# Programme Specification (Undergraduate) FOR ENTRY YEAR: 2026/27

**Date created:** 31/03/21 **Last amended:** 23/07/2026 **Version no.** 3

## 1. Programme title(s) and code(s):

MChem Chemistry

MChem Chemistry with a Year in Industry

MChem Chemistry with a Year Abroad*

MChem Medicinal Chemistry

MChem Medicinal Chemistry with a Year in Industry

MChem Medicinal Chemistry with a Year Abroad**

Notes

All programmes include a variant with integrated Foundation Year; *Medicinal Chemistry (with Foundation Year)* is entered by approved transfer only, before the start of Year 1.

BSc Chemistry with a Year Abroad; BSc Medicinal Chemistry with a Year Abroad are available as *exit awards only* for students failing to progress from the 3rd to 4th years on F107 and F153. In these cases, students would have to take the 3rd year of the appropriate BSc programme before they can achieve these awards.

** The year abroad can be spent in Europe, USA, Canada, China or Japan*

*** The year abroad can be spent in Europe, China or Japan only*

### a) HECOS Code

MChem Chemistry/MChem Chemistry with Year in Industry/MChem Chemistry with Year Abroad

| HECOS Code | % |
|---|---|
| 100417 | 100% |

MChem Medicinal Chemistry/MChem Medicinal Chemistry with Year in Industry/MChem Medicinal Chemistry with Year Abroad

| HECOS Code | % |
|---|---|
| 100423 | 100 |

### b) UCAS Code (where required)

MChem Chemistry F105

MChem Chemistry with a Year in Industry F106

MChem Chemistry with a Year Abroad F107

MChem Medicinal Chemistry F150

MChem Medicinal Chemistry with a Year in Industry F152

MChem Medicinal Chemistry with a Year Abroad F153

**2. Awarding body or institution:**

University of Leicester

**3. a) Mode of study**

Full-time

**b) Type of study**

Campus-based

Some modules while on Year in Industry/Year Abroad are studied via Distance Learning.

**4. Registration periods:**

| **Degree** | MChem | MChem | MChem with Year in Industry/Year Abroad | MChem with Year in Industry/Year Abroad | MChem with Foundation Year | MChem with Foundation Year | MChem with Year in Industry \Abroad and Foundation Year | MChem with Year in Industry \Abroad and Foundation Year |
|---|---|---|---|---|---|---|---|---|
| | Normal | Max. | Normal | Max. | Normal | Max. | Normal | Max. |
| Chemistry | 4 years | 6 years | 4 years | 6 years | 5 years | 7 years | 5 years | 7 years |
| Medicinal Chemistry | 4 years | 6 years | 4 years | 6 years | 5 years | 7 years | 5 years | 7 years |

**5. Typical entry requirements**

A-level AAB or equivalent and GCSE Maths grade 6

**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 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 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., health, industry, sustainability
- 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 student to chemical research methodology through carrying out an extended research project
- To introduce students to a range topics of current chemical 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.

In addition for the "with a Year in Industry" variants:

- To provide students with an experience of the application of chemistry and professional skills in an industrial environment and to reinforce knowledge through its use in different environments.
- To gain an appreciation of the full range of skills required by chemists in industry.

In addition for the "with a Year Abroad" variants:

- To provide experience of study of Chemistry at an overseas University, to reinforce knowledge through use in different environments and when studying in Europe & China, development of communication skills in a foreign language.

**Additional aims and objectives for related degrees**

Medicinal Chemistry

- To provide a broad understanding of the chemistry that underpins central areas of biochemistry.
- To provide a broad understanding of the processes involved in development of new drugs including drug design, discovery, mode of action and production.

## 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 Education Strategy
- University Assessment Strategy [login required]
- University of Leicester Periodic Developmental Review Report
- External Examiners' reports (annual)
- United Nations Education for Sustainable Development Goals
- Student Destinations Data
- Royal Society of Chemistry accreditation guidance

## 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? |
|---|---|---|
| On successful completion of the programme students will be able to: | | |

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| recall and apply the basic concepts of chemistry theory across all 3 main areas of chemistry* (inorganic, organic & physical) and related mathematics; | Lectures; tutorials; specified & directed reading; problem classes; problem-based learning; open ended group work; laboratory practical classes; research projects; computer aided learning. | Written examinations; assessed coursework including – tutorial problems, computer tests, oral presentations; assessed practical work and reports. |
| solve structured and unseen model problems; | Lectures; tutorials; specified & directed reading; problem classes; problem-based learning; open ended group work; laboratory practical classes; research projects; computer aided learning. | Written examinations; assessed coursework including – tutorial problems, computer tests, oral presentations; assessed practical work and reports. |
| conduct experiments and apply practical techniques. | Lectures; tutorials; specified & directed reading; problem classes; problem-based learning; open ended group work; laboratory practical classes; research projects; computer aided learning. | Written examinations; assessed coursework including – tutorial problems, computer tests, oral presentations; assessed practical work and reports. |
| Typical students should have detailed knowledge of selected topics in at least 2* of the broad areas of chemistry (analytical, organic, inorganic, and physical). | Lectures; tutorials; specified & directed reading; problem classes; problem-based learning; open ended group work; laboratory practical classes; research projects; computer aided learning. | Written examinations; assessed coursework including – tutorial problems, computer tests, oral presentations; assessed practical work and reports. |
| Demonstrate specialist knowledge at Masters-level (FHEQ level 7) in some areas of chemistry. | Lectures; tutorials; specified & directed reading; problem classes; problem-based learning; open ended group work; laboratory practical classes; research projects; computer aided learning. | Written examinations; assessed coursework including – tutorial problems, computer tests, oral presentations; assessed practical work and reports. |
| Specific to Medicinal Chemistry: | | |
| knowledge and understanding of biochemistry; | Lectures; specified & directed reading; laboratory practical classes. | Written examinations; assessed coursework including – written work, essays, practical reports, oral presentations |
| knowledge of processes of drug discovery. | Lectures; specified & directed reading; laboratory practical classes. | Written examinations; assessed coursework including – written work, essays, practical reports, oral presentations |

