Scientific Photographer

Introduction

Scientific photographers produce precise and detailed photos of industrial events and processes. These photos are used by scientists and engineers for training, to monitor industrial processes and for legal purposes, etc.

Also known as

- Photographer, Scientific
- Technical/Scientific Photographer

Work Activities

Scientific photographers use photographic skills to record information for use by scientists or engineers.

They produce photos for a variety of purposes. For example, they may photograph a research project using high speed photography, keeping detailed notes. At other times, they may produce discs, slides and other visual aids for conferences, training purposes or illustrative, exhibition and publication work.

While straightforward photographic techniques are used for most of their work, they also make use of more advanced methods of photography such as:

- ultraviolet photography
- infrared photography
- high speed photography
- time-lapse photography
- holography.

Electronic imaging, such as video, is also used. In some instances, scientific photographers may have to adapt equipment to overcome a particular problem or to take photos from uncomfortable or awkward angles.

Scientific photographers need to concentrate on lighting, shutter speeds, camera settings and developing the photos. They often use very delicate instruments attached to a camera, such as optical microscopes.

Scientific photographers may have to travel locally and nationally as part of their job.

Being able to read, write and speak Welsh may be an advantage when you're looking for work in Wales.

Personal Qualities and Skills

As a scientific photographer, you need:

- An eye for detail, shape, form and colour.
- The technical ability to handle cameras, lenses and lighting equipment.
- To be precise in your work and pay attention to detail.
- Knowledge of computer imaging software and digital technology.
- Good communication and organisational skills.
- Knowledge of photography techniques.
- To keep up to date with changing technology.
- The ability to work to deadlines.

A driving licence is useful.

Pay and Opportunities

Pay

Pay rates for scientific photographers vary depending on whether they are employed or self-employed.

The pay rates given below are approximate.

Scientific photographers earn in the range of £16,000 - £19,000 a year, rising to around £24,500 - £32,000. Higher salaries can be awarded to more experienced photographers.

Scientific photographers may be paid an hourly rate. This can range from £7 to £15 per hour.

Bonuses may be awarded on top of a salary.

Incidents of unpaid work are high amongst photographers.

Hours of work

Working hours can vary. Some scientific photographers work regular office hours, usually over a 37-hour week, Monday to Friday. Others work irregular hours, which may include early starts, late finishes, and work at weekends and on public holidays. Freelance photographers can choose their own working hours.

What's happening in this work area?

Competition for scientific photographer posts is strong, as there are often more applicants than vacancies.

Where could I work?

The main employers of scientific photographers are the Civil Service (the Ministry of Defence having the largest department), the Defence Research Agency, universities, industrial firms and industrial research associations. Some industrial concerns use freelance photographers.

Opportunities for scientific photographers occur with employers in towns and cities throughout the UK.

Self-employment

Opportunities occur for scientific photographers to work on a self-employed, freelance basis.

Where are vacancies advertised?

Vacancies are advertised on all the major job boards, on Universal Jobmatch, at Jobcentre Plus and in scientific journals.

It's a good idea to build up a network of relevant contacts, as not all photography jobs are advertised.

Entry Routes and Training

Entry routes

Many entrants to this career are graduates. Degrees in science-based subjects can give you an advantage. You'll also need a qualification in photography.

It may be possible to enter the career with a degree in a subject related to photography.

Relevant HNCs, foundation degrees and HNDs are available and can be used as routes into full degree courses.

The British Institute of Professional Photography (BIPP) - the official qualifying body for professional photography - can provide information on training courses and membership.

An Advanced Level Apprenticeship is also a great place to start.

Training

Training is on-the-job.

The Association of Photographers (AOP) also offers training and networking opportunities.

City & Guilds also offers qualifications in photography.

Progression

Photographers may be able to move to larger organisations or work overseas.

Many photographers become self-employed.

Qualifications

To enter a science-based degree, the usual minimum requirement is:

- 2/3 A levels. At least one science subject is required.
- GCSEs at grade C and above in your A level subjects.
- A further 2/3 GCSEs at grade C and above. Either English or Maths, or both, can be specified. Passes in science subjects may also be useful.

Alternatives to A levels include:

- A BTEC level 3 National Diploma in Art and Design.
- An Advanced Level Apprenticeship.
- The International Baccalaureate Diploma (IBD).

