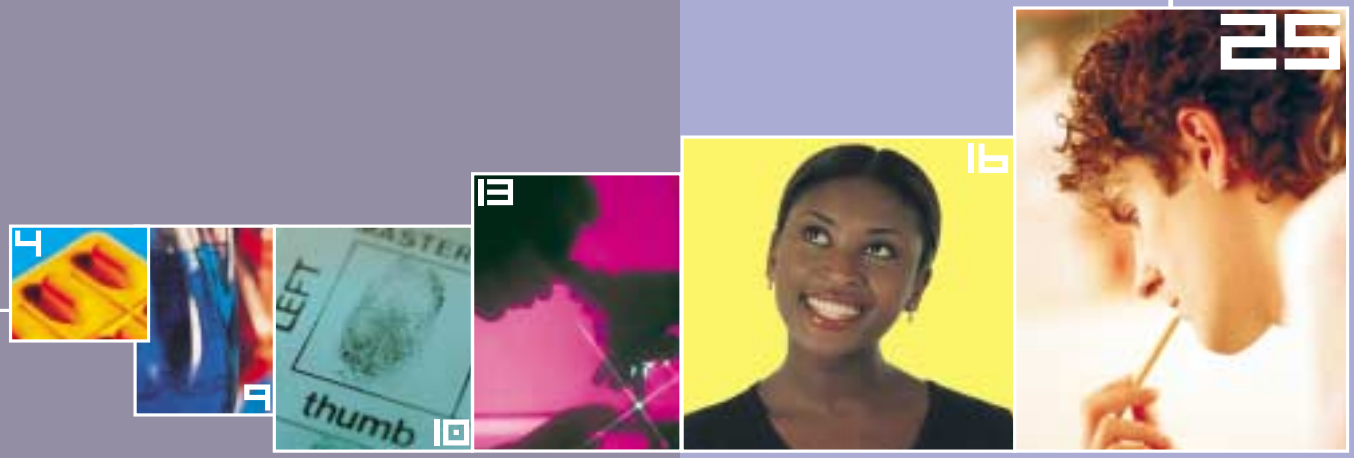
LIFE
beyond exams

CHEMISTRY: THE CREATIVE SCIENCE

careers guidance
for post-16 students

RS•C
ROYAL SOCIETY OF CHEMISTRY

contents



page no.

introducing life beyond exams

This booklet is about the varied world of chemistry - a world that becomes more fascinating the more you look into it. At the moment, chemistry is probably just another subject to you. However, in the future it could be the basis of your career.

Chemistry is a subject of global impact. As a fundamental science it has a profound effect on our planet and is involved in nearly every facet of everyday life. Almost every new technological change and important discovery has its foundation in chemistry. In short, chemists influence our lives and make the world a better place to live in.

Having a chemistry qualification is rather like having an open flight ticket to any destination in the world - it gives you great choice. Without chemistry your options shrink in number. A chemistry qualification - from school, college or beyond - isn't just an end in itself, it's a beginning.

To give you a taste of the world of chemistry, we have included facts on some of the main career destinations and what they all have in common - chemistry.

Look through the rest of this booklet, then look to the future - chemistry beckons.

Royal Society of Chemistry (RSC)
0207 437 8656

The Association of the British Pharmaceutical Industry (ABPI) 0207 930 3477

chemistry today...

You already know quite a lot about the world of chemistry. We all do. Our lives depend on chemistry in action - in our bodies, our food, and our environment.

Materials we use everyday such as plastics, paints and dyes are the result of chemical research. Artificial fibres, new medicines and even the microchips that run computers could not have been developed without the skill and knowledge of chemists.
So while we are all users of chemistry, for chemists themselves there is the added dimension of challenge and new discovery - the opportunity to directly influence the quality of life

... and tomorrow

Science never stands still. The 21st century will be an important time to understand and develop those processes that so critically affect the future for us all.

Take a closer look at how chemists are dealing with these issues today - in industry, in research, the community and in education.




INDUSTRY

What do chemists do?

We live in an age of chemistry-based technology and future demands will require chemical expertise in many fields including:

- improvements in the environment – *eg* pollution control and recycling waste materials;
- new foodstuffs – *eg* new chocolates and ice creams; and
- improved methods of producing most synthetic materials – *eg* plastics, fibres and medicines.

So let's take a closer look at chemists at work. How do chemists' skills play a part? Let's look at the chemical industry first.

Institution of Chemical Engineers (IChemE)
01788 578 214

Research and development

'R&D' - a simple abbreviation which describes two critical stages in the process of innovation of new products.

Research chemists explore and invent new products and processes:-

- working from their original ideas and concepts;
- in response to a particular requirement from either a customer or society.

These are the ideas people, breaking new ground, advancing our understanding of the world and turning knowledge into opportunity.

Large teams of development scientists, engineers and particularly chemists are required to turn the fruits of research into products. They work together to develop and tailor products to suit customer needs and create the technology needed to produce these products.

