Science Careers Outside the Lab

The following work areas and job profiles include descriptions of typical duties and entry requirements, plus links to vacancy sites and employers. Click on the sections below for examples of the roles that may be of interest plus ways to gain experience and find opportunities.

Science Communication – education & outreach

This area of work is about making science accessible and engaging and presenting it in an easy-to-understand way. This could be in schools as a science teacher or bringing science to the public at events and festivals, in museums or through workshops in the community. Example job roles include:

- Environmental education officer
- Higher education lecturer
- Museum education officer
- Secondary school teacher
- <u>STEM outreach/public engagement</u>

Work experience opportunities:

Employers value any experience that demonstrates your motivation to work in this field. Why not read the article on <u>how to get experience in science communication</u> and look at some of the following options,

- The <u>Aspiring Teachers</u> programme is a combination of guidance sessions and online resources designed to help you to gain an insight into the education and teaching sector.
- <u>STEM ambassadors</u> a volunteer role to encourage and inspire young people to progress further in science, technology, engineering, and mathematics (STEM) subjects.
- <u>Soapbox Science | Research and Innovation | University of Exeter</u> Soapbox Science showcases the research of women who are making significant contributions to the scientific community.
- Teach First have a <u>STEM Talent Taster programme</u> for STEM students to experience teaching and their training programme.
- Part-time jobs as a tutor. For more advice, see the <u>Superprof magazine</u> and Prospects <u>private tutor job profile</u>
- Explore Learning have opportunities for paid part-time Maths and English tutors.

- Volunteer <u>at local Museums</u> such as the <u>Royal Albert Memorial Museum -</u> RAMM.
- The <u>PSCI-COM science communication mailing list</u> includes regular job/internship adverts.
- <u>BIG</u>, the STEM Communicators Network, <u>advertises jobs</u> and occasionally internships and has a <u>list of science centres</u> and <u>festivals</u>, which could be useful for voluntary opportunities.

Science Communication - Publishing & Writing

Scientific communication roles may involve preparing educational materials, product information or writing commissioned scientific journal articles for publication.

Science communication covers a range of career areas, including science writing and journalism, science publishing, events and PR. Employers include pharmaceutical companies, science publishers, the NHS, government, research institutes, professional bodies, such as the Royal Societies of Biology and Chemistry, health charities and the media, including TV, radio, and advertising. Example job roles include:

- Event manager
- Magazine journalist
- Medical communications
- Public relations officer
- Scientific publishing
- Science writer
- Technical authors

Advice & tips:

- Listen to Ayesha Tandon discuss her role as a climate science journalist.mov
- Read the career guides MedComms Careers Guides |FirstMedCommsJob.com
- Watch <u>Biochemical Society Webinar in Careers in Science communication</u>, medical writing and engagement
- <u>Cafe Scientifique</u> is a place where, for the price of a cup of coffee or a glass of wine, anyone can come to explore the latest ideas in science and technology.
- The <u>PSCI-COM science communication mailing list</u> includes regular discussions and job adverts
- <u>Developing people and skills BBSRC UKRI</u>. Look out for any media training opportunity.

For graduate roles and work experience:

Be prepared that science/medical communications agencies include a writing test as part of the recruitment process for medical writer roles. See <u>Carrot</u>

<u>Recruitment: How to Master the Writing Test: A Guide for Medical Writers</u>

Below is a list of organisations that you can use to connect with science communication publishers and audiences. If you have an idea for an article or event, then make contact and see where it might take you.

For science writers and journalists

- European Medical Writers' Association
- American Medical Writers' Association
- Informative events and training are offered by <u>Association of British Science</u>
 Writers
- <u>UK Science Media Centre</u> (4 week paid internships available closing date in November each year)
- <u>Wiley</u> offer 10-week paid internships for students and graduates.
- Elsevier advertise editorial positions.
- <u>Taylor and Francis</u> academic publisher with a range of roles including editorial, production, marketing, and sales.
- <u>Springer</u> advertise a <u>publishing traineeship</u> for graduates.
- The Royal Society of Chemistry graduate roles in publishing and communications
- Atwood Tate a recruitment agency for the publishing industry which often advertises scientific and medical publishing roles, including editorial and marketing.

General science communication

- Our Services Research Outreach
- Careers | American Association for the Advancement of Science (AAAS)
- European Science Communication and Information Network.
- Research Councils (UK) Our councils UKRI
- New Scientist
- FirstMedCommsJob.com advertises <u>entry level jobs</u>, suitable for new graduates. They also have an <u>agency directory</u> of medcomms agencies across the UK and Europe
- <u>The Healthcare Communications Association</u> has a list of members, including medcomms agencies, industry, and health charities.
- Scientific publishing companies often advertise in publications such as <u>New Scientist</u>. The main publishers tend to be based in Oxford, Cambridge, London and the south coast including:

Government and Policy

Policy officers undertake research and gather objective evidence to support the policymaking process or to influence policy decisions. Typical employers would be local and central government, scientific professional bodies, e.g. Royal Society and Institute of Physics, thinktanks and charities.

