**The Objective** of this four-year, full-time degree is to produce graduates who:
- Have an in-depth knowledge of Chemistry, in both a pure and applied context
- Have highly developed problem solving skills and a sound knowledge of processes
- Are able to contribute significantly to, and operate effectively in, the Chemical and Pharmaceutical Industries.

**Programme Outline**

The **first year** of this programme provides students with a grounding in the fundamentals of Chemistry, Biology, Physics, Mathematics and Computing. In **second year**, the mainstream Chemistry courses are developed in conjunction with relevant topics in Physics, Mathematics, Computing and Biochemistry. During **year three**, the programme aims to complete coverage of the basic Chemistry material, while further developing key laboratory skills and experience. Increasing emphasis is placed on the applied nature of Chemistry. The **final year** of the programme concentrates on the development of advanced topics and their application to problem solving. A major element of the final year is the Research Project, which comprises a Literature Survey followed by laboratory based research work.

**Relevant Work Experience** through DCU’s work experience programme INTRA (INtegrated TRAining) is a central feature of education at DCU and an integral part of most undergraduate and some postgraduate degree programmes. **Students from the B.Sc. Chemical & Pharmaceutical Sciences** are required to complete a six month INTRA placement at the end of third year, from April to September inclusive.

**Work Areas**

Students from the B.Sc. Chemical & Pharmaceutical Sciences will have the ability to work in the following areas within a wide variety of industries such as the Chemical, Pharmaceutical, Polymer, Food & Drink, Brewing, Materials, Medical and Veterinary industries:

- Synthesis
- Research & Development
- Process Development
- Materials Characterisation & Structure Determination
- Qualitative & Quantitative Chemical Analysis
- Environmental Monitoring
- Quality Control
- Process or Plant Management
- Technical Services
- Safety

**Student Availability**

Students are available for interview from October onwards. Please post vacancies on the INTRA online website at [www.intra.dcu.ie](http://www.intra.dcu.ie), or send details to:

**INTRA Unit**, Student Support & Development, Dublin City University, Glasnevin, Dublin 9, Ireland.
Phone: 00 353 1 700 5514
Fax: 00 353 1 700 5505
Website: [www.intra.dcu.ie](http://www.intra.dcu.ie)
# B.Sc. Chemical & Pharmaceutical Sciences

## Year 1

<table>
<thead>
<tr>
<th>CHEMISTRY</th>
<th>BIOLOGY</th>
<th>MATHEMATICS</th>
<th>COMPUTING</th>
<th>PHYSICS</th>
<th>LABORATORY WORK</th>
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## Year 2

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<th>CHEMISTRY</th>
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<th>MATHEMATICS</th>
<th>COMPUTING</th>
<th>PHYSICS</th>
<th>LABORATORY WORK</th>
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## Year 3

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<th>INORGANIC CHEMISTRY</th>
<th>PHYSICAL CHEMISTRY</th>
<th>ANALYTICAL CHEMISTRY</th>
<th>COMPUTING</th>
<th>LABORATORY WORK</th>
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</thead>
<tbody>
<tr>
<td>Drugs &amp; their Action, Heterocycles, Molecular Rearrangements, Reactive Intermediaries</td>
<td>Organometallics, Transition Metals, Bio-inorganic Chemistry</td>
<td>Surface Chemistry, Spectroscopy, Quantum Chemistry, Materials Science</td>
<td>Chromatography, Atomic Spectroscopy</td>
<td>Applications in Chemistry</td>
<td></td>
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</tbody>
</table>

## Year 4

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