Their work requires them to develop a broad base of skills, alongside their chemistry skills, such as an understanding of engineering, markets, safety, economics, organisation and management. Their work is rewarding, as they create real products from basic ideas, concepts and understanding.

Together, the R&D chemists play a vital role. Part of their expertise lies in coming up with the right answers to the right questions. For example, questions about new materials and their properties, about new applications of existing materials and questions affecting the overall feasibility and economic viability of the project.

Naturally, this calls for careful monitoring and feedback from a variety of sources, especially in reactions from customers, obtained through market research. Increasingly, too, computer technology plays an active role in their work, particularly in the storage and retrieval of information, and in designing new compounds and synthetic routes.

Chemical Industries Association (CIA)
0207 834 3399

What else do chemists need to know?

Chemists have to keep abreast of the latest scientific advances. But increasingly the special skills of information scientists are needed to search and sift the knowledge already available in the world. The connection of two pieces of information that appear unrelated can and has often led to significant advances. Apart from being good scientists; information scientists need to be conversant with modern computerised methods of information storage and retrieval.

Patent agents, who often have a chemistry qualification are also vital. They organise legal agreements and protect the fruits of research through the international legal framework of patents.

Characterisation, measurement and analysis

No research programme can be done without the special skills of characterisation and measurement. Here, chemists specialise in techniques such as spectroscopy and microscopy. These chemists along with other scientists become part of the research team, and help to understand processes at a molecular level.

Analytical chemists monitor all the process stages to help production and to ensure that quality products are produced.

Production

In industry, ideas and products are only useful if they can be put into commercial production. And the success of a product often depends on the efficiency and cost effective operation of the manufacturing process. Here too chemists face further challenges.

Does the process produce a high enough yield? Is the finished product pure? Are good safety standards being maintained? Can the environmental impact be controlled and minimised? These are just some of the problems that production chemists have to resolve every day.

Chemists in these roles have a broad range of skills like the development chemists and are good at problem solving. The technical problems of manufacturing tend to be difficult and require both a high intellectual and practical input.

Production management is also well suited to people with a chemical background. Apart from the obvious technical skills it also requires the skills of leadership, organisation and motivation.

Marketing, sales & technical support

Eventually, an idea becomes reality and a new product is successfully produced. But it's not the end of the story until that product is in the hands of the customer. Getting it there to meet the customers' needs for a reasonable profit, is the job of the marketing and sales staff.

Both the marketing and selling of technical products requires a technical background and that of a chemist is ideal. While technical, organisational and management skills are required, it is commercial acumen or shrewdness, which distinguishes this activity. Many factors that would affect success or failure need to be correctly balanced.

- What the product offers the customer?
- How can the product be promoted and sold?
- What price should be charged?
- What sort of quantities should be produced to begin with?
- What are the strengths and weaknesses of the product?
- How to remain competitive?

Having decided how to take a product to market, the company will now be represented by a member of the sales force. Sales staff must be articulate and enjoy meeting people and travelling. But in a competitive market such as pharmaceuticals and chemicals, they also need to understand their product to sell it effectively. That means having a good grasp of the technology involved in the manufacturing of the product and how the customer uses it.

Technical support staff are there to back up the sales force by providing technological advice and to explain and demonstrate the advantages of the products to the customer. They ensure that products live up to expectations by solving any problems as they arise. Such technologists are 'troubleshooters' and must relish the challenge of problem solving. And of course, like sales staff, they must enjoy travel and dealing with a wide range of customers.

CHEMISTS IN THE COMMUNITY

How do you know that your tap water is safe to drink? How do you know the air around us is safe to breathe? How do life-saving drugs combat disease? Chemists can help to answer these questions.

Most of these are in research and development, analytical chemistry and in information science, and their fields of study and investigation are as varied.

The Research councils. These include Biotechnology & Biological Sciences, Natural Environment, Engineering & Physical Sciences, Particle Physics & Astronomy, and Medical Research Councils. Chemists undertake important research in all of these national organisations. In addition to running their own institutions, research councils often sponsor research in universities.

