Liverpool John Moores University

Title:	MEDICINAL CHEMISTRY
Status:	Definitive
Code:	**7104PHASCI** (123666)
Version Start Date:	01-08-2020

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

Team	Leader
Andrew Leach	Y
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Academic Level:	FHEQ7	**Credit Value:**	30	**Total Delivered Hours:**	60
Total Learning Hours:	300	**Private Study:**	240		

Delivery Options
Course typically offered: Semester 2

Component	Contact Hours
Lecture	21
Practical	21
Workshop	15

Grading Basis: 50 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	Exam	Exam	60	3
Report	Project	Mini-project	40	

Aims

To understand the application of medicinal chemistry to the drug discovery process

and the requirement for a modern synthetic approach to the supply of relevant molecules

Learning Outcomes

After completing the module the student should be able to:

1. Display thorough knowledge of how pharmaceutical molecules are designed and tested and how the outcomes of these tests might be predicted
2. Demonstrate knowledge of and capability in organic chemistry particularly as it relates to the synthesis of active pharmaceutical ingredients

Learning Outcomes of Assessments

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

Exam 1 2

Mini-project (practicals) 1 2

Outline Syllabus

Lead discovery
Medicinal chemistry in business
Compound screening
Computer aided drug design
Chemoinformatics
Advanced organic synthesis
Bioconjugation
Bioinorganics
High throughput screening and synthesis
Chemistry of drug toxicity

Learning Activities

Lectures with on-line pre-work
Problem solving workshops to build on each lecture
Practical sessions themed to build up a mini-project

Notes

Medicinal chemistry, as it is currently practiced within the pharmaceutical industry and academia, will be described. The course will focus on the particular strengths of LJMU's school of pharmacy and biomolecular sciences, notably chemoinformatics/computer aided drug design and organic synthesis. External speakers from the pharmaceutical industry will ensure that the teaching is anchored in the most up-to-date science.