

Chemical Engineering

Heriot-Watt University

Venues

Edinburgh Campus

Content

Year 1

Provides a general introduction to the subject, emphasising the role of basic mathematics and science. Courses introduce basic techniques and principles of chemical engineering including: Mass Balances; Basic Thermodynamics and Energy Balances. An awareness of professional and personal development forms a critical part of the teaching in this year.

Year 2

Important themes focus on an understanding of the movement of fluids, heat transfer and how materials behave. Principal components include Fluid Mechanics; Heat Transfer; Mass Transfer and Thermodynamics. A mini design project is also included.

Year 3

Provides opportunities to analyse key operations in the industry, particularly the processing and separation of gases and liquids. In parallel, there are courses looking at chemical reactor theory, how processes are controlled and the prediction of physical behaviour. Material on Safety, Sustainability and Economics is consolidated in a group-based project.

Year 4

A central theme is the advanced analysis of key processing operations and their control. Specialist topics include Energy Efficiency, Safety and Sustainability. A group-based design project is also undertaken.

Year 5

Specialist engineering elective courses from subjects such as carbon solutions, renewable energy technologies, oil and gas technology, bioprocessing, brewing and distilling are studied in this year. Two major projects are also taken in this year: an in-depth individual research project; and an enhanced group-based design project, where students have the opportunity to demonstrate their skills in process design and commercial awareness, culminating in a board-style presentation to senior industry leaders.

Students wishing to obtain a Diploma in Industrial Training (DIT) linked to their degree will be assisted to find suitable placements, which may be abroad. The 10-month placement takes place in the penultimate year of the programme and is supported by Chemical & Process Engineering staff. On successful completion of a DIT placement, students will be eligible to apply for professional registration as an Engineering Technician (EngTech TChemE) with the IChemE and Engineering Council.

Start Date

September

Qualification

Degree

Study Method

Full time

Award Title

MEng

UCAS Code

H801

Course Length

5 years

Faculty

School of Engineering and Physical Sciences

Department

Chemical Engineering

Entry Requirements

2022 entry requirements:

Standard entry: 4 Highers at AAAB including Maths and Chemistry at AA plus English at National 5.

Widening access entry: 4 Highers at BBBC including Maths and Chemistry at BB plus English at National 5.

For entry to Level 2 you would require 3 Advanced Highers at AAB including Maths and Chemistry at AA plus 4 Highers at AAAB.

SCQF Level

11

Progression Routes

«ProgressionRoutes»

Combination Courses

«htmlCombinationCourse»

«htmlCombinationUCASCode»

Address

Edinburgh

EH14 4AS

Website

www.hw.ac.uk