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| *For Medicinal Chemistry there is less coverage of inorganic and physical chemistry, in year 3, the detailed knowledge is in organic chemistry and pharmaceutical chemistry. | Lectures; specified & directed reading; laboratory practical classes. | Written examinations; assessed coursework including – written work, essays, oral presentations |

ii) Understanding and application of key concepts and techniques

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| On successful completion of the programme students will be able to: | | |
| apply chemical concepts in new situations (e.g., ability to predict physical and chemical properties by comparison with analogues); | Lectures; tutorials; specified & directed reading; problem classes; problem-based learning; open ended group work; laboratory practical classes; research projects; computer aided learning. | Written examinations; assessed coursework including – tutorial problems, computer tests, oral presentations; assessed practical work, lab notebooks and laboratory / project reports. |
| apply logic and chemical knowledge to make deductions based on (limited) evidence; | Lectures; tutorials; specified & directed reading; problem classes; problem-based learning; open ended group work; laboratory practical classes; research projects; computer aided learning. | Written examinations; assessed coursework including – tutorial problems, computer tests, oral presentations; assessed practical work, lab notebooks and laboratory / project reports. |
| solve familiar and unfamiliar chemistry related problems; | Lectures; tutorials; specified & directed reading; problem classes; problem-based learning; open ended group work; laboratory practical classes; research projects; computer aided learning. | Written examinations; assessed coursework including – tutorial problems, computer tests, oral presentations; assessed practical work, lab notebooks and laboratory / project reports. |
| design, construct and conduct chemical experiments using standard equipment and following safe procedures; | Lectures; tutorials; specified & directed reading; problem classes; problem-based learning; open ended group work; laboratory practical classes; research projects; computer aided learning. | Written examinations; assessed coursework including – tutorial problems, computer tests, oral presentations; assessed practical work, lab notebooks and laboratory / project reports. |
| use computer programs to retrieve & analyse data; | Lectures; tutorials; specified & directed reading; problem classes; problem-based learning; open ended group work; laboratory practical classes; research projects; computer aided learning. | Written examinations; assessed coursework including – tutorial problems, computer tests, oral presentations; assessed practical work, lab notebooks and laboratory / project reports. |

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| describe and discuss the accumulation of scientific evidence; | Lectures; tutorials; specified & directed reading; problem classes; problem-based learning; open ended group work; laboratory practical classes; research projects; computer aided learning. | Written examinations; assessed coursework including – tutorial problems, computer tests, oral presentations; assessed practical work, lab notebooks and laboratory / project reports. |
| design experiments (practical or theoretical) to solve a chemical problem; | Lectures; tutorials; specified & directed reading; problem classes; problem-based learning; open ended group work; laboratory practical classes; research projects; computer aided learning. | Written examinations; assessed coursework including – tutorial problems, computer tests, oral presentations; assessed practical work, lab notebooks and laboratory / project reports. |
| apply conceptual knowledge in a research environment. | Lectures; tutorials; specified & directed reading; problem classes; problem-based learning; open ended group work; laboratory practical classes; research projects; computer aided learning. | Written examinations; assessed coursework including – tutorial problems, computer tests, oral presentations; assessed practical work, lab notebooks and laboratory / project reports. |

iii) Critical analysis of key issues

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| On successful completion of the programme students will be able to: | | |
| critically appraise physical & chemical information and discuss its limitations; | Lectures; tutorials; problem-based learning; problem classes, open ended group work; laboratory practical classes; research projects; computer aided learning. | Written examinations; practical & projects reports; oral presentations; assessed practical work; assessed computer exercises. |
| draw quantitative conclusions from sample data; | Lectures; tutorials; problem-based learning; problem classes, open ended group work; laboratory practical classes; research projects; computer aided learning. | Written examinations; practical & projects reports; oral presentations; assessed practical work; assessed computer exercises. |
| summarise key findings of scientific papers; | Lectures; tutorials; problem-based learning; problem classes, open ended group work; laboratory practical classes; research projects; computer aided learning. | Written examinations; practical & projects reports; oral presentations; assessed practical work; assessed computer exercises. |

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| critically assess and compare scientific theories. | Lectures; tutorials; problem-based learning; problem classes, open ended group work; laboratory practical classes; research projects; computer aided learning. | Written examinations; practical & projects reports; oral presentations; assessed practical work; assessed computer exercises. |

iv) Clear and concise presentation of material

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| On successful completion of the programme students will be able to: | | |
| present scientific ideas, data and results in a variety of (appropriate) forms e.g., reports, seminars, posters, papers etc; | Lectures, tutorials; problem-based learning; group-based problem classes; open ended group project work; laboratory practical classes; research projects. | Laboratory notebooks; practical and project reports; oral presentations; assessed practical work including lab samples & associated data; assessed computer exercises; tutorial work |
| use appropriate software for presenting and modelling chemical structures and systems; | Lectures, tutorials; problem-based learning; group-based problem classes; open ended group project work; laboratory practical classes; research projects. | Laboratory notebooks; practical and project reports; oral presentations; assessed practical work including lab samples & associated data; assessed computer exercises; tutorial work |
| participate in scientific discussion and debate. | Lectures, tutorials; problem-based learning; group-based problem classes; open ended group project work; laboratory practical classes; research projects. | Laboratory notebooks; practical and project reports; oral presentations; assessed practical work including lab samples & associated data; assessed computer exercises; tutorial work |

v) Critical appraisal of evidence with appropriate insight

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| On successful completion of the programme students will be able to: | | |
| discuss and implement experimental methodology; | Tutorials; problem-based learning; lectures; open ended group project work; laboratory practical classes; research projects. | Written examinations; reports; oral presentations; assessed practical work; assessed computer exercises; assessed problems; project assessments. |
| collect and critically analyse data; | Tutorials; problem-based learning; lectures; open ended group project work; laboratory practical classes; research projects. | Written examinations; reports; oral presentations; assessed practical work; assessed computer exercises; assessed problems; project assessments. |

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| draw valid inferences from data in a variety of settings; | Tutorials; problem-based learning; lectures; open ended group project work; laboratory practical classes; research projects. | Written examinations; reports; oral presentations; assessed practical work; assessed computer exercises; assessed problems; project assessments. |
| discuss and criticize scientific literature. | Tutorials; problem-based learning; lectures; open ended group project work; laboratory practical classes; research projects. | Written examinations; reports; oral presentations; assessed practical work; assessed computer exercises; assessed problems; project assessments. |

vi) Other discipline specific competencies

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| On successful completion of the programme students will be able to: | | |
| discuss, design, and implement scientific experiments; | Tutorials; problem-based learning; research projects. | Written reports; oral presentations; assessed practical work; written examinations. |
| competently use a range of standard laboratory equipment; | Tutorials; problem-based learning; research projects. | Written reports; oral presentations; assessed practical work; written examinations. |
| describe and adhere to laboratory safety procedures; | Tutorials; problem-based learning; research projects. | Written reports; oral presentations; assessed practical work; written examinations. |
| describe and discuss some areas of current research in chemistry. | Tutorials; problem-based learning; research projects. | Written reports; oral presentations; assessed practical work; written examinations. |

**b) Transferable skills**

i) Oral communication

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| On successful completion of the programme students will be able to: | | |
| describe and discuss scientific concepts to a variety of audiences; | Tutorials; problem-based learning; group problem solving classes; research projects. | Oral presentations and questioning (including projects) |
| give reasoned arguments in response to chemical questions. | Tutorials; problem-based learning; group problem solving classes; research projects. | Oral presentations and questioning (including projects) |

ii) Written communication

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| On successful completion of the programme students will be able to: | | |
| write concise and clear scientific reports, laboratory notebooks & reports and project summaries; | Tutorials; problem-based learning; laboratory practical classes; CV writing workshop; research projects. | Written lab-notebooks, project and laboratory reports; assessed CVs; assessed coursework including essays, written examinations. |
| write CVs; | Tutorials; problem-based learning; laboratory practical classes; CV writing workshop; research projects. | Written lab-notebooks, project and laboratory reports; assessed CVs; assessed coursework including essays, written examinations. |
| clearly discuss some areas of current research in chemistry in written form. | Tutorials; problem-based learning; laboratory practical classes; CV writing workshop; research projects. | Written lab-notebooks, project and laboratory reports; assessed CVs; assessed coursework including essays, written examinations. |

iii) Information technology

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| On successful completion of the programme students will be able to: | | |
| use spreadsheets, word processing and presentation facilities; | Workshops; research projects; literature-based coursework exercises; laboratory practical classes | Assessed IT tasks; laboratory/project assessments; practical and project reports; assessed problems. |
| use basic IT skills to access chemical information from online databases; | Workshops; research projects; literature-based coursework exercises; laboratory practical classes | Assessed IT tasks; laboratory/project assessments; practical and project reports; assessed problems. |
| use mathematical packages for data analysis; | Workshops; research projects; literature-based coursework exercises; laboratory practical classes | Assessed IT tasks; laboratory/project assessments; practical and project reports; assessed problems. |
| use chemistry specific software such as drawing or molecular modelling packages. | Workshops; research projects; literature-based coursework exercises; laboratory practical classes | Assessed IT tasks; laboratory/project assessments; practical and project reports; assessed problems. |

iv) Numeracy

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| On successful completion of the programme students will be able to: | | |
| use analytical and graphical methods; | Lectures; group problem solving classes; problem-based learning; research project; laboratory practical classes. | Written examinations; practical and project reports; oral presentations; assessed practical work; assessed problems |
| analyse data; | Lectures; group problem solving classes; problem-based learning; research project; laboratory practical classes. | Written examinations; practical and project reports; oral presentations; assessed practical work; assessed problems |
| solve numerical problems involving e.g., calculus, linear algebra. | Lectures; group problem solving classes; problem-based learning; research project; laboratory practical classes. | Written examinations; practical and project reports; oral presentations; assessed practical work; assessed problems |

v) Team working

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| On successful completion of the programme students will be able to: | | |
| discuss concepts and formulate plans working with peers; | Group problem solving classes, coursework & projects; problem-based learning; research projects. | Group assessment (outcomes and oral questioning); project assessment. |
| recognise individual strengths within a team; | Group problem solving classes, coursework & projects; problem-based learning; research projects. | Group assessment (outcomes and oral questioning); project assessment. |
| organise time and tasks coherently between group members; | Group problem solving classes, coursework & projects; problem-based learning; research projects. | Group assessment (outcomes and oral questioning); project assessment. |
| produce joint reports/presentations. | Group problem solving classes, coursework & projects; problem-based learning; research projects. | Group assessment (outcomes and oral questioning); project assessment. |

vi) Problem solving

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| On successful completion of the programme students will be able to: | | |

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| analyse problems; | Lectures; tutorials; problem-based learning; laboratory classes; open ended group work; research projects. | Assessed examinations; assessed problems; group work assessment; project assessments. |
| plan and implement projects; | Lectures; tutorials; problem-based learning; laboratory classes; open ended group work; research projects. | Assessed examinations; assessed problems; group work assessment; project assessments. |
| apply chemistry knowledge and problem-solving ability to novel applications; | Lectures; tutorials; problem-based learning; laboratory classes; open ended group work; research projects. | Assessed examinations; assessed problems; group work assessment; project assessments. |
| solve unfamiliar numerical problems. | Lectures; tutorials; problem-based learning; laboratory classes; open ended group work; research projects. | Assessed examinations; assessed problems; group work assessment; project assessments. |

vii) Information handling

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| On successful completion of the programme students will be able to: | | |
| gather, retrieve, and manipulate chemical information and data from a variety of sources, analyse & use it to support a chemical argument; | Lectures, tutorials; problem-based learning; laboratory and project supervision; group problem solving classes; research projects. | Assessed examinations; assessed problems; project and laboratory reports; oral presentations. |
| describe and discuss the scientific method; | Lectures, tutorials; problem-based learning; laboratory and project supervision; group problem solving classes; research projects. | Assessed examinations; assessed problems; project and laboratory reports; oral presentations. |
| present data in various forms (e.g., tabular and graphical); | Lectures, tutorials; problem-based learning; laboratory and project supervision; group problem solving classes; research projects. | Assessed examinations; assessed problems; project and laboratory reports; oral presentations. |
| access, search and appraise articles in scientific journals/literature. | Lectures, tutorials; problem-based learning; laboratory and project supervision; group problem solving classes; research projects. | Assessed examinations; assessed problems; project and laboratory reports; oral presentations. |

viii) Skills for lifelong learning

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| On successful completion of the programme students will be able to: | | |
| plan and undertake projects involving elements of independent research; | Laboratory classes & research projects; careers / skills training sessions; lectures from visiting speakers. | Open note assessments; meeting deadlines; Project assessments; written examinations; assessed CVs. |
| access, search and appraise scholarly articles; | Laboratory classes & research projects; careers / skills training sessions; lectures from visiting speakers. | Open note assessments; meeting deadlines; Project assessments; written examinations; assessed CVs. |
| collect and analyse data; | Laboratory classes & research projects; careers / skills training sessions; lectures from visiting speakers. | Open note assessments; meeting deadlines; Project assessments; written examinations; assessed CVs. |
| search for and pursue employment and/or further study opportunities; | Laboratory classes & research projects; careers / skills training sessions; lectures from visiting speakers. | Open note assessments; meeting deadlines; Project assessments; written examinations; assessed CVs. |
| work effectively in teams; | Laboratory classes & research projects; careers / skills training sessions; lectures from visiting speakers. | Open note assessments; meeting deadlines; Project assessments; written examinations; assessed CVs. |
| work to deadlines managing their time effectively. | Laboratory classes & research projects; careers / skills training sessions; lectures from visiting speakers. | Open note assessments; meeting deadlines; Project assessments; written examinations; assessed CVs. |
| Students taking an industrial placement year will also appreciate the cultural environment of different businesses. | Experience with industry. | Reflective coursework exercises. |

ix) Year in Industry

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| Select appropriate resources for researching/securing placement opportunities. | Problem solving classes, Masterclasses, Career development programmes, Independent research. | Formative module feedback through session tasks and exercises |

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| Explain the process for applying for and securing a relevant placement. | Problem solving classes, Masterclasses, Career development programmes, Independent research. | Formative module feedback through session tasks and exercises |
| Construct effective applications for placement opportunities. | Problem solving classes, Masterclasses, Career development programmes, Independent research. | Formative module feedback through session tasks and exercises |
| Recognise suitable plans for transitioning into a placement. | Problem solving classes, Masterclasses, Career development programmes, Independent research. | Formative module feedback through session tasks and exercises |
| Apply the theoretical and practical aspects of the material studied at the University and demonstrate the personal and professional skills necessary for your role within the organisation. | Students undertake a minimum of 9 months experience in the workplace.<br><br>Project supervision, independent research | Completion of Monthly Reflective Journals to record skills development, major achievements, key areas of work, learning points and challenges overcome.<br><br>Assessed by a Placement Portfolio, comprising of a Reflective Summary, Professional Development Plan, and Updated CV (excluded from word count) to formally assess on a pass or fail basis.<br><br>Formative feedback during a Placement Visit (in person or via Skype) from Placement Provider and Placement Tutor regarding reflection on skills development, areas of strength and weakness and contribution to the workplace. |

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| Compose a Professional Development Plan considering your strengths, development areas and motivations for your next step. | Project supervision, independent research | Completion of Monthly Reflective Journals to record skills development, major achievements, key areas of work, learning points and challenges overcome.<br><br>Assessed by a Placement Portfolio, comprising of a Reflective Summary, Professional Development Plan, and Updated CV (excluded from word count) to formally assess on a pass or fail basis.<br><br>Formative feedback during a Placement Visit (in person or via Skype) from Placement Provider and Placement Tutor regarding reflection on skills development, areas of strength and weakness and contribution to the workplace. |
| Modify your CV to include the skills and experience you have gained through your significant experience gained in the past 12 months. | Project supervision, independent research | Completion of Monthly Reflective Journals to record skills development, major achievements, key areas of work, learning points and challenges overcome.<br><br>Assessed by a Placement Portfolio, comprising of a Reflective Summary, Professional Development Plan, and Updated CV (excluded from word count) to formally assess on a pass or fail basis.<br><br>Formative feedback during a Placement Visit (in person or via Skype) from Placement Provider and Placement Tutor regarding reflection on skills development, areas of strength and weakness and contribution to the workplace. |

## 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:

The following modules must be passed at the first attempt and a re-sit will not, as standard, be provided:

- CH1205
- CH2204
- CH3266
- CH4263
- CH4264

Discretion may be given by the Board of Examiners, who may require resubmission of one or more assessed coursework elements, where it is possible for students to achieve a pass mark for the module by improving their mark in individual coursework elements. There are no resit opportunities for non-mitigated missed practical work.

These modules are not eligible for compensated pass and must be passed at 40.00% (50% for CH4263 and CH4264).

The following modules have a requirement of 100% completion of scheduled laboratory sessions (attendance and submission of any associated assessment):

- CH1205
- CH2204

A limited number of additional "catch-up" sessions may be provided for students who have accepted mitigation for non-attendance.

If, during the year, a student reaches a point where they have failed to complete more lab sessions than there are catch-up sessions available, the module will be failed as they are now unable to meet the 100% completion requirement. As these modules are not eligible for compensation, this means a student's studies for the current academic year will come to an immediate end.

The Board of Examiners will convene at the earliest subsequent opportunity to make a decision regarding the student's progression (determined in line with the standard Senate Regulations; typically, Termination of Studies).

A Repeat Year may be granted in certain exceptional circumstances.

In addition to achieving a Year 2 credit-weighted average of 55.00% or greater, students on MChem degrees must achieve a credit-weighted average of 55.00% or greater across the following modules to progress to Year 3 (in addition to the standard MChem progression requirements):

- CH2201
- CH2202
- CH2203

Student-initiated transfers between BSc and MChem may take place at any point up until the end of July in Year Two. Transfers between BSc and MChem may take place after this only in exceptional cases, such as awaiting reassessment results, mitigating circumstances, or significant change of personal circumstances. Approval of transfers to MChem degrees is subject to students meeting the MChem progression criteria.

**Students undertaking a Year Abroad**

Reassessments may be undertaken for failure in the following modules only:

- CH3601

- CH3602

Modules CH3651 and CH3652 are not eligible for compensation and must be passed at 40.00%.

For initial approval of a study abroad placement, students must achieve an average of 60.00% across their Year Two Semester 1 assessments.

For final approval of the placement at the end of Year Two, students must achieve both an overall credit-weighted average of at least 60.00% and a credit-weighted average of at least 55.00% across the following modules:

- CH2201
- CH2202
- CH2203

Borderline cases will be addressed by the Board of Examiners on a case-by-case basis; the absolute minimum outlined in the MChem progression section above applies.

For students undertaking a Year Abroad in the USA or Canada, there are no reassessment opportunities for failed modules.

If a student fails a module counting towards their 24 USA or Canadian credit hours then they will be automatically transferred to the appropriate BSc programme and resume the course at the start of Year Three.

If they have passed more than 75% of the modules taken in the USA/Canada then, after successful completion of Year Three, they can graduate with a BSc with a Year Abroad, otherwise they will graduate with a BSc degree.

For students undertaking a Year Abroad in Europe, China or Japan, reassessments may be undertaken for failure in the following modules only:

- CH3601
- CH3602

Modules CH3651 and CH3652 are not eligible for compensated pass and must be passed at 40.00%. If students have failed either CH3651 or CH3652, they will be automatically transferred to the appropriate BSc programme and resume the course at the start of Year Three. Upon successful completion of this year, they will graduate with the BSc and will not be entitled to the 'with Year Abroad' degree.
In certain exceptional situations a student may complete the placement year and be subsequently be unable to complete the final year of the MChem programme. In such a scenario it may be possible to make an exit award of a BSc with Year Abroad. This award will have required the student to have completed all elements of the placement year (including theory and project modules). Such an award will not be automatic, and each instance will be reviewed by the Board of Examiners on a case-by-case basis.

If, after reassessment, students have failed either CH3601 or CH3602 but passed both of CH3651 and CH3652, they will be automatically transferred to the appropriate BSc programme and resume the course at the start of Year Three.

Upon successful completion of this year, they will graduate with the BSc with Year Abroad degree.

**Students undertaking a Year in Industry**

Reassessments may be undertaken for failure in the following modules only:

- CH3601
- CH3602

Modules CH3651 and CH3652 are not eligible for compensated pass and must be passed at 40.00%.

Students wishing to undertake an MChem degree with a Year in Industry must achieve, at the end of Year Two, both an overall credit-weighted average of at least 60.00% and a credit-weighted average of at least 55.00% across the following modules:

- CH2201
- CH2202
- CH2203

Borderline cases will be addressed by the Board of Examiners on a case-by-case basis; the absolute minimum outlined in the MChem progression section above applies.

Students wishing to undertake an MChem degree with a Year in Industry must achieve, at the end of Year Two, both an overall credit-weighted average of at least 60.00% and a credit-weighted average of at least 55.00% across the following modules:

- CH2201
- CH2202
- CH2203

Borderline cases will be addressed by the Board of Examiners on a case-by-case basis; the absolute minimum outlined in the MChem progression section above applies.

If students have failed either CH3651 or CH3652, they will be automatically transferred to the appropriate BSc programme and resume the course at the start of Year Three. Upon completion of this year, they will graduate with the BSc and will not be entitled to the 'with Year in Industry' degree.

In certain exceptional circumstances a student may complete the placement year and be subsequently be unable to complete the final year of the MChem programme. In such a scenario it may be possible to make an exit award of a BSc with a Year in Industry. This award will have required the student to have completed all elements of the placement year (including theory and project modules). Such an award will not be automatic, and each instance will be reviewed by the Board of Examiners on a case-by-case basis.

If, after reassessment, students have failed either CH3601 or CH3602 but passed both of CH3651 and CH3652, they will be automatically transferred to the appropriate BSc programme and resume the course at the start of Year Three. Upon successful completion of this year, they will graduate with the BSc with Year in Industry degree.

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

**a) Course transfers**

**Transfer between different degrees:**

- Transfers between Chemistry and Medicinal Chemistry (in either direction) are allowed up until the very start of Semester 1 of Year Two.

- Transfer on to a degree with a Year Abroad or in Industry is only allowed by the end of the second week of Year Two (exceptionally the department may allow a student to transfer onto these programmes after this date).

## 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.

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

**Awarding requirements for Royal Society of Chemistry accredited degrees**

- To meet Royal Society of Chemistry accreditation requirements, we require all students to pass at least one Level One or Level Two module in all three areas of the subject (organic, inorganic, and physical chemistry – see table below). Students will need to do this by the end of their studies in order to graduate with a degree in Chemistry/Medicinal Chemistry.

| Organic Chemistry | Inorganic Chemistry | Physical Chemistry | Medicinal Chemistry only |
|---|---|---|---|
| By the end of their studies, students must have passed at least one of the following modules: CH1201 and CH2201. | By the end of their studies, students must have passed at least one of the following modules: CH1202 and CH2202. | By the end of their studies, students must have passed at least one of the following modules: CH1203 and CH2203. | By the end of their studies, students must have passed at least two of the following modules: CH1211, CH2211, CH3211, CH4211 |

- In addition, students will also need to gain an overall (CWA across both modules) pass mark of 50% for the two final year project modules CH4263 & CH4264.
- Students who meet all other progression and awarding regulations but fail to meet all these accreditation requirements may be awarded a non-accredited degree in Chemical Science/Pharmaceutical and Chemical Sciences.

## 12. Special features

Small group tutorials, group problem solving, student-centred learning, research-based projects, links with industry, problem and context-based learning, opportunities for industrial placements and years abroad.

Placements

It is the student's responsibility to secure a year in industry role. Employer-led activities provide a platform for students to engage with organisations who are recruiting students for year in industry roles.

When a Placement Student starts a year in industry, they will be required to complete health and safety documents and confirm they have completed a formal induction process no later than the 2nd week of placement. A Placement Student on the Year in Industry variant will also gain from being able to:

- Apply the theoretical and practical aspects of the material studied at the University and demonstrate the personal and professional skills necessary for your role within the organisation.

- Compose a Professional Development Plan considering your strengths, development areas and motivations for your next step.
- Modify your CV to include the skills and experience you have gained through your significant experience gained in the past 12 months.

**12a. Research-inspired Education**

**Students on this programme will advance through the four quadrants of the University of Leicester Research-inspired Education Framework as follows:**

| RiE Quadrant | Narrative |
|---|---|
| | Our programme offers a solid foundation in fundamental inorganic, organic and physical chemistry topics. This, coupled with chemistry-focussed support in mathematics, critical thinking, problem solving and practical skills, provides a good foundation for the research-focussed modules and research project in later years. All of our modules are contextualised through real-world examples and application to solve modern challenges in: catalysis; medicine; materials; sustainability and biotechnology. |
| **Research-briefed**<br>Bringing staff research content into the curriculum. | **Research-briefed** – Students experience challenging and inspiring learning in classes informed by cutting-edge research. Our programme leverages the expertise of our two core research themes: *Chemistry for Health* and *Chemistry for a Sustainable Future,* along with other expertise from across the university. Our staff bring their research straight into the classroom, making learning exciting, relevant and highly contextualised to modern-day issues. Additionally, students are exposed the research culture of the school from their very first year, with a particular highlight being a dedicated series of lectures showcasing the research of selected Leicester chemistry academics. |
| **Research-based**<br>Framed enquiry for exploring existing knowledge. | **Research-based** – Students engage in a variety of authentic assessments, working both individually and as a team to solve real-world problems and develop the necessary skills for both research and employment suitable for STEM graduates. This will include how to apply theory concepts to unseen problems; practical techniques, programming, data processing, data analysis; and how to effectively communicate science. |
| **Research-oriented**<br>Students critique published research content and process. | **Research-oriented** – Students will develop the ability to critically appraise their own experimental technique/processes, analyses, and conclusions through lectures, problem classes, laboratory work, computer classes, and authentic assessments. Students receive guidance on evaluating published research and engaging critically with literature through lectures and seminars. Students will also learn to write in the style of scientific research papers, formal reports and populate science articles, enhancing their ability to communicate complex ideas effectively. |
| **Research-apprenticed**<br>Experiencing the research process and methods; building new knowledge. | **Research-apprenticed** – Our programme provides the training to ensure the students become junior researchers by the end of their degrees. Across the programme students develop crucial transferable skills for both research and future employment, including report writing, group work, presentation skills, reading research papers, and data searching skills. Additionally, all students will push the boundaries of knowledge in their final dissertation project based on their independent research, supported by an expert supervisor. |

**As part of studying at a research-intensive university, students on this programme have the following extra or co-curricular opportunities available to them to gain exposure to research culture:**

In addition to the research-oriented content embedded in the programme's modules, students have several extra-curricular routes to increase their exposure to a global research culture. For example, the School hosts regular academic research seminars throughout the year. These provide all students the opportunity to see Chemistry from outside of Leicester and are an effective way to also establish new connections. Refreshments before and after the seminar facilitate this networking and provide the audience time to meet the speaker for informal conversation and questions. During their final year projects, MChem students attend weekly research section/group meetings that provide opportunity to solve problem statements, practice research presentations and get further direction on their own research. Additionally, we offer the opportunity to conduct a summer research internship in one of the School's academic research groups – although availability of such placements is variable, competitive and limited.

**Teaching on this programme will be research-informed (it draws consciously on systematic inquiry into the teaching and learning process itself) in the following way:**

The teaching in our School is underpinned by the *Research in Chemical Education (RICE*) group, whose reading and contribution to global pedagogic literature promotes the high quality and highly innovative delivery of our programmes. To this end, the School has designed an advanced curriculum that promotes excellence, equal opportunity and high performance from its students through innovative practices such as active learning and authentic assessment strategies. These techniques are embedded across all modules in the programme, with all colleagues being regularly briefed and trained to deliver a consistently excellence student experience. The School supports all staff involved in teaching to gain an accredited Higher Education teaching qualification, in which they demonstrate their use of teaching theory to support their own practice and reflect on their current teaching and continuing professional development.

### 12b. Work-related learning

The workload of all students on this programme includes the opportunity to engage with *at least* 100 hours of employer informed, work-related learning activity. Further information regarding work-related learning is available online.

### 13. Indications of programme quality

All degrees were accredited by the Royal Society of Chemistry in Jan 2016 and reaccredited in January 2022.

Academic Review

External examiners reports

Destinations of Leavers from Higher Education (DLHE) survey

### 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 [log-in required]

UNIVERSITY OF LEICESTER

# Programme Specification (Undergraduate) FOR ENTRY YEAR: 2026/27

**Date created:** 31/03/21 **Last amended:** 23/07/2026 **Version no.** 3

## 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 | Update |
|---|---|---|
| 2026/27 | CH1204 Applied Mathematics for Chemistry | Renamed from Chemistry Maths and Skills |
| 2026/27 | CH1205 Introductory Practical, Computing, and Skills | Renamed from Introductory Practical Chemistry and changed from 15 credits to 30 credits |
| 2026/27 | CH1206 Scientific Method and Principles of Analytical Chemistry | Module removed |
| 2026/27 | CH1207 Sustainable and Environmental Chemistry | Module removed |
| 2026/27 | CH1211 Discovering Drugs and their Targets | New core module |
| 2028/29 | CH3266 Chemistry Year Three Research Project | Replaces Advanced Chemistry Practical Parts 1 and 2 |
| 2029/30 | CH4263 Chemistry Year Four Project Part 1<br>CH4264 Chemistry Year Four Project Part 2 | Modules replaced with CH4261 and CH4262 Chemistry Year 4 Research Project Parts 1 and 2 and each increases from 30 credits to 45 credits |
| 2029/30 | CH4211 Techniques in Chemical Biology | Name changed from *Advanced Topics in Medicinal Chemistry* |

MChem Chemistry

**Level 4/Year 1 2026/27**

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 90 credits | 30 credits | n/a |
| 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 | CH1211 | Discovering Drugs and their Targets | 15 credits |
| Year long | CH1201 | Introductory Organic Chemistry | 15 credits |
| Year long | CH1202 | Introductory Inorganic Chemistry | 15 credits |
| Year long | CH1203 | Introductory Physical Chemistry | 15 credits |
| Year long | CH1204 | Applied Mathematics for Chemistry | 15 credits |
| Year long | CH1205 | Introductory Practical, Computing, and Skills | 30 credits |

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

**Level 5/Year 2 2027/28**

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 2028/29**

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 45 credits | 30 credits | 15 credits |
| Optional | n/a | n/a | 30 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 2 | CH3203 | Advanced Physical Chemistry | 15 credits |
| Year long | CH3260 | Research Skills, Employability & General Paper | 15 credits |
| Year long | CH3266 | Chemistry Year Three Research Project | 30 credits |

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

Option modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Semester 2 | CH3205 | Metals in Synthesis | 15 credits |
| Semester 2 | CH3206 | Advanced Analytical Chemistry | 15 credits |
| Semester 2 | CH3213 | Major Therapeutic Areas | 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.

## Level 7/Year 4 2029/30

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 90 credits | n/a | n/a |
| Optional | 30 credits | n/a | n/a |

120 credits in total

Core modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | CH4263 | Chemistry Year Four Research Project Part 1 | 45 credits |
| Year long | CH4264 | Chemistry Year Four Research Project Part 2 | 45 credits |

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

Option modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | CH4201 | Advanced Structure Determination | 15 credits |
| Year long | CH4202 | Advanced Synthetic Methods | 15 credits |
| Year long | CH4208 | Bioinorganic Chemistry | 15 credits |
| Year long | CH4211 | Techniques in Chemical Biology | 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.

## MChem Chemistry with a Year in Industry

### Level 4/Year 1 2026/27

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 90 credits | 30 credits | n/a |
| 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 | CH1211 | Discovering Drugs and their Targets | 15 credits |
| Year long | CH1201 | Introductory Organic Chemistry | 15 credits |
| Year long | CH1202 | Introductory Inorganic Chemistry | 15 credits |
| Year long | CH1203 | Introductory Physical Chemistry | 15 credits |
| Year long | CH1204 | Applied Mathematics for Chemistry | 15 credits |
| Year long | CH1205 | Introductory Practical, Computing, and Skills | 30 credits |

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

## Level 5/Year 2 2027/28

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 |

| Delivery period | Code | Title | 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 2028/29

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 120 credits | n/a | n/a |
| Optional | n/a | n/a | n/a |

120 credits in total

Core modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | CH3601 | Core Chemistry Distance Learning Part 1 | 30 credits |
| Year long | CH3602 | Core Chemistry Distance Learning Part 2 | 30 credits |
| Year long | CH3651 | Placement Project Practical | 30 credits |
| Year long | CH3652 | Placement Project Report | 30 credits |
| Year long | ADCH223 | On Placement | n/a |

**Notes**
Delivery of Year Long modules is weighted to ensure approximate equal student workload between semesters. CH3601 and CH3602 contain some sub-module optionality.

## Level 7/Year 4 2029/30

### Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 90 credits | n/a | n/a |
| Optional | 30 credits | n/a | n/a |

120 credits in total

### Core modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | CH4263 | Chemistry Year Four Research Project Part 1 | 45 credits |
| Year long | CH4264 | Chemistry Year Four Research Project Part 2 | 45 credits |

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

### Option modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | CH4201 | Advanced Structure Determination | 15 credits |
| Year long | CH4202 | Advanced Synthetic Methods | 15 credits |
| Year long | CH4208 | Bioinorganic Chemistry | 15 credits |
| Year long | CH4211 | Techniques in Chemical Biology | 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.

MChem Chemistry with a Year Abroad

**Level 4/Year 1 2026/27**

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 90 credits | 30 credits | n/a |
| 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 | CH1211 | Discovering Drugs and their Targets | 15 credits |
| Year long | CH1201 | Introductory Organic Chemistry | 15 credits |
| Year long | CH1202 | Introductory Inorganic Chemistry | 15 credits |
| Year long | CH1203 | Introductory Physical Chemistry | 15 credits |
| Year long | CH1204 | Applied Mathematics for Chemistry | 15 credits |
| Year long | CH1205 | Introductory Practical, Computing, and Skills | 30 credits |

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

**Level 5/Year 2 2027/28**

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 75 credits | 30 credits | 15 credits |

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| 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 2028/29

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 120 credits | n/a | n/a |
| Optional | n/a | n/a | n/a |

120 credits in total

Core modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | CH3601 | Core Chemistry Distance Learning Part 1 | 30 credits |
| Year long | CH3602 | Core Chemistry Distance Learning Part 2 | 30 credits |
| Year long | CH3651 | Placement Project Practical | 30 credits |
| Year long | CH3652 | Placement Project Report | 30 credits |

**Notes**

Delivery of Year Long modules is weighted to ensure approximate equal student workload between semesters. CH3601 and CH3602 contain some sub-module optionality.

These modules are taken only by students whose Year Abroad is spent at a partner institution in Europe, China or Japan. Students whose Year Abroad is at a partner institution in the USA or Canada take modules from their host university. Choices should be discussed with the Study Abroad Coordinator; there may be subsequent restrictions on Year Four optional choice.

## Level 7/Year 4 2029/30

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 90 credits | n/a | n/a |
| Optional | 30 credits | n/a | n/a |

120 credits in total

Core modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | CH4263 | Chemistry Year Four Research Project Part 1 | 45 credits |
| Year long | CH4264 | Chemistry Year Four Research Project Part 2 | 45 credits |

**Notes**

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

Option modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | CH4201 | Advanced Structure Determination | 15 credits |
| Year long | CH4202 | Advanced Synthetic Methods | 15 credits |
| Year long | CH4208 | Bioinorganic Chemistry | 15 credits |
| Year long | CH4211 | Techniques in Chemical Biology | 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.