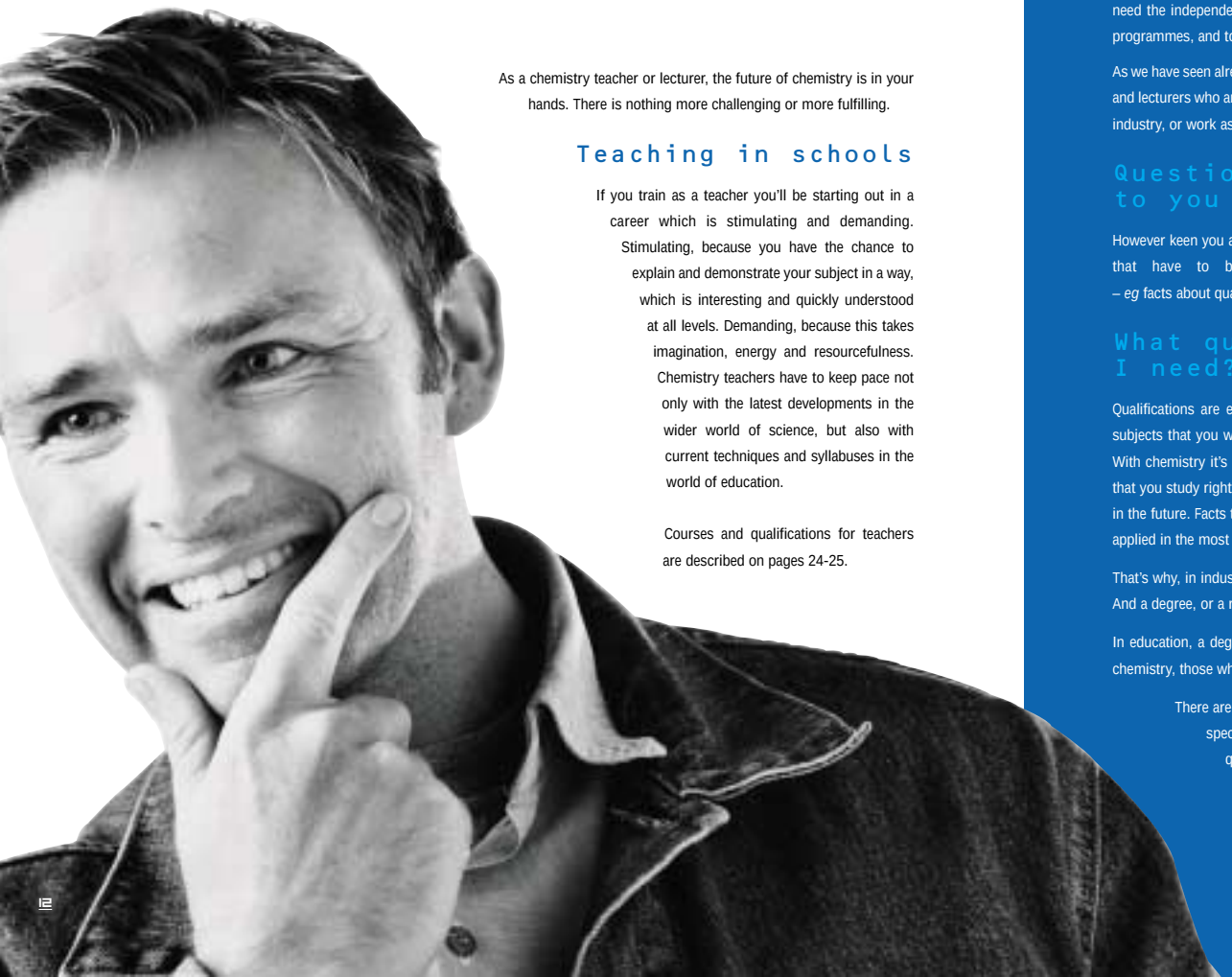
Hospitals. Chemists and biochemists work in both pathology and clinical biochemistry laboratories analysing body tissues and fluids. This gives vital assistance to medical staff in helping to diagnose diseases.

Forensic science. Forensic scientists use a variety of techniques to examine trace evidence associated with crime. The results of this evidence can be used in court. This trace evidence may include: explosives, firearms, blood, saliva, hairs, fibres and tyre impressions. Most forensic scientists in the UK work in government and police laboratories.

Public protection. This involves working in laboratories, where chemists analyse materials such as air, water, trade waste, sewage, drugs and food to ensure they are safe.

Among the most highly qualified of these analytical chemists are public analysts. They are involved with the work of the environmental health and trading standards offices. Some are local government employees, while others work independently - but all must, by law, hold the Royal Society of Chemistry qualification - Mastership in Chemical Analysis (MChemA).

CHEMISTS IN EDUCATION



As a chemistry teacher or lecturer, the future of chemistry is in your hands. There is nothing more challenging or more fulfilling.

Teaching in schools

If you train as a teacher you'll be starting out in a career which is stimulating and demanding. Stimulating, because you have the chance to explain and demonstrate your subject in a way, which is interesting and quickly understood at all levels. Demanding, because this takes imagination, energy and resourcefulness. Chemistry teachers have to keep pace not only with the latest developments in the wider world of science, but also with current techniques and syllabuses in the world of education.

Courses and qualifications for teachers are described on pages 24-25.

Teaching in colleges and universities

Lecturers in further and higher education often carry out original research, sometimes of great national and international significance. Lecturers need to have the ability to communicate their subject in great depth. They also need the independence and expertise required to do their own research programmes, and to supervise the work of others.

As we have seen already, much scientific research is valuable to industry, and lecturers who are experts in particular areas collaborate closely with industry, or work as consultants.

