the body. Consequently this course will require you to draw on the knowledge you bring from previous study of pathophysiology, immunology and genomics. Therapeutics have a high rate of obsolescence, so particular attention in this course is devoted to an appreciation of mechanisms of action of drug classes and in arming you with the basic knowledge and know-how that you will require to keep up with this rapidly changing field.

Grade Scheme: Graded (HD, D, C, P, MF, F, XF)

Work Experience:

No work experience: Student is not undertaking work experience in industry.

Placement Component: No

Supplementary Assessment: Yes

Where supplementary assessment is available a student must have failed overall in the course but gained a final mark of 45 per cent or above and submitted all major assessment tasks.

Program Level:

Level of course in Program	AQF Level of Program					
	5	6	7	8	9	10
Introductory						
Intermediate						
Advanced			✔			

Learning Outcomes:

Knowledge:

K1.   Justify the need for pharmaceuticals

K2.   Describe the various classes of drug target and types of chemical mediators

K3.   Describe the processes of drug absorption, distribution, metabolism and elimination

K4.   Distinguish the action of drugs on selected major organ systems

Skills:

S1.   Analyse pharmacokinetic data in terms of absorption, distribution, metabolism and elimination

S2.   Develop skills to find, interpret, evaluate and communicate information about drugs

S3.   Evaluate methods and approaches to assessing drug action and toxicity

Application of knowledge and skills:

A1.   Measure drug action and/or toxicity in the laboratory

A2.   Critically evaluate scientific data

Course Content:

This course introduces fundamental concepts and knowledge in pharmacology and toxicology. There is an emphasis on molecular and cellular effects of drugs, drug targets, mechanisms of action and drug-receptor interactions. Examples are drawn from drugs affecting the immune system, the heart and vascular system, nervous system and other organ systems. Unwanted side-effects, drug toxicity and safety are considered in the context of mechanisms of drug action, time and dose-dependent factors determining drug action and efficacy and the importance of measurement and experimentation in pharmacology.

Graduate Attributes

The Federation University FedUni graduate attributes (GA) are entrenched in the Higher Education Graduate Attributes Policy (LT1228). FedUni graduates develop these graduate attributes through their engagement in explicit learning and teaching and assessment tasks that are embedded in all FedUni programs. Graduate attribute attainment typically follows an incremental development process mapped through program progression. **One or more graduate attributes must be evident in the specified learning outcomes and assessment for each FedUni course, and all attributes must be directly assessed in each program**

Graduate attribute and descriptor		Development and acquisition of GAs in the course	
		Learning Outcomes (KSA)	Assessment task (AT#)
GA 1 Thinkers	Our graduates are curious, reflective and critical. Able to analyse the world in a way that generates valued insights, they are change makers seeking and creating new solutions.	K1, S3 ,A2	AT2, AT1, AT3
GA 2 Innovators	Our graduates have ideas and are able to realise their dreams. They think and act creatively to achieve and inspire positive change.	S1	AT2

Graduate attribute and descriptor		Development and acquisition of GAs in the course	
		Learning Outcomes (KSA)	Assessment task (AT#)
GA 3 Citizens	Our graduates engage in socially and culturally appropriate ways to advance individual, community and global well-being. They are socially and environmentally aware, acting ethically, equitably and compassionately.	K1	AT4
GA 4 Communicators	Our graduates create, exchange, impart and convey information, ideas, and concepts effectively. They are respectful, inclusive and empathetic towards their audience, and express thoughts, feelings and information in ways that help others to understand.	S2, K2, K3	AT1, AT2, AT4
GA 5 Leaders	Our graduates display and promote positive behaviours, and aspire to make a difference. They act with integrity, are receptive to alternatives and foster sustainable and resilient practices.	S3	AT1

Learning Task and Assessment:

Learning Outcomes Assessed	Learning Tasks	Assessment Type	Weighting
S2, S3	Drug information sheet	Written assignment	20-40%
K1, K2, K4, S1	Computer simulations	Practical	10-20%
A1, A2	Laboratory experiment	Practical	10-20%
K1-4, S1-3	Final exam	Exam	40-60%

Adopted Reference Style:

Australian Harvard

Refer to the library website for more information

Fed Cite - referencing tool