

BSc (Hons) Chemistry

Chemical and Environmental Engineering / Faculty of Science and Engineering

Year 1 Modules

The preliminary year is designed to help you develop your English language skills so that you can make the most of your degree programme.

This special English language programme designed by the English for Academic Purposes experts at the University's Centre for English Language Education is carefully integrated with academic content modules so that you are prepared fully for years two to four of your degree programme.

Module Code	Module Title	Credits
CELEF008	Introduction to Academic Skills	10
CELEN038	The Scientific Method	10
CELEF005	Foundation Algebra	20
CELEN056	Electricity and Magnetism	10
CELEN057	Foundation Mechanics	10
CELEF003	Foundation Calculus	20
CELEF006	English for Specific Academic Purposes: Science and Engineering	10
CELEN040	Foundation Science B: Chemistry	15
CELEN058	Further Foundation Mechanics	15

Year 2 Modules

Building on your pre-university and preliminary year's studies, you will spend your qualifying year gaining core chemical knowledge and understanding.

Module Code	Module Title	Credits
CHEE1053	Sustainable Chemistry	10
CHEE1043	Foundation Laboratory Work	20
CHEE1037	An Introduction to Organic Molecules and their Reactivity	20
CHEE1038	An Introduction To Spectroscopy, Energy And Bonding In Chemistry	20
CHEE1039	An Introduction to Structure, Periodicity and Coordination Chemistry	20

MATH1047	Mathematical Methods for Chemical and Environmental Engineering	20
CHEE1054	Frontiers in Chemistry	10

Year 3 Modules

In this year, theoretical and practical modules further develop the knowledge and understanding gained in the first year. The core material accounts for approximately 80 credits of your study, with a further 20 credits taken as optional modules.

Module Code	Module Title	Credits
CHEM2006	Principles in Analytical Chemistry	10
CHEM2003	Core Laboratory Work A	30
CHEM2007	General Inorganic Chemistry	20
CHEM2010	Synthesis and Spectroscopy	20

Optional Modules

Module Code	Module Title	Credits
MTHS2003	Advanced Calculus and Differential Equation Techniques	10
CHEM2018	Sustainable Chemistry 2	10
CHEM2008	Atmospheric Chemistry	10
CHEM2011	Medicinal Chemistry and Molecular Biology	10

Year 4 Modules

You will study the three major branches of chemistry in increasing depth in 60 credits of core modules. Practical work, which consists of a series of mini-projects, is covered by a 30-credit module. You will also have a choice of optional specialist modules to provide a further 30 credits.

Module Code	Module Title	Credits
CHEM3003	Bioinorganic and Metal Coordination Chemistry	10
CHEM3016	Organometallic and Asymmetric Synthesis	10
CHEM3017	Chemical Bonding and Reactivity	10
CHEM3027	BSc Chemistry Project	30
CHEM3002	Catalysis	10

CHEM3019	Pericyclics and Reactive Intermediates	10
CHEM3018	Solids, Interfaces and Surfaces	10

Optional Modules

Module Code	Module Title	Credits
CHEM3004	Protein Structure and Function, Biospectroscopy and Bioinformatics	10
CHEM3012	Chemical Biology and Enzymes	10
CHEM3022	Contemporary Drug Discovery	10
CHEM3024	Topics in Inorganic Chemistry	10
CHEM3062	Structure Determination Methods	10