Questions which matter to you

However keen you are on a chemistry career, there are some questions that have to be answered because they affect everyone – *eg* facts about qualifications, prospects and money.

What qualifications will I need?

Qualifications are essential for most careers. But after a few months the subjects that you worked so hard to learn may have been quickly forgotten. With chemistry it's different. That's because the basic techniques and theories that you study right from the start provide the foundations for everything you do in the future. Facts that are needed even at school are part of the knowledge that is applied in the most advanced research.

That's why, in industry, most of the chemists holding responsible positions are graduates. And a degree, or a recognised equivalent, improves your own career prospects.

In education, a degree or equivalent is necessary - both for school teachers and for those who work in further and higher education. In chemistry, those who teach to degree level normally have a higher degree themselves – *eg* a PhD.

There are interesting and challenging jobs in chemistry for people with other qualifications. For instance laboratory assistants and specialist technicians are vital in industry, the service industries, and in school, college and university laboratories. They have qualifications such as A-levels, GNVQ/GSVQ, National and Higher Diplomas or Certificates in Science. Technicians who obtain these qualifications can also go on to degree studies. It is also possible to obtain NVQ qualifications through on the job training. (These different types of qualification are explained in the Qualifications section.)

Teacher Training Agency (TTA) 01245 454 454
General Teaching Council for Scotland 0131 314 6000

QUALIFICATIONS

Do chemistry qualifications lead to jobs?

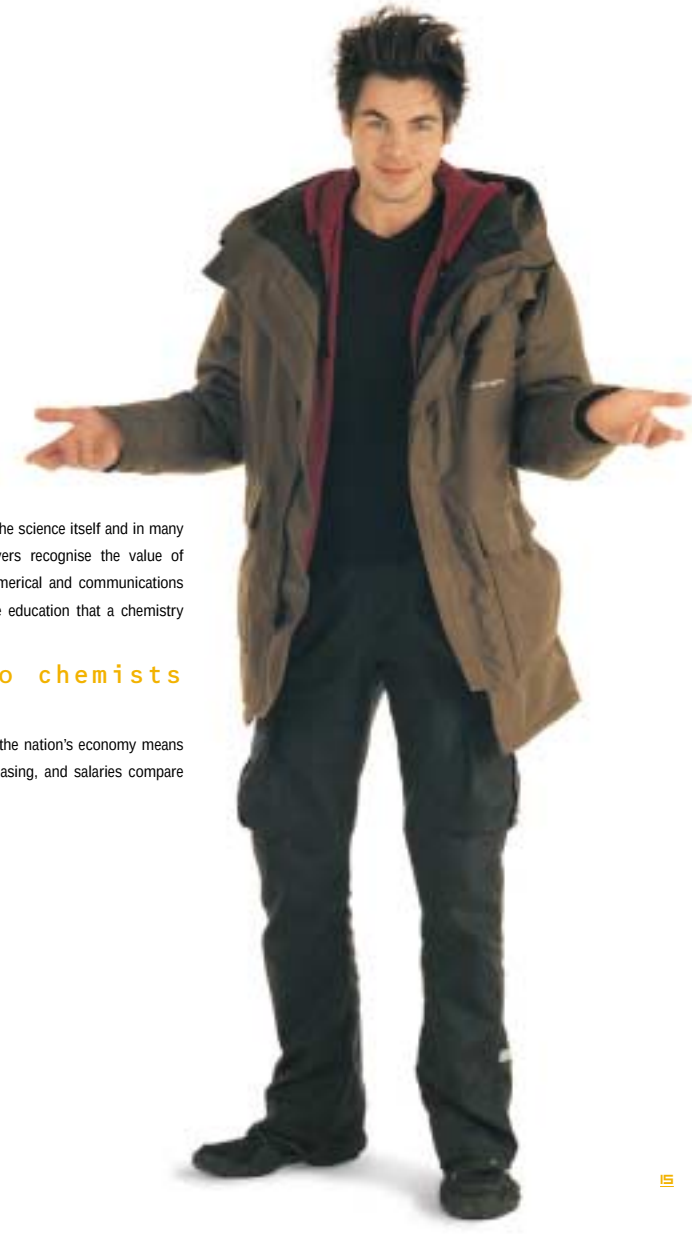
Yes - and the range of jobs available to someone with a chemistry qualification is greater than with most other qualifications.

The reasons are simple. Chemistry underpins everything in our modern life-style. For example, it is chemistry that enables us to convert crude oil into petrol, plastics and fibres.

Chemists invented Nylon, Terylene, Lycra and other artificial fibres, plastics and synthetic rubbers; chemists make fertilisers; medicines that help to fight disease, pain and disability; chemists help to make sewage harmless and water pure; they also analyse and monitor the atmosphere and the sea for pollutants.

There are few things that we use which have not, at some stage been made, processed or monitored by chemists.

