

Liverpool John Moores University

Title: Advanced Pharmaceutical Techniques and Delivery Systems
Status: Definitive
Code: **6008DFACAP** (119214)
Version Start Date: 01-08-2019

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

Team	Leader
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Academic Level: FHEQ6 **Credit Value:** 12 **Total Delivered Hours:** 24

Total Learning Hours: 120 **Private Study:** 96

Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	14
Practical	4
Workshop	4

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	Exam	Examination	60	2
Report	Prac rep	Practical report	40	

Aims

To present and illustrate industrially relevant techniques for the formulation and characterisation of pharmaceutical materials. To highlight recent advances in drug delivery technology.

Learning Outcomes

After completing the module the student should be able to:

- 1 Demonstrate an understanding of a range of techniques for the design, manufacture and characterisation of pharmaceutical materials for drug delivery
- 2 Evaluate approaches to formulation and testing of pharmaceuticals for in vivo delivery
- 3 Review and evaluate the application of techniques in the current literature

Learning Outcomes of Assessments

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

exam	1	2
Practical report	2	3

Outline Syllabus

*The function and associated considerations of advanced pharmaceutical technologies in exploring the physicochemical properties of materials.
Techniques to control drug particle morphology and the production of therapeutic mono dispersed particulate systems.
Advanced crystal growth techniques and the characterisation of solid state properties.
The testing of biologicals, including vaccines, therapeutic immunoglobulins and monoclonal antibodies using ELISA and radio-immunoassay techniques.
The preparation and evaluation of novel drug delivery systems including for example liposomes, nanoparticles, biodegradable polymers and lipids.*

Learning Activities

The module will be taught by a combination of lectures and interactive workshops. There will be a practical exercise based around the formulation and analysis of a product. Students will work in groups and give a presentation on the analysis of their formulation.

Notes

Additional support material will be made available on Blackboard