

# Healthcare Science Career of the Week



## Histocompatibility & Immunogenetics

Area of HCS: Life Science

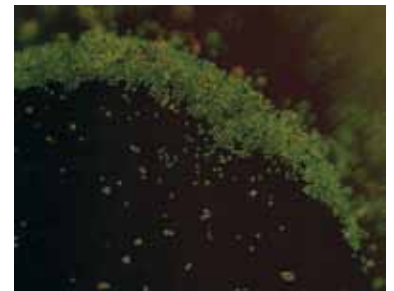
Pay scale: £21k-£80k

**AMAZING FACT** | These guys would have featured in Eastenders when Dexter donated his kidney to his Dad, Sam.

These guys play a really important role in organ transplant teams. They are responsible for checking if an organ donor and recipient are a match, which is crucial for a successful organ transplant.

Their place of work is within a lab and they work with tissue and cell samples from both donors and recipients. To check if there is a match, they perform a mini transplant in a dish! They mix cell samples from both patients along with antibodies and chemicals from the immune system and see if there is a reaction.

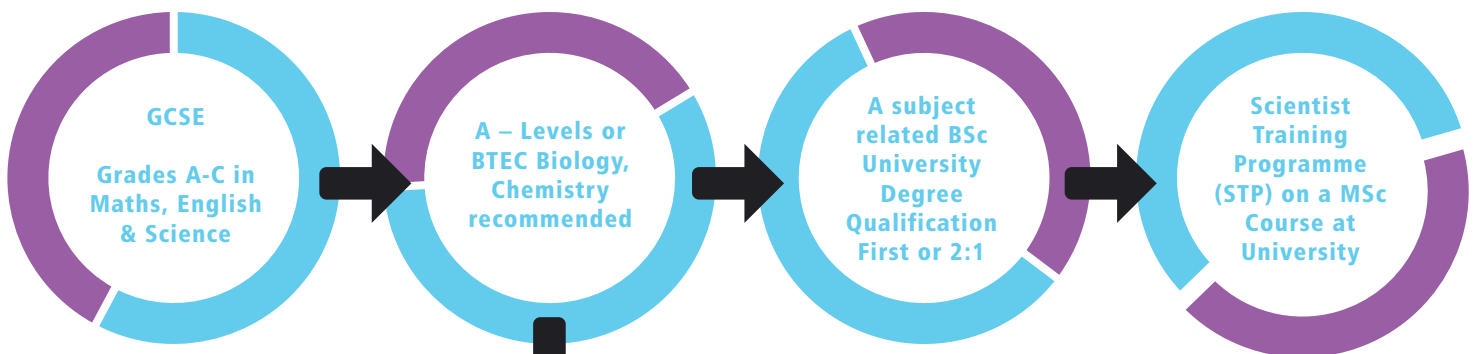
The picture on the right shows two cells from this procedure. The green cell means there is a match and the red means there would be an organ rejection!



### VIDEO

You can watch an interview with a Immunogeneticist and see how they match an organ donor and organ recipient in a lab! Go to [www.medicalmavericks.co.uk/book](http://www.medicalmavericks.co.uk/book) and watch the video.

## What to do to get into this career...



### Top Tip

Check out the range of courses at University that would be relevant for this career and then check what the entry requirements are for each of them for a more accurate picture.

### Alternative courses to Consider at University:

Genetics  
Biomedical Science  
Immunology  
Molecular Biology  
Cell Biology  
Physiology  
Biological Science

### Similar careers to look for in Life Sciences:

Biochemistry  
Pathology  
Haematology  
Clinical Immunology  
Toxicology  
Virology



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# Healthcare Science Career of the Week



## Clinical Perfusion Scientist

Area of HCS: Physiological Science

Pay scale: £25k-£67k

### AMAZING FACT

On average, the human heart beats 36,792,000 times per year, 100,800 times per day, 4,200 times per hour and 70 times per minute.

In open heart surgery, you will need some help in pumping your blood round your body whilst the heart is being worked on. This is where these guys come in, they look after your circulation whilst the operation is going on.

With the help of a large number of sophisticated machines, (See Right) they take over a patients lung and heart functions. They literally sustain the life of a person whose heart has been stopped. When you hear the words 'going onto bypass' on hospital TV dramas, it is these guys saying that.

They are taking the blood out of the body, oxygenating it in a machine, and then putting it back in whilst the heart or lungs are being operated on! That is some serious responsibility.

