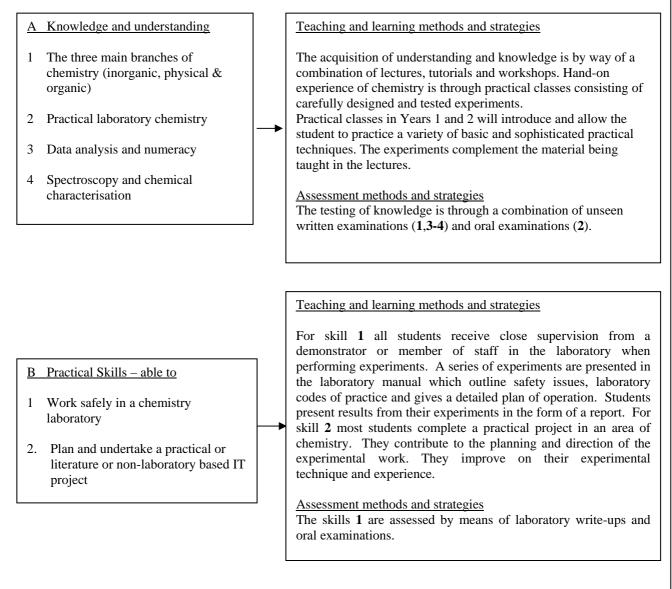
1	Awarding institution/body	University of Newcastle upon Tyne
2	Teaching institution	University of Newcastle upon Tyne
3	Programme accredited by	
4	Final award	BSc (Joint Honours)
5	Programme	Chemistry with Mathematics
6	UCAS code	FG11
7	Relevant QAA subject benchmarking group(s)	Chemistry
8	Date of production/revision	March 2002

# 9 Programme Aims

The degree programme aims to educate students with an understanding of the essential principles and applications of organic, inorganic and physical chemistry and to equip students with skills that enable them to pursue careers in science-related disciplines and commerce. To educate the student in the use of simple and more advanced chemical laboratory techniques and the application of these techniques to problems in contemporary science.

# 10 Intended Learning Outcomes for Chemistry

The progamme provides opportunities for students to develop and demonstrate knowledge and understanding, qualities, skills in the following areas:



#### C Cognitive skills - able to

- 1 Critically evaluate data
- 2 Apply learnt knowledge to unseen problems
- 3 Analyse and interpret data

#### Teaching and learning methods and strategies

Intellectual skills are developed by means of the teaching and learning programme outlined above. All courses are designed to promote discussion of key topics and facilitate self-assessment. Courses encourage application of concepts within a laboratory framework. Tutorials and seminars back-up lecture material and facilitate small group participation in answering problems.

#### Assessment methods and strategies

Problem solving based examinations and oral responses to either problems of tasks (tutorials) are used to test skills **1** to **3**. Write up of independent projects also allows students to demonstrate cognitive skills

#### D Key skills - able to

- 1 Communicate and express clearly ideas both orally and in writing
- 2 Work in a group environment
- 3 Manage time and complete work to deadlines
- 4 Assess and form an opinion of other peoples work
- 5 Find information from a range of sources
- 6 Be self-reliant
- 7 Critically evaluate data and use when required.

#### Teaching and learning methods and strategies

All laboratory courses require regular written work and the use of search libraries, the Internet and extensive bookwork. After marking practical write-ups and tutorial work the work is discussed with the students to develop their understanding as well as their powers of expression. Skills (2 and 3) are learnt from working in group environments (groups vary in size from 2 to 6 depending on the courses), and handing in reports to set deadlines. Skills 4 and 5 are obtained from detailed literature searches. Skills 2 and 4 stem from small group tutorials and oral presentations to a peer audience. Solving of unseen problems helps develop skill 7.

#### Assessment methods and strategies

Oral examinations are used to assess a student's ability, both at one-to-one level and in a peer-reviewed atmosphere. Many of the outlined skills are assessed in written examinations by both the answers and the approach to question answering. Laboratory work in a research environment critically evaluates skills 2-7.

# 11 Programme Features, Curriculm and Structure

The degree programme is offered full-time (3 years). The entry and progression points are indicated by arrows. All students must take the compulsory courses outlined in each year. A number of option courses are open for study and are chosen by the student with consultation with their personal tutor.

All modules are to the value of 10 credits unless specified.

#### Stage 3

#### **Compulsory Modules**

60 credits of Chemistry Modules to be chosen from Stage 2 modules not previously attended, or Option Modules from Stage 3.

## **Options Modules**

CHY315 Organic synthesis and the periodic table CHY326 Molecular machines CHY335 Molecules and materials CHY398 Project (30) CHY330 Advanced Inorganic Chem (20) CHY320 Advanced Physical Chemistry (20)

#### **BSc (Joint Honours) Degree**

Degree classification is determined by the averaging method and is based on stage 2 and 3 marks (1:2). The Common Scale applies.

Outcomes developed and assessed: B1,2; C1-4; D1-7

Knowledge outcomes developed as indicated by module titles

## Stage 2

#### **Compulsory Modules**

At least two from:

CHY220 Physical Chemistry (20) CHY230 Inorganic Chemistry (20) CHY210 Organic Chemistry (20) CHY240 Structural Chemistry (20)

#### **Options Modules**

CHY265 Technology and Business Awareness CHY208 Introduction to Biological Chemistry CHY275 Landmarks in Inorganic Chemistry CHY235 Reaction Mechanisms **Progression requirements** 

240 Credits (total)

Outcomes developed and assessed: B1; C2,3; D1-5

Knowledge outcomes developed as indicated by module titles

Stage 1

#### **Compulsory Modules**

CHY110 Basic Organic Chemistry (20) CHY120 Elements of Physical Chemistry (20) CHY130 Structural and Inorganic Chemistry (20) **Option Modules** 

None

#### **Progression requirements**

120 Credits (total)

Outcomes developed and assessed: B1; C2,3; D1, 3

Knowledge outcomes developed as indicated by module titles