

<h2 style="margin: 0;">Programme Specification</h2> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Save Show Guidance </div>						
General Information						
Title		BEng Chemical Engineering				
Awarding Institution		University of Bath				
Teaching Institution		University of Bath				
Programme Accredited by		Institution of Chemical Engineers (IChemE) (July 2010)				
Collaborative Provision Type		Not Applicable ▼				
Placement Available?		Yes ▼				
Study Abroad Available?		No ▼				
Subject Benchmark Statement(s)		Engineering: http://www.qaa.ac.uk/en/Publications/Documents/Subject-benchmark-statement-Engineering-.pdf Click here to see 'QAA List'				
Programme Approved by		August 2003				
Aims	Learning Outcomes	Assessment	Placement/Prof Acc	Admissions/Support	Show All	Close
Aims; "What is the purpose of this programme of study? What is the programme intended to achieve?"						
Synopsis and Coherence		<p>The first two years are designed to give students a thorough grounding in the principles and practices of chemical engineering as well as in the topics which underpin professional chemical engineering, ranging from the pure sciences through to information technology, communication, and laboratory and design skills. There is a first-year design project in Semester 2 which introduces students to this key chemical engineering activity at an early stage and reinforces the concepts introduced in the 12-credit Chemical Engineering Principles Unit (CE10167). Additional foreign language units may be taken in these first two years of study, although marks from these are not included in year marks. The final year builds on skills and knowledge acquired in the first two years of academic study. Key activities include a combined research and design project in Semester 2. The BEng final design projects incorporate elements of both individual and group work. The final year also includes an option in Semester 1, so that students may develop their own interests in different academic areas.</p>				
Educational Aims of the Programme						

	<p>The broad aim is to enable and inspire graduates to pursue professional careers, nationally or internationally, mainly in industry but also in commerce or academia. The specific aim is to provide the breadth of education in Chemical Engineering, to allow graduates to work successfully in situations requiring the exercise of personal responsibility, and decision making in complex and unpredictable circumstances.</p> <p>Graduates should be able to:</p> <ol style="list-style-type: none"> 1. formulate and solve technical, economic and managerial problems applicable to the full range of processing industries; 2. appreciate advanced material and some of the research in the department, and understand its role in developing the discipline; 3. operate small and pilot-scale equipment and use it to acquire essential data; 4. understand process design and use integrated approaches to solve complex, often open-ended process design problems; 5. judge the criteria for successful industrial strategies; 6. demonstrate achievement of a specialised knowledge, particularly via project work, of process engineering which is founded on the chemical and physical sciences. <p>Additionally, for four-year placement students only:</p> <ol style="list-style-type: none"> 7. demonstrate a knowledge of industrial practice by means of a one-year placement which normally qualifies as part of the training and experience requirements for Corporate Membership of the Institution of Chemical Engineers (MIChemE) and Chartered Engineer (CEng) status. Nonetheless, a further 12 months of Further Learning to Masters Level is required before these qualifications can be achieved. <p>The following methods cover the following four areas. Teaching and learning is mainly through lectures, tutorials, students' private study, laboratory work, and design projects. Plant visits and specialist external and internal speakers also contribute to teaching and learning. The main ways of assessment are written and oral examinations, coursework, poster presentations, as well as laboratory and project reports, including reports on industrial placement (for placement students only).</p>
<p>Learning Outcomes; including teaching, learning and assessment methods, specifying those applicable for interim awards where appropriate. Indicate what successful students should be able to do, how well they should be able to do it and the context or conditions in which they should be able to do it. See also <i>FHEQ</i> and <i>SEC</i> guidance.</p>	
<p>Knowledge and Understanding</p>	<p>Students will demonstrate:</p> <ul style="list-style-type: none"> • systematic and detailed understanding of chemical, biochemical and physical science, ranging from the well-established principles to new techniques; • knowledge of a number of the basic practical technologies currently used in Chemical Engineering; • critical understanding of the uncertainty, ambiguity and limits of their knowledge, and how these may affect analyses of, and solutions to, engineering problems; • awareness of the commercial and financial constraints that engineers may have to work under. <p>Teaching and learning is through lectures, tutorials, students' own reading, practical exercises, laboratory work and design exercises.</p> <p>Assessment is by a combination of written examination, written course work and oral presentation.</p>
<p>Intellectual Skills</p>	<p>Students will demonstrate an:</p> <ul style="list-style-type: none"> • ability to apply the concepts and principles of chemical and biochemical engineering science to the solution of engineering problems in a number of commonly encountered engineering contexts; • ability to evaluate information in the form of arguments, assumptions and/or technical data (that may or may not be complete) in order to be able to produce solutions to problems in Chemical Engineering. <p>Teaching and learning is through lectures, tutorials, students' own reading, practical exercises, laboratory work and design exercises.</p> <p>Assessment is by a combination of written examination, written course work and oral presentation.</p>
<p>Professional Practice Skills</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • employ a range of established and new techniques to review and analyse information concerning engineering problems, and to propose and implement solutions in a professional manner; • deal with complex engineering issues, both systematically and creatively, make sound judgements in the absence of complete data, and communicate their conclusions clearly to both specialist and non-specialist audiences; • undertake further continuing professional development and the development of new and advanced skills that will enable them to assume a high level of responsibility within an engineering organisation. <p>Teaching and learning is through lectures, tutorials, students' own reading, practical exercises, laboratory work and design exercises.</p> <p>Assessment is by a combination of written examination,</p>
<p>Transferable/Key Skills</p>	