The chemical and pharmaceutical industries are two of the largest employers in the manufacturing industries. What's more chemists are also employed in related areas such as biotechnology and electronics.



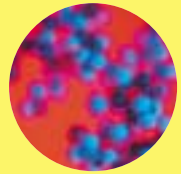
So chemistry does mean jobs - in the science itself and in many other disciplines. Many employers recognise the value of training in logical thought, numerical and communications skills and the general science education that a chemistry course provides.

How much do chemists earn?

The importance of chemistry to the nation's economy means that the value of chemists is increasing, and salaries compare well with other professions.

WHERE DO I GO FROM HERE?

You've seen what chemistry has to offer now and in the future. And you'll have realised the importance of qualifications in helping you to achieve these career aims. The question is, where to go from here?

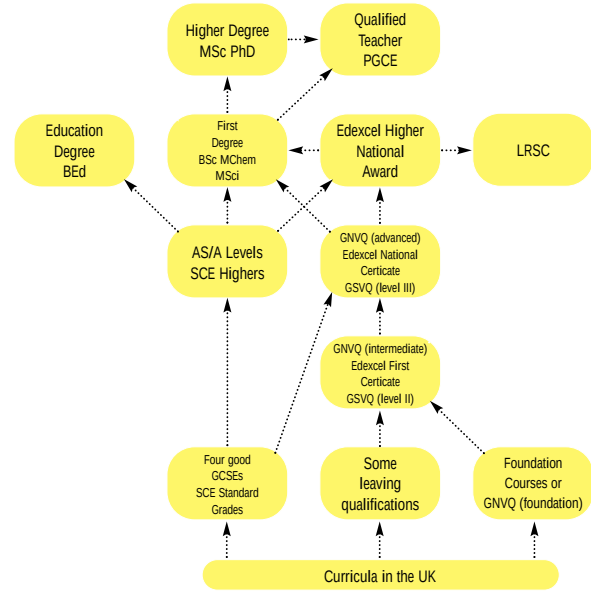


You may already have firm ideas, or you may be in need of practical advice to start you off. Here's one plan of action that you may find helpful as you try to sort out the bewildering array of options.

Ask yourself what type of career you really want and how you see those career plans developing;

Choose the type of course which most closely matches your interests and preferences. For example, do you want to study full-time or part- time, or on a sandwich course? Do you want to go to a college, or university - and where? The diagram should help to focus your ideas along definite paths - whether degree or equivalent studies, or technician qualifications;

Read the more detailed explanations of the various courses, which follow - so that you have a better grasp of what's available. Finally, but most importantly contact any of the organisations listed on the back cover and read their literature for further information and advice.



16 years old? Do you have GCSE or SCE qualfications?

What's available to you?

GCE A- and AS-levels (in England, Wales and Northern Ireland)
Highers and Advanced Highers (in Scotland)
First and National Certificate in Science (Edexcel, BTEC)
GNVQ qualifications (in England, Wales and Northern Ireland)
GSVQ/National Certificate (in Scotland)

What's involved?

A- and AS-levels/Highers

With good GCSE or SCE passes at 16+, a full-time GCE A-level or Scottish Higher/Advanced Higher course is an obvious choice. This can be taken either at school, at a sixth-form college (in England and Wales), or at a college of further education. If it is your intention to go on to study for a degree such as chemistry, chemical engineering or pharmacy, there is little doubt that the combination of chemistry, physics (or biology) and mathematics at this level still gives the widest possible choice of courses.

If you want to broaden your programme of study at A-level you can study one of the new Advanced Subsidiary Qualifications.

First and National Certificate in Science (Edexcel, BTEC)

Certificates are normally awarded for part-time study and have the advantage that you can work and study at the same time. The First Certificate is a one-year course. The First Certificate in Science consists of five units whereas the First Diploma consists of seven units. Students studying for the First Certificate in Science also do common skills units, including numeracy, communication and IT.

The National Certificate in Applied Science is designed for part-time students and consists of three core units and seven optional units. There is a wide range of units including units covering physical, analytical, organic and inorganic chemistry. Common skills units are also part of the course and languages can also be incorporated into the programme. The full-time Diploma course consists of 16 units.

Intermediate/Advanced level GNVQ Science

The Intermediate GNVQ course is usually a one-year full-time course consisting of three mandatory units and three optional units. In addition you have to study three key skill units. The qualification is equivalent to four GCSEs (A-C). The mandatory units of the Intermediate GNVQ course dovetail into the Advanced GNVQ course.

The Advanced GNVQ course is normally a two-year full-time course consisting of six mandatory units and six optional units. As with the Intermediate qualification you have to study three key skill units. This qualification is equivalent to two A-levels. These courses cover aspects of chemistry, biology and physics.

At Advanced level a new six unit award (Single Award GNVQ) will be introduced from September 2000. Two of the units will be compulsory, with some restrictions on the choice of the optional units. This qualification is designed to provide flexibility, allowing post-16 students to mix and match GNVQs with other qualifications, including A-levels and the new Advanced Subsidiary qualifications.

