MODULE SPECIFICATION

Part 1: Information			
Module Title	Pharmacology		
Module Code	USSJXP-15-2	Level	Level 5
For implementation from	2020-21		
UWE Credit Rating	15	ECTS Credit Rating	7.5
Faculty	Faculty of Health & Applied Sciences	Field	
Department	HAS Dept of Applied Sciences		
Module type:	Standard		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description

Overview: The module will introduce the basic principles of drug action, the biological basis of diseases states affecting different physiological systems, therapeutic approaches to treating these diseases, and the cellular/molecular mode of action of drugs used.

Educational Aims: See Learning Outcomes.

Outline Syllabus: Key drug targets including major receptor subtypes, ion channels, transporters, and structure-function relationships.

Pharmacokinetics. Introduction to drug absorption, diffusion, biotransformation and excretion with particular reference to lipid:water, solubility, concentration gradients, routes of administration and explanation of key terms including tmax, Cmax, AUC and Vd.

Pharmacodynamics: receptor occupancy theory, dose response curves, agonists and antagonists, efficacy, potency and affinity and therapeutic index, Schild plots and pA2 values.

Selective Toxicity. Introduction to the concept of selective toxicity and the mechanisms by which drugs achieve selectively toxic effects through exploitation of comparative distribution, comparative biochemistry and comparative cytology. Historical perspectives will be considered along with the problem of resistance.

Cytotoxic Agents and Antimicrobials. Introduction to and description of typical cytotoxic drugs and antimicrobials. These drugs will be considered with respect to functionality, mode of action, targets and the limitations of such therapies.

Detailed consideration of the mechanisms of action of anticancer agents.

Pharmacology of the most commonly prescribed and abused drugs and their related body systems.

Teaching and Learning Methods: See Assessment.

Part 3: Assessment

The assessment strategy for this module is designed to test the breadth and depth of students' knowledge, as well as their ability to analyse, synthesize and summarise information critically, including published research and data from the 'grey' literature. The controlled component is a written exam. The online examination (with a 24 hour submission window) provides students with the opportunity to demonstrate their knowledge and understanding of the key concepts and paradigms associated with the subject matter, to use examples and other evidence critically to support their arguments.

The written assignment provides the opportunity for the student to complete an in-depth analysis of selected topic from the module syllabus by critically reviewing published research.

Opportunities for formative assessment and feedback are built into the assignment and review of past exam papers.

All work is marked in line with the Department's Generic Assessment Criteria and conforms to the university policies for the setting, collection, marking and return of student work. Assessments are described in the Module handbook that is supplied at the start of module.

First Sit Components	**Final Assessment**	**Element weighting**	**Description**
Examination (Online) - Component A	✓	50 %	Online examination (24 hours)
Report - Component B		50 %	Scientific report (1500 words)
Resit Components	**Final Assessment**	**Element weighting**	**Description**
Examination (Online) - Component A	✓	50 %	Online examination (24 hours)
Report - Component B		50 %	Scientific report (1500 words)

Part 4: Teaching and Learning Methods

Learning Outcomes

On successful completion of this module students will achieve the following learning outcomes:

Module Learning Outcomes	Reference
Discuss the basic principles of cellular communication; that is, the concept of receptors and how their interaction with endogenous ligands and synthetic drugs is measured	MO1
Discuss critically pharmacokinetics (drug absorption, distribution, biotransformation and excretion) and pharmacodynamic parameters, including, drug administration	MO2
Understand the drug development process including toxicity testing and adverse events	MO3
Discuss critically the principles of selective toxicity and how they are exploited during the use of cytotoxic agents and antimicrobials	MO4
Explain the relationship between drug structure and function of selected cytotoxic agents and antimicrobials	MO5
Illustrate the mechanism of action of most commonly prescribed and abused drugs	MO6

Contact Hours

Independent Study Hours:	
Independent study/self-guided study	117
Total Independent Study Hours:	117
Scheduled Learning and Teaching Hours:	
Face-to-face learning	33
Total Scheduled Learning and Teaching Hours:	33
Hours to be allocated	150
Allocated Hours	150

Reading List

The reading list for this module can be accessed via the following link:

https://uwe.rl.talis.com/index.html

Part 5: Contributes Towards

This module contributes towards the following programmes of study: