UNIVERSITY OF LEICESTER

Programme Specification (Undergraduate) FOR ENTRY YEAR: 2023/24

Date created: 31/03/21 **Last amended:** 07/12/2023 **Version no.** 2

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
- 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?
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. Project supervision, independent research	Completion of Monthly Reflective Journals to record skills development, major achievements, key areas of work, learning points and challenges overcome. 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. 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.
Compose a Professional Development Plan considering your strengths, development areas and motivations for your next step.	Students undertake a minimum of 9 months experience in the workplace.Project supervision, independent research	Completion of Monthly Reflective Journals to record skills development, major achievements, key areas of work, learning points and challenges overcome. 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. 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?
Modify your CV to include the skills and experience you have gained through your significant experience gained in the past 12 months.	Students undertake a minimum of 9 months experience in the workplace. Project supervision, independent research	Completion of Monthly Reflective Journals to record skills development, major achievements, key areas of work, learning points and challenges overcome. 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. 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:

- **Practical & project requirements:**
  Modules CH1205, CH2204, CH3271, CH4261 & CH4262 must be passed **at the first attempt**, except at the discretion of the Board of Examiners who may ask students to resubmit 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 missed non-mitigated practical work.

  Practical modules CH1205 and CH2204 have a requirement of 100% attendance of scheduled laboratory sessions including submission of any associated assessment. Practical module CH3271 has a requirement of 90% attendance of scheduled laboratory sessions including submission of any associated assessment. If this is not achieved then the module will be automatically failed. 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 missed more lab sessions than there are catch-up sessions available, it will be impossible for them to pass the module as the laboratory module in each year is mandatory for progression and these credits cannot be carried. The Board of Examiners will convene at the earliest opportunity and make a decision regarding the student's progression (typically, either termination of studies or granting of a Repeat Year), and their studies for the current year will end immediately.
- **Year 2 to 3 progression:** In order to remain on the MChem programme students are required to achieve a CWA of at least 60% at the end of Year Two and have no resits.

Students whose CWA is between 55-60% (or who have a resit) will be individually considered for progression by the exam board in light of any mitigating or other circumstances. Students who fail to meet these criteria at the end of the second year are required to transfer to the relevant BSc programme.

- **Students undertaking a Year Abroad** are required to achieve an average of 60% or higher in their Year Two Semester 1 examinations (and coursework) in order to be allowed to make an application to the overseas University. If a student fails to meet this requirement they may be able to remain as a MChem student, but may not go on their year abroad (students with marks between 57-60% will be considered on a case-by-case basis).
- **Year 3 to 4 progression:** Students will need a Year Three CWA of 50% or higher to progress to Year Four. Failure to achieve this will mean that they are considered by the Board of Examiners for the appropriate bachelor's degree. Students taking a placement year may be able to graduate with a BSc with a Year in Industry or a Year Abroad as long as they have met the requirements outlined below.
- **Failure of modules in Year Three MChem for campus-based students**: In exceptional circumstances a student may fail some credits in Year Three. If only 15 credits are failed then students can proceed to Year Four and re-sit the failed assessments or, alternatively, they can graduate immediately with a BSc, as the third year of the MChem programme meets the intended learning outcomes of the equivalent BSc programme.
- **Failure of modules in Year Three MChem for students on placement:**
    - **Industry:** If students fail either module CH3601 or CH3602 and pass both CH3651 and CH3652 then they will be automatically transferred to Year Three of the appropriate BSc degree and graduate "with a Year in Industry" on successful completion of their final year. If students fail either module CH3651 or CH3652 then they will be automatically transferred to the Year Three of the appropriate BSc degree and will <u>not</u> graduate "with a Year in Industry".
    - **Abroad USA & Canada:** There are no resits for modules taken in the USA or Canada. If a student fails a module counting towards their 24 USA or Canadian credit hours then they will be automatically transferred to the start of Year Three of the appropriate BSc programme. If they have passed >75% of the modules taken in the USA/Canada then, after successful completion of Year Three, they can graduate "with a Year Abroad" otherwise they will graduate with a BSc degree.
    - **Abroad Europe, China & Japan:** If students fail either module CH3601 or CH3602 and pass both CH3651 and CH3652 then they will be automatically transferred to Year Three of the appropriate BSc degree and graduate "with a Year Abroad" on successful completion of their final year. If students fail either module CH3651 or CH3652 then they will be automatically transferred to Year Three of the appropriate BSc degree and will not graduate "with a Year Abroad".
    - **Other placement non-progression:** in certain limited situations (normally involving considerable mitigating 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 Year Abroad/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.
- **Year 4 completion:** To graduate with an Integrated Masters degree students will need an overall CWA for Year Four of 50% or higher. They will also need to pass both elements of the research project CH4261 & CH4262. Failure to achieve either of these requirements will mean that they are considered by the Board of Examiners for the appropriate bachelor's degree.
- **Progression onto a Year in Industry**

The progression criteria for a 'year in industry' programme is to meet the requirements needed to progress to the next level of study as outlined in the University's Senate 5 Regulations.

