

**APPROVED****Bachelor of Science Pharmaceutical Science (2020)**  
Health and Science

<b>Programme Short Title</b>	B.Sc. Pharmaceutical Science				
<b>Programme Code</b>	DK_NLPHS_7	<b>Mode of Delivery</b>	Full Time On Campus	<b>No. of Semesters</b>	6
<b>Semesters Per Stage</b>	2	<b>NFQ Level</b>	7	<b>Programme Credits</b>	180
<b>Language of Instruction</b>	English				
<b>Field of Study</b>	0510 - Science				
<b>Educational Aim of Programme</b>	This programme aims to educate and train scientists for employment in the pharmaceutical and chemical industries, a major growth area of economic and strategic importance both in Ireland and Worldwide. This is a multidisciplinary programme where students receive grounding in the fundamental sciences in addition to the more applied areas of relevance to the sector.				
<b>External Code</b>	<b>Code:</b>				
<b>Programme Extra Information</b>	Special Regulation: For modules with Practical and/or Final Examination components, a minimum mark of 30% must be achieved in each component.				

## Programme Learning Outcomes (PLOs)

On successful completion of this programme the learner should be able to :

#	Description
PLO1	Have a good level of knowledge of: - a broadly based scientific core; - mathematics; - theory and understanding in the area of pharmaceutical / biopharmaceutical science.
PLO2	Have a good level of knowledge in: - the terminology, nomenclature and/or classification systems appropriate to pharmaceutical / biopharmaceutical science; - theories, concepts and principles of pharmaceutical / biopharmaceutical science; - methods for acquiring, processing, interpreting and presenting information, especially related to pharmaceutical / biopharmaceutical science; - the identification, definition and resolution of routine problems; - relevant legal, quality and regulatory frameworks; - current issues of concern to society and an appreciation of the ethical issues involved.
PLO3	Have a good level of knowledge in some aspect of the defining elements of pharmaceutical / biopharmaceutical science, as a result of individual study and/or research.
PLO4	Apply knowledge and understanding to address familiar problems in a scientific work setting.
PLO5	Employ data analysing, synthesising and summarising skills in a scientific work setting.
PLO6	Source, interpret and apply appropriate and referenced literature within the area of pharmaceutical / biopharmaceutical science.
PLO7	Work independently within defined time boundaries.
PLO8	Operate a broad range of laboratory and other relevant equipment safely.
PLO9	Apply numerical and statistical analysis skills.
PLO10	Maintain detailed records of activities.
PLO11	Communicate Scientific information in a variety of forms to specialist and non-specialist audiences.
PLO12	Identify and implement solutions to problems relating to scientific processes in a logical manner.
PLO13	Appreciate the views of others.
PLO14	Participate fully in the day-to-day operations of the pharmaceutical / biopharmaceutical industry, or other scientific work setting.
PLO15	Make decisions in relation to a controlled environment.
PLO16	Test simple hypotheses.
PLO17	Appreciate the limits of knowledge within the area of pharmaceutical / biopharmaceutical science.
PLO18	Analyse and generate data, diagnose and trouble-shoot technical problems and contribute to their resolution in a range of structured settings.
PLO19	Use scientific skills to accurately perform tasks.
PLO20	Behave professionally in a range of structured work settings.
PLO21	Take direction, accept criticism and use feed-back to enhance own performance.
PLO22	Participate in a structured team environment across a range of scientific disciplines and tasks.

PLO23	Be self-directed in terms of time, motivation and planning and be self-aware and be open and sensitive to others.
PLO24	Work with significant autonomy within allocated responsibility.
PLO25	Work individually on complex tasks, exercise independent technical judgement, develop a personal work plan and accept responsibility for own work.
PLO26	Demonstrate an ability for autonomous, independent learning, identify gaps in personal knowledge, understanding and skills and identify appropriate means of gaining these attributes.
PLO27	Evince a commitment to continuing education and lifelong learning and take appropriate action to remain aware of industrial, regulatory and societal change, which will impact on chosen specialisation.
PLO28	Discuss relevant scientific issues in a social, cultural and economic context and promote science and technology to the general public.
PLO29	Demonstrate and awareness of current issues of concern to society and an appreciate of the ethical issues involved.

## Semester Schedules

### Stage 1 / Semester 1

Mandatory	
Module Code	Title
BIOL S8Z01	<a href="#">Biology</a>
CHEM S7Z04	<a href="#">Fundamental Chemistry</a>
HLSTS8Z01	<a href="#">Health and Safety and Academic Skills</a>
MATH S7Z01	<a href="#">Mathematics 1</a>
PHYS S7Z03	<a href="#">Physics Through PBL 1</a>

### Stage 1 / Semester 2

Mandatory	
Module Code	Title
CHEM S7Z05	<a href="#">Chemistry</a>
MATH S7Z02	<a href="#">Mathematics 2</a>
PHYS S7Z04	<a href="#">Physics Through PBL 2</a>

### Stage 2 / Semester 1

Mandatory	
Module Code	Title
INST S7Z02	<a href="#">Analytical Science</a>
CHEM S8Z01	<a href="#">Biochemistry</a>
CHEM S7003	<a href="#">Introduction to Organic Chemistry</a>

PHAR S7021	<a href="#">Pharmaceutical Microbiology</a>
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## Stage 2 / Semester 2

Mandatory	
Module Code	Title
BIOL S8Z02	<a href="#">Molecular Biology</a>
CHEM S7012	<a href="#">Pharmaceutical Chemistry</a>
CHEM S7013	<a href="#">Pharmaceutical Processing</a>
DATA S7Z01	<a href="#">Statistics and Data Analysis</a>

## Stage 3 / Semester 1

Mandatory	
Module Code	Title
PHAR S7Z01	<a href="#">Immunology</a>
PROJ S8010	<a href="#">Literature Research Project</a>
MNUF S7001	<a href="#">Pharmaceutical Manufacturing</a>
PHAR S8015	<a href="#">Regulatory Affairs and GMP Compliance</a>
Elective	
Module Code	Title
BITC S7012	<a href="#">Pharmaceutical Biotechnology</a>
PHAR S8014	<a href="#">Pharmacopoeial Characterisation</a>

## Stage 3 / Semester 2

Mandatory	
Module Code	Title
PHAR S8018	<a href="#">Pharmaceutical Analysis and Validation</a>
PHAR S8017	<a href="#">Physiology &amp; Pharmacology</a>
QUAL S7Z01	<a href="#">Quality Management</a>
Elective	
Module Code	Title

PHAR S8016	<a href="#">Biopharmaceutical Therapeutics</a>
PHAR S7023	<a href="#">Pharmaceutical Drug Design</a>