University of the West of England
BRISTOL

ACADEMIC SERVICES

MODULE SPECIFICATION

Part 1: Basic Data						
Module Title	Applied Pharmacology for Physician Associates					
Module Code	UZYRSF-15-3		Level	3	Version	1
UWE Credit Rating	15	ECTS Credit Rating	7.5	WBL module?	No	
Owning Faculty	Health & Applied Sciences		Field	Allied Health Professions		
Department	Allied Health Professions		Module Type	Standard		
Contributes towards	MSc Physician Associate Studies					
Pre-requisites	None		Co- requisites	None		
Excluded Combinations	Applied Pharmacology for Non-Medical Prescribers UZTRBA-20-M Applied Pharmacology for Non-Medical Prescribers UZTSPT-15-M Applied Pharmacology for Non-Prescribers UZTSPS-15-3		Module Entry requirements	None		
First CAP Approval Date	24/03/2016		Valid from	September 2016		
Revision CAP Approval Date			Valid from			

Review Date	.

Part 2: Learning and Teaching	
Learning Outcomes	On successful completion of this module students will be able to: • Understand and apply knowledge of drug actions in prescribing practice (Component A) • Identify key factors in the choice of routes of drug administration (Component A) • Understand the mechanisms of action of major classes of drugs i.e. pharmacodynamics and the causes and consequences of drug interaction and adverse drug reactions (Component A) • Critically evaluate the factors involved in pharmacokinetics (Component A)

	• Critically evaluate the relationship between the extremes of age and a range of physiologies, and their impact upon the safety of drug and drug response (Component A) • Discuss the issues which influence patient concordance and drug response (Component A) • Understand the differences between medicines used according to their license, medicines used off licence and medicines used off label (Component A) • Demonstrate a critical understanding of pharmacological knowledge through literature searching and its application to practice (Component A)
Syllabus Outline	**Pharmacokinetics** • An introduction to the basic principles and factors which affect drug absorption, distribution, metabolism and excretion with reference to lipid: water solubility, concentration gradients and explanation of key terms including tmax, Cmax, t1/2, AUC and Vd • Enteral routes of drug administration, their uses and limitations • Parenteral routes of drug administration, their uses and limitations **Drug interactions, adverse reactions, side effects, toxicity** • Multiple drug therapy and the possibility of synergistic and antagonistic drug interactions • Enzyme induction and inhibition and its consequences on plasma drug concentrations, effect of gut contents, food and other drugs on absorption • Adverse reactions Type A - expected/dose dependant and Type B - bizarre, e.g. anaphylactic shock, side effects and their value in drug therapy. • Toxic drug effects, their management and/or avoidance and effects of patient concordance **Physiology, age and health in drug usage** • Physiological changes which occur in ageing • Drug therapy in neonates, children and the elderly with reference to pharmacokinetics • Differential effects of drugs in diseased and healthy patients/subjects • Drug misuse and dependence **Mechanism of action of classes of drugs** • Outline consideration of the mechanism of action of major classes of drugs Including those used to control pain, cardiac diseases, respiratory disorders, common gastrointestinal complaints, use of antimicrobial agents, common endocrine diseases (diabetes mellitus and thyroid disease) and those drugs acting within the central nervous system
Contact Hours	36 hours scheduled learning and teaching study hours. 114 hours independent study hours Contact hours will be achieved via blended learning education. Some material will be videoed lectures made available on Black-Board for all learners. Subject specific vodcasts with associated self-directed learning tasks. Contact with the module leader for discussion of module related issues will be facilitated by e-mail, telephone conversations and discussion boards.

Teaching and Learning Methods	The module will include a range of teaching methods to maximise the students learning capabilities and experiences including lectures, small group work and case-studies. This module will be a blended learning package blended learning supported by BlackBoard voice overs, videoed revision sessions and Multiple Choice Questions (MCQs). This will be supported by a series of revision/exam skills sessions, as either one-to-one or class events, focusing on short answer questions and multiple choice questions. Students are given a one hour mock examination and the provision of appropriate revision material, including previous examination papers to be accessed via the library, web and Blackboard. Students are encouraged to learn and share experiences from one another's areas of practice, as well as from their designated medical supervisor.
Key Information Sets Information	Key Information Sets (KIS) are produced at programme level for all programmes that this module contributes to, which is a requirement set by HESA/HEFCE. KIS are comparable sets of standardised information about undergraduate courses allowing prospective students to compare and contrast between programmes they are interested in applying for.

