

Liverpool John Moores University

Title: ADVANCED DRUG DELIVERY AND PHARMACEUTICAL TECHNOLOGY
Status: Definitive
Code: **6001DFPHAR** (113293)
Version Start Date: 01-08-2011

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

Team	Leader
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Academic Level: FHEQ6 **Credit Value:** 12.00 **Total Delivered Hours:** 26.00
Total Learning Hours: 120 **Private Study:** 94

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	17.000
Seminar	6.000
Tutorial	1.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	exam	80.0	2.00
Presentation	AS2	seminar presentation	20.0	

Aims

To illustrate the recent developments in drug delivery and selected areas of

pharmaceutical technology. To demonstrate novel methods of assessing performance of drug delivery systems and relationships between drug delivery systems and drug targeting.

Learning Outcomes

After completing the module the student should be able to:

- 1 discuss the advantage of aerosol delivery of proteins
- 2 Discuss the application of supercritical fluids CO₂ to pharmaceutical inhalers
- 3 Discuss the novel improvements in formulation of transdermal drug delivery system
- 4 Discuss nasal drug delivery systems
- 5 Discuss novel improvements in gene delivery systems
- 6 Discuss recent advances in formulation of dry powder inhalers
- 7 Discuss application of Atomic Force Microscopy and Scanning Electron Microscopy to formulation of pharmaceutical inhalers

Learning Outcomes of Assessments

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

EXAM	1	2	3	4	5	6	7
CW	1	2	3	4	5	6	7

Outline Syllabus

Recent developments in drug delivery systems: Of necessity this part of the syllabus will vary from time to time to take into account the most recent developments. Currently, the topics covered include: pharmaceutical aerosols (including oral and nasal), gene delivery systems, and transdermal drug delivery systems.

Learning Activities

Review of current research papers followed by interactive small group discussions about the papers and presentations.

References

Course Material	Book
Author	Various
Publishing Year	0
Title	Use of the most recent literature available
Subtitle	
Edition	

Publisher	
ISBN	

Notes

This module is designed to introduce the student to relevant advances in drug delivery and pharmaceutical technology associated with drug delivery systems, with emphasis on pharmaceutical aerosols, tablets, transdermal drug delivery systems and biotechnology.