

Special and visual effects work



PA 05

July 2024

Whenever you play computer games or watch films, stage extravaganzas, TV dramas or just the adverts in between, you will have seen special and visual effects. There are opportunities for people with qualifications at all levels to work in special/visual effects, although some entrants are graduates.

The wonders of special and visual effects

Special and visual effects can create the illusion of such things as snowstorms, hurricanes, shattering windows, talking animals, flying cars, exploding bombs and many other images! Special effects are sometimes referred to as **SFX** and visual effects are often called **VFX**. The work can be roughly divided into three areas, although for the final effects they are often mixed.

Physical special effects

These happen 'live' in front of a camera during production. They can involve modelmaking, animatronics/robotics, the design and use of mechanical and hydraulic equipment, and the creation of atmospheric and water effects.

Pyrotechnic special effects

This includes anything that fires, burns or explodes: from the effect of a bullet entering a body to the representation of a nuclear holocaust.

Visual effects (VFX)

These are computer-generated (CGI) and other images that can be superimposed on film at the post-production stage; they are used widely in the games industry. VFX are needed where images would be too dangerous, expensive, inconvenient or even impossible to otherwise capture on film. This is a growing area. Entry level jobs include:

- **data capture technicians**, who collect information from the live-action film team and deliver it to the VFX team
- **artist** roles to create the characters and the look of the VFX
- roles in the compositing department, where **ROTO artists** and **prep artists** use a range of digital techniques to prepare all elements of a scene to be layered by a compositor (who combines live action and CGI)
- **assistant technical directors**, who oversee the technical production process; they need programming and coding skills.

Detailed information about these and other VFX roles can be found on the ScreenSkills website (see under Further Information).

Companies concerned with SFX/VFX often specialise in particular areas of work. Although the SFX/VFX industry in the UK is quite small, it has an excellent reputation. Many blockbusters at the box office, including the James Bond, Star Wars and Harry Potter films, have included SFX/VFX created by experts from the UK. There is currently a shortage of people with certain VFX skills. There are opportunities to work overseas.

Levels of work

Representatives from the SFX/VFX industry for film and TV have established a **Joint Industry Special Effects Grading Scheme** that defines roles based on skills, experience and competence, and provides a career structure for those working in the industry. The scheme is recognised by employers. The main broad grades are outlined below and there's more detail at: www.jigs.org.uk/special-effects.

- **Trainees** run errands, keep workshop areas tidy, assist experienced staff in the construction and operation of effects, and help with general maintenance tasks. They are expected to learn about equipment, techniques, materials, and health and safety.
- **Technicians** prepare and construct the effects as specified by their supervisor or senior technician, and often carry out the operation of the effects. They are also responsible for the maintenance of any machinery and equipment.
- **Senior technicians** are in charge of the workshop or floor (area where the special effect is taking place), and oversee and coordinate the work of the technicians and trainees. Senior technicians work from technical drawings and sketches and may liaise with the supervisor and other professionals working on the production, such as the director and stunt coordinator. Senior technicians also deal with any problems that arise. They need a good understanding of film techniques to know how the finished effects will look.
- **Supervisors** work closely with the director and/or producer deciding on the effects required, recruiting the team to create them, and planning and supervising the work. They also have to make sure health and safety regulations are followed.

It can take several years to progress through the grades - fewer for visual effects where the work is not hazardous. As evidence of what you are able to do, you are expected to keep a logbook throughout this time, so that it can be produced when you apply for upgrading or move from project to project. For certain areas of work (particularly pyrotechnics) you must attend specialist training courses and take exams, such as those offered through the **Institute of Explosives Engineers** - www.iexpe.org - before progressing from one grade to the next.

There is a Joint Industry Grading Scheme that covers **SFX riggers**, who erect and dismantle rigs (scaffolding and hoisting equipment) on film and entertainment productions. For more details on riggers generally, refer to the leaflet on *Costumes, sets and props work*.

Other jobs that do not come under the Joint Industry Special Effects Grading Scheme include:

- **special effects animators**, who use software packages to create VFX (for details on careers in this area, see the leaflet on *Animation*)
- **special effects modelmakers**, who create three-dimensional replicas of buildings, vehicles or creatures to use in special effects sequences (find out more about this area of work in the leaflet on *Modelmaking*)
- **special effects make-up artists**, who may use prosthetics as well as cosmetics to create the right look (for information on careers in media make-up, refer to the *Make-up artist* leaflet).

Specialist courses are available in all the above areas.

