Programme Specification (Undergraduate)

Date amended: 26/06/2016

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

Chemistry Foundation Year

2. Awarding body or institution:

University of Leicester

3. a) Mode of study:

Full time

b) Type of study:

Campus-based

4. Registration periods:

The normal period of registration is one year (progressing to a 3 or 4 year UG degree)

The maximum period of registration is one year

5. Typical entry requirements:

A level: CCC or points equivalent from best three A levels must include Chemistry.

BTEC Diploma: DDM in appropriate subject area.

The programme is designed to provide a second chance to applicants who have just missed their A-level entry grades for standard first year entry.

6. Accreditation of Prior Learning:

NA

7. Programme aims:

The programme aims to:

- Help students to develop mature professional and study skills that will equip them to thrive in a UG degree programme and beyond
- Provide students who lack suitable entry qualifications with training in chemistry, mathematics and study skills that will enable them to progress onto a UG degree programme in Chemistry.

8. Reference points used to inform the programme specification:

- University of Leicester Learning and Teaching Strategy 2011-2016
- Specification documents for various A level mathematics qualifications
- Specification documents for various A level chemistry qualifications

9. Programme Outcomes:

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
(a) Discipline specific knowledge and competencies		
(i) Mastery of an appropriate body of knowledge		
Mastery of mathematics and chemistry equivalent to parts of the content of AS level	Course text book and other specially prepared pre-reading. Lectures, problem classes. Group work/peer learning. Regular coursework with timely feedback.	Regular coursework assessments. Group projects. Presentations. Formal laboratory reports. End of semester examinations. Blackboard-based multiple choice exams. Precis of research article
(ii) Understanding and application of key concepts and techniques		
Application of chemistry and mathematics knowledge to specific scenarios	Regular coursework questions with timely feedback. Group work/peer learning. Workshop/surgery sessions.	Regular coursework assessments. End of semester examinations.
(iii) Critical analysis of key issues		
Students should be able to explain the process of scientific enquiry, the roles of experiment and theory, the limits of science and the role of experimental error.	Induction programmes, resource based learning, group projects, seminars	Presentations, written reports, literature review,
(iv) Clear and concise presentation of material		
Students should be able to communicate scientific ideas through written material and oral presentations.	Lectures, seminars, written guidance (handbook). Formative feedback on presentations and reports.	Presentations, written reports, literature review,
(v) Critical appraisal of evidence with appropriate insight		
Distinguish between precision and accuracy and explain the role of experimental error in the scientific process.	Embedded throughout the programme in lectures, seminars workshops, written course material, handbook. Specific instruction through problem solving classes	Written reports, specific coursework assessments.
(vi) Other discipline specific competencies		
Use mathematical models to explain various features of physical and chemical phenomena. View mathematics as an integral part of scientific method rather than as a separate, compartmentalised subject.	Embedded throughout the programme by means of examples in lectures, seminars workshops, written course material. Coursework with rapid feedback	Regular coursework assessments. End of semester examinations
(b) Transferable skills		
(i) Oral communication		
Students should be able to communicate scientific ideas through oral presentations.	Lectures, seminars, written guidance (handbook). Formative feedback on presentations.	Individual and group presentations.

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
(ii) Written communication		
Students should be able to communicate scientific ideas through written material. Students should master the art of setting out a mathematical proof in a clear, logical manner	Lectures, seminars, written guidance (handbook). Formative feedback on written coursework assessments, reports, and mathematical submissions	Reports, regular science coursework assignments, regular competency-base mathematical submissions.
(iii) Information technology		
Students should • be able to use electronic resources to find information • evaluate such information • use IT resources to process data use IT to present data	Seminars, tutorials, inductions sessions, advice in course materials and handbook, formative feedback on presentations	Individual and group presentations.
(iv) Numeracy		
Mastery of specific elements of chemistry and mathematics at AS-level standard	Course materials, pre-reading, lectures, problem classes, formative feedback on coursework submissions, competency-based mathematics tuition	Coursework submissions, end of semester examinations.
(v) Team working		
Working in groups to solve problems, prepare and deliver reports and presentations.	Feedback in workshops. Formative feedback on presentations and reports.	Presentations and reports. *Viva*-voce examination (computer program), peer assessment.
(vi) Problem solving		
To apply scientific, chemical and mathematical knowledge to a wide variety of problems	Lectures, workshops, formative feedback on regular coursework assessments.	regular coursework assessments, examinations
(vii) Information handling		
Students should be able to correctly process, average and present scientific data and draw appropriate conclusions from it	Skills workshops, laboratory practicals, handbooks, formative feedback on coursework assessments.	Laboratory notes, formal laboratory report, coursework assessments

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
(viii) Skills for lifelong learning		
Students should • keep an ordered set of course notes • organise their time effectively • be able assimilate and draw accurate conclusions from a wide variety of data to effectively communicate scientific conclusions in both written and oral form	Professional practice tutorials, compulsory attendance at core learning activities, specific instruction in lectures and seminars, formative feedback on presentations and written material	By keeping ordered notes, by attending sessions and being punctual, through regular coursework assessment and end of semester examinations, reports and presentations.

10. Progression points:

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

The Maths and Chemistry modules will need to be passed at 60%. All other modules can be passed at 40% if the overall average is >60%. Resits will be offered for all modules except the Chemistry Laboratory, and the Methods and Techniques module.

11. Special features:

12. Indications of programme quality

The teaching methodology has been informed experience teaching the Interdisciplinary Science degree programme to a diverse range of students with widely varying mathematical abilities. Competency-based mathematics has proven very effective in this context. The Methods and Techniques module was informed by similar modules in the IScience course.

Appendix 1: Programme structure (programme regulations)

There are eight 15 credit modules and all students are required to take all modules.

Appendix 2: Module specifications

Attached.

Appendix 3: Skills matrix

Attached.