- Government/Civil Service Fast Stream (Science & Engineering path)
- Policy officer
- Working in Bioethics What is Bioethics?: BEEP BioEthics Education Project
- <u>Nuffield Council on Bioethics</u> a leading independent policy and research centre that identifies, analyses, and advises on ethical issues in biomedicine and health to benefit people and society.

Opportunities for work experience:

- Civil Service: <u>List of government departments</u> including <u>Working for the Defence Science and Technology Laboratory | Civil Service Careers</u>. See,
 - <u>Early diversity programme</u> 5 day paid insight in London for first-year undergraduates from diverse backgrounds.
 - Summer diversity programme 2 months paid internship within a government department for undergraduates and postgraduates from diverse backgrounds.
- <u>W4MP</u> search using 'intern' as a keyword. Often includes opportunities in policy work, for government, political parties, thinktanks and charities. Some internships may be available to graduates only.
- <u>Science and Technologies Facility Council: Policy Internships Scheme</u> –
 opportunity for STFC-funded PhD students to work for three months
 in Parliament or Government, either with The Parliamentary Office for
 Science, Innovation and Technology which offers 3 month <u>POST Fellowships</u>, or
 the <u>Government Office for Science</u> (GO Science)
- Volunteering Windsor Fellowship

Graduate roles:

- Campaign for Science & Engineering advertises science policy officer jobs.
- NHS Graduate Management Training Scheme includes a policy and strategy management scheme, and The Department of Health & Social Care (DHSC) Health Policy Fast Track scheme.

For further information about careers in Politics & Government visit our Employment sector pages <u>Politics</u>, <u>Government and the Public Sector | Career Zone | University of Exeter</u>

Business & Management

There are opportunities within business, finance, and consulting for graduates to apply their scientific background and analytical skills, for example, to help solve clients' problems or to provide market intelligence. Typical employers include pharmaceutical and life science companies, consultancies, health charities, government and energy and utility companies in roles including:

- Business development manager
- Ergonomist
- Management consultant
- Project manager
- Risk manager

You can find business-related internships and placements within a wide range of science organisations, including pharmaceutical and biotechnology companies.

The <u>NHS Graduate Management Training Scheme</u> offers a wide range of specialisms, including finance, HR and general management.

Cancer Research UK has <u>graduate programmes</u> in finance, HR and scientific strategy and funding

You may also wish to look at our <u>Business Operations and Management | Career</u>
Zone | University of Exeter webpages for further sources of information and advice.

Energy & Environment

You can find job roles within a wide range of organisations, including pharmaceutical, oil and gas and utility companies, government, research institutes, professional bodies, charities, and environmental consultancies. Explore job roles such as:

- Agricultural consultant
- Ecologist
- Energy manager

- Environmental consultant
- Environmental manager
- Meteorologist
- Nature conservation officer
- Sustainability consultant
- Waste management officer

Opportunities for science graduates within a wide range of organisations, include:

- Higher education and research institutions, including <u>research councils</u> and research centres such as the <u>British Antarctic Survey</u>.
- There are also opportunities within the nuclear industry, for example, <u>Sellafield's graduate scheme</u> has programme areas including environmental, safety support and technical aimed at STEM students.
- Environmental, ecological and sustainability consultancies.
- Charities, environmental NGOs and pressure groups, e.g. <u>National Trust</u>, <u>RSPB</u>, <u>WWF</u>, <u>Friends of the Earth</u>.
- Local and central government and non-departmental public bodies, including <u>Defra</u>, <u>Natural England</u>, the <u>Met Office</u> and the <u>Environment</u> <u>Agency</u>. See <u>Civil Service jobs</u>, to search for vacancies.
- <u>national park authorities</u>
- Intergovernmental and international organisations, such as the <u>United</u>
 Nations <u>Environment Programme</u> (UNEP) and international <u>think tanks</u>

For further information, take a look at our Employment Sector pages <u>Energy and</u> <u>Earth Resources | Career Zone | University of Exeter</u>

Information, Research and Data

Roles in data science, informatics, statistics, and clinical research exist within a wide range of organisations, including the NHS, pharmaceutical companies, government, research institutes and contract research organisations.