## MChem Medicinal Chemistry

### Level 4/Year 1 2026/27

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 90 credits | 30 credits | n/a |
| 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 | CH1211 | Discovering Drugs and their Targets | 15 credits |
| Year long | CH1201 | Introductory Organic Chemistry | 15 credits |
| Year long | CH1202 | Introductory Inorganic Chemistry | 15 credits |

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | CH1203 | Introductory Physical Chemistry | 15 credits |
| Year long | CH1204 | Applied Mathematics for Chemistry | 15 credits |
| Year long | CH1205 | Introductory Practical, Computing, and Skills | 30 credits |

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

## Level 5/Year 2 2027/28

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 | CH2211 | Pharmaceutics | 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 2028/29

### Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 45 credits | 30 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 2 | CH3211 | Hit to Lead Drug Discovery | 15 credits |
| Sem 2 | CH3213 | Major Therapeutic Areas | 15 credits |
| Year long | CH3260 | Research Skills, Employability & General Paper | 15 credits |
| Year long | CH3266 | Chemistry Year Three Research Project | 30 credits |

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

### Option modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Semester 2 | CH3203 | Advanced Physical Chemistry | 15 credits |
| Semester 2 | CH3205 | Metals in Synthesis | 15 credits |

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Semester 2 | CH3206 | Advanced Analytical 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.

## Level 7/Year 4 2029/30

### Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 105 credits | n/a | n/a |
| Optional | 15 credits | n/a | n/a |

120 credits in total

### Core modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | CH4211 | Techniques in Chemical Biology | 15 credits |
| Year long | CH4263 | Chemistry Year Four Research Project Part 1 | 45 credits |
| Year long | CH4264 | Chemistry Year Four Research Project Part 2 | 45 credits |

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

### Option modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | CH4201 | Advanced Structure Determination | 15 credits |
| Year long | CH4202 | Advanced Synthetic Methods | 15 credits |

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | CH4208 | Bioinorganic 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.

## MChem Medicinal Chemistry with a Year in Industry

**Level 4/Year 1 2026/27**

### Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 90 credits | 30 credits | n/a |
| 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 | CH1211 | Discovering Drugs and their Targets | 15 credits |
| Year long | CH1201 | Introductory Organic Chemistry | 15 credits |
| Year long | CH1202 | Introductory Inorganic Chemistry | 15 credits |
| Year long | CH1203 | Introductory Physical Chemistry | 15 credits |
| Year long | CH1204 | Applied Mathematics for Chemistry | 15 credits |
| Year long | CH1205 | Introductory Practical, Computing, and Skills | 30 credits |

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

## Level 5/Year 2 2027/28

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 | CH2211 | Pharmaceutics | 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 2028/29**

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 120 credits | n/a | n/a |
| Optional | n/a | n/a | n/a |

120 credits in total

Core modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | CH3601 | Core Chemistry Distance Learning Part 1 | 30 credits |
| Year long | CH3602 | Core Chemistry Distance Learning Part 2 | 30 credits |
| Year long | CH3651 | Placement Project Practical | 30 credits |
| Year long | CH3652 | Placement Project Report | 30 credits |
| Year long | ADCH223 | On Placement | n/a |

**Notes**

Delivery of Year Long modules is weighted to ensure approximate equal student workload between semesters. CH3601 and CH3602 contain some sub-module optionality.

**Level 7/Year 4 2029/30**

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 105 credits | n/a | n/a |
| Optional | 15 credits | n/a | n/a |

120 credits in total

Core modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | CH4211 | Techniques in Chemical Biology | 15 credits |
| Year long | CH4263 | Chemistry Year Four Research Project Part 1 | 45 credits |
| Year long | CH4264 | Chemistry Year Four Research Project Part 2 | 45 credits |

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

Option modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | CH4201 | Advanced Structure Determination | 15 credits |
| Year long | CH4202 | Advanced Synthetic Methods | 15 credits |
| Year long | CH4208 | Bioinorganic 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.

## MChem Medicinal Chemistry with a Year Abroad

**Level 4/Year 1 2026/27**

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 90 credits | 30 credits | n/a |
| 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 | CH1211 | Discovering Drugs and their Targets | 15 credits |
| Year long | CH1201 | Introductory Organic Chemistry | 15 credits |
| Year long | CH1202 | Introductory Inorganic Chemistry | 15 credits |
| Year long | CH1203 | Introductory Physical Chemistry | 15 credits |
| Year long | CH1204 | Applied Mathematics for Chemistry | 15 credits |
| Year long | CH1205 | Introductory Practical, Computing, and Skills | 30 credits |

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

## Level 5/Year 2 2027/28

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 | CH2211 | Pharmaceutics | 15 credits |
| Sem 2 | CH2206 | Analytical Chemistry in Practice | 15 credits |

| Delivery period | Code | Title | 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 2028/29

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 120 credits | n/a | n/a |
| Optional | n/a | n/a | n/a |

120 credits in total

Core modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | CH3601 | Core Chemistry Distance Learning Part 1 | 30 credits |
| Year long | CH3602 | Core Chemistry Distance Learning Part 2 | 30 credits |
| Year long | CH3651 | Placement Project Practical | 30 credits |
| Year long | CH3652 | Placement Project Report | 30 credits |

**Notes**
Delivery of Year Long modules is weighted to ensure approximate equal student workload between semesters. CH3601 and CH3602 contain some sub-module optionality.

**Level 7/Year 4 2029/30**

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 105 credits | n/a | n/a |
| Optional | 15 credits | n/a | n/a |

120 credits in total

Core modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | CH4211 | Techniques in Chemical Biology | 15 credits |
| Year long | CH4263 | Chemistry Year Four Research Project Part 1 | 45 credits |
| Year long | CH4264 | Chemistry Year Four Research Project Part 2 | 45 credits |

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

Option modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | CH4201 | Advanced Structure Determination | 15 credits |
| Year long | CH4202 | Advanced Synthetic Methods | 15 credits |
| Year long | CH4208 | Bioinorganic 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 [login required] (Note - modules are organized by year of delivery).