	<p>Students will demonstrate:</p> <ul style="list-style-type: none"> • an ability to use IT to collect, analyse and present technical information; • an ability to use appropriate professional simulation and design tools; • the exercise of initiative and personal responsibility; • an ability to effectively present technical information in both written and spoken form; • independent learning ability required for continuing professional development; • how to plan and execute a small project; • an ability to work in a team. <p>Teaching and learning is through lectures, tutorials, students' own reading, practical exercises, laboratory work and design exercises.</p> <p>Assessment is by a combination of written examination, written course work and oral presentation.</p>
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Assessment Methods

Summary of Assessment Regulations	▼
<p>Progression Regulations and Awards</p> <p><i>For programmes fully compliant with NFA refer to the relevant appendices of the relevant NFAAR document (UG, PGI, ED, HY, or CPD)</i></p> <p><i>Note any significant features relevant to the "Assessment in the programme context" sections of the relevant NFAAR document.</i></p> <p><i>Set out any approved exemptions from NFA.</i></p> <p><i>Set out progression and assessment regulations where these do not comply with NFA.</i></p>	<p>Students leaving an undergraduate programme prematurely may be eligible for a Certificate of Higher Education (www.bath.ac.uk/quality/documents/certhe.pdf) or a Diploma of Higher Education (www.bath.ac.uk/quality/documents/diplhe.pdf)</p> <p>The rules for progression from one stage to another and grading of assessed work and examinations conform to the University's framework for assessment and assessment regulations (NFAAR), see http://www.bath.ac.uk/registry/nfa/nfaar-ug.pdf</p>

Students leaving an undergraduate programme prematurely may be eligible for a [Certificate of Higher Education](#) or a [Diploma of Higher Education](#).

[Click here to see 'Indicators of Quality & Standards'](#)

Placement and Professional Accreditation

Details of Work Placements Requirements / Work Based Learning / Industrial Training Requirements	<p>All students are exposed throughout the degree programme to work-based and industrial aspects of chemical engineering. For example, they meet professional chemical engineers throughout their programme at Bath. In addition, as a result of staff interests, the design projects have an industrial context. Additionally, some units are devoted to the management aspects of the professional chemical engineering work environment.</p> <p>For students on the four-year thick sandwich programme the principal work-based experience is the one-year industrial placement. This is organised by a Departmental Industrial Placement Officer and has run successfully for many years with a wide range of industrial partners. A member of academic staff normally meets with the student at least twice during the year, at least once at the placement site, to discuss progress. On return to the University, students are required to submit both a report (typically 5000 words) and a poster which are assessed by staff. Industrial supervisors are also required to submit reports on student performance on placement. Full credit for the industrial placement, which is recorded on transcripts, normally only follows after satisfactory completion of these requirements.</p>
Details of Study Abroad Requirements	
Details of Professional Accreditation	<p>The BEng (Hons) degree in Chemical Engineering was last accredited by the Institution of Chemical Engineers (IChemE) in July 2010. The accreditation was for the maximum period of five years. The Department will request the IChemE to re-accredit the degree programme in Academic Year 2014/15. The Department therefore reserves the right to propose changes to the curriculum and syllabus from time to time, in line with both the University's quality assurance procedures and the IChemE's current guidelines on accreditation.</p>

