



2017/18 Programme Fact Sheet

Chemical Engineering is dynamic and evolving. It provides many solutions to problems facing industries in the pharmaceutical, biotechnological, oil, energy and food and drink sectors. It is vital to many issues affecting our quality of life; such as better and more economical processes to reduce the environmental burden, and more delicious and longer lasting food due to the right combination of chemistry, ingredients and processing.

Birmingham is a friendly, self-confident, School which has one of the largest concentrations of chemical engineering expertise in the UK. The School is consistently in the top five chemical engineering schools for research in the country.

It has a first-class reputation in learning, teaching and research, and is highly placed in both The Guardian and The Times league tables.

Course Code:	K0032
Course Title:	Chemical Engineering
Award:	B.Eng.
Duration:	3 Years
UCAS Code:	H800
Annual Tuition Fee:	Home/EU: £9,250 Overseas: £20,790 Students undertaking a standard undergraduate programme will be charged the above fees in each year of their studies. If your programme contains either a year abroad, year in industry or clinical years, please contact your Programme Office for a full breakdown of your tuition fees across all years of your programme.
Additional Course Costs:	No mandatory additional course costs associated with this programme
Delivery Location:	Campus
Study Mode:	Full-time

Learning Outcomes:	<p>Students are expected to have knowledge and understanding of:</p> <ol style="list-style-type: none"> 1. A broad knowledge and understanding of the scientific principles underpinning Chemical and Formulation Engineering 2. A knowledge and understanding of mathematical and computational methods and their use for modelling, analysis and design in Engineering 3. A knowledge and understanding of the essential concepts, principles, theories and current practice of Chemical and Formulation Engineering, and their limitations. 4. A knowledge and understanding of the essential elements of the design process and design methodologies. 5. An understanding of important concepts from other Engineering disciplines and subjects outside engineering. 6. A knowledge and understanding of the characteristics and uses of commonly occurring engineering materials and functional products 7. Some knowledge and understanding of management and business practices. 8. An awareness of ethical and social issues related to engineering and of professional responsibilities. 9. Select and apply scientific principles, routine mathematical methods and computer based engineering tools in solving familiar Chemical Engineering problems. 10. Model and analyse routine engineering systems, processes and products. 11. Search for information for solving a problem, and present it for discussion. 12. Consider given information and extract that which is pertinent to the routine problem. 13. Design a system, component or process using routine design techniques, and be able to modify an existing design. 14. Apply engineering techniques to design and problem solving taking account of typical technical risks, with some grasp of commercial risk. 15. Take personal responsibility for acting in a professional and ethical manner.
Accredited By:	1. Accredited by the Institution of Chemical Engineers (IChemE) on behalf of the Engineering Council for the purposes of fully meeting the academic requirement for registration as an Incorporated Engineer and partially meeting the academic requirement for registration as a Chartered Engineer.
Accreditation Dependency:	Accreditation is not dependent on student choice
Awarded By:	The University of Birmingham
Regulatory Body:	The University of Birmingham is regulated by the Higher Education Funding Council for England (HEFCE).

Assessment Methods and Contact Hours

Course Title: Chemical Engineering

The below data provides an indication of the type of activity a student is likely to undertake during a typical pathway on their chosen programme of study.

The balance of assessment by examination and assessment by coursework depends to some extent on the optional modules you choose. The approximate percentage of the course assessed by coursework is set out below.

Assessment Methods

Year	% Coursework	% Written Exam	% Practical Exam
Year 1	20	80	0
Year 2	25	75	0
Year 3	45	55	0
Year 4	0	0	0

Contact Hours

Year	% Lectures, seminars or similar	% Independent Study	% Time on Placement
Year 1	30	70	0
Year 2	30	70	0
Year 3	30	70	0
Year 4	0	0	0

For a detailed breakdown of the contact hours associated with each module available on this programme, please visit <https://intranet.birmingham.ac.uk/as/registry/policy/programmemodule/handbook/index.aspx>

Programme Requirements

The modules listed below are compulsory. Optional modules are regularly reviewed to ensure they are up-to-date and informed by the latest research and teaching methods. For example optional modules please visit the respective course web page on our website.

Any changes to compulsory modules will only be made in consultation with all registered students and offer holders.

Course Title: Chemical Engineering

Programme Code: 0637

Year: 1

The following must be taken:

Module Code	Module Title	Credits	Level	Pre-requisites	Co-requisites
17299	Chemistry for Engineers	10	Certificate		
21829	Properties and Applications of Materials	10	Certificate		
21830	Modelling Concepts and Tools	20	Certificate		
29494	LC Process Design and Analysis	20	Certificate		
29495	LC Introduction to Transport Phenomena	20	Certificate		
29496	LC Reaction, Equilibria and Thermodynamics	20	Certificate		

Year: 2

The following must be taken:

Module Code	Module Title	Credits	Level	Pre-requisites	Co-requisites
17122	Reactors and Catalysis	10	Intermediate		
17125	Mass, Heat and Momentum Transport	20	Intermediate		
17126	Process Integration and Unit Operations	20	Intermediate		
17127	Computing for Design	10	Intermediate		17126 - LI Process Integ & Unit Operat
17128	Product Design Exercise	10	Intermediate		
22894	Liquid Mixing in Industrial Systems	10	Intermediate		
28467	Process Systems and Principles of Process Control	20	Intermediate	21830 - LC Modelling Concepts + Tools;	

Year: 3

The following must be taken:

Module Code	Module Title	Credits	Level	Pre-requisites	Co-requisites
17131	Process and Project Management	10	Honours		
17133	Design Project	40	Masters		
19559	Environmental Engineering and Life Cycle Analysis	10	Honours		
22992	Chemical Engineering Thermodynamics	10	Honours		
23624	LH Multiphase Systems	20	Honours		
23627	LH Processing for Formulation	10	Honours		