In Scotland the similar qualification are known as GSVQs and these are available at level II and level III. Each qualification is made up of mandatory and optional modules- 12 at level II and 18 at level III.

NVQ

This is a job-based qualification and is a way of recording an individual's work related competence.

GCE = General Certificate of Education
GCSE = General Certificate of Secondary Education
SCE = Scottish Certificate of Education
GNVQ = General National Vocational Qualification
GSVQ = General Scottish Vocational Qualification
NVQ = National Vocational Qualification

Aged 18? A-levels or equivalent?

What's available to you?

Full-time

University full-time and sandwich degrees

Higher National Diploma

Part-time

University degrees

Open University Degrees

Licentiate of the Royal Society of Chemistry

Higher National Certificate

What's involved?

Full-time and sandwich courses

Full-time courses offer the quickest route to a particular qualification. Sandwich courses combine full-time study with – *eg* a year working in industry or a year abroad. These enable you to gain work experience and be paid while still enjoying the advantages of being a full-time student or the benefits of studying in another country.

Part-time courses

Part-time courses usually involve study for one day and one evening each week while doing a full-time job. They are hard work and take longer, but allow you to embark on a career earlier. They are attractive to those with family commitments and those who wish to start earning money sooner.

Which course...

Degree courses

These lead to the award of a Bachelor of Science (BSc) or Master of Chemistry (MChem). Courses are usually 3-4 years full-time or sandwich, or 5-6 years by part-time study. Minimum entry requirements are usually at least two A-levels, or 3-4 Scottish Highers, but many courses require more than this bare minimum and there are restrictions about which subjects are acceptable. General National Vocational Qualifications (GNVQs) and General Scottish Vocational Qualifications (GSVQs) can also be used for entry to some courses. It is very important that you check with individual institutions about specific entry requirements.

Joint degree courses

Many universities run degree courses in which chemistry is studied jointly with some other subject to honours level. At an institution with a course-unit system, the equivalent of a joint honours degree can be built up by choosing appropriate units during the course.

Chemistry 'with' courses

These courses differ from joint degree courses in that chemistry forms the major component of the course along with such subjects as, a foreign language, medicinal chemistry, biochemistry, biology, law and management.

Other degrees involving chemistry

Many degree courses include a significant amount of chemistry. Among them are biochemistry, chemical engineering, geochemistry, metallurgy, materials science, pharmacy and many others. If you are undecided about which course to take, follow up some of the references given at the back of this booklet.

All courses include other subjects, both scientific and non-scientific. Mathematics and physics are often compulsory, and other common options or requirements include biological and Earth sciences, computing, industrial administration, economics and languages. The extent of specialisation in chemistry varies and the booklets such as *Degree course guide: Chemistry.* – CRAC/Hobsons give valuable information on this and related matters.

Entry procedures

University applications are made through the Universities and Colleges Admissions Service, UCAS (except the Open University, to which applications must be made direct).

Higher National Certificate (HNC)

This is usually gained by part-time study over two years and consists of 10 units. Entry qualifications are either one A-level/two Scottish Highers, or GNVQs/GSVQs.

Higher National Diploma (HND)

This is usually a full-time or sandwich course and takes 2-3 years. It is at a similar level to HNC, but is broader in content, consisting of 16 units - 6 core units and 10 optional units. Entry qualifications are either one A-level/two Scottish Highers, or GNVQs/GSVQs.

Postgraduate courses

Master of Science (MSc), Master of Philosophy (MPhil) and Doctor of Philosophy (PhD) or (DPhil)

Postgraduate courses are very popular. About one third of chemists proceed to postgraduate study - more than in any other science.

The choices include:-

one-year MSc courses by instruction in specialised areas (these courses often consist of six months of lectures and practical plus 4-6 months of research); and research courses leading to MSc or MPhil (normally 1-2 years) and PhD (normally 3 years)

It is also possible to obtain these qualifications by part-time study.

Where to study

Degrees can be taken at universities, or certain colleges and should all be of an equivalent standard. The choice of institution for degree study depends on your entry qualifications, the type of degree course you wish to pursue, and on personal factors such as geographical location, availability of accommodation *etc.*

ARE YOU INTERESTED IN TEACHING?

What's available?

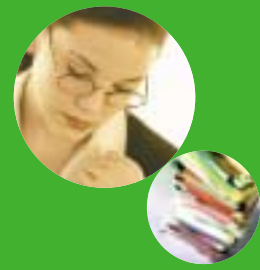
University (+ Postgraduate Certificate in Education, PGCE)
Bachelor of Arts/Bachelor of Science Degree with Qualified Teacher Status (QTS)
Bachelor of Education Degree (BEd)

What's involved?