Admissions and Support

Admissions Criteria including APL/APEL arrangements	
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<p><i>Only refer to APL, APEL or direct entry with advanced standing if regular use is likely to be made or is not possible.</i></p>	<p>Admissions criteria can be found by following the link below: http://www.bath.ac.uk/study/ug/prospectus/subject/chemical-biochemical-engineering/entry-requirements/</p> <p>Admissions criteria may vary from year to year. Subjects must include Chemistry and Mathematics but not General Studies or Mother Language.</p>
<p>Details of Support Available to Students</p> <p>[link to Ac Reg quality page]</p>	
<p>Department and Programme Specific Support Information</p> <p><i>e.g. induction programmes, any peer mentoring schemes, regular department events</i></p>	<p>Further information about the Department of Chemical Engineering and undergraduate study is available at: http://www.bath.ac.uk/chem-eng/</p> <p>"Accreditation of Chemical Engineering Degrees: A Guide for University Departments and Assessors Based on Learning Outcomes, Master and Bachelor Level Degree Programmes", Institution of Chemical Engineers, Rugby, February 2012, see http://www.icheme.org/membership/~media/Documents/icheme/Membership/Accreditation/accreditationguide0212.pdf</p>



BEng(Hons) Chemical Engineering - Being delivered 2017/2018
UECE-AFB05

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NFAAR Version	UG <input type="checkbox"/>
Length	3 Years
Mode of Attendance	Full-time
Mode of Placement	None
Type of Placement	None
Intended Award	Bachelor of Engineering with Honours
Award Title	BACHELOR OF ENGINEERING IN CHEMICAL ENGINEERING
For UG Masters Type Programmes this is	
Exit Awards	UECE-AFC05 Certificate of Higher Education UECE-AFL05 Diploma of Higher Education
Exit Award Rules	
Designated Alternative Programmes	

Assessment weightings and decision references		
Stage	Weighting within programme %	NFAAR decisions reference http://www.bath.ac.uk/registry/nfa/index.htm
Stage 1	<input type="text" value="0"/>	
Stage 2	<input type="text" value="32"/>	
Stage 3	<input type="text" value="68"/>	
Stage 4	<input type="text"/>	
Stage 5	<input type="text"/>	
Stage 6	<input type="text"/>	

Unit	Unit Title	Credits	Period	Part	Stage	DEU	SRU	TSC or DPC	Placement Status
Year of Study : 1 (8)									
Unit Status : Compulsory Unit (8)									
CE10185	Chemical engineering skills & practice 1	12	All Year	1	1				
CE10224	Science for chemical engineering	12	All Year	1	1				
CE10167	Chemical engineering principles (conservation, transformation & separation)	12	All Year	1	1	Yes			
CE10079	Bioprocess engineering fundamentals	6	Semester 1	1	1				
MA10192	Mathematics 1	6	Semester 1	1	1				
CE10083	Transport phenomena 1	6	Semester 2	1	1				
CE10087	First year design project	3	Semester 2	1	1				
MA10193	Mathematics 2	3	Semester 2	1	1				
Year of Study : 2 (9)									
Unit Status : Compulsory Unit (9)									
CE20186	Chemical engineering skills & practice 2	9	All Year	2	2				
XX20196	Process dynamics, modelling and control	12	All Year	2	2				
CE20089	Transport phenomena 2	6	Semester 1	2	2				
CE20090	Engineering thermodynamics	6	Semester 1	2	2				
CE20091	Reaction engineering	6	Semester 1	2	2				
CE20093	Particle technology	3	Semester 2	2	2				
CE20094	Management 1	6	Semester 2	2	2				
CE20095	Separations processes 2	6	Semester 2	2	2				
CE20223	Design & safety	6	Semester 2	2	2				
Year of Study : 3 (9)									
Unit Status : CE3015 Optional Units: Select 1 unit from this list: (4)									
CE30123	Intermediate design project	6	Semester 1	3	3				
CE40128	Management 2	6	Semester 1	3	3				
XX40175	Advanced mathematical modelling	6	Semester 1	3	3				
ZZ00001	Director of Studies approved unit		Semester 1	3	3				
Unit Status : Compulsory Unit (5)									
CE30119	Transport phenomena 3	6	Semester 1	3	3				
CE30145	Environmental management	6	Semester 1	3	3				
CE40126	Advanced biochemical engineering	6	Semester 1	3	3				
CE40127	Advanced chemical engineering	6	Semester 1	3	3				

