

Module Title:	Formulation and Compounding 2
Language of Instruction:	English
Credits:	5
NFQ Level:	6
Module Delivered In	1 programme(s)
Teaching & Learning Strategies:	This module will be delivered via two one-hour lectures for twelve weeks and one two-hour practical for ten 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.
Module Aim:	To give the student an insight into the requirements of formulation and compounding in the modern pharmacy.
Learning Outcomes	
<i>On successful completion of this module the learner should be able to:</i>	
LO1	Discuss the procedures in drug production from synthesis to finished product manufacture.
LO2	Develop and test a range of products containing pharmaceutical actives.
LO3	Evaluate and discuss processes involved in drug manufacture and basic quality assurance
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>	
Successful completion of year 1 or equivalent	

Module Content & Assessment

Indicative Content
Oral dosage route Comminution, mixing, compression, granulation
Insulins Formulation, storage and labelling
Sterile dosage forms Formulation, manufacture and quality control. Clean rooms.
Clinical trials Clinical trials. Blind and double-blind trials, placebo effect
Pulmonary medications Formulation and manufacture
Oral liquids Composition, manufacture, stability evaluation
Stability & shelf-life Aims, product specification, assay
Modified drug release Coatings and films, matrices and ion-exchangers
Quality control Evaluation of tablets, capsules, suppositories
Other dosage forms Ophthalmic preparations. Enemas
Practical Practicals will allow students to develop the required technical competencies, attitudes and behaviours as well as problem-solving abilities and group skills promote deep learning via investigation of a problem, application of prior knowledge and analysis of results thus generating new knowledge.

Assessment Breakdown	%
Continuous Assessment	10.00%
Practical	40.00%
End of Module Formal Examination	50.00%

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
Other	MCQ, assignments and practical work	1,2	10.00	n/a

No Project

Practical				
Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Practical/Skills Evaluation	Continuous assessment will take the form of practical reports, and specific assignments	1,2	40.00	n/a

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

Module Workload

Workload: Full Time		
<i>Workload Type</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Lecture	12 Weeks per Stage	2.00
Laboratory	12 Weeks per Stage	2.00
Estimated Learner Hours	15 Weeks per Stage	5.13
Total Hours		125.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_SAPHA_C	Higher Certificate in Science in Pharmacy Technician Studies	4	Mandatory