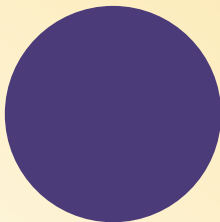
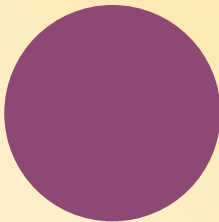
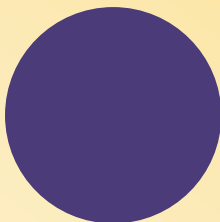
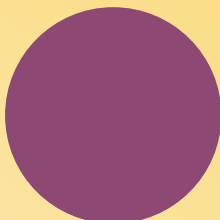


Discover a career path in

# SCIENCE



**HEON**  
HIGHER EDUCATION  
OUTREACH NETWORK

Biologist  
Chemist  
Biotechnologist  
Geologist  
Agricultural Consultant

Physicist  
Mathematician  
Nutritionist  
Sports Scientist  
Psychologist

This guide has been prepared for you to discover a range of different careers. Each of the pages outlines some key information about a particular career. If there is something of interest, we recommend using the information as a starting point and researching more online. Some suggested subjects to study are listed on each of the career pages. These are just ideas and exact entry requirements should be checked with each institution when applying. It should also be noted that most higher education courses will have a minimum GCSE requirement.

The Higher Education Outreach Network (HEON) is a partnership of local organisations including universities and colleges working in Surrey and Northeast Hampshire. The partnership is made up of the following institutions, many of whom offer courses that can lead to the careers listed in this guide:



Work experience can be a fantastic way to find out more about a job or industry you may be interested in. It's also a great way to gain and demonstrate experience for your future college, university, and job applications. It's worth reaching out to employers to ask about opportunities, and your school or college careers leader can help you with this.

HERE ARE SOME HELPFUL LINKS TO GET YOU STARTED:



AND YOU CAN ALWAYS LOOK AT VIRTUAL WORK EXPERIENCE OPTIONS TO COMPLETE AT HOME OR AT YOUR OWN PACE:



**@HEONPARTNERSHIP**  
**HEON@SURREY.AC.UK**

# So you want to be a **BIOLOGIST**

Biological Scientists study life in all forms and cover a wide range of subjects. These include anatomy, ecology, microbiology and zoology. This degree will provide you with an opportunity to study the structure and function of cells, which are fundamental to this science.

## SKILLS REQUIRED

- Practical laboratory skills and manual dexterity
- Analytical skills and the ability to present data in a meaningful way
- Communication and teamwork skills
- A willingness to accept responsibility and use common sense
- The ability to work under pressure while maintaining standards of service
- Attention to detail

## CAREERS THAT ARE AVAILABLE

- Clinical Trials Specialist
- Epidemiology and Information Analyst
- Forensic Scientist
- Management Consultant
- Educator in schools, colleges or universities

## SUBJECTS TO CONSIDER TAKING AT SIXTH FORM OR COLLEGE

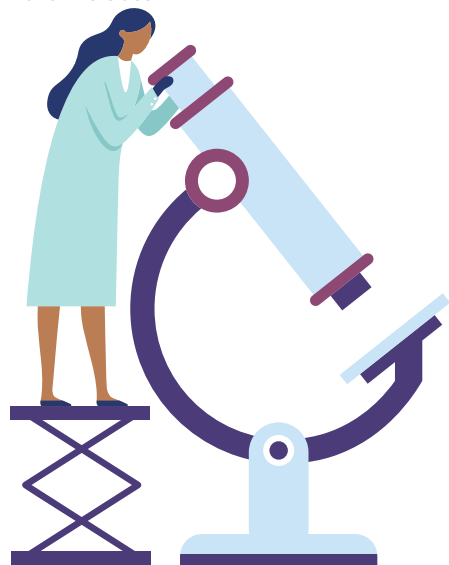
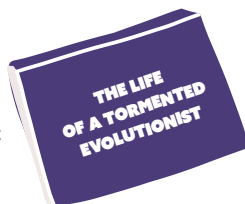
- Biology
- Chemistry

You may have to study for a further degree to pursue a science career. Example postgraduate courses include,

- Biological Science
- Ecology
- Marine Biology

## CHECK THESE OUT Campbell's Biology

**Darwin: The Life of a Tormented Evolutionist**  
by Adrian Desmond  
& James Moore



Average salary  
**£39,000**  
with a range from  
**£15,609 to £50,000**  
38-40 hrs/week



# So you want to be a **CHEMIST**

Few disciplines are as stimulating, exciting, and fast-moving as chemistry. You will seek answers to some of life's most fundamental questions, learn about the latest advances in inorganic, organic and physical chemistry, and harness the power of new technologies.