- <u>Clinical bioinformatics</u>
- Health informatics
- Bioinformatics/health informatics
- Clinical research associate
- Data scientist
- <u>Information officer</u>
- Market researcher
- Medical information scientist
- Medical science liaison
- Operational researcher

- Records manager
- Statistician see also a case study from the ABPI

Opportunities in clinical research can be found within pharmaceutical companies, such as <u>MSD</u>, and contract research organisations (CROs), such as <u>Labcorp</u>. The Clinical & Contract Research Organisation lists <u>member profiles</u> for CROs and drug development companies.

<u>PSI</u> has a list of <u>medical research and pharmaceutical companies</u> who offer internships and placements in statistics and programming and <u>Medical Statistician</u>
<u>Apprenticeship</u>

Examples of employers:

- The <u>Civil Service Fast Stream</u> includes opportunities within <u>Digital</u>, <u>Data & Technology</u>, the <u>Government Operational Research Service</u> and the Government Statistical Service.
- You can also search for opportunities within government departments on the <u>Civil Service Jobs website</u>.
- The <u>NHS Graduate Management Training Scheme</u> includes health informatics and health analysis specialisms.
- <u>Elsevier</u> is a global information analytics company which specialises in science and health. They offer <u>graduate opportunities</u> in business analysis and data science.

Vacancy sites:

- DataScientistJobs
- Datatech Analytics
- Techno Jobs: Data scientist jobs
- Business Analyst Jobs
- NHS jobs
- Royal Statistical Society: jobs
- <u>Eurosciencejobs</u> research and postdoc opportunities across Europe
- European Bioinformatics Institute

If you are struggling to find work experience in a science or pharmaceutical company, it would be worth trying to find related experience outside the industry, e.g. in finance, retail, or travel, to gain relevant transferable skills.

Manufacturing and Supply Chain

Job roles exist in a vast field of manufacturing and engineering specialisms. To read more visit <u>Engineering and manufacturing job profiles | Prospects.ac.uk</u> and the below job profiles.

- Clinical research associate
- Health & safety adviser
- Health & safety inspector
- <u>Production manager</u>
- Quality manager
- Supply chain manager

You can find opportunities within the pharmaceutical industry in manufacturing and supply chain, e.g. GSK offers these streams as part of its <u>Future Leaders graduate</u> <u>programme</u>, whilst MSD offers <u>12 month placements</u> in manufacturing and supply chain.

If you are struggling to find opportunities in a science or pharmaceutical company, it would be worth trying to find experience outside the industry, e.g. in manufacturing, engineering, or transport companies, to gain relevant transferable skills.

Health and Social Care

There are various career options within health, from healthcare science and academic research to health promotion and environmental health. Opportunities can be found within the NHS, private healthcare, local and central government, professional bodies, academic and research institutions, and the not-for profit sector. See Prospects: Healthcare for more information.

- Environmental health practitioner
- Epidemiologist
- Genetic counsellor
- Health promotion specialist
- Health service manager
- Physician associate
- Radiation protection practitioner
- Therapeutic radiographer

Healthcare scientists

- Audiology
- Cardiac sciences
- Medical physics
- Physiological sciences

To work as a healthcare scientist in the NHS, you need to complete the <u>NHS Scientist</u> <u>Training Programme (STP)</u>. This is a graduate-entry training programme that leads to more senior scientist roles in the NHS. There are several roles which involve

patient contact and are not lab-based, such as audiology, physiology, genomic counselling, and medical physics.

Getting work experience:

Gaining experience in the NHS can sometimes be difficult, as departments may not have the resources to be able to offer this. Some NHS Trusts only offer work experience to school pupils or students on specific courses (e.g. medicine and physiotherapy), while others have set work experience programmes or are happy to be contacted speculatively to arrange work experience or shadowing. Many hospitals have a dedicated staff member who deals with placements – check the NHS Trust website for hospital contact details. If you are unable to find this information, you could telephone the hospital switchboard and ask to speak to the work experience/placement co-ordinator. NHS Health Careers has advice on ways to gain healthcare-related experience

Within the NHS, the <u>NHS Graduate Management Training Scheme</u> has various specialisms, including health analysis and policy and strategic management.

