Module Definition Form (MDF)

Module code: MOD005031	**Version:** 2 **Date Amended:** 06/Jul/2018

1. Module Title
Pharmaceutical Formulations

2a. Module Leader
Irfan Bashir

2b. School
School of Allied Health and Social Care

2c. Faculty
Faculty of Health, Medicine and Social Care

3a. Level
5

3b. Module Type
Standard (fine graded)

4a. Credits
30

4b. Study Hours
300

5. Restrictions

Type	Module Code	Module Name	Condition
Pre-requisites:	None		
Co-requisites:	None		
Exclusions:	None		
Courses to which this module is restricted:	None		

LEARNING, TEACHING AND ASSESSMENT INFORMATION

6a. Module Description

Pharmaceutics concerns the process whereby a new drug can be presented to patients in a suitable form (tablets, capsules, liquids etc.) to maximize absorption and achieve the required therapeutic concentrations in the body. In this module, the formulation and manufacturing of solid dosage forms (tablets and capsules) and semi-solid dosage forms (creams and ointments) as well as other dosage forms will explored. Students in this module will be introduced to the properties and function of excipients, the impact of crystal structure on the formulation as well as the important characteristics of powders relevant to formulation and the theory of tablet compression. In addition, the process of extemporaneous preparation, labelling and packaging of dosage forms will be described.

This module will be delivered using face-to-face learning and students will be expected to attend sessions as well as participate in on-line study using our (Canvas), internet resources and online discussions as required. The practical component of this module will ensure that students are familiar with the principles of pharmaceutical technology and laboratory practice and learn a range of formulation techniques hence developing confidence in using equipment as well as collection, presentation and interpretation of data.

6b. Outline Content

Pharmaceutical pre-formulation and dosage form design

The formulation and manufacturing process of dosage forms

The properties and function of excipients, and the impact of crystal structure on pharmaceutical formulations

The important characteristics of powders relevant to formulation and the theory of tablet compression.

The stability of drugs and medicines and methods used to assess it

A practical course involving the preparation, packaging and labelling of common types of dosage forms, (including : creams, ointments, tablets and capsules) with an emphasis on calculations.

6c. Key Texts/Literature

The reading list to support this module is available at: https://readinglists.aru.ac.uk/

6d. Specialist Learning Resources

Category two laboratory; Technical support; Computer laboratory; VLE

7. Learning Outcomes (threshold standards)		
No.	**Type**	**On successful completion of this module the student will be expected to be able to:**
1	Knowledge and Understanding	Explain the rationale behind the design and formulation of dosage forms and describe the basic concepts and roles of pharmaceutical technology relevant to pharmaceutical manufacturing.
2	Knowledge and Understanding	Analyse the role of excipients, manufacturing methods and processes used for traditional dosage forms
3	Intellectual, practical, affective and transferrable skills	Prepare several types of extemporaneous preparations and perform the calculations necessary for these preparations.
4	Intellectual, practical, affective and transferrable skills	Appraise relevant methodologies, accurately label and present extemporaneous pharmaceutical preparations

8a. Module Occurrence to which this MDF Refers				
Year	**Occurrence**	**Period**	**Location**	**Mode of Delivery**
2026/7	ZZF	Template For Face To Face Learning Delivery		Face to Face

8b. Learning Activities for the above Module Occurrence			
Learning Activities	**Hours**	**Learning Outcomes**	**Details of Duration, frequency and other comments**
Lectures	20	1-4	3 hours per week (12 weeks) combining lectures and seminars
Other teacher managed learning	18	1-4	6 × 3 hours per week of laboratory sessions
Student managed learning	262	1-4	Self-directed study
TOTAL:	300		

9. Assessment for the above Module Occurrence

The assessment for some modules includes a presentation (see below for details on how this particular module is assessed). We recognise that presenting, especially to a large group, can cause significant anxiety or distress for some students. If this may affect you, please contact your Module Leader or the Disability and Neurodiversity Service as early as possible. We will work with you to consider appropriate reasonable adjustments. Depending on your individual needs, these might include, for example, presenting to a smaller group or presenting only to a member of academic staff.

Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
010	Coursework	1-2	60 (%)	Fine Grade	30 (%)
Portfolio that compiles elements of practical lab work (critical discussion of methods and results) equivalent to 3000 words					

Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
011	Practical	3-4	40 (%)	Fine Grade	30 (%)
3 hour In-lab practical test (Equivalent to 3000 words)					

In order to pass this module, students are required to achieve an overall mark of 40% (for modules at levels 3, 4, 5 and 6) or 50% (for modules at level 7*).

In addition, students are required to:
(a) achieve the qualifying mark for each element of fine graded assessment as specified above
(b) pass any pass/fail elements

[* the pass mark of 50% applies for all module occurrences from the academic year 2024/25 – see Section 3a of this MDF to check the level of the module and Section 8a of this MDF to check the academic year]