

**1. Programme title(s) and code(s)**

BSc Chemistry

**HECOS Code**

HECOS Code	%
100417	100%

**2. Awarding body or institution**

University of Leicester

**3. a) Mode of study**

Full-time

**b) Type of study**

Campus-based in Panjin campus, Dalian University of Technology, PRC

**4. Registration periods**

The normal period of registration for the BSc is four years

The maximum period of registration for the BSc is six years

**5. Typical entry requirements**

All students that have followed the Chinese school and qualification system must be from the same Gaokao group (the top group out of four) as students entering other DUT undergraduate programmes. Students must also possess a sufficient level of English language to enable such students to undertake studies with the English language as the teaching medium.

For Year 1 entry, a Gaokao English language score of 70% for English language or an IELTS score of 5.0 will be required. After intensive English language teaching in Year 1, students will be required to demonstrate CEFR Level B2 in English language (otherwise IELTS 6.0).

**6. Accreditation of Prior Learning**

APL will not be accepted for exemptions from individual modules, however may be considered for direct entry to Year 2, on a case-by-case basis and subject to the general provisions of the University APL policy.

**7. Programme aims**

The programme aims:

- To provide a broad and in-depth understanding of ideas central to chemistry
- To provide students with direct experience of a UK-style degree programme
- To enhance and develop the students' English language skills
- To train students in the practical skills necessary for the safe manipulation of chemicals

- To generate interest in, and understanding of, the wider role of chemistry in society e.g. industry and commerce
- To enable students to develop independent learning skills as well as the experience of working as part of a team
- To stimulate intellectual development, develop powers of critical analysis and ability to solve problems
- To enhance written and oral communication skills
- To provide students with training in mathematical techniques and IT skills
- To introduce students to chemical research methodology through carrying out a research project
- To introduce students to some topics of current chemical or chemical engineering research
- To equip students with the knowledge and generic skills for employment or further training in R&D, science-based industry and establishments, education, and for training at management levels in other professions.

#### 8. Reference points used to inform the programme specification

- [QAA Benchmarking Statement for Chemistry](#)
- Framework for Higher Education Qualifications (FHEQ)
- UK Quality Code for Higher Education
- [University Learning Strategy](#)
- [University Assessment Strategy](#)
- University of Leicester Periodic Developmental Review Report
- External Examiners' reports (annual)
- United Nations Education for Sustainable Development Goals
- Student Destinations Data

#### 9. Programme Outcomes

Unless otherwise stated, programme outcomes apply to all awards specified in 1. Programme title(s).

##### a) Discipline specific knowledge and competencies

##### i) Mastery of an appropriate body of knowledge

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Typical students should be able to:		
recall and apply basic chemistry theory across all three main areas of chemistry (organic, inorganic and physical) and related mathematics	Lectures; Directed reading; Problem classes; Tutorials; Laboratory Practical Classes; Computer aided training.	Written exams; assessed practical work; assessed computer exercises; assessed problems; tutorial work
solve structured and unseen model problems	Lectures; Directed reading; Problem classes; Tutorials; Laboratory Practical Classes; Computer aided training.	Written exams; assessed practical work; assessed computer exercises; assessed problems; tutorial work
conduct experiments and apply practical techniques.	Lectures; Directed reading; Problem classes; Tutorials; Laboratory Practical Classes; Computer aided training.	Written exams; assessed practical work; assessed computer exercises; assessed problems; tutorial work

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
demonstrate detailed knowledge of selected topics in five areas of chemistry (analytical, chemical engineering, organic, inorganic and physical).	Lectures; Directed reading; Problem classes; Computer aided training; Project supervision	Written exams; assessed computer exercises; project assessment.