You can search for health-related opportunities on the following sites:

- NHS Jobs
- NHS Scotland Recruitment
- Civil Service Jobs
- Healthjobs UK
- BUPA Careers
- <u>HSJjobs.com</u> health service management jobs across a range of roles
- CharityJob
- Health and Safety Executive
- <u>European Public Health Alliance</u> list of not-for-profit organisations across Europe working in public health.
- World Health Organization: Vacancies
- <u>Institute of Physics and Engineering in Medicine</u>
- The Society for Radiological Protection includes a list of affiliate members

For information and advice on health-related careers, including medicine, nursing and allied health professions, plus links to sources of vacancies see our employment sector-specific <u>Health and Social Care | Career Zone | University of Exeter</u>

Scientific Sales, Marketing and Recruitment

Working in scientific sales and marketing involves promoting and selling scientific products or services—such as laboratory equipment, pharmaceutical products, biotechnology solutions, or scientific software—to clients like research institutions, hospitals, universities, and industrial labs. It blends scientific knowledge with business acumen to understand customer needs, explain complex products effectively, and develop strategic marketing initiatives. See the example job profiles:

- Marketing executive
- Market researcher
- Medical sales representative
- Medical science liaison
- Recruitment consultant

You can search job opportunities for sales, marketing, and/or recruitment roles on the following sites:

- emedcareers
- PharmiWeb
- <u>CHASE Graduate Academy</u> recruitment agency with graduate medical and pharmaceutical sales jobs.
- <u>Medtech Search Associates</u> recruitment agency with sales and marketing roles for science graduates with commercial experience.
- ABPI list of <u>pharmaceutical recruiters</u>. Look for opportunities advertised on their websites or make a <u>speculative enquiry</u>.

Legal Services, Patents & Regulatory Affairs

Law, science, and regulatory affairs are interconnected fields that ensure legal compliance, scientific integrity, and public safety in various industries, particularly pharmaceuticals, biotechnology, environmental protection, and healthcare. Roles include:

- Patent attorney
- Patent examiner
- Regulatory affairs
- Solicitor
- Trademark attorney

If you have an interest in working in legal services you may wish to read - A non-law student's guide to a career in law -, for advice on a career in law, including training routes in.

<u>The Biochemist Blog</u> includes an article from a postgraduate student who undertook an internship with an intellectual property firm.

Patents & trademarks

Opportunities are available within private practices, e.g., specialist law firms, or within industry ('in house'), e.g., within science or engineering companies. Most patent attorneys work in private practice. A science degree is usually the minimum requirement, with some employers also preferring candidates to have had research or industrial experience.

Work experience in patent law can be difficult to find; it's worth contacting employers directly with a speculative approach. Recruiters will also value experience in law firms and in a scientific or technical environment.

- <u>IP Careers: Employer Directory</u> UK and Europe. IP Careers also has helpful careers advice on <u>finding work experience in patents</u>
- <u>Chartered Institute of Patent Attorneys: member directory</u> useful for speculative applications
- <u>Venner Shipley LLP</u> offer work experience for one week in Easter or summer vacations, including chemical and life science patent opportunities.
- <u>Dehns</u> two-week paid summer placement opportunity to gain an insight into the work of a patent or trademark attorney.
- <u>Intellectual Property Office (IPO)</u> UK government body responsible for intellectual property (IP) rights including patents, designs, trademarks, and copyright.
- European Patent Office internships and traineeships for graduates.
- World Intellectual Property Organisation (WIPO): Internships.

Regulatory affairs

The Organisation for Professionals in Regulatory Affairs (TOPRA) has <u>resources</u> <u>for starting out in regulatory affairs</u>, with tips and advice, including volunteering. Their <u>Jobs Board</u> sometimes advertises paid internships. They also run <u>short courses</u> to provide an insight into regulatory affairs and offer <u>career coaching</u> to members.

Some vacancies within regulatory affairs are aimed more at graduates who have had some relevant experience, though there are entry-level graduate schemes available, e.g. GSK's Future Leaders Graduate Programme.

Try contacting companies <u>speculatively</u>, to enquire about possible entry-level vacancies.

It may be possible to gain experience in a related role or sector, such as quality assurance roles within the pharmaceutical industry, moving into regulatory affairs once you have built up your knowledge and skills.

- TOPRA
- Pharmiweb.com
- emedcareers search using 'regulatory affairs' as a keyword.
- Medicines & Healthcare Products Regulatory Agency government department that regulates medicines, medical devices, and blood components for transfusion in the UK.
- ABPI have a list of <u>pharmaceutical recruiters</u> in the UK who run graduate training programmes. Look for opportunities advertised on their website or make a speculative enquiry.

For more detailed information about pursuing a career in legal services see <u>Law and legal services</u> - information for law and non law students | Career Zone | University of Exeter

Tips and Advice

Exploring and making career choices is a process and takes commitment to research and gaining relevant skills and / or transferable experience. If you require any support or direction to help you why not.

• Read our guide on Career Planning | Career Zone | University of Exeter

or

• Book an appointment for a friendly and impartial career conversation Careers Guidance | Career Zone | University of Exeter