Key Information Set - Module data

Number of credits for this module	15

Hours to be allocated	Scheduled learning and teaching study hours	Independent study hours	Placement study hours	Allocated Hours
150	36	114	0	150

The table below indicates as a percentage the total assessment of the module which constitutes a -

Written Exam: Unseen written exam, open book written exam, In-class test
Coursework: Written assignment or essay, report, dissertation, portfolio, project
Practical Exam: Oral Assessment and/or presentation, practical skills assessment, practical exam

Please note that this is the total of various types of assessment and will not necessarily reflect the component and module weightings in the Assessment section of this module description:

Total assessment of the module:	
Written exam assessment percentage	100%
Coursework assessment percentage	0%
Practical exam assessment percentage	0%
	100%

Reading Strategy	**Core reading** Any core reading will be indicated clearly, along with the method for accessing it, e.g. students may be required to purchase a set text, be given a print study pack or be referred to texts that are available electronically or in the Library. Module handbooks will also reflect the range of reading to be carried out.

	Further reading Further reading will be required to supplement the set text and other printed reading. Students are expected to identify all other reading relevant to their chosen topic for themselves. They will be required to read widely using the library search, a variety of bibliographic and full text databases, and Internet resources. Many resources can be accessed remotely. The purpose of this further reading is to ensure students are familiar with current research, classic works and material specific to their interests from the academic literature. **Access and skills** The development of literature searching skills is supported by a Library seminar provided within the first semester. Students will be presented with further opportunities within the curriculum to develop their information retrieval and evaluation skills in order to identify such resources effectively. Additional support is available through the library web pages, including interactive tutorials on finding books and journals, evaluating information and referencing. Sign up workshops are also offered by the Library.
Indicative Reading List	The following list is offered to provide validation panels/accrediting bodies with an indication of the type and level of information students may be expected to consult. As such, its currency may wane during the life span of the module specification. However, as indicated above, current advice on readings will be available via the module guide. Boarder, M., Newby, D. and Navti P. (2010). *Pharmacology for pharmacy and the health sciences: a patient-centred approach.* Oxford: Oxford University Press. Battista, E (2015). *Crash Course Pharmacology*. 4th ed. Edinburgh: Mosby Elsevier. Neal, M.J. (2012). *Medical Pharmacology at a Glance*. [online] 7th ed. West Sussex: Wiley-Blackwell. [accessed 18 January 2016]. Scott, W.N. and McGrath, D. (2012). *Nursing Pharmacology made incredibly easy!* 3rd ed. London: Lippincott Williams & Williams. Thorp, C.M. (2008). *Pharmacology for the Health Care Professions.* [online] West Sussex: Wiley-Blackwell. [accessed 18 January 2016] Rang, H.P., Dale, M.M., Flower, R., Ritter, J.M. and Henderson, G. (2016). *Rang & Dale's Pharmacology*. [online] 8th ed. Edinburgh: Churchill Livingstone. [accessed 18 January 2016]. You will be provided with a copy of the British National Formulary (BNF) - which you may bring to the pharmacology exam (note this copy must be clean/free from notes for the examination).

Part 3: Assessment	
Assessment Strategy	The assessment for this module is a 2 hour unseen written examination which consists of a total of five, short answer (SAQ- 14 marks each) and ten multiple-choice questions (MCQ- 2 marks each) to test pharmacological knowledge and its application to practice. SAQs are used to demonstrate depth of knowledge. MCQs are used to demonstrate breath of knowledge. Timing is set at 2 hours as it is considered that those involved in prescribing take the time they require to ensure patient safety. The exam is a high pass mark with enough time to complete as accuracy is paramount not speed. The BNF is provided as it matches what happens in practice. Students must achieve a minimum 80% pass.

Identify final assessment component and element	**A**	
% weighting between components A and B (Standard modules only)	**A:** **100%**	**B**:

First Sit	
Component A (controlled conditions) **Description of each element**	**Element weighting** **(as % of component)**
2 hour unseen written examination	100%

Resit (further attendance at taught classes is not required)	
Component A (controlled conditions) **Description of each element**	**Element weighting** **(as % of component)**
2 hour unseen written examination	100%

If a student is permitted a retake of the module under the University Regulations and Procedures, the assessment will be that indicated by the Module Description at the time that retake commences.