ii) Understanding and application of key concepts and techniques

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Typical students should be able to:		
apply chemical concepts in new situations e.g. ability to predict physical and chemical properties by comparison with analogues	Lectures; Directed Reading; Problem Classes; Tutorials; Laboratory Practical Classes; Computer aided learning; Project supervision.	Written exams; assessed practical work, including lab samples, associated data, lab notebooks and reports; assessed computer exercises; assessed problems; tutorial work; project assessment.
apply logic and chemical knowledge to make deductions based on (limited) evidence	Lectures; Directed Reading; Problem Classes; Tutorials; Laboratory Practical Classes; Computer aided learning; Project supervision.	Written exams; assessed practical work, including lab samples, associated data, lab notebooks and reports; assessed computer exercises; assessed problems; tutorial work; project assessment.
solve familiar and unfamiliar chemistry related problems	Lectures; Directed Reading; Problem Classes; Tutorials; Laboratory Practical Classes; Computer aided learning; Project supervision.	Written exams; assessed practical work, including lab samples, associated data, lab notebooks and reports; assessed computer exercises; assessed problems; tutorial work; project assessment.
design, construct and undertake experiments	Lectures; Directed Reading; Problem Classes; Tutorials; Laboratory Practical Classes; Computer aided learning; Project supervision.	Written exams; assessed practical work, including lab samples, associated data, lab notebooks and reports; assessed computer exercises; assessed problems; tutorial work; project assessment.
demonstrate professional use of standard equipment and knowledge of and application of safety procedures.	Lectures; Directed Reading; Problem Classes; Tutorials; Laboratory Practical Classes; Computer aided learning; Project supervision.	Written exams; assessed practical work, including lab samples, associated data, lab notebooks and reports; assessed computer exercises; assessed problems; tutorial work; project assessment.

iii) Critical analysis of key issues

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Typical students should be able to:		

<b>Intended Learning Outcomes</b>	<b>Teaching and Learning Methods</b>	<b>How Demonstrated?</b>
critically appraise physical and chemical information, and discuss its limitations	Progressively through the programme, particularly in the 4th year.  Lectures; Problem Classes; Tutorials; Laboratory Practical Classes; Group projects; Computer aided learning; Project supervision.	Written exams; assessed practical work, including lab samples, associated data, lab notebooks and reports; assessed computer exercises; assessed problems; tutorial work; project assessment.
summarise key findings of scientific papers	Progressively through the programme, particularly in the 4th year.  Lectures; Problem Classes; Tutorials; Laboratory Practical Classes; Group projects; Computer aided learning; Project supervision.	Written exams; assessed practical work, including lab samples, associated data, lab notebooks and reports; assessed computer exercises; assessed problems; tutorial work; project assessment.
draw quantitative conclusions from sample data	Progressively through the programme, particularly in the 4th year.  Lectures; Problem Classes; Tutorials; Laboratory Practical Classes; Group projects; Computer aided learning; Project supervision.	Written exams; assessed practical work, including lab samples, associated data, lab notebooks and reports; assessed computer exercises; assessed problems; tutorial work; project assessment.
critically assess and compare scientific theories	Progressively through the programme, particularly in the 4th year.  Lectures; Problem Classes; Tutorials; Laboratory Practical Classes; Group projects; Computer aided learning; Project supervision.	Written exams; assessed practical work, including lab samples, associated data, lab notebooks and reports; assessed computer exercises; assessed problems; tutorial work; project assessment.

iv) Clear and concise presentation of material

<b>Intended Learning Outcomes</b>	<b>Teaching and Learning Methods</b>	<b>How Demonstrated?</b>
Typical students should be able to:		
present scientific ideas, data and results in a variety of (appropriate) forms, e.g. reports, seminars, posters	Tutorials, Laboratory Practical Classes; Group projects; Problem classes; Project supervision.	Assessed practical work, including lab samples, associated data, lab notebooks and reports; assessed computer exercises; assessed problems; tutorial work; project assessment.
use chemical software, e.g. drawing, molecular modelling	Tutorials, Laboratory Practical Classes; Group projects; Problem classes; Project supervision.	Assessed practical work, including lab samples, associated data, lab notebooks and reports; assessed computer exercises; assessed problems; tutorial work; project assessment.

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
participate in scientific discussion and debate.	Tutorials, Laboratory Practical Classes; Group projects; Problem classes; Project supervision.	Assessed practical work, including lab samples, associated data, lab notebooks and reports; assessed computer exercises; assessed problems; tutorial work; project assessment.

v) Critical appraisal of evidence with appropriate insight

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Typical students should be able to:		
discuss and implement experimental methodology	Tutorials, Laboratory Practical Classes; Group projects; Problem classes; Project supervision.	Assessed practical work, including lab samples, associated data, lab notebooks and reports; assessed computer exercises; assessed problems; tutorial work; project assessment.
collect and critically analyse data	Tutorials, Laboratory Practical Classes; Group projects; Problem classes; Project supervision.	Assessed practical work, including lab samples, associated data, lab notebooks and reports; assessed computer exercises; assessed problems; tutorial work; project assessment.
draw valid inferences from data	Tutorials, Laboratory Practical Classes; Group projects; Problem classes; Project supervision.	Assessed practical work, including lab samples, associated data, lab notebooks and reports; assessed computer exercises; assessed problems; tutorial work; project assessment.
interrogate and discuss scientific literature.	Tutorials, Laboratory Practical Classes; Group projects; Problem classes; Project supervision.	Assessed practical work, including lab samples, associated data, lab notebooks and reports; assessed computer exercises; assessed problems; tutorial work; project assessment.

vi) Other discipline specific competencies

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Typical students should be able to:		
respond to questioning	Tutorials; Group project supervision; Project supervision	Tutorial work; project assessment.
give a short seminar.	Tutorials; Group project supervision; Project supervision	Tutorial work; project assessment.

