Programme Specification[1]

1. Programme Title(s) and Code(s):

Programme Title	*UCAS Code*	*GU Code*
MSci Chemistry with European placement		F102-2207

2. Academic Session:

2018-19

3. SCQF Level (see Scottish Credit and Qualifications Framework Levels):

11

4. Credits:

640

5. Entrance Requirements:

Please refer to the current undergraduate prospectus at: https://www.gla.ac.uk/prospectuses/undergraduate/

6. ATAS Certificate Requirement (see Academic Technology Approval Scheme):

ATAS Certificate not required

7. Attendance Type:

Both Full Time and Part Time

8. Programme Aims:

• To present an integrated course of study which describes, analyses and relates the principles of modern chemistry at a level appropriate for a professional chemist
• To provide the opportunity to study in depth a choice of advanced treatments and applications of aspects of modern chemistry.
• To provide training and experience in the principles and practice of synthetic methodologies and chemical measurement techniques, using advanced instrumentation where appropriate, and in the critical analysis of

[1] This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if full advantage is taken of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of each course can be found in course handbooks and other programme documentation and online at www.gla.ac.uk/

The accuracy of the information in this document is reviewed periodically by the University and may be checked by the Quality Assurance Agency for Higher Education.

experimental data

• To develop problem solving abilities, critical assessment and communication skills, to a level appropriate for a career of leadership in academia or industry, and to give students the experience of group work

• To offer the opportunity to apply measurement, problem solving and critical assessment, and communication skills in performing and writing a report on an extended and demanding project

• To encourage students to work effectively, to develop a professional attitude to what they do and to take full responsibility for their own learning.

9. Intended Learning Outcomes of Programme:

The programme provides opportunities for students to develop and to demonstrate knowledge and understanding, skills, qualities and other attributes in the following areas.

Knowledge and Understanding:

By the end of this programme students will be able to:

• demonstrate knowledge of the fundamental concepts, principles, theories and methods of the various branches of chemistry for example: organic, inorganic, physical and theoretical

• demonstrate understanding of selected advanced topics in chemistry at the leading edge of research

• describe in detail the underlying theories on which practical experiments and measurements in chemistry are based

Skills and Other Attributes:

By the end of this programme students will be able to:

Subject-specific/practical skills

• plan and carry out experimental investigations, using standard and complex or advanced experimental equipment and apparatus, of complex chemical systems or processes, demonstrating logic, initiative, planning and decision making skills in solving problems encountered

• analyse, interpret and critically evaluate experimental data, make a quantitative evaluation of the errors inherent in the experimental measurements and draw valid conclusions from the results of experimental investigations

• apply computer software to analyse experimental data and to write scientific reports

• recover, evaluate and summarise the professional literature and material from other sources concerned with a chosen area of chemistry, and prepare a written analysis of the current position in the chosen area, which should include a critical comparison of the material and a discussion of likely future developments

• plan the course of action required to achieve self-defined goals in an open-ended chemistry project

• make appropriate safety assessments for experimental procedures.

Intellectual skills

• describe and analyse quantitatively processes, relationships and techniques related to the areas covered in the contributory courses

• write down, and where appropriate either prove or discuss the underlying basis of, chemical laws and principles related to topics in these areas

• analyse critically, and solve using appropriate mathematical tools, advanced or complex problems, which may include unseen elements, related to topics included in the course component outlines

• demonstrate a critical awareness of the significance and importance of the topics, methods and techniques discussed in the lectures and their relationship to other concepts in courses you have taken.

Transferable/key skills

• give an oral account of experimental work performed and conclusions drawn from it

• prepare a detailed written report on an experimental investigation

• apply logical analysis to problem solving

• make a preliminary definition of goals to be achieved during open-ended project work and revise these goals

and strategies for completion of the work in the light of results achieved and difficulties encountered
• write a report on an extended piece of project work, which should include a critical evaluation of the significance of the work, and how it compares with earlier work done in the same area
• prepare an abstract of experimental or project work performed in the accepted scientific format
• prepare and present audio-visual presentations summarizing the results of a project
• appreciate open problems typical of business situations;
• interact positively with colleagues in a group context
• apply team-working skills to address a complex problem and contribute significantly to the work of a group tackling such a problem, combining their own work constructively with the work of others
• contribute to the management of a group engaged in project work
• combine with colleagues to prepare and deliver a presentation and report of group work.

