

Module Title:	Assay Development
Language of Instruction:	English
Credits:	10
NFQ Level:	8
Module Delivered In	1 programme(s)
Teaching & Learning Strategies:	This module will be delivered via three one-hour lectures and two three-hour practicals per week. . Students may be required to carry out assignments, give presentations and take multiple choice questions. Independent learning will be facilitated during the preparation of assignments, presentations and practicals.
Module Aim:	To develop separation and extraction strategies in the analysis of drugs in pharmaceutical preparations
Learning Outcomes	
<i>On successful completion of this module the learner should be able to:</i>	
LO1	Develop spectroscopic and other methods in the principles of validation of an analytical method.
LO2	Validate the major extraction and separation techniques used in sample recovery
LO3	Explore the assay methods to determine contaminant degradation by-products using standard chromatographic techniques
LO4	Evaluate the methods used in the analysis of various drug delivery vehicles
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

Assay Development

• Discuss the principles of validation of an analytical method. • Evaluate the major extraction and separation techniques used in sample recovery • Develop assay methods separating out drug and primary metabolites using standard chromatographic methods • Explore the robustness of the methods in the analysis of sustained-release, multi-dose and other drug-delivery forms

Assessment Breakdown	%
Continuous Assessment	10.00%
Practical	30.00%
End of Module Formal Examination	60.00%

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
Case Studies	Regular written examinations to evaluate student understanding of course content	1,4	10.00	n/a

No Project

Practical

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Practical/Skills Evaluation	Solvent extraction, flocculation, Sep-pack® and pre-column separation. pKa separation.	2,3	30.00	n/a

End of Module Formal Examination

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Formal Exam	Final year evaluation	1,4	60.00	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
Practicals	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