**b) Transferable skills**

## i) Oral communication

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
In English, typical students should be able to:		
give reasoned arguments in response to chemical questions	Tutorials; Group work; Group project supervision; Project supervision	Tutorial work; Oral project presentations and examinations
give a short seminar on a chemical topic	Tutorials; Group work; Group project supervision; Project supervision	Tutorial work; Oral project presentations and examinations

## ii) Written communication

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
In English, typical students should be able to:		
write abstracts, tutorial and problem class work, lab notebooks, lab reports and project dissertation	Lectures; Tutorials; Practical classes; Group work; Writing workshops; Project supervision.	Assessed practical work, including lab samples, associated data, lab notebooks and reports; assessed computer exercises; assessed problems; assessed essays; tutorial work; project assessment.
communicate scientifically.	Lectures; Tutorials; Practical classes; Group work; Writing workshops; Project supervision.	Assessed practical work, including lab samples, associated data, lab notebooks and reports; assessed computer exercises; assessed problems; assessed essays; tutorial work; project assessment.

## iii) Information technology

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Typical students should be able to:		
use mathematical packages for data analysis	Problem classes; Practical classes; Group work; Project supervision	Assessed practical work; assessed computer exercises; project assessment.
use spreadsheets, presentation and word processing facilities	Problem classes; Practical classes; Group work; Project supervision	Assessed practical work; assessed computer exercises; project assessment.
use scientific software packages, e.g. drawing or molecular modelling.	Problem classes; Practical classes; Group work; Project supervision	Assessed practical work; assessed computer exercises; project assessment.

## iv) Numeracy

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Typical students should be able to:		

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
use analytical and graphical methods	Progressively throughout course.	Written exams; assessed practical work, including lab samples, associated data, lab notebooks and reports; assessed computer exercises; assessed problems; tutorial work; project assessment.
use calculus in Chemistry and Chemical Engineering	Progressively throughout course.	Written exams; assessed practical work, including lab samples, associated data, lab notebooks and reports; assessed computer exercises; assessed problems; tutorial work; project assessment.
analyse data	Progressively throughout course.	Written exams; assessed practical work, including lab samples, associated data, lab notebooks and reports; assessed computer exercises; assessed problems; tutorial work; project assessment.
solve numerical problems.	Progressively throughout course.	

v) Team working

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Typical students should be able to:	Group problem solving; Group projects; Project supervision	Group assessments (oral and written); project assessment.
discuss concepts and formulate plans working with peers	Group problem solving; Group projects; Project supervision	Group assessments (oral and written); project assessment.
organize time and tasks	Group problem solving; Group projects; Project supervision	Group assessments (oral and written); project assessment.
produce joint reports/presentations	Group problem solving; Group projects; Project supervision	Group assessments (oral and written); project assessment.
recognize individual strengths.	Group problem solving; Group projects; Project supervision	Group assessments (oral and written); project assessment.

vi) Problem solving

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Typical students should be able to:		
apply knowledge	Lectures; Problem Classes; Tutorials; Laboratory Practical Classes; Computer aided learning; Project supervision.	Written exams; assessed practical work; assessed computer exercises; assessed problems; tutorial work; project assessment.
analyse and solve familiar and unfamiliar problems	Lectures; Problem Classes; Tutorials; Laboratory Practical Classes; Computer aided learning; Project supervision.	Written exams; assessed practical work; assessed computer exercises; assessed problems; tutorial work; project assessment.