A university degree followed by a one-year full-time Postgraduate Certificate in Education (PGCE) course is the main route into chemistry teaching. The postgraduate course is taken in a university department of education or a college of higher education. The course includes the study of science in relation to teaching, courses in educational theory and practice, and periods of schools practice.

Bachelor of Education Degree (BEd)

The BEd course is usually three or four years long leading to an ordinary or honours degree. In some colleges it is possible to specialise in, say chemistry or physical science and education.



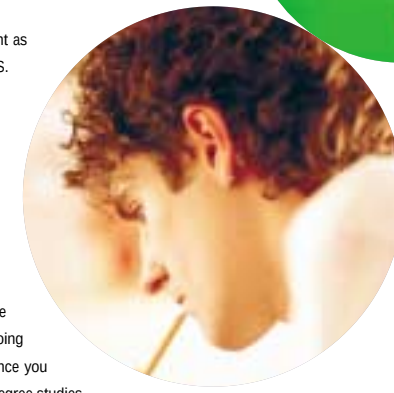
Bachelor of Arts/Bachelor of Science (BA/BSc) with Qualified Teacher Status (QTS)

Some institutions offer a BA/BSc with QTS. For example this can be a four year course where a subject such as chemistry is studied to the same level as a normal chemistry degree course but option units are also taken in education. Typically the third year is spent following a syllabus identical to that for the PGCE, including teaching practice, aimed at attaining QTS. At the end of four years you have a BSc in chemistry and will also be qualified teachers.

School-Centred Initial Teacher Training (SCITT)

This scheme enables you to gain QTS through training in a school. The course is a mixture of theory and practice, with a high proportion of time spent in the classroom. These courses last for one year and lead to a PGCE.

Northern Ireland Council for the Curriculum
Examinations and Assessment 01232 261 200



Graduate and Registered Teacher Programmes

These programmes allow you to combine employment as a teacher with school based training, leading to QTS. First you must find employment in a school that can offer you training.
The Graduate Teacher Programme (GTP) is for graduates over the age of 24 and normally lasts for one year.

The Registered Teacher Programme (RTP) is for those with two years' higher education. The programme normally takes two years, where you study for a degree at the same time as doing your teacher training. You achieve QTS once you have successfully completed both your degree studies and the teacher training.

Professional qualifications

Degrees and diplomas are all very important but how do you keep up-to-date with your subject 10 or 20 years after qualifying and in a science as vast and rapidly advancing as chemistry. Who safeguards standards of training and professional practice across the many varied industries and organisations?

In the UK, that role belongs to the Royal Society of Chemistry (RSC).
The RSC is:
the professional qualifying body for chemists; and
the learned society for the subject of chemistry as a whole.

Among its main concerns are the desire to promote a wider awareness and knowledge of chemistry ... the responsibility for training, qualifications and conduct throughout the profession ... and a duty to look after the professional interest of chemists.

Student member

You can become a student member of the Royal Society of Chemistry while you are studying (at college or university), with a view to obtaining professional qualifications in chemistry.

CHEMISTRY CONTACTS

People and publications

Although this booklet cannot cover every aspect of chemistry today, there is a wealth of information and advice that you can turn to for career guidance.

First of all, people. As well as your own science teachers and careers advisers, you should contact the Education Department, The Royal Society of Chemistry, Burlington House, Piccadilly, London W1V 0BN; email: education@rsc.org

When it comes to reading material, there is a wide choice of publications. Some of these publications give general information, while others give very detailed information. Together these publications provide a comprehensive insight into the world of chemistry.

Further reading

Careers

General reference books such as those listed below are usually available in schools, colleges, careers offices and reference libraries. In case of difficulty, you can get in touch with the publishers at the addresses given.

Occupations series - Careers and Occupational Information Centre (COIC) - an introduction to opportunities in the professions, industry and commerce.

Job Book series - CRAC/Hobsons Publishing (a comprehensive guide which includes a large number of entries from organisations outlining training schemes).

Careers with a Science Degree - Lifetime Careers Wiltshire Ltd

Just the Job – Scientific Work - Hodder & Stoughton

Physics: Just the Job - The Institute of Physics

Working In – Physical Sciences - (COIC)

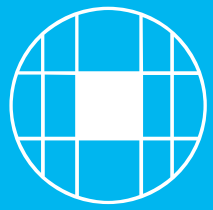
Careers in Biology - The Institute of Biology

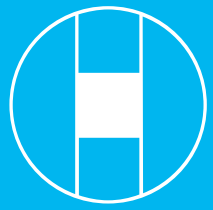
A Career in Information Science - The Institute of Information Scientists

Which Materials - The Institute of Materials

Careers Information Booklets for Graduates - Association of Graduate Careers Advisory Service

The Handbook of Careers Education and Guidance - Westlake Publishing Ltd





Courses

Again, most of these general reference books on courses should be available in your local library.

Decisions at 15/16+ - CRAC/Hobsons Publishing

Which Degree: Sciences, Medicine, Mathematics - Hobsons Publishing

The Big Official UCAS Guide to University and College Entrance - UCAS (Copies available from Sheed & Ward.)