Where a degree programme has a requirement from a Professional or Statutory Body (PSRB) for academic attainment for students undertake a year in industry are exempt from the proposed new progression criteria and will continue to uphold existing progression criteria. A Placement Student will revert back to the degree without Year in Industry if:

- They fail to secure a year in industry role.
- They fail to pass the assessment related to the year in industry.
- The year in industry ends early due to the behaviour of the Placement Student not being in accordance with the University's Regulations for Students, Student Responsibilities. The Placement Student will need to suspend for the remainder of the academic year. To prevent such an incident from happening, processes are in place to identify any possible issues or concerns early in the year in industry role. This includes a start check, regular communications, visits to the workplace (physical and/or virtual) and evaluation. Communication and contact between the Placement Student, Placement Provider and University provides support should issues arise.
- They discontinue their Year in Industry. A student can return to their campus-based studies no later than the end of teaching week 2 at the start of the academic year should they decide to discontinue their Year in Industry they should complete a Course Transfer From. If a Placement Student decides to discontinue their Year in Industry after this point they will need to suspend their studies for the remainder of the academic year.

Nine months is the minimum time required for a year in industry to be formally recognised. If the year in industry is terminated earlier than 9 months as a result of event outside of the Placement Students control (for example redundancy, or company liquidation), the following process will be adopted:

- If the Placement Student has completed 1 – 6 months, they will be supported to search for another placement to take them up to the 9 months required for the year in industry to be formally recognised. If the Placement Student does not find a placement to meet this criteria they will be required to suspend and transferred onto the degree without Year in Industry.
- If the Placement Student has completed 7-8 months, they will be supported to search for another placement to take them up to the 9 months required for the year in industry to be formally recognised. If the Placement Student cannot source an additional placement to take them to 9 months, assessments related to the year in industry will be set for the student to make it possible for the individual learning objectives for the year in industry to be met. This will allow the Year in Industry to be recognised in the degree certificate.
- A Placement Student will not be permitted to undertake a placement which runs across two academic years.

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:

- Transfer from MChem Medicinal Chemistry to MChem Chemistry is allowed at the end of Year One (and in exceptional cases at the end of Year Two).

- Transfer from MChem Chemistry to MChem Medicinal Chemistry is only allowed up until the start of Semester 2 of Year One.
- 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: CH1209, BS2013, CH3211, CH4211

- In addition, students will also need to gain an overall (CWA across both modules) pass mark of 40% for the two final year project modules CH4261 & CH4262.
- 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. Students should attend Placement Preparation modules, additional support workshops and 1-2-1 appointments with the Career Development Service. 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.

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: 2023/24

Date created: 31/03/21 **Last amended:** 07/12/2023 **Version no.** 2

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.

MChem Chemistry

Updates to the programme

Academic year affected	Module Code(s)	Update
2023/24; 2024/25; 2025/26; 2026/27	CH1209, BS2013, CH3211, CH4211	For MChem Medicinal Chemistry, students must pass at least two of these modules to meet PSRB accreditation requirements
2023/24	CH1209	Title changed from Introductory Pharmaceutical Chemistry
2025/26	CH3211	Module title changed from 'Pharmaceutical Chemistry' to 'Hit to Lead Drug Discovery'
2026/27	CH4211	Module title changed from 'Medicinal Chemistry' to 'Advanced Topics in Medicinal Chemistry'

Level 4/Year 1 2023/24

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	CH1200	General Chemistry	15 credits
Sem 1	CH1206	Scientific Method & Principles of Analytical Chemistry	15 credits
Sem 2	CH1207	Chemistry of the Real World	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	Chemistry Key Skills and Maths	15 credits
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

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 2025/26

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	CH3270	MChem Research Skills, Employability & General Paper	15 credits
Year long	CH3271	Advanced Chemistry Practical	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	CH3204	Biological Chemistry	15 credits
Semester 2	CH3205	Metals in Synthesis	15 credits
Semester 2	CH3206	Advanced Analytical Chemistry	15 credits
Semester 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.

Level 7/Year 4 2026/27

Credit breakdown

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

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Year long	CH4261	Chemistry Project Part 1	30 credits
Year long	CH4262	Chemistry Project Part 2	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
Year long	CH4201	Advanced Structure Determination	15 credits
Year long	CH4202	Advanced Synthetic Methods	15 credits
Year long	CH4203	Earth System Science	15 credits
Year long	CH4207	Computational Chemistry and Quantum Mechanics	15 credits
Year long	CH4208	Bioinorganic Chemistry	15 credits
Year long	CH4211	Advanced Topics in Medicinal 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 Chemistry with a Year in Industry

Level 4/Year 1 2023/24

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	CH1200	General Chemistry	15 credits

Delivery period	Code	Title	Credits
Sem 1	CH1206	Scientific Method & Principles of Analytical Chemistry	15 credits
Sem 2	CH1207	Chemistry of the Real World	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	Chemistry Key Skills and Maths	15 credits
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

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

Delivery period	Code	Title	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

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 2026/27

Credit breakdown

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

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Year long	CH4261	Chemistry Project Part 1	30 credits
Year long	CH4262	Chemistry Project Part 2	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
Year long	CH4201	Advanced Structure Determination	15 credits
Year long	CH4202	Advanced Synthetic Methods	15 credits
Year long	CH4203	Earth System Science	15 credits
Year long	CH4207	Computational Chemistry and Quantum Mechanics	15 credits
Year long	CH4208	Bioinorganic Chemistry	15 credits
Year long	CH4211	Advanced Topics in Medicinal 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 Chemistry with a Year Abroad

Level 4/Year 1 2023/24

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	CH1200	General Chemistry	15 credits
Sem 1	CH1206	Scientific Method & Principles of Analytical Chemistry	15 credits
Sem 2	CH1207	Chemistry of the Real World	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	Chemistry Key Skills and Maths	15 credits
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

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

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 2026/27

Credit breakdown

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

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Year long	CH4261	Chemistry Project Part 1	30 credits
Year long	CH4262	Chemistry Project Part 2	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
Year long	CH4201	Advanced Structure Determination	15 credits
Year long	CH4202	Advanced Synthetic Methods	15 credits
Year long	CH4203	Earth System Science	15 credits
Year long	CH4207	Computational Chemistry and Quantum Mechanics	15 credits
Year long	CH4208	Bioinorganic Chemistry	15 credits
Year long	CH4211	Advanced Topics in Medicinal 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

Level 4/Year 1 2023/24

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	CH1200	General Chemistry	15 credits

Delivery period	Code	Title	Credits
Sem 1	CH1206	Scientific Method & Principles of Analytical Chemistry	15 credits
Sem 2	CH1209	Introductory Medicinal Chemistry	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	Chemistry Key Skills and Maths	15 credits
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

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	BS2013	Physiology and Pharmacology	15 credits
Sem 1	CH2200	Spectroscopy Theory and Practice	15 credits
Sem 2	CH2206	Analytical Chemistry in Practice	15 credits
Year long	CH2201	Organic Chemistry	15 credits

Delivery period	Code	Title	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

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	CH3211	Hit to Lead Drug Discovery	15 credits
Year long	CH3270	MChem Research Skills, Employability & General Paper	15 credits
Year long	CH3271	Advanced Chemistry Practical	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	CH3204	Biological Chemistry	15 credits
Semester 2	CH3205	Metals in Synthesis	15 credits
Semester 2	CH3206	Advanced Analytical Chemistry	15 credits
Semester 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.

Level 7/Year 4 2026/27

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	75 credits	n/a	n/a
Optional	45 credits	n/a	n/a

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Year long	CH4211	Advanced Topics in Medicinal Chemistry	15 credits
Year long	CH4261	Chemistry Project Part 1	30 credits
Year long	CH4262	Chemistry Project Part 2	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
Year long	CH4201	Advanced Structure Determination	15 credits
Year long	CH4202	Advanced Synthetic Methods	15 credits
Year long	CH4203	Earth System Science	15 credits
Year long	CH4207	Computational Chemistry and Quantum Mechanics	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 in Industry

Level 4/Year 1 2023/24

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	CH1200	General Chemistry	15 credits
Sem 1	CH1206	Scientific Method & Principles of Analytical Chemistry	15 credits

Delivery period	Code	Title	Credits
Sem 2	CH1209	Introductory Medicinal Chemistry	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	Chemistry Key Skills and Maths	15 credits
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

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	BS2013	Physiology and Pharmacology	15 credits
Sem 1	CH2200	Spectroscopy Theory and Practice	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

Delivery period	Code	Title	Credits
Year long	CH2203	Physical Chemistry	15 credits
Year long	CH2204	Practical Chemistry and Key Skills	30 credits
Year long	ADCH001	Industrial Placement Workshops	n/a

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

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 2026/27

Credit breakdown

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

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Year long	CH4211	Advanced Topics in Medicinal Chemistry	15 credits
Year long	CH4261	Chemistry Project Part 1	30 credits
Year long	CH4262	Chemistry Project Part 2	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
Year long	CH4201	Advanced Structure Determination	15 credits
Year long	CH4202	Advanced Synthetic Methods	15 credits
Year long	CH4203	Earth System Science	15 credits
Year long	CH4207	Computational Chemistry and Quantum Mechanics	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 2023/24

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	CH1200	General Chemistry	15 credits
Sem 1	CH1206	Scientific Method & Principles of Analytical Chemistry	15 credits
Sem 2	CH1209	Introductory Medicinal Chemistry	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	Chemistry Key Skills and Maths	15 credits
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

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	BS2013	Physiology and Pharmacology	15 credits
Sem 1	CH2200	Spectroscopy Theory and Practice	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

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 2026/27

Credit breakdown

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

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Year long	CH4211	Advanced Topics in Medicinal Chemistry	15 credits
Year long	CH4261	Chemistry Project Part 1	30 credits
Year long	CH4262	Chemistry Project Part 2	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
Year long	CH4201	Advanced Structure Determination	15 credits
Year long	CH4202	Advanced Synthetic Methods	15 credits
Year long	CH4203	Earth System Science	15 credits
Year long	CH4207	Computational Chemistry and Quantum Mechanics	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).

Appendix 3: Skills matrix