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
plan and implement laboratory work and projects.	Lectures; Problem Classes; Tutorials; Laboratory Practical Classes; Computer aided learning; Project supervision.	Written exams; assessed practical work; assessed computer exercises; assessed problems; tutorial work; project assessment.

vii) Information handling

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Typical students should be able to:		
describe and discuss the scientific method	Lectures; Problem Classes; Tutorials; Laboratory Practical Classes; Computer aided learning; Project supervision.	Written exams; assessed practical work; assessed computer exercises; assessed problems; tutorial work; project assessment.
gather, retrieve, manipulate and analyse chemical data and information from a variety of sources including scientific journals and databases	Lectures; Problem Classes; Tutorials; Laboratory Practical Classes; Computer aided learning; Project supervision.	Written exams; assessed practical work; assessed computer exercises; assessed problems; tutorial work; project assessment.
present data in appropriate forms.	Lectures; Problem Classes; Tutorials; Laboratory Practical Classes; Computer aided learning; Project supervision.	Written exams; assessed practical work; assessed computer exercises; assessed problems; tutorial work; project assessment.

viii) Skills for lifelong learning

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Typical students should be able to:		
demonstrate understanding of the professional responsibilities of a chemist	Progressively through the programme, particularly in the 4th year.  Lectures; Problem Classes; Tutorials; Laboratory Practical Classes; Group projects; Computer aided learning; Project supervision.	Meeting deadlines; All assessment elements; Project assessment.
develop their study and time management skills	Progressively through the programme, particularly in the 4th year.  Lectures; Problem Classes; Tutorials; Laboratory Practical Classes; Group projects; Computer aided learning; Project supervision.	Meeting deadlines; All assessment elements; Project assessment.
learn independently	Progressively through the programme, particularly in the 4th year.  Lectures; Problem Classes; Tutorials; Laboratory Practical Classes; Group projects; Computer aided learning; Project supervision.	Meeting deadlines; All assessment elements; Project assessment.



Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
access and search scholarly articles and databases	Progressively through the programme, particularly in the 4th year.  Lectures; Problem Classes; Tutorials; Laboratory Practical Classes; Group projects; Computer aided learning; Project supervision.	Meeting deadlines; All assessment elements; Project assessment.
retrieve information	Progressively through the programme, particularly in the 4th year.  Lectures; Problem Classes; Tutorials; Laboratory Practical Classes; Group projects; Computer aided learning; Project supervision.	Meeting deadlines; All assessment elements; Project assessment.
analyse data	Progressively through the programme, particularly in the 4th year.  Lectures; Problem Classes; Tutorials; Laboratory Practical Classes; Group projects; Computer aided learning; Project supervision.	Meeting deadlines; All assessment elements; Project assessment.
work in groups	Progressively through the programme, particularly in the 4th year.  Lectures; Problem Classes; Tutorials; Laboratory Practical Classes; Group projects; Computer aided learning; Project supervision.	Meeting deadlines; All assessment elements; Project assessment.
plan and implement group and individual activities.	Progressively through the programme, particularly in the 4th year.  Lectures; Problem Classes; Tutorials; Laboratory Practical Classes; Group projects; Computer aided learning; Project supervision.	Meeting deadlines; All assessment elements; Project assessment.

## 10. Progression points

This programme follows the standard Scheme of Progression set out in [Senate Regulations](#) – see the version of Senate Regulation 5 governing undergraduate programmes relevant to the year of entry.

The following additional progression requirements for this programme have been approved:

- There are two progression points in each academic year: end of Semester 1 and end of Semester 2 of the DUT-DLI teaching calendar. A progression decision is made by the DLI Board of Examiners on the basis of the Semester 1 exam/resit results in March and Semester 2 exam/resit results in July each year. Where it is known following Semester 1 that a student has not met the requirements to progress to the next year, they may be required to suspend their studies at that stage.

- Students must pass the English language modules in year 1, which cannot be carried into year 2.
- Students must pass each of the chemistry laboratory practical modules in Years 2 and 3, for which there are no opportunities for reassessment, and which cannot be carried into the subsequent year. These modules have an additional attendance requirement wherein students may not be absent for more than 10% of the scheduled laboratory classes (including submission of post-lab work) Additional “catch-up” sessions will be provided for students for whom non-attendance has been mitigated.

In cases where a student has failed to meet a requirement to progress he or she will be required to withdraw from the course.

Transfer between different degrees: Students not satisfying the UoL progression requirements may be allowed to transfer onto DUT programmes. Students satisfying the UoL progression requirements may be allowed to transfer to the University of Leicester campus-based BSc Chemistry degree programme, subject to capacity and physical resource limitations on the UoL campus.

### c) Course transfers

n/a

#### 11. Criteria for award and classification

This programme follows the standard scheme of undergraduate award and classification set out in [Senate Regulations](#) – see the version of *Senate Regulation 5 governing undergraduate programmes* relevant to the year of entry.

#### 12. Special features

Programme delivered entirely in English with UK-style facilities provided on Panjin campus, Small group tutorials via simultaneous on-line classroom approaches, group problem solving, research-based projects, problem based learning.

