



University of
Strathclyde
Glasgow



DEPARTMENT OF PURE & APPLIED CHEMISTRY

Chemistry Graduate Careers

www.strath.ac.uk/science/chemistry/

22 Ti titanium 47.87	23 V vanadium 50.94	24 Cr chromium 52.00	25 Mn manganese 54.94	26 Fe iron 55.85	27 Co cobalt 58.93	28 Ni nickel 58.69	29 Cu copper 63.55	30 Zn zinc 65.38(2)	31 Ga gallium 69.72	32 Ge germanium 72.63
40 Zr zirconium 91.22	41 Nb niobium 92.91	42 Mo molybdenum 95.94	43 Tc technetium 98.91	44 Ru ruthenium 101.1	45 Rh rhodium 102.9	46 Pd palladium 106.4	47 Ag silver 107.9	48 Cd cadmium 112.4	49 In indium 114.8	50 Sn tin 118.7
72 Hf hafnium 178.5	73 Ta tantalum 180.9	74 W tungsten 183.8	75 Re rhenium 186.2	76 Os osmium 190.2	77 Ir iridium 192.2	78 Pt platinum 195.1	79 Au gold 197.0	80 Hg mercury 200.6	81 Tl thallium [204.3, 204.4]	82 Pb lead 207.2
104 Rf rutherfordium	105 Dubnium	106 Sg seaborgium	107 Bh bohrium	108 Hs hassium	109 Mt meitnerium	110 Ds darmstadtium	111 Rg roentgenium	112 Cn copernicium	113 Uut ununtrium	114 Fl flerovium
60 Pm promethium	61 Sm samarium	62 Eu europium 152.0	63 Gd gadolinium 157.3	64 Tb terbium 158.9	65 Dy dysprosium 162.5	66 Ho holmium	67 Er erbium	68 Tm thulium	69 Yb ytterbium	70 Lu lutetium

Use your passion for Chemistry to open a world of opportunities for yourself in industries around the globe...

Every industry that touches our lives is heavily influenced by chemistry. Pioneering chemists are breaking the boundaries of discovery in a broad spectrum of industries, improving lives around the world and gaining substantial reward.

From nanotechnology to large scale chemical plants, from environmental safeguarding to forensic science, and pharmaceutical industries to teaching... the opportunities are both abundant and captivating.

Here in the Department of Pure and Applied Chemistry, at the University of Strathclyde, we offer 6 undergraduate degrees:

- MChem Chemistry
- MChem Forensic & Analytical Chemistry
- MChem Chemistry with Teaching
- MChem Chemistry with Drug Discovery
- MChem Chemistry with Data Science
- MSci Applied Chemistry & Chemical Engineering



Professional Accreditation

The professional accreditations that these degrees boast, are testament to the quality of education that we provide. 5 of our undergraduate degrees are accredited by the Royal Society of Chemistry. This is the RSC's highest category of degree classification and means that these degrees have the content and standard necessary for the education of a professional chemist expecting to be active in the international job market.

After graduating and gaining some work experience, graduates of our accredited degrees are eligible to apply for the status of Chartered Chemist – the UK qualification recognised in the European Community for professional chemists.

In addition to their RSC accreditations, our MChem Forensic & Analytical Chemistry degree is also accredited by the Chartered Society of Forensic Sciences. Our MChem Chemistry with Teaching degree is also accredited by the General Teaching Council for Scotland; and our MSci Applied Chemistry & Chemical Engineering degree is accredited by the Institution of Chemical Engineers.

We work closely with industry to ensure that the content of our courses is directly relevant to their needs, maximising the employability of our students following graduation.

RSC | Advancing the
Chemical Sciences

IChemE
Institution of Chemical Engineers



The
Chartered
Society of
Forensic
Sciences

Work Experience

Both employers and students have repeatedly hailed the availability of our integrated Industrial Placements (or engineering design projects for our ACCE students), as one of the most valuable aspects of our Chemistry degrees.

Students undertaking our MChem Chemistry, MChem Chemistry with Drug Discovery, MChem Chemistry with Data Science and MChem Forensic and Analytical Chemistry degrees have the opportunity to pursue either a paid industrial placement with one of our many highly regarded industry partners (including companies such as Astra Zeneca, Charles River, GSK and Pfizer), or an in-house research project as part of our Chemistry Clinic during Year 4 of their studies.



Watch our Chemistry Clinic video.

Our MChem Chemistry with Teaching students undertake the education component of their course in Year 4, including teaching practice in schools. Our MSci Applied Chemistry & Chemical Engineering students undertake an engineering design project in Year 4.