## SKILLS REQUIRED

- Knowledge of chemistry including the safe use and disposal of chemicals
- Maths knowledge
- Science skills
- Excellent verbal communication skills
- Complex problem-solving skills

## CAREERS THAT ARE AVAILABLE

- Analytical Chemist
- Biotechnologist
- Chemical Engineer
- Forensic Scientist
- Healthcare Researcher
- Management Consultant
- Pharmacologist

## SUBJECTS TO CONSIDER TAKING AT SIXTH FORM OR COLLEGE

Chemistry will most likely be a required subject. Other subjects to consider include:

- Biology
- Maths
- Physics

## CHECK THIS OUT

**The Disappearing Spoon: And Other True Tales of Madness, Love, and the History of the World from the Periodic Table of the Elements**  
by Sam Kean



Average salary  
**£33,000**  
with a range from  
**£15,609 to £42,000**  
39-41 hrs/week



# So you want to be a BIOTECHNOLOGIST

Biotechnology is made up of a variety of science specialisms which focus on the study of life and investigation of living organisms. Each of the specialisms has a focus and provides an in-depth study of the science behind all living beings.

## SKILLS REQUIRED

- An aptitude for bioscience
- An enquiring mind and the ability to work with abstract concepts
- Organisational and planning skills with the ability to plan ahead whilst delivering to deadline
- Problem-solving skills
- Digital skills and data handling

## CAREERS THAT ARE AVAILABLE

- Biological Scientists
- Biochemist
- Forensic Scientist
- Nanotechnologist
- Pharmacologist

## SUBJECTS TO CONSIDER TAKING AT SIXTH FORM OR COLLEGE

Biology and chemistry will most likely be required subjects.

Other subjects to consider include:

- Maths
- Physics
- Geography

## CHECK THESE OUT

**No Time to Lose: A Life In Pursuit Of Deadly Viruses** by Peter Piot

**The Genesis of Germs** by Alan L. Gillen



Average salary  
**£37,000**  
with a range from  
**£24,000 to £50,000**  
38-40 hrs/week  
(may work evenings)



# So you want to study GEOLOGIST

In literal terms, geography means 'to draw/record the land,' whereas geology means 'to find the knowledge of the land'. Geology focuses on how the land came to be. Geologists study the structure of the Earth and how it was formed and shaped over time. They explore its natural mineral and energy resources and analyse rocks to uncover its history.

## SKILLS REQUIRED

- Strong IT, numerical and computational skills, to handle large data sets
- Excellent communication and interpersonal skills
- Flexibility and the ability to work as part of a multidisciplinary team
- The ability to express ideas and findings clearly, both orally and in writing, to produce reports and make presentations

## CAREERS THAT ARE AVAILABLE

- Engineering Geologist
- Environmental Geologist
- Exploration Manager (minerals and ore deposits)
- Geochemist
- Geophysicist (oil and gas)
- Geoscientist

## SUBJECTS TO CONSIDER TAKING AT SIXTH FORM OR COLLEGE

- Maths
- Geography
- Biology
- Chemistry
- Physics

## CHECK THESE OUT

**The Planet in a Pebble: A journey into Earth's deep history** by Jan Zalasiewicz

**Journey to the Centre of the Earth** by Jules Verne



Average salary  
**£34,500**  
with a range from  
**£28,000 to £42,000**  
35-40 hrs/week



# So you want to be an AGRICULTURAL CONSULTANT

Agriculture & Forestry covers the study of farming and environmental sciences, such as soil analysis and estate management. It's an increasingly modernised area of study, with climate change being at the forefront of public debate.