#### 13. Indications of programme quality

All current BSc degrees were accredited by the Royal Society of Chemistry (RSC) in Jan 2016. It is our intention to seek accreditation from the RSC for this BSc Chemistry programme during the next accreditation review.

#### 14. External Examiner(s) reports

The details of the External Examiner(s) for this programme and the most recent External Examiners' reports for this programme can be found at [exampapers@Leicester](mailto:exampapers@Leicester) [log-in required]

## Programme Specification (Undergraduate)

FOR ENTRY YEAR: 2022/23

Date created: [Click or tap here to enter text.](#)

Last amended: 03/03/2022

Version no. 1

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### Appendix 1: Programme structure (programme regulations)

The University regularly reviews its programmes and modules to ensure that they reflect the current status of the discipline and offer the best learning experience to students. On occasion, it may be necessary to alter particular aspects of a course or module.

#### Updates to the programme

Academic year affected	Module Code(s)	Update
2022/23	EL0002, EL0003, EL0004	Three 15 credit modules introduced in place of 45 credit English language module.

BSc Chemistry (4+0)

Level 3/Year 0      2022/23      (Students are at Panjin Campus)

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	n/a	60 credits	60 credits
Optional	n/a	n/a	n/a

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Sem 1	EL0002	University English 1: Speaking and Listening	15 credits
Sem 1	EL0003	University English 2: Reading and Writing	15 credits
Sem 1	EL0004	University English 3: Project	15 credits
Sem 1	CH0280	Advanced Mathematics I	15 credits
Sem 1		Military Theory and Training	n/a
Sem 1		Moral Cultivation and Basic Law	n/a
Sem 1		Physical Education I	n/a
Sem 2	EL0005	English for Specific Academic Purposes	15 credits
Sem 2	CH0061	Introduction to Chemistry	30 credits
Sem 2	CH0281	Advanced Mathematics II	15 credits
Sem 2		Chinese Modern Contemporary History and Situation Policy	n/a
Sem 2		Physical Education II	n/a
Sem 3		College Student Mental Health and Health Education	n/a

**Level 4/Year 1      2023/24      (Students are at Panjin Campus)**

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	15 credits	60 credits	45 credits
Optional	n/a	n/a	n/a

120 credits in total

## Core modules

Delivery period	Code	Title	Credits
Sem 1	CH1200	General Chemistry	15 credits
Sem 1	CH1202	Introductory Inorganic Chemistry	15 credits
Sem 1	CH1282	Advanced Mathematics III	15 credits
Sem 1	CH1283	College Physics and Practical A	15 credits
Sem 1		College Computing	n/a
Sem 1		Principle of Marxism and Theory of Socialism	n/a
Sem 2	CH1201	Introductory Organic Chemistry	15 credits
Sem 2	CH1203	Introductory Physical Chemistry	15 credits
Sem 2	CH1284	College Physics and Practical B	15 credits
Sem 2		Introduction to Maoism and Theory of Socialism	n/a
Sem 2		General Optional Course 1	n/a
Sem 3		Cognition Practical	n/a
Year long	CH1205	Introductory Practical Chemistry	15 credits

### Notes

Delivery of Year Long modules is weighted towards Semester 2 to ensure approximate equal student workload between semesters.

### Level 5/Year 2      2024/25      (Students are at Panjin Campus)

#### Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	n/a	60 credits	60 credits
Optional	n/a	n/a	n/a

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Sem 1	CH2200	Spectroscopy Theory and Practice	15 credits
Sem 1	CH2201	Organic Chemistry	15 credits
Sem 1	CH2280	Principles of Chemical Engineering and Practical I	15 credits
Sem 1	CH2284	Practical Chemistry and Key Skills – Part A	15 credits
Sem 1		Biochemistry	n/a
Sem 1		Biochemistry Practical	n/a
Sem 2	CH2202	Inorganic Chemistry	15 credits
Sem 2	CH2203	Physical Chemistry	15 credits
Sem 2	CH2281	Principles of Chemical Engineering and Practical II	15 credits
Sem 2	CH2285	Practical Chemistry and Key Skills – Part B	15 credits
Sem 2		General Optional Course 2	n/a
Sem 3		Production Practical	n/a

**Level 6/Year 3      2025/26      (Students are at Panjin Campus)**

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	n/a	45 credits	45 credits
Optional	n/a	15 credits	15 credits

120 credits in total

### Core modules

Delivery period	Code	Title	Credits
Sem 1	CH3201	Advanced Organic Chemistry	15 credits
Sem 1	CH3202	Advanced Inorganic Chemistry	15 credits
Sem 1	CH3203	Advanced Physical Chemistry	15 credits
Sem 1		General Optional Course 3	n/a
Sem 2	CH3851	Chemistry Research Project Part 1	30 credits
Sem 2	CH3852	Chemistry Research Project Part 2	15 credits

### Notes

Delivery of Year Long modules is weighted to ensure approximate equal student workload between semesters.