Graduate Career Destinations

A broad array of fascinating opportunities are available to our students upon graduation...

Job titles:

- Analytical Chemists
- Accountant/Auditor
- Chemical Engineer
- College / University Lecturers
- Chemical Development Engineer
- Cosmetics Developer
- Defence and Security
- Drug Discoverer
- Energy Storage Device Designer
- Environmental Chemist
- Food and Drink Scientists
- Forensic Researcher
- Forensic Scientist
- Fuel Chemist
- Government Scientist
- Graduate Engineer
- Industrial Chemist
- Laboratory Manager
- Materials Scientist
- Medicinal Chemist
- Patent Agent
- Pharmaceutical Researcher
- Police Officer
- Polymer Chemist
- Process Engineer
- Product Support Chemist
- Purification Scientist
- Quality Analyst
- Quality Control Technician
- Research Scientist
- Safety Consultant
- Sales and Marketing Manager
- School Teacher
- Scientific Journalist
- Toxicologist

Industries:

- Accountancy
- Agriculture
- Brewing and Distilleries
- Cosmetic Industry
- Education
- Environmental Agencies
- Food and Drink Industries
- Forensic Services
- Forestry Commission
- Government Services
- Health Care
- Health Service
- Industrial Consultancies
- Inland Revenue
- Law Firms
- Marketing and Sales
- Medical Devices
- Merchant Banks
- Patent Agencies
- Petrochemical Industry
- Pharmaceutical Industry
- Police Laboratories
- Police Service
- Recruitment Agencies
- Scientific Publishing
- Water Purification



Further Study

Many of our graduates continue to higher degrees in chemistry or other science related areas.

International Opportunities

Following graduation our Chemistry Alumni can be found working all over the world, with many now working in locations including:

- Australia
- Canada
- China
- Denmark
- France
- Germany
- Hong Kong
- Italy
- Japan
- Middle East
- New Zealand
- Norway
- Spain
- Sweden
- Switzerland
- UK
- USA

Top Employers

Key employers of University of Strathclyde Chemistry Alumni include:

- Almac Sciences
- Astra Zeneca
- BioAscent
- BP
- Cancer Research UK
- Charles River Laboratories
- Evotec
- Geotrace
- GSK
- Intel
- Johnson & Johnson
- John Matthey
- Lonza
- Onyx Scientific Ltd
- Pfizer
- R-Biopharm Rhone
- Scottish Water
- Scottish Police Authority
- Thermofisher Scientific
- Wellcome Trust

What Do Employers Say?

Ian Love

Head of Chromatographic Bioanalysis, Department of Bioanalysis, Charles River



We value greatly our relationship with our academic partners and offering year-long industrial placements is a great fit for our growing business. We're proud to share this opportunity as the experience gained from a year within our heavily regulated industry laboratory cannot be replicated in academia.

On placement, the students spending time with us get enthusiastically involved in a wide variety of tasks and contribute actively to bringing new therapies to life. A willingness to work hard work and achieve has been a key feature of all Industrial Placement students we've employed and, without exception, each has been a credit to their institution.

Upon graduation, evidence of an industrial placement such as is offered at Charles River Edinburgh is very attractive to employers. We are proud to have been able to extend full time opportunities to past Industrial Placement students with each going on to contribute to our business and mission in many positive ways."

Dr David Hollinshead

Science Policy Director, AstraZeneca



What AstraZeneca are looking for in a chemistry graduate is...first and foremost, excitement at working alongside others in applying their chemistry to address the needs of pharmaceutical discovery and development, and a drive to make their science successful. On the technical side, AstraZeneca seek fundamental chemical understanding, practical and analytical skills which contribute to successful laboratory working and effective problem solving.

What we have discovered about University of Strathclyde graduates is that they have certainly been inspired by their course content and tutoring.

Chemistry qualifications enable both good career prospects and better financial rewards than many other graduate courses. The value of a chemistry qualification is recognised by more than just the chemistry using industries, and chemistry graduates are actively sought by the business, financial and other sectors. Equally, the government is indicating it wants the UK to be globally competitive by moving into high-value goods, service and industries through an effective science and innovation system. It is never a bad time to secure a chemistry higher education degree!"

Dr Harry Kelly

Chemistry Recruitment Manager, GlaxoSmithKline (GSK)



At GSK, we aim to recruit the best chemistry graduates who will work towards discovering and developing the medicines of the future. From the day they start at GSK, our graduate chemists are fully integrated into multidisciplinary teams and are expected to utilise and build upon the skills and knowledge acquired at university in order to contribute to the Research and Development processes and achievements. Therefore, we look for excellent chemistry knowledge, evidence of practical chemistry skills, good communication and presentation skills together with the ability to operate effectively within a team."