You have to be a serious team player in this career working alongside anaesthetists, surgeons and theatre staff to keep the patient alive and safe. Communication and being able to keep calm and give clear instructions is also key.

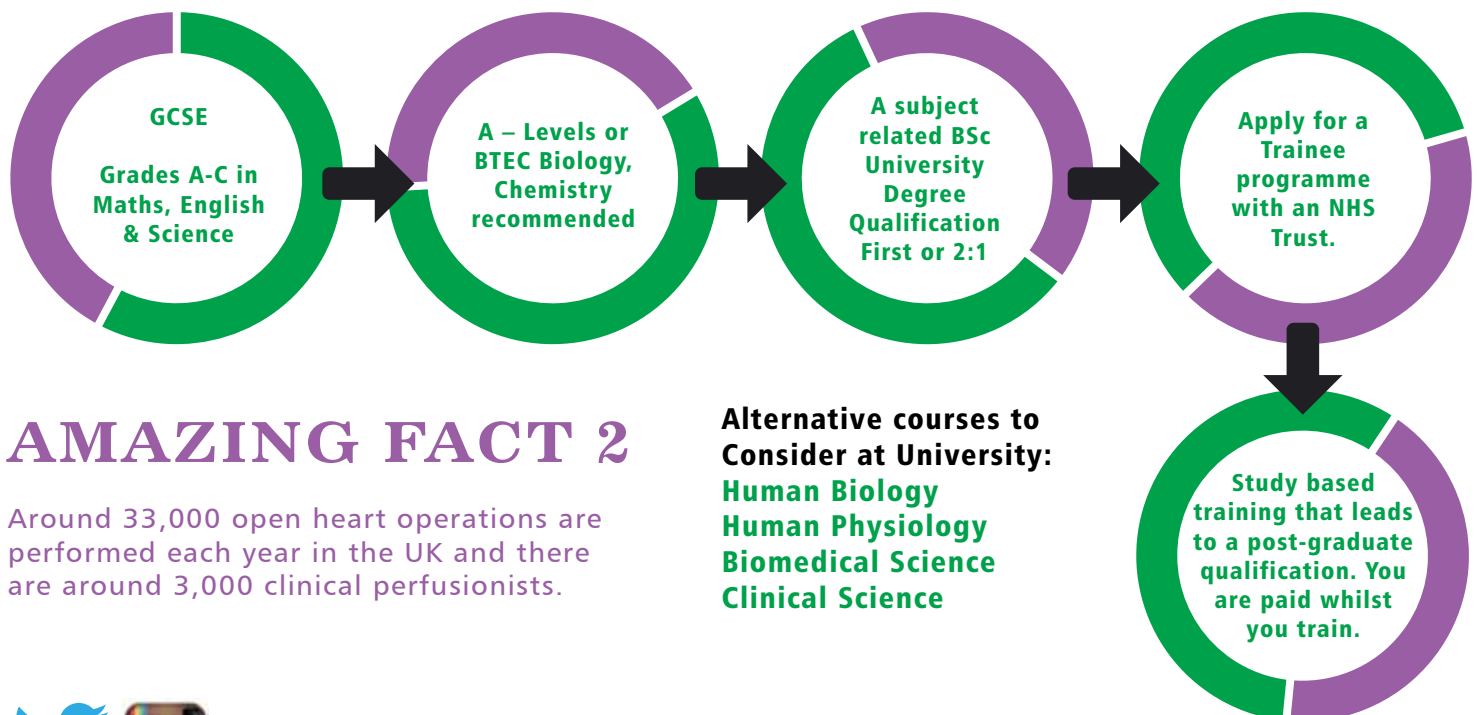
It's not just adults that need heart surgery. New born babies are common patients, having to have defects in their heart repaired fairly soon after birth.



### SEARCH

There is a dedicated website for Clinical Perfusion. You can check it out by going to [www.scps.org.uk](http://www.scps.org.uk) It has more info on what these peeps get up to as well as links to jobs vacancies.

### What to do to get into this career...



### AMAZING FACT 2

Around 33,000 open heart operations are performed each year in the UK and there are around 3,000 clinical perfusionists.



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# Healthcare Science Career of the Week



## Microbiologist

Area of HCS: Life Science  
Pay scale: Band 4-7 £18k-£55k

**AMAZING FACT** | Electron Microscopes can magnify things up to 10 million times. (Check out the house dust mite below)

Contrary to the name, this is a huge part of biology and medical research. They study microscopic organisms that can be deadly to humans such as bacteria and viruses, characterising them and developing effective treatments against diseases.

As well as bacteria, microbiologists also study:

- Viruses such as HIV
- Fungal infections such as athlete's foot
- Parasites such as tapeworm

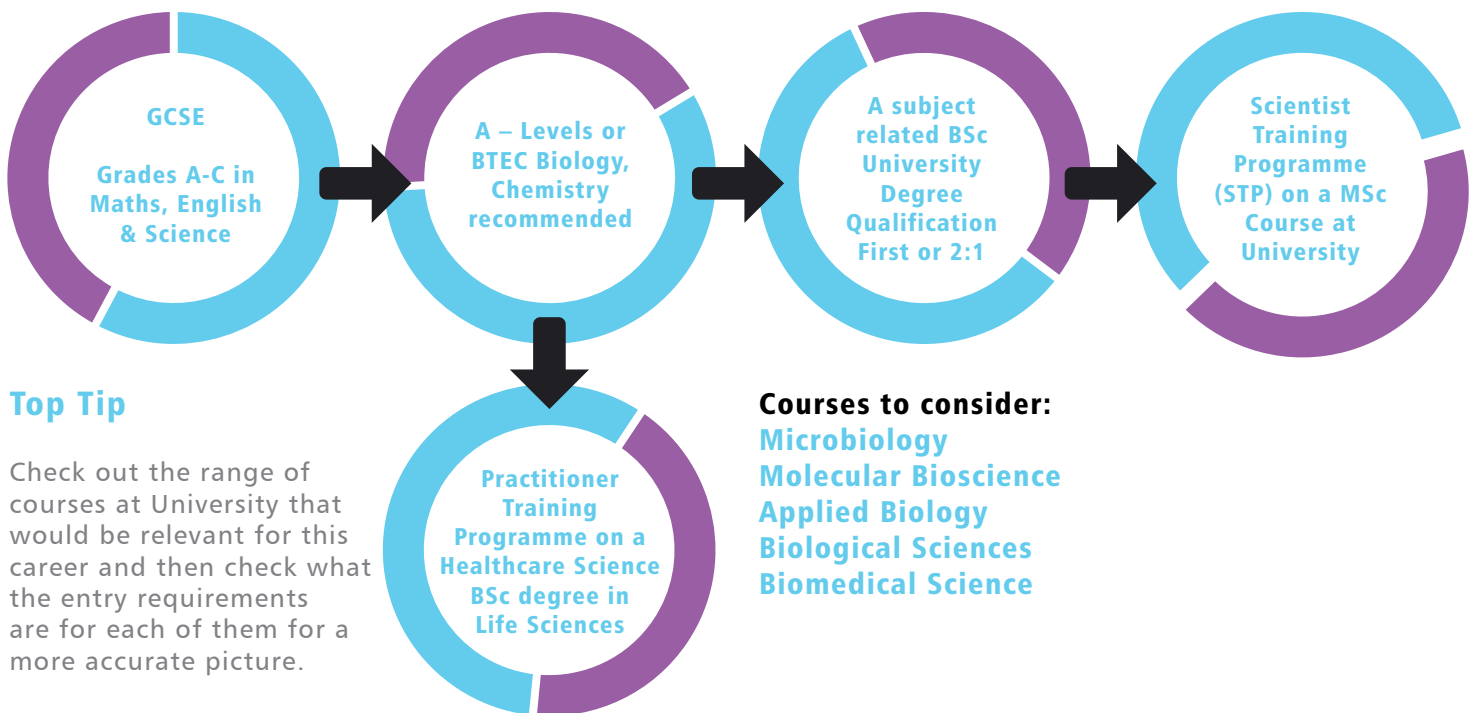
This research enables the patients to get the best and most up-to-date treatments available. Not only do they get to use electron microscopes but they use the machine to the right to carry out PCR (polymer chain reaction), which enables them to take a tiny sample of DNA and multiply it!!



### VIDEO

We've put a really cool video from Australia that looks at the day in the life of a microbiologist on our website. Check out [www.medicalmavericks.co.uk/book](http://www.medicalmavericks.co.uk/book) if you want to watch it!

## What to do to get into this career...



### Top Tip

Check out the range of courses at University that would be relevant for this career and then check what the entry requirements are for each of them for a more accurate picture.

### Courses to consider:

Microbiology  
Molecular Bioscience  
Applied Biology  
Biological Sciences  
Biomedical Science



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