### Option modules

Delivery period	Code	Title	Credits
Sem 1	CH3206	Advanced Analytical Chemistry	15 credits
Sem 1	CH3280	Polymer Chemistry and Physics	15 credits
Sem 2	CH3205	Metals in Synthesis	15 credits
Sem 2	CH3209	Computational Chemistry	15 credits

### Notes

This is an indicative list of option modules and not definitive of what will be available. Option module choice is also subject to availability, timetabling, student number restrictions and, where appropriate, students having taken appropriate pre-requisite modules.

BSc Chemistry (2+2)

**Level 3/Year 0      2022/23      (Students are at Panjin Campus)**

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	n/a	60 credits	60 credits
Optional	n/a	n/a	n/a

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Sem 1	EL0002	University English 1: Speaking and Listening	15 credits
Sem 1	EL0003	University English 2: Reading and Writing	15 credits
Sem 1	EL0004	University English 3: Project	15 credits
Sem 1	CH0280	Advanced Mathematics I	15 credits
Sem 1		Military Theory and Training	n/a
Sem 1		Moral Cultivation and Basic Law	n/a
Sem 1		Physical Education I	n/a
Sem 2	EL0005	English for Specific Academic Purposes	15 credits
Sem 2	CH0061	Introduction to Chemistry	15 credits
Sem 2	CH0281	Advanced Mathematics II	15 credits
Sem 2		Chinese Modern Contemporary History and Situation Policy	n/a
Sem 2		Physical Education II	n/a
Sem 3		College Student Mental Health and Health Education	n/a



**Level 4/Year 1      2023/24      (Students are at Panjin Campus)**

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	15 credits	60 credits	45 credits
Optional	n/a	n/a	n/a

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Sem 1	CH1200	General Chemistry	15 credits
Sem 1	CH1202	Introductory Inorganic Chemistry	15 credits
Sem 1	CH1282	Advanced Mathematics III	15 credits
Sem 1	CH1283	College Physics and Practical A	15 credits
Sem 1		College Computing	n/a
Sem 1		Principle of Marxism and Theory of Socialism	n/a
Sem 2	CH1201	Introductory Organic Chemistry	15 credits
Sem 2	CH1203	Introductory Physical Chemistry	15 credits
Sem 2	CH1284	College Physics and Practical B	15 credits
Sem 2		Introduction to Maoism and Theory of Socialism	n/a
Sem 2		General Optional Course 1	n/a
Sem 3		Cognition Practical	n/a
Year long	CH1205	Introductory Practical Chemistry	15 credits

**Notes**

Delivery of Year Long modules is weighted towards Semester 2 to ensure approximate equal student workload between semesters.

**Level 5/Year 2      2024/25      (Students are at Leicester)**

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	75 credits	30 credits	15 credits
Optional	n/a	n/a	n/a

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Sem 1	CH2200	Spectroscopy Theory and Practice	15 credits
Sem 1	CH2207	Polymer and Materials Chemistry	15 credits
Sem 2	CH2206	Analytical Chemistry in Practice	15 credits
Year long	CH2201	Organic Chemistry	15 credits
Year long	CH2202	Inorganic Chemistry	15 credits
Year long	CH2203	Physical Chemistry	15 credits
Year long	CH2204	Practical Chemistry and Key Skills	30 credits

**Notes**

Delivery of Year Long modules is weighted towards Semester 2 to ensure approximate equal student workload between semesters.

**Level 6/Year 3      2025/26      (Students are at Leicester)**

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	30 credits	45 credits	30 credits
Optional	n/a	n/a	15 credits

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Sem 1	CH3201	Advanced Organic Chemistry	15 credits
Sem 1	CH3202	Advanced Inorganic Chemistry	15 credits
Sem 1	CH3263	BSc Project Practical	15 credits
Sem 2	CH3203	Advanced Physical Chemistry	15 credits
Sem 2	CH3205	Metals in Synthesis	15 credits
Year long	CH3260	BSc General Paper and Key Skills	15 credits
Year long	CH3264	BSc Project Report	15 credits

**Notes**

Delivery of Year Long modules is weighted to ensure approximate equal student workload between semesters.

