

# MRES (INDUSTRIAL PHARMACEUTICS)

## Overview

The MRes (Industrial Pharmaceutics) is a 12-month full time (24 months part-time) research programme based within the School of Pharmacy and/or industry. The programme consists of an extensive research induction programme to develop basic pharma/biopharma process and analytical development skills.

Students undertake a total workload equivalent to **90** credits over the 12-month full-time programme (24-months part-time), the principal element of which is the completion of a major research thesis of approximately 20,000 words. In parallel, students must take and pass taught modules to the value of 20 credits.

## Programme Requirements

For information about modules, module choice, options and credit weightings, please go to Programme Requirements (p. 1).

## Programme Requirements

Code	Title	Credits
<b>Taught Modules</b>		
Students take <b>20</b> credits as follows - all listed core modules ( <b>5</b> credits) and <b>15</b> credits of elective modules:		
<i>Core Modules</i>		
PF6040	Pharmaceutics Research Skills	5
<i>Elective Modules</i>		
Students take modules to the value of <b>15</b> credits from the following: <b>15</b>		
PF6026	Pharmaceutical Technology and Unit Operations with Regulatory Insights	5
PF6027	Pharmaceutical GxP and Regulatory Science (5)	
PF6028	Process Control and Validation for Pharmaceutical Processes (5)	
PF6029	Biotechnology-derived and Advanced Therapy Medicinal Products (ATMPs)	5
PF6032	Bioprocessing Unit Operations	5
PF6033	Pharmaceutical Analysis and Analytics (5)	
PF6035	Lean Six Sigma for BioPharma (10)	
PF6044	Digital Transformation in the (Bio)pharma Industry	5
PG6001	STEPS - Scientific Training for Enhanced Postgraduate Studies (5)	
PG6009	Graduate Information Literacy (5)	
PG6003	Teaching and Learning for Graduate Studies (5)	
PG6015	An Introduction to Research Integrity, Ethics and Open Science (5)	
PG6021	English for Postgraduate Studies (Upper-Intermediate: B2+) (5)	
PG6022	English for Postgraduate Studies (Lower Advanced: C1) (5)	
PG6029	Skills in Public Engagement of Science (5)	
ST6013	Statistics and Data Analysis for Postgraduate Research Students (10)	

## Research

Students take **70** credits as follows:

Independent Research	70
<b>Total Credits</b>	<b>110</b>

## Examinations

Full details and regulations governing Examinations for each programme will be contained in the *Marks and Standards Book* and for each module in the *Book of Modules*.

## Programme Learning Outcomes

### Programme Learning Outcomes for MRes (Industrial Pharmaceutics) (NFQ Level 9, Major Award)

On successful completion of this programme, students should be able to:

- Design scientifically and statistically robust experiments.
- Develop robust manufacturing processes and analytical methods.
- Appraise, assess and problem solve complex manufacturing and analytical issues encountered in the pharma/biopharma industry using structured problem-solving approaches.
- Interpret and evaluate complex scientific data.
- Communicate effectively within the workplace through written and verbal formats including scientific and technical writing.
- Detail and interpret the good manufacturing practices requirements in a pharma/biopharma manufacturing environment.