Chemistry

CAO code: DN200 Option: Chemistry & Chemical Sciences (CCS)

Sample pathway for a degree in Chemistry



ENGAGE WITH THE PRINCIPLES

CHEMISTRY MATHEMATICS

▶ The Basis of Organic and **Biological Chemistry**

Topics include:

▶ The Basis of Physical Chemistry

▶ The Molecular World

Topics include:

▶ Mathematics for the Biological & Chemical Sciences

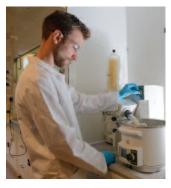
▶ One Small-Group Project

▶ One Elective module

▶ Two

Elective

modules



Preparing an experiment in Chemistry.

- Understand the important role chemistry plays in controlling the conversion of matter into useful substances such as new materials, sensors and medicines
- Develop skills in modern synthesis and analysis techniques used in the pharmaceutical and chemistry industries



CHOOSE YOUR SUBJECTS

CHEMISTRY Topics include:

▶ The Basis of Inorganic Chemistry

▶ Carbonyl Chemistry & Synthesis

- ▶ Organic Chemistry
- ▶ Physical Chemistry
- ▶ Inorganic Chemistry

▶ Quantum Mechanics

▶ Chemical Kinetics

MEDICINAL CHEMISTRY & CHEMICAL BIOLOGY

Topics include:

- ▶ Molecular Genetics and Biotechnology
- ▶ Principles of Biochemistry
- ▶ Medicinal Chemistry & Chemical Biology
- ▶ Pharmacology: Biomedical Science of Drugs
- ▶ Biomolecular Laboratory Skills



FOCUS ON YOUR CHOSEN SUBJECT

CHEMISTRY – Topics include:

- ▶ Instrumental Analysis
- ▶ Organometallic & Solid State Chemistry
- Main Group Chemistry & Bonding
- ▶ Symmetry & Computational Chemistry

▶ Two Elective modules



REFINE YOUR KNOWLEDGE

CHEMISTRY – Topics include:

BSc (Honours) Chemistry

- ▶ Chemistry Research Project
- ▶ Methods in Organic Synthesis
- ▶ Chemical Thermodynamics
- ▶ Electrochemistry
- ▶ Reactivity & Change
- ▶ Nanochemistry
- ▶ Advanced Inorganic Chemistry
- ▶ Methods in Organic Synthesis 2
- ▶ Modern Methods and Catalysis



my first Chemistry lecture, I knew it was for me. The

lecturers were excellent, funny and passionate. By my second year I was hooked. I had great opportunities to be a part of several clubs and societies. During my degree, I was organised several trips around Intervarsities. I've also had the Student Leader.

Andrew Keating, Graduate

As soon as I had

captain of the UCD Mountaineering Club. We Ireland and the UK as well as hosting the Irish Climbing fantastic opportunity to be a Peer Mentor and a Science

Industry

Most graduates work in the pharmaceutical or

chemical industries. Positions range from

development and raw materials/product

manufacturing chemists to quality control/

Students can pursue a PhD in Ireland or abroad in areas as diverse as:

PhD

- ▶ Pharmaceutical design
- ▶ Atmospheric kinetics
- ▶ Biological aspects of nanoscience
- ▶ Energy generation
- ▶ Pollution control
- ▶ Novel material synthesis
- ▶ Polymer chemistry
- ▶ Materials analysis bio-inorganic chemistry
- ▶ Computational studies

analysis in manufacturing.

▶ 2nd level or 3rd level Teaching ▶ State Labs such as the Forensic laboratory

analysis/assurance, research and

- ▶ ESB and Bord Gáis ▶ Environmental Protection Agency
- ▶ Medical device industry
- ▶ Patent law
- ▶ Healthcare industry

*See pages 4 and 5 for information on the terminology used above. Potential combinations shown here are examples only and are not guaranteed by UCD. Topics are subject to change each year.

Associate Professor Mike Casey UCD School of Chemistry

mike.casey@ucd.ie facebook.com/UCDScience twitter.com/ucdscience



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