Option modules

Delivery period	Code	Title	Credits
Sem 2	CH3206	Advanced Analytical Chemistry	15 credits
Sem 2	CH3208	Advanced Materials Chemistry	15 credits

## Notes

This is an indicative list of option modules and not definitive of what will be available. Option module choice is also subject to availability, timetabling, student number restrictions and, where appropriate, students having taken appropriate pre-requisite modules.

## BSc Chemistry (2+1+1)

**Level 3/Year 0      2022/23      (Students are at Panjin Campus)**

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	n/a	60 credits	60 credits
Optional	n/a	n/a	n/a

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Sem 1	EL0002	University English 1: Speaking and Listening	15 credits
Sem 1	EL0003	University English 2: Reading and Writing	15 credits
Sem 1	EL0004	University English 3: Project	15 credits
Sem 1	CH0280	Advanced Mathematics I	15 credits
Sem 1		Military Theory and Training	n/a
Sem 1		Moral Cultivation and Basic Law	n/a
Sem 1		Physical Education I	n/a
Sem 2	EL0005	English for Specific Academic Purposes	15 credits
Sem 2	CH0061	Introduction to Chemistry	15 credits
Sem 2	CH0281	Advanced Mathematics II	15 credits
Sem 2		Chinese Modern Contemporary History and Situation Policy	n/a

Delivery period	Code	Title	Credits
Sem 2		Physical Education II	n/a
Sem 3		College Student Mental Health and Health Education	n/a

**Level 4/Year 1      2023/24      (Students are at Panjin Campus)**

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	15 credits	60 credits	45 credits
Optional	n/a	n/a	n/a

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Sem 1	CH1200	General Chemistry	15 credits
Sem 1	CH1202	Introductory Inorganic Chemistry	15 credits
Sem 1	CH1282	Advanced Mathematics III	15 credits
Sem 1	CH1283	College Physics and Practical A	15 credits
Sem 1		College Computing	n/a
Sem 1		Principle of Marxism and Theory of Socialism	n/a
Sem 2	CH1201	Introductory Organic Chemistry	15 credits
Sem 2	CH1203	Introductory Physical Chemistry	15 credits
Sem 2	CH1284	College Physics and Practical B	15 credits
Sem 2		Introduction to Maoism and Theory of Socialism	n/a
Sem 2		General Optional Course 1	n/a

Delivery period	Code	Title	Credits
Sem 3		Cognition Practical	n/a
Year long	CH1205	Introductory Practical Chemistry	15 credits

#### Notes

Delivery of Year Long modules is weighted towards Semester 2 to ensure approximate equal student workload between semesters.

#### Level 5/Year 2      2024/25      (Students are at Leicester)

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	75 credits	30 credits	15 credits
Optional	n/a	n/a	n/a

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Sem 1	CH2200	Spectroscopy Theory and Practice	15 credits
Sem 1	CH2207	Polymer and Materials Chemistry	15 credits
Sem 2	CH2206	Analytical Chemistry in Practice	15 credits
Year long	CH2201	Organic Chemistry	15 credits
Year long	CH2202	Inorganic Chemistry	15 credits
Year long	CH2203	Physical Chemistry	15 credits
Year long	CH2204	Practical Chemistry and Key Skills	30 credits

#### Notes

Delivery of Year Long modules is weighted towards Semester 2 to ensure approximate equal student workload between semesters.

**Level 6/Year 3      2025/26      (Students are at Panjin Campus)**

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	n/a	45 credits	45 credits
Optional	n/a	15 credits	15 credits

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Sem 1	CH3201	Advanced Organic Chemistry	15 credits
Sem 1	CH3202	Advanced Inorganic Chemistry	15 credits
Sem 1	CH3203	Advanced Physical Chemistry	15 credits
Sem 1		General Optional Course 3	n/a
Sem 2	CH3851	Chemistry Research Project Part 1	30 credits
Sem 2	CH3852	Chemistry Research Project Part 2	15 credits

**Notes**

Delivery of Year Long modules is weighted to ensure approximate equal student workload between semesters.

Option modules

Delivery period	Code	Title	Credits
Sem 1	CH3206	Advanced Analytical Chemistry	15 credits
Sem 1	CH3280	Polymer Chemistry and Physics	15 credits
Sem 2	CH3205	Metals in Synthesis	15 credits
Sem 2	CH3209	Computational Chemistry	15 credits

## Notes

This is an indicative list of option modules and not definitive of what will be available. Option module choice is also subject to availability, timetabling, student number restrictions and, where appropriate, students having taken appropriate pre-requisite modules.