10. Typical Learning and Teaching Approaches:

A range of learning and teaching approaches are used including
• Lectures
• Tutorials
• Guided reading of books and articles
• Problem-solving sessions
• Interactive teaching sessions
• Practical classes
• Group-work tasks
• Extended projects
• Practical and project reports
• Extended essays on selected topics
• Data analysis sessions
• European placement experience
• Distance learning

11. Typical Assessment Methods:

Unseen written examinations
Verbal and written reports of laboratory work
Oral and written presentations of project work and assessment of practical skills by supervisors
Oral presentations and reports on group tasks

12. Programme Structure and Features:

Year 1
CHEM1001 Chemistry 1 (40 credits)
Additional courses (80 credits).
Year 2
CHEM2001 Chemistry 2X (30 credits)
CHEM2002 Chemistry 2Y (30 credits)
Additional courses (60 credits).
Year 3
CHEM3012 Organic chemistry 3 (40 credits)
CHEM3010 Inorganic chemistry 3 (40 credits)
CHEM3014 Physical chemistry 3 (40 credits)
CHEM5016 Frontiers of chemistry 3M (20 credits)
Year 4
CHEM4026 Chemistry European placement year (120 credits)
Year 5
CHEM5021 Organic chemistry 4M (20 credits)

CHEM5022 Physical chemistry 4M (A) (20 credits)
CHEM5017 Inorganic chemistry 4M (A) (20 credits)
CHEM5005 Chemistry problems 4M (A) (20 credits)
CHEM5003 Chemistry special topics 4M (A) (20 credits)
CHEM5009P Chemistry project 4M (A) (40 credits)

Assessment

The programme is assessed on the basis of performance in years 3, 4 and 5.

Degree assessment: carry over from third year assessment (20%); placement assessment (20%); final year examinations (42.9%); research project (17.1%).

Interim assessment at end of year 3: Examinations (72.9%), Frontiers of chemistry assessment (14.3%) and assessment of laboratory work (12.8%).

Progress Requirements

In addition to Science generic progress requirements as set out in the University Calendar:

Year 1 to Year 2: Chemistry 1 at grade D3 or better;

Year 2 to Year 3: Chemistry 2X and 2Y both at grade B3 or better at first sitting.

Year 3 to year 4: Chemistry 3M normally at an aggregate grade C3 or better at first sitting.

Year 4 to year 5: Successful completion of European placement year.

Exit Awards and programme changes

At the end of Year 1, students who satisfy the University requirements may leave with a Certificate of Higher Education

At the end of Year 2, students who satisfy the University requirements may leave with a Diploma of Higher Education

At the end of Year 3, students who satisfy the University requirements may graduate with a BSc Designated Degree in the Chemistry.

At the end of year 3, students who have completed the level 3 courses with at least an aggregate grade D3 at first sitting may move to the BSc. Honours Programme in year 4.

At the end of year 4, students who complete the assessment for the placement year and satisfy the University requirements may graduate with a BSc designated degree in chemistry with work placement.

Regulations

This programme will be governed by the relevant regulations published in the University Calendar. These regulations include the requirements in relation to:

(a) Award of the degree
(b) Progress
(c) Early exit awards
(d) (For undergraduate programmes, where appropriate) Entry to Honours

https://www.gla.ac.uk/myglasgow/senateoffice/policies/calendar/

13. Programme Accredited By:

Accredited by the Royal Society of Chemistry

14. Location(s):

Glasgow

15. College:

College of Science and Engineering

16. Lead School/Institute:

Chemistry [REG30100000]

17. Is this programme collaborative with another institution:

No

18. Awarding Institution(s):

University of Glasgow

19. Teaching Institution(s):

University of Glasgow

20. Language of Instruction:

English

21. Language of Assessment:

English

22. Relevant QAA Subject Benchmark Statements (see Quality Assurance Agency for Higher Education) and Other External or Internal Reference Points:

The QAA Benchmark statement for chemistry can be found at http://www.qaa.ac.uk/en/Publications/Documents/SBS-chemistry-14.pdf

23. Additional Relevant Information (if applicable):

Support for students is provided by the Postgraduate/Undergraduate Adviser(s) of Studies supported by University resources such LEADS (www.gla.ac.uk/myglasgow/leads/), Counselling & Psychological Services (www.gla.ac.uk/services/counselling/), the Disability Service (www.gla.ac.uk/services/studentdisability/) and the Careers Service (www.gla.ac.uk/services/careers/).

24. Online Learning:

No

25. Date of approval:	29/09/2017