Bachelor of Science (Hons) in **Pharmaceutical Sciences** (AL840)

This course is designed to meet the current demands of pharmaceutical companies by providing graduates with the core skills and competencies that are highly valued by industry.

The Pharmaceutical Sciences industry in Ireland

This unique course provides the broad-based, essential information and skills required for employment in the modern pharmaceutical sector. It covers chemical-based and next generation biotech-based therapeutics and their formulation into safe and effective medicines of high and durable quality.

The core experience across the modules is the exploration of the structure-property relationships of drugs and pharmaceutical materials. Using sophisticated apparatus and instrumentation, our graduates will develop the lab skills that will give them a range of career options. In addition, we will help to develop the interpersonal aptitudes required for you to interact with colleagues from other disciplines.

Contact Us

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Why study this course at AIT?

- An established programme delivering synthetic, formulation, analytical, and transferable skillsets,
- Opportunities for diverse applied research projects up to NQAI Level 10 (PhD)-often based on industry-faculty collaborations,
- Supporting a strong local cluster of drug substance, finished product pharmaceutical, diagnostic reagent, and medical device companies,
- This programme is recognised for professional graduate admission to the Institute of Chemistry of Ireland (GradICI).

Career Opportunities

Many of our graduates hold highly responsible and well remunerated jobs. A testament to their impact and your future employability is the number of employers who contact us looking for pharmaceutical sciences' graduates.

On completion, you will possess a comprehensive portfolio of skills enabling you to seamlessly integrate into this fast-paced, yet stable sector of the Irish economy. Inspiring roles continue to emerge within this multidisciplinary industry. Examples include: formulation scientist, pharmacologist, clinical research manager, synthetic organic chemist, analytical chemist, qualified person and regulatory affairs associate.

Quotes from our graduates in the Industry

'An excellent course…set me up for the future in this industry' **(Sinclair, 2009 graduate now Plant Chemist, Pfizer)**

'Provided a real world understanding of the fundamentals of the pharmaceutical industry,' **(Josephine, 2014, Process Coordinator, Fill Finish Operations, Seqirus)**

'From this course I gained a very solid foundation in the many aspects of chemistry, which allowed me to successfully complete a PhD in the area of natural product chemistry' **(Michelle, 2008, Symphysis Medical NUIG Research Fellow).**

Educating today for tomorrow's pharmaceutical solutions

Even casual observers will be aware of the importance of the pharmaceutical sector in the Irish industrial landscape. While a major driver for our approach to teaching remains the needs of local and national pharmaceutical manufacturing companies, we also remain determined to provide graduates with the key skills and knowledge to contribute to the research efforts that go into the development of new medicines. We take pride in delivering relevant learning through a blend of lectures, tutorials and instrumental-based practical sessions using industry-standard software platforms. The student also develops their problem solving skills during their final year research project. Many of our graduates progress to programmes of further study or research (MSc & PhD) whether in AIT, elsewhere in Ireland, or further afield.

What will I study?

Year 1

Learning & Development for Higher Education, Biology, Chemistry, Physics,Mathematics for Scientists, Introduction to IT for Scientists, Enquiry-based Learning, Scientific Computing.

Year 2

Biochemistry,Gene Technology, Microbiology, Analytical Techniques, Organic Chemistry, Mathematics & Statistics, Physical and Inorganic Chemistry.

Year 3

Coordination & Bioinorganic, Chemistry, Synthetic Organic Chemistry, Pharmaceutical Analytical Chemistry, Pharmaceutical Separations, Quality Assurance & GMP, Environmental Science Dosage Form Design, Pharmaceutical Spectroscopy, Pharmaceutical Synthesis, Pharmaceutical Materials, Professional & Transferrable Skills for Pharmaceutical Scientists, Pharmaceutical Statistics.

Year 4

Project Theory & Practice, Contemporary Issues in Pharmaceutical Sciences, Metals in Medicine, Pharmacology, Pharmaceutical Regulatory Affairs, Pharmacognosy & Natural Products, Pharmaceutical Technology, API Discovery & Characterisation, Bio-analytical Techniques in Therapeutics, Pharmaceutical Experimental Design & Validation, Medical Devices & Advanced Therapies.

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