## SKILLS REQUIRED

- Data management and analysis
- Report-writing
- Identifying trends from data
- Forward planning
- Teamwork

## CAREERS THAT ARE AVAILABLE

- Agricultural Consultant
- Rural Business Manager
- Farm Technician
- Environmental Consultant
- Soil Scientist

## SUBJECTS TO CONSIDER TAKING AT SIXTH FORM OR COLLEGE

- Biology
- Chemistry
- Maths



## CHECK THESE OUT

**The Making of the English Landscape**  
by W G Hoskins

**How the World Really Works**  
by Vaclav Smil



Average salary  
**£33,805**  
with a range from  
**£20,000 to £45,000**  
37-40 hrs/week

# So you want to be a PHYSICIST

As Physicists, we're driven to explore and discover our universe. Think astronomy and galaxy formation, state-of-the-art cancer screening, ultra-fast lasers and much more.

## SKILLS REQUIRED

- Maths knowledge
- Knowledge of physics
- Knowledge of engineering science and technology
- Analytical thinking skills
- Science skills
- The ability to think clearly using logic and reasoning

## CAREERS THAT ARE AVAILABLE

- Academic Researcher
- Automated Test Engineer
- Clinical Scientist
- Market Risk Project Manager
- Medical Physicist
- Meteorologist

## SUBJECTS TO CONSIDER TAKING AT SIXTH FORM OR COLLEGE

Physics will most likely be a required subject other subjects to consider include:

- Chemistry
- Biology
- Maths

## CHECK THESE OUT

**A Brief History of Time**  
by Stephen Hawking

**Human Universe** Brian Cox  
TV show and Book



Average salary  
**£35,673**  
with a range from  
**£15,609 to £50,000**  
35-40 hrs/week



# So you want to be a MATHEMATICIAN

Mathematics is a highly regarded discipline that both underpins our contemporary world and is a fascinating subject in its own right. It is essential for understanding almost every area of modern life: from finance and medical science to digital communications and weather forecasting.

## SKILLS REQUIRED

- Communication
- Creative problem solving
- Decision making
- Logical reasoning and analytical skills
- Numeracy and IT skills
- Presentation skills

## CAREERS THAT ARE AVAILABLE

- Investment Analyst
- Meteorologist
- Actuary
- Statistician
- Chartered Accountant
- Financial Risk Analyst
- Corporate Investment Banker

## SUBJECTS TO CONSIDER TAKING AT SIXTH FORM OR COLLEGE

- Mathematics
- Further Mathematics
- Physics

Some degrees require a maths admissions test.

## CHECK THESE OUT

**1089 and All that: A Journey Into Mathematics** by David Acheson

**Seventeen Equations that Changed the World** by Ian Stewart

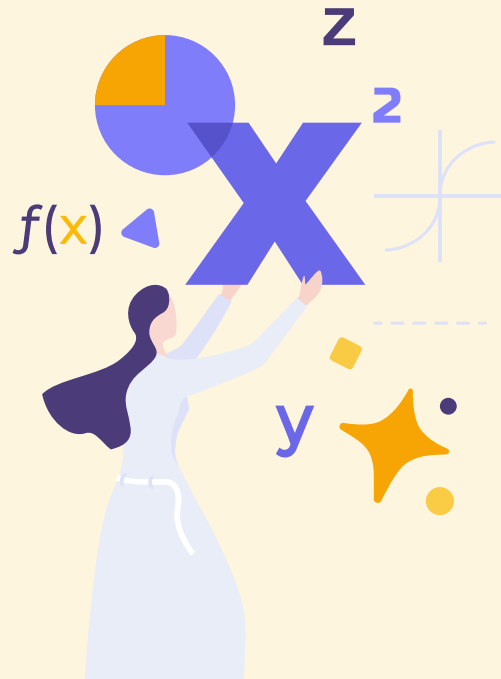
Something to watch  
**The Bletchley Circle**



Average salary

**£39,156**

with a range from  
**£23,252 - £156,500**  
35-40 hrs/week



# So you want to be a NUTRITIONIST

Nutritionists are experts in food science who help advise on the right choices when thinking about how we eat. As a nutritionist, you are a diet specialist, passionate about a healthy lifestyle, and keen to develop your knowledge of scientific nutritional advice. You will share scientific food knowledge and advice about the effects of diet and nutrition on health and wellbeing.

## SKILLS REQUIRED

- Presenting scientific reports
- Collecting, analysing, and interpreting scientific data