Career Paths of Strathclyde Chemistry Graduates

Denise Wilson-Logue

(graduated 2011)

MChem Forensic & Analytical Chemistry



What was your first job after graduation?

My first Laboratory position after university was as a Development Chemist at Fujifilm Imaging Colorants in Grangemouth. The role involved performing a range of analytical tests on various pigment and dye samples. I was also involved in developing new analysis methods for some of the upcoming products.

Where has that led you/what do you do now?

I now have a broad range of analytical chemistry experience, as I've worked in a variety of laboratory roles within the pharmaceutical and Scotch Whisky Industries. I now work at Thermo Fisher Scientific, an international life science company, as a quality control (QC) Scientist in the analytical lab. Our site in Renfrewshire produces cell culture media which is a vital resource for researching diseases, new medicines and other applications such as making vaccines. As well as performing the required testing which allows our products to be released to customers, my role also involves method development and validation, troubleshooting and supporting other members of the team with my expertise in chromatographic and spectroscopic analysis.

How did your course and time in the Department of Pure and Applied Chemistry prepare you for the world of work?

My Industrial Placement year at GSK was a really important part in preparing me for the world of work. Having a full year's experience of doing relevant and meaningful work really helps to set you apart from other graduates when applying for a job. It also helps you to understand and appreciate some of the differences between research and industrial labs, which helps you to think about what your career plans might be when you graduate. The department's focus on transferrable skills was also really useful. For example, ensuring that their graduates are good communicators, and have a strong awareness of things like COSHH and regulatory standards that they will be expected to perform to in an industrial setting.

What did you enjoy most about your course and time at University?

I really enjoyed the strong practical focus of the course. Spending time in all of the different labs really helps you to understand the real-life applications of the things you are learning every day. The teaching staff were brilliant as well. Having so many leaders in their respective fields to share their expertise and interesting anecdotes made the learning experience so much more valuable.

Why did you choose to study with us?

I did consider a number of different options when I was applying to University, but ultimately, I chose this Department due to its reputation and the opportunity to undertake an industrial placement, which I thought would be incredibly valuable for my career prospects. I was most interested in the subject matter of the F&A course, but no-matter which degree stream you choose, you will end up with a really strong grounding in all aspects of chemistry.

Do you have any words of wisdom for our future Chemistry students and graduates?

When working in a lab, always read the instructions from start to finish before you start the experiment. If you miss something halfway through, or do the tasks in the wrong order, you might have to start the whole thing again! Embarking on a career in chemistry is a life-long learning journey which will continue after you graduate. It requires critical thinking skills, patience and an acceptance that you won't always get it right first time. Sometimes the simplest of questions have a very complex solution, and the most complex problems can have really simple solutions! Don't be disheartened with the things that you struggle with. There are a lot of different disciplines within the chemical sciences and we can't all excel at every single one.

Career Paths of Strathclyde Chemistry Graduates continued...



Fraser Gunn

(graduated 2018)

MChem Chemistry

What do you do now, following graduation?

I am a PhD Student, researching perovskite solar cells in the Department of Pure and Applied Chemistry, University of Strathclyde

What did you enjoy most about your course and time at University?

The course allowed me to learn the basic laboratory skills and also to improve the skills learned in order to effectively work in a research lab.

The industrial placement year was invaluable as it allowed me to grow in confidence and also improved upon my understanding of chemistry both in the real world and in research.

The final year project was actually the thing that made me want to continue in research and do a PhD as I got so involved in the project that I wanted to see it through and help to contribute more to the field.

All the staff members in the department from the lab technicians, the lecturers, the store staff and the office staff were all friendly and approachable and made me feel at home within the department and made me realise that chemistry really does play an important role in the world and that I wanted to contribute my part to it.

What did you enjoy most about your course and time at University?

The best part of the course hands down was the industrial placement year, this year made me grow as a chemist. I did my placement in the department meaning that I learned how effective research is in driving innovation for the modern world.

Why did you choose to study with us?

Strathclyde has always had a reputation for being a pioneering institution for science and chemistry in particular, I wanted to learn chemistry that was relevant and at the forefront of research.

Strathclyde also offered an industrial placement year in industry which not many other universities offered and I felt that this year would be invaluable to me, which it was.

Do you have any words of wisdom for our future Chemistry students and graduates?