Pay rates vary depending on the area and level of work. For those working in film and TV, BECTU - the media and entertainment union - sets recommended minimum pay rates for freelancers; see <https://bectu.org.uk/get-involved/ratecards>.

What it takes

A range of practical and technical skills is required, especially for physical special effects. Due to the hazardous nature of the work, it's essential that those working in physical and pyrotechnic special effects are able to follow strict health and safety guidelines. Excellent computer skills are important for those working on VFX. For all areas of SFX/VFX you need:

- a visual imagination and creativity
- problem-solving skills
- to be able to pay attention to detail
- good communication skills
- the ability to work well in a team
- to know how to 'sell' yourself and run your own business; you are likely to work as a freelancer for much of your career.

Entry and training

There is a variety of ways into a career in SFX/VFX. It may be possible to start as a **runner** for a production company and move into SFX/VFX later, although employers increasingly want to employ people with relevant specialist skills.

Certain **further education courses** include the option to study VFX. For example, you might be able to take relevant units through a course leading to an OCR Level 3 Cambridge Technical in digital media.

The **NextGen Skills Academy** - www.nextgenskillsacademy.com - is backed by major employers to provide training routes for young people wanting to enter games design, animation and VFX work. The Academy offers a Level 3 Diploma in games, animation and VFX skills through a network of further education colleges and can provide information on Apprenticeships.

Apprenticeships can offer structured training in the workplace. In England, it may be possible to take an Apprenticeship at level 4 to train as a junior VFX director. There are also Degree Apprenticeships at level 6 for VFX artists or technical directors, and at level 7 for VFX supervisors. For information on Apprenticeships, see: www.apprenticeships.gov.uk.

With A level or equivalent qualifications you could consider one of the increasing number of specialist **higher education courses** in VFX, or VFX combined with animation, CGI, modelmaking or motion graphics, for example; there are also a few courses in SFX. Relevant courses are also available at postgraduate level. ScreenSkills endorses a number of VFX courses - see www.screenskills.com/education-training/screenskills-select.

Some entrants have **foundation degrees, HNDs or degrees** in subjects such as animation, computing, graphic design, illustration or media production. Higher education qualifications in engineering can be useful for work involving hydraulics or robotics, and maths and physics are also very useful subjects.

Carefully check the content of any courses you are considering as their emphasis and suitability for working in SFX/VFX will vary. Also research course entry requirements. You can find information in prospectuses and on institution websites, and through www.ucas.com.

If you are interested in special effects involving **explosives and pyrotechnics**, as mentioned above, you will need to take safety exams.

Most SFX/VFX staff work on a freelance basis, undertaking different contracts for particular films or projects. Finding work is competitive and opportunities are often only reported by word of mouth, so you need to **approach prospective employers** directly. Use online directories, such as the one listed under the Further Information section of this leaflet, to identify potential employers. BECTU - see <https://bectu.org.uk/get-involved/agreements-grading-schemes> - has a list of people who are approved and graded under the industry scheme described earlier.

Employers look for practical skills and experience, so take any opportunity you can to gain relevant **work experience** and develop a **portfolio/showreel** of your work.

ScreenSkills operates **Trainee Finder** for those keen to get experience in the industry. For details, refer to the leaflet on *Working in the media* and see: www.screenskills.com/education-training/trainee-finder.

The **British Film Institute (BFI) Academy** offers residential specialist courses for 16- to 19-year-olds to learn the craft of animation and VFX - see: www.bfi.org.uk/bfi-film-academy-opportunities-young-creatives.

***Adults:** Specialist skills in areas such as engineering, modelmaking, welding or mechanics can be useful.*

Further Information

ScreenSkills - the skills body for the screen-based industries including VFX. For career profiles and information on entry routes, training, careers events, bursaries, mentoring etc, view: www.screenskills.com

Discover! Creative Careers - to explore careers in the creative industries, including in VFX, and to find out about events, work experience etc, view: <http://discovercreative.careers>

The Knowledge - an online directory of companies providing services in the film and TV production industries. Enter relevant search words, e.g. 'SFX', 'special effects', 'VFX' or 'visual effects' to find organisations operating in these areas: www.theknowledgeonline.com

Related Leaflets

D 01 Digital careers - an introduction to the work and training

D 07 Games design and development

E 12 Modelmaking

P 01 Working in the media

PA 01 Animation

PA 11 Careers in film and TV - an introduction

Q 01 Drama and acting (includes stunt work)

Q 06 Careers in theatre

Q 07 Costumes, sets and props work

RC 05 Make-up artist