Unit	Unit Title	Credits	Period	Part	Stage	DEU	SRU	TSC or DPC	Placement Status
CE30163	BEng final design project	30	Semester 2	3	3	Yes			

Business Support Systems - part of Computing Services



BEng(Hons) Chemical Engineering with Year long work placement - Being delivered 2017/2018
UECE-AKB05

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NFAAR Version	UG <input type="checkbox"/>
Length	4 Years
Mode of Attendance	Full-time
Mode of Placement	Thick Sandwich
Type of Placement	Year Long Work Placement
Intended Award	Bachelor of Engineering with Honours
Award Title	BACHELOR OF ENGINEERING IN CHEMICAL ENGINEERING
For UG Masters Type Programmes this is	
Exit Awards	UECE-AKC05 Certificate of Higher Education UECE-AKL05 Diploma of Higher Education
Exit Award Rules	
Designated Alternative Programmes	UECE-AFB05 BEng (hons) Chemical Engineering

Assessment weightings and decision references		
Stage	Weighting within programme %	NFAAR decisions reference
Stage 1	<input type="text" value="0"/>	http://www.bath.ac.uk/registry/nfa/index.htm
Stage 2	<input type="text" value="32"/>	
Stage 3	<input type="text" value="0"/>	
Stage 4	<input type="text" value="68"/>	
Stage 5	<input type="text"/>	
Stage 6	<input type="text"/>	

Unit	Unit Title	Credits	Period	Part	Stage	DEU	SRU	TSC or DPC	Placement Status
Year of Study : 1 (8)									
Unit Status : Compulsory Unit (8)									
CE10185	Chemical engineering skills & practice 1	12	All Year	1	1				
CE10224	Science for chemical engineering	12	All Year	1	1				
CE10167	Chemical engineering principles (conservation, transformation & separation)	12	All Year	1	1	Yes			
CE10079	Bioprocess engineering fundamentals	6	Semester 1	1	1				
MA10192	Mathematics 1	6	Semester 1	1	1				
CE10083	Transport phenomena 1	6	Semester 2	1	1				
CE10087	First year design project	3	Semester 2	1	1				
MA10193	Mathematics 2	3	Semester 2	1	1				
Year of Study : 2 (9)									
Unit Status : Compulsory Unit (9)									
CE20186	Chemical engineering skills & practice 2	9	All Year	2	2				
XX20196	Process dynamics, modelling and control	12	All Year	2	2				
CE20089	Transport phenomena 2	6	Semester 1	2	2				
CE20090	Engineering thermodynamics	6	Semester 1	2	2				
CE20091	Reaction engineering	6	Semester 1	2	2				
CE20093	Particle technology	3	Semester 2	2	2				
CE20094	Management 1	6	Semester 2	2	2				
CE20095	Separations processes 2	6	Semester 2	2	2				
CE20223	Design & safety	6	Semester 2	2	2				
Year of Study : 3 (1)									
Unit Status : Compulsory Unit (1)									
CE30115	Industrial placement	60	All Year	2	3				
Year of Study : 4 (9)									
Unit Status : CE3015 Optional Units: Select 1 unit from this list: (4)									
CE30123	Intermediate design project	6	Semester 1	3	4				
CE40128	Management 2	6	Semester 1	3	4				
XX40175	Advanced mathematical modelling	6	Semester 1	3	4				
ZZ00001	Director of Studies approved unit		Semester 1	3	4				
Unit Status : Compulsory Unit (5)									
CE30119	Transport phenomena 3	6	Semester 1	3	4				

Unit	Unit Title	Credits	Period	Part	Stage	DEU	SRU	TSC or DPC	Placement Status
CE30145	Environmental management	6	Semester 1	3	4				
CE40126	Advanced biochemical engineering	6	Semester 1	3	4				
CE40127	Advanced chemical engineering	6	Semester 1	3	4				
CE30163	BEng final design project	30	Semester 2	3	4	Yes			

Business Support Systems - part of Computing Services