Chemistry at Strathclyde and the industrial placement year really will help you to improve your basic skills be it for industry or research, you will leave with a better understanding of what chemistry is going on out in the world.





Henni-Karolina Ropponen

(graduated 2018)

MChem Chemistry with Drug Discovery

What was your first job after graduation?

I moved to Germany to do my PhD in Medicinal Chemistry for which I was awarded the Kekulé Fellowship by the

German Chemical Industry Association (VCI). My research at Helmholtz Institute for Pharmaceutical Research Saarland (HIPS) is focusing on novel anti-infectives.

Where has that led you/what do you do now?

In addition to my PhD, I am working as a part-time scientific collaborator at Roche EXPERIO school laboratory in Switzerland, where I supervise school classes and other visitors in our laboratory and design new workshops. I very much enjoy transferring the excitement of science to younger generations by engaging in teaching.

How did your course and time in the Department of Pure and Applied Chemistry prepare you for the world of work?

During my industrial placement year at Roche, Switzerland, I was able to put all the learnings into practise and it helped me to take the first step as a scientist. The connections created during the placement year enabled me to build the network for my current positions.

What did you enjoy most about your course and time at University?

Friendliness of the peers and professors - I always felt welcomed and supported as an international student. Strathclyde provides a motivating place for learning with the focus on applying the theory in practise. I also think that it is unique that the professors are always reachable for support and help.

Why did you choose to study with us?

During my high school exchange in Peebles, I passed successfully the Scottish Highers. I had always a desire to study abroad and I felt I wanted to return to Scotland for my university degree. The industrial placement year also really appealed to me, as it was something I could not have experienced back home in Finland!

Do you have any words of wisdom for our future Chemistry students and graduates?

Be ready to challenge yourself.



Career Paths of Strathclyde Chemistry Graduates continued...



Naomi MacKay

(graduated 2016)
MChem Chemistry

What was your first job after graduation?

My first graduate job was “Assistant Scientist” at Charles River Laboratories, Edinburgh. I worked within the Bioanalysis department,

analysing various pharmaceutical samples by LC-MS/MS.

Where has that led you/what do you do now?

I now work as “Senior Scientist” at RBiopharm Rhone, Glasgow. I work within the Technical Services department where primarily, my job role is to develop method for the analysis of mycotoxins in food and feed products. This role is also customer facing, so I regularly provide customer support via phone and email, as well as travel to customer sites and host practical lab training sessions and demonstrations.

How did your course and time in the Department of Pure and Applied Chemistry prepare you for the world of work?

During my 5 year course, I spent one year on industrial placement at GSK. This experience was invaluable, giving me good insight into what a future career would be like, what it was like to work independently and how to handle the pace of working life. In my first post-university job, my experience from industrial placement saw me “hit the ground running” and earned me an early promotion!

What did you enjoy most about your course and time at University?

For me, the best aspect of the Pure and Applied Chemistry course was the variation. I was able to cover many different types of chemistry in the theory modules - organic, inorganic, analytical, physical (to name a few) and was also able to experience the relevant laboratory work for each of these.

I loved my time at university and have made some great life-long friends whilst enjoying the amazing City of Glasgow!

Why did you choose to study with us?

The industrial placement year (with the opportunity to travel) was a great attraction for me when compared with other Chemistry courses in Scotland. In addition, the course at Strathclyde was accredited and had a high employment rate.

Do you have any words of wisdom for our future Chemistry students and graduates?

Don't get too bogged down worrying about the smaller details! Try your best, work hard and it will all work out okay in the end.





Victoria Paluzzi

(graduated 2019)
MChem Forensic and
Analytical Chemistry

What are you doing since graduation?

I am a PhD Student at the Purdue University undertaking both teaching and graduate research roles.

How did your course and time in the Department of Pure and Applied Chemistry prepare you for the world of work?

Everyone, from Brian, Lorraine, Penny, Len, Aaron, Duncan, Karen... the list is endless of professors who helped me on my journey to where I am. They provided me with a course that suited my interests as well as informed myself and my colleagues.

What did you enjoy most about your course and time at University?

Labs, nights out with our course and my dissertation project.

Why did you choose to study with us?

I wanted to go somewhere that would match my desire to excel efficiently and have a main focus on a course I was truly interested in. This is not seen in the US, where I am from, and Strathclyde offered all that with a sense of compassion and excitement.

Do you have any words of wisdom for our future Chemistry students and graduates?

Write down everything. Lecture notes, lab notes, all of it. Write, write, write.

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