## BSc Chemistry (3+1)

**Level 3/Year 0      2022/23      (Students are at Panjin Campus)**

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	n/a	60 credits	60 credits
Optional	n/a	n/a	n/a

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Sem 1	EL0002	University English 1: Speaking and Listening	15 credits
Sem 1	EL0003	University English 2: Reading and Writing	15 credits
Sem 1	EL0004	University English 3: Project	15 credits
Sem 1	CH0280	Advanced Mathematics I	15 credits
Sem 1		Military Theory and Training	n/a
Sem 1		Moral Cultivation and Basic Law	n/a
Sem 1		Physical Education I	n/a
Sem 2	EL0005	English for Specific Academic Purposes	15 credits
Sem 2	CH0061	Introduction to Chemistry	15 credits
Sem 2	CH0281	Advanced Mathematics II	15 credits



Delivery period	Code	Title	Credits
Sem 2		Chinese Modern Contemporary History and Situation Policy	n/a
Sem 2		Physical Education II	n/a
Sem 3		College Student Mental Health and Health Education	n/a

**Level 4/Year 1      2023/24      (Students are at Panjin Campus)**

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	15 credits	60 credits	45 credits
Optional	n/a	n/a	n/a

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Sem 1	CH1200	General Chemistry	15 credits
Sem 1	CH1202	Introductory Inorganic Chemistry	15 credits
Sem 1	CH1282	Advanced Mathematics III	15 credits
Sem 1	CH1283	College Physics and Practical A	15 credits
Sem 1		College Computing	n/a
Sem 1		Principle of Marxism and Theory of Socialism	n/a
Sem 2	CH1201	Introductory Organic Chemistry	15 credits
Sem 2	CH1203	Introductory Physical Chemistry	15 credits
Sem 2	CH1284	College Physics and Practical B	15 credits
Sem 2		Introduction to Maoism and Theory of Socialism	n/a

Delivery period	Code	Title	Credits
Sem 2		General Optional Course 1	n/a
Sem 3		Cognition Practical	n/a
Year long	CH1205	Introductory Practical Chemistry	15 credits

#### Notes

Delivery of Year Long modules is weighted towards Semester 2 to ensure approximate equal student workload between semesters.

#### Level 5/Year 2      2024/25      (Students are at Panjin Campus)

#### Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	n/a	60 credits	60 credits
Optional	n/a	n/a	n/a

120 credits in total

#### Core modules

Delivery period	Code	Title	Credits
Sem 1	CH2200	Spectroscopy Theory and Practice	15 credits
Sem 1	CH2201	Organic Chemistry	15 credits
Sem 1	CH2280	Principles of Chemical Engineering and Practical I	15 credits
Sem 1	CH2284	Practical Chemistry and Key Skills – Part A	15 credits
Sem 1		Biochemistry	n/a
Sem 1		Biochemistry Practical	n/a
Sem 2	CH2202	Inorganic Chemistry	15 credits
Sem 2	CH2203	Physical Chemistry	15 credits

Delivery period	Code	Title	Credits
Sem 2	CH2281	Principles of Chemical Engineering and Practical II	15 credits
Sem 2	CH2285	Practical Chemistry and Key Skills – Part B	15 credits
Sem 2		General Optional Course 2	n/a
Sem 3		Production Practical	n/a

**Level 6/Year 3      2025/26      (Students are at Leicester)**

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	30 credits	45 credits	30 credits
Optional	n/a	n/a	15 credits

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Sem 1	CH3201	Advanced Organic Chemistry	15 credits
Sem 1	CH3202	Advanced Inorganic Chemistry	15 credits
Sem 1	CH3263	BSc Project Practical	15 credits
Sem 2	CH3203	Advanced Physical Chemistry	15 credits
Sem 2	CH3205	Metals in Synthesis	15 credits
Year long	CH3260	BSc General Paper and Key Skills	15 credits
Year long	CH3264	BSc Project Report	15 credits

**Notes**

Delivery of Year Long modules is weighted to ensure approximate equal student workload between semesters.

## Option modules

Delivery period	Code	Title	Credits
Sem 2	CH3206	Advanced Analytical Chemistry	15 credits
Sem 2	CH3208	Advanced Materials Chemistry	15 credits

### Notes

This is an indicative list of option modules and not definitive of what will be available. Option module choice is also subject to availability, timetabling, student number restrictions and, where appropriate, students having taken appropriate pre-requisite modules.

## Appendix 2: Module specifications

See undergraduate [module specification database](#) (Note - modules are organized by year of delivery).