To enter a photography-based degree, the usual minimum requirement is:

- 2/3 A levels. Passes in Photography and Art will be useful.
- GCSEs at grade C and above in your A level subjects.
- A further 2/3 GCSEs at grade C and above. Either English or Maths, or both, can be specified. A pass in an art and design-based subject will also be useful.

Alternatives to A levels include:

- A BTEC level 3 National Diploma in Art and Design.
- An Advanced Level Apprenticeship.
- The International Baccalaureate Diploma (IBD).

To get onto an Advanced Level Apprenticeship, you'll usually need 5 GCSEs at grade C or above, including English and Maths, or to have completed an Intermediate Level Apprenticeship.

To enter a relevant HNC, HND or foundation degree, you will usually need:

- 1/2 A levels. A pass in Art could be useful.
- 4/5 GCSEs at grade C or above. Passes in English, Maths and Art may be required. Passes in science subjects will also be useful.

Some universities accept the Welsh Baccalaureate as equivalent to 1 A-level.

Adult Opportunities

Age limits

It is illegal for any organisation to set age limits for entry to employment, education or training, unless they can show there is a real need to have these limits.

Skills/experience

This is an extremely competitive field. Relevant skills and/or qualifications are usually preferred. A portfolio of photographic work is important. Knowledge of, and qualifications in, specific areas of science and technology can also be useful.

Courses

Photography can be studied on a full- or part-time basis, or it can develop from a hobby. It is useful to update your skills by taking short courses in photographic techniques and methods such as those offered by City & Guilds.

If you don't have the qualifications needed to enter your chosen degree or HND course, a college or university Access course (eg, Access to Art and Design) could be the way in. No formal qualifications are usually required, but you should check individual course details.

They can lead to relevant degree/HND courses.

Intermediate Level Apprenticeships and Advanced Level Apprenticeships may be available in your area.

A full list of relevant qualifications is available on the Skillset website.

Universities and colleges of higher education (HE) will usually consider applications from candidates who do not meet their usual entry requirements, especially those with relevant experience. You should check the admissions policy of individual universities and HE colleges.

Distance learning

Relevant courses at various levels in photography are offered by a large number of centres, including the Open University, by distance learning.

Statistics

- 55% of those in occupations such as scientific photographer are self-employed.
- 22% work part-time.
- 5% have flexible hours.
- 20% of employees work on a temporary basis.

Further Information

Professional institutions Professional institutions have the following roles:

- To support their members.
- To protect the public by keeping standards high in their professions.

For more information on the institution(s) relevant to this career, check out the contacts below.

Contacts

- **Apprenticeships: Get In. Go Far**
  National Apprenticeship Service (NAS)
  Tel: 0800 015 0400
  Email: nationalhelpdesk@findapprenticeship.service.gov.uk
  Website: www.apprenticeships.org.uk

- **Skills Development Scotland - Modern Apprenticeships**
  Tel: 0800 9178000

Email: info@skillsdevelopmentscotland.co.uk
Website: www.myworldofwork.co.uk/modernapprenticeships

- **City & Guilds**
  Address: 1 Giltspur Street, London EC1A 9DD
  Tel: 020 7294 2468
  Email: learnersupport@cityandguilds.com
  Website: www.cityandguilds.com

- **Open University (OU)**
  Tel: 0845 3006090
  Website: www.open.ac.uk

- **Association of Photographers (AOP)**
  Address: 21 Downham Road, London N1 5AA
  Tel: 020 7739 6669
  Email: info@aophoto.co.uk
  Website: www.the-aop.org

- **Royal Photographic Society**
  Address: Fenton House, 122 Wells Road, Bath BA2 3AH
  Tel: 01225 325733
  Email: reception@rps.org
  Website: www.rps.org

- **British Institute of Professional Photography (BIPP)**
  Address: The Coach House, The Firs, High Street, Whitchurch, Aylesbury, Buckinghamshire HP22 4SJ
  Tel: 01296 642020
  Email: info@bipp.com
  Website: www.bipp.com

- **British Journal of Photography**
  Publisher: Incisive Media
  Email: support@apptitudemedia.co.uk
  Website: www.bjp-online.com

- **Careers Wales - Welsh Apprenticeships**
  Tel: 0800 028 4844
  Website: ams.careerswales.com/

Related Careers

- Photographic Processing Assistant
- Digital Imaging Technician
- Fashion Photographer
- General Practice Photographer
- Medical Photographer
- Press Photographer
- Industrial/Commercial Photographer
- Photographer