Directory of Further Education - CRAC/Hobsons Publishing (a guide to the field of further education)

Chemistry courses

Degree Courses Guide: Chemistry - CRAC/Hobsons Publishing (comparative information about all chemistry degree courses.)

Accredited courses - Royal Society of Chemistry

Chemistry department prospectuses for individual universities and colleges. Addresses can be found in general reference books - *eg Degree Course Guide.*

Grants and sponsorship

Sponsorship for Students - CRAC/Hobsons Publishing

Student Grants and Loans - Department for Education and Employment (DfEE)

Student's Money Matters - Trotman & Co Ltd

Professional qualifications

Job Book series - CRAC/Hobsons Publishing

Regulations for Admission - Royal Society of Chemistry

Studying abroad

Europe

The European Choice - A Guide to Opportunities for Higher Education in Europe - DfEE

SOCRATES/ERASMUS - The UK Guide - Independent Schools Careers Organisation (ISCO) Publications

ADDRESSES

Association of Graduate Careers Advisory Service (AGCAS)
Higher Education Careers Service Unit
Prospects House
Booth Street East
Manchester
M13 9EP
www.prospects.csu.ac.uk

Biochemical Society
59 Portland Place
London W1N 3AJ
www.biochemsoc.co.uk

Careers and Occupational Information Centre (COIC)
W4
Moorfoot 5010
Sheffield
S1 4PQ
www.dfee.gov.uk/cid

Chemical Industry Education Centre
Department of Chemistry
University of York
Heslington
York
YO1 5DD
www.york.ac.uk/org/ciec

CRAC/Hobsons Publishing Plc
Bateman Street
Cambridge
CB2 1LZ
www.hobsons.com

Department for Education and Employment
Sanctuary Buildings
Great Smith Square
Westminster
London
SW1 3BT
www.dfee.gov.uk

General Teaching Council for Scotland
Clerwood House
96 Clermiston Road
Edinburgh
EH12 6UT
www.gtcs.org.uk

Graduate Teacher Training Registry (GTTR)
Fulton House Jessop Avenue
Cheltenham
Gloucestershire
GL50 3SH
www.gttr.ac.uk

Health Service Careers
PO Box 204
London SE99 7UW

Hodder & Stoughton
Educational Freepost OF 1488
Abingdon
Oxon
OX14 4YY

Independent Schools Careers Organisation (ISCO)
12A Princess Way
Camberley
Surrey
GU15 3SP

Institute of Biology
20 Queensberry Place
London
SW7 2DZ
www.iob.org

Institute of Biomedical Science
12 Coldbath Square
London
EC1R 5HL
www.ibms.org

Institute of Food Science and Technology (UK)
5 Cambridge Court
210 Shepherds Bush Road
London
W6 7NL
www.easynet.co.uk/ifst

Institute of Information Scientists
44 Museum Street
London
WC1A 1LY
www.iis.org.uk

Institute of Materials
Education Department
1 Carlton House Terrace
London
SW1Y 5DB
www.instmat.co.uk

Institute of Petroleum
61 New Cavendish Street
London
W1M 8AR
www.petroleum.co.uk

Institute of Physics
76 Portland Place
London
W1N 4AA
www.iop.org

Institution of Chemical Engineers
Davis Building
165-189 Railway Terrace
Rugby
CV21 3HQ
www.icheme.org

ADDRESSES

Department of Education for Northern Ireland
Rathgael House
Balloo Road
Bangor
County Down
BT19 2PR
www.deni.gov.uk

Patent Office
Concept House
Cardiff Road
Newport
Gwent
NP9 1RH
www.patent.gov.uk

The Royal Pharmaceutical Society of Great Britain
1 Lambeth High Street
London
SE1 7JN
www.rpsgb.org.uk

The Royal Society of Chemistry
Burlington House
Piccadilly London
W1V OBN
www.rsc.org
www.chemsoc.org

Scottish Office Education Department
Victoria Quay
Edinburgh
EH6 6QQ
www.scotland.gov.uk

Sheed and Ward Ltd
14 Cooper's Row
London
EC3N 2BH

Society of Dyers and Colourists
Perkin House
PO Box 24482
Grattan Road
Bradford
BD1 2JB
www.sdc.org.uk

Teacher Training Agency (TTA)
Communications Centre
PO Box 3210
Chelmsford
Essex
CM1 3WA
www.teach-tta.org.uk

Trotman & Co Ltd
12 Hill Rise
Richmond
Surrey
TW10 6UA
www.trotmanpublishing.co.uk

Universities and Colleges Admissions Service (UCAS)
Rosehill
New Barn Lane
Cheltenham
Gloucestershire
GL52 3LZ
www.ucas.ac.uk

Westlake Publishing Ltd
17 Sturton Street
Cambridge
CB1 2SN
www.datalake.com