

Module Title:	Pharmaceutical Formulation
Language of Instruction:	English
Credits:	10
NFQ Level:	8
Module Delivered In	1 programme(s)
Teaching & Learning Strategies:	<p>This module will be delivered via three one-hour lectures for twelve weeks and two three-hour practicals for twelve weeks. Students may be required to access the material via College networks in advance of the class and practicals to encourage active learning. To consolidate lectures and practicals, students will normally be required to carry out assignments, give presentations and answer multiple choice questions. Group and peer learning will be facilitated during the preparation of assignments, presentations and practicals. Any course-related issue or questions that may arise will be discussed at lectures. Online demonstrations will illustrate the key concepts of the course and will be available throughout the year. Digital resources such as Youtube, Reusable learning objects and the National Digital Learning Repository will be used as practicable.</p>
Module Aim:	To give the student an insight into the requirements of formulation and compounding in modern pharmaceutical industry.
Learning Outcomes	
<i>On successful completion of this module the learner should be able to:</i>	
LO1	Evaluate the procedures in drug production from synthesis to finished product manufacture.
LO2	Evaluate advanced methods used in preformulation screening of drugs and excipients
LO3	Evaluate and interpret the processes involved in drug manufacture and basic quality assurance
LO4	Interpret the principles underlying good manufacturing practices as applied to pharmaceutical industries
LO5	Evaluate the procedures of drug production from synthesis to finished product manufacture.
LO6	Develop analytical procedures for routine pharmaceutical analysis.
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

Pharmaceutical Formulation

• Prepare standard pharmaceutical products from first principles • Appreciate the critical importance of precise dosage: accurate weighing and volume delivery, sample preparation and reporting in the preparation and manufacture of medicines • Source information in a practical way from pharmacopoeia and other sources • Discuss the procedures in drug production from synthesis to finished product manufacture. • Evaluate the methods used in preformulation screening of drugs and excipients • Develop and test a range of products containing pharmaceutical actives. • Explore the use of sustained-release drug-delivery vehicles • Explain drug registration requirements. • Evaluate and discuss processes involved in drug manufacture and basic quality assurance • Explain the principles underlying good manufacturing practices as applied to pharmaceutical industries • Understand the procedures in drug production from synthesis to finished product manufacture. • Develop analytical procedures for routine pharmaceutical analysis. • Understand drug registration requirements. • Validate existing drug manufacturing plant and instrumentation

Assessment Breakdown	%
Continuous Assessment	10.00%
Practical	20.00%
End of Module Formal Examination	70.00%

Special Regulation

Students must achieve a minimum grade (35%) in both practical/CA and final exam.

Continuous Assessment

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Examination	Continuous assessment mid-term examinations	1,2,3,4,5	10.00	Week 8

No Project

Practical

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Practical/Skills Evaluation	Laboratory preparation, analysis	1,2,5,6	20.00	End-of-Semester

End of Module Formal Examination

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Formal Exam	Final written examination	1,4,5	70.00	End-of-Semester

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

Module Workload

Workload: Full Time		
<i>Workload Type</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Lecture	12 Weeks per Stage	3.00
Laboratory	12 Weeks per Stage	6.00
Independent Learning	15 Weeks per Stage	9.47
Total Hours		250.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_SAPHA_B	Bachelor of Science (Honours) in Pharmaceutics and Drug Formulation	7	Mandatory