CHEM C1101: Pharmaceutical Chemistry

Module Title:	Pharmaceutical Chemistry
Language of Instruction:	English

Credits:	5

NFQ Level:	6

Module Delivered In	1 programme(s)

Teaching & Learning Strategies:	The module will be delivered as two one-hour theory classes for eleven weeks and one two- hour practical class for nine weeks. Group and peer learning will be facilitated during the preparation of assignments and practicals. Any course-related issue or questions that may arise will be discussed at lectures.

Module Aim:	The aim of this module is to impart knowledge of fundamental chemistry and to provide practical training in this subject area with due regard to best practice and safety.

Learning Outcomes	
On successful completion of this module the learner should be able to:	
LO1	Interpret the basic concepts of atomic and molecular structures and bonding of simple chemicals and use the periodic table.
LO2	Interpret the basic principles of solution chemistry.
LO3	Understand the concepts of acidity and basicity and pH as they apply to biological systems.
LO4	Perform the calculations involved in solution preparation.
LO5	Perform designated practical exercises in the area of solution preparation with due regard to accuracy and precision, practical dexterity and good laboratory practice.

Pre-requisite learning
Module Recommendations *This is prior learning (or a practical skill) that is recommended before enrolment in this module.*
No recommendations listed
Incompatible Modules *These are modules which have learning outcomes that are too similar to the learning outcomes of this module.*
No incompatible modules listed
Co-requisite Modules
No Co-requisite modules listed
Requirements *This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.*
No requirements listed

CHEM C1101: Pharmaceutical Chemistry

Module Content & Assessment

Indicative Content
Theory 1 Atoms, atomic structure, elements, compounds and mixtures. The periodic table of the elements, molecules and bonding. The Mole, molar mass and molar volume. Concentration, molarity, normality and standard solutions. Polarity of compounds and solvents. Solutions and solubility. Concentrated, dilute, saturated and supersaturated solutions. Precipitates, suspensions and colloids. Acids, bases, buffers, the pH scale and indicators. Introduction to organic chemistry, homologous series. Structures of common pharmaceuticals, and the relationship between structure and solubility
Practicals The scheduled practicals will develop the following skills: Accuracy and precision in liquid measurement, standard solution preparation, titration, measurement of pH, effect of buffers, and analyses of common pharmaceutical products

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

Special Regulation
Students must achieve a minimum grade (35%) in both the practical/CA and final examination.

Continuous Assessment				
Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Examination	two 1 hour CA Tests during the semester	1,2,3,4	20.00	n/a

No Project

Practical				
Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Practical/Skills Evaluation	Practical lab book	5	30.00	Sem 1 End

End of Module Formal Examination				
Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Formal Exam	2 hour exam	1,2,3,4	50.00	End-of-Semester

SETU Carlow Campus reserves the right to alter the nature and timings of assessment

CHEM C1101: Pharmaceutical Chemistry

Module Workload

Workload: Full Time		
Workload Type	*Frequency*	*Average Weekly Learner Workload*
Lecture	12 Weeks per Stage	2.00
Practicals	12 Weeks per Stage	1.50
Independent Learning	15 Weeks per Stage	5.53
	Total Hours	125.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_SAPHA_C	Higher Certificate in Science in Pharmacy Technician Studies	1	Mandatory