

## Liverpool John Moores University

Title: PREFORMULATION STRATEGIES  
Status: Definitive  
Code: **7103PHASCI** (123665)  
Version Start Date: 01-08-2021

Owning School/Faculty: Pharmacy & Biomolecular Sciences  
Teaching School/Faculty: Pharmacy & Biomolecular Sciences

Team	Leader
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**Academic Level:** FHEQ7      **Credit Value:** 20      **Total Delivered Hours:** 43  
**Total Learning Hours:** 200      **Private Study:** 157

### Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	14
Practical	21
Workshop	6

**Grading Basis:** 50 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	Exam	Exam comprising but not limited to short- and long-answer questions.	60	2
Report	Report	An extended report based on a laboratory investigation and interpretation of data	40	

### Aims

*To provide students with knowledge and skills to examine physical and chemical properties of both small molecules and macromolecules and estimate how these influence their in vitro and in vivo behaviour as active pharmaceutical ingredients.*

## **Learning Outcomes**

After completing the module the student should be able to:

- 1 Demonstrate expertise in applying specialised techniques to determine the physicochemical properties active pharmaceutical ingredients
- 2 Display mastery of interpreting complex information and data generated from specialised techniques to determine the physicochemical properties of active pharmaceutical ingredients

## **Learning Outcomes of Assessments**

The assessment item list is assessed via the learning outcomes listed:

Examination	1
Practical Report	2

## **Outline Syllabus**

*Solubility*

*Permeability*

*Stability*

*Thermal analysis*

*Crystallinity/Polymorphism*

*Particle size/morphology*

*Preformulation techniques: UV, IR, XRD, TGA, DSC, Particle Sizing, SEM, ELISA, SDS Page, Western Blot assay*

## **Learning Activities**

Lectures introducing each topic within the module

Practical sessions giving students first-hand experience of relevant techniques

Workshops to support analysis of data generated during practical sessions

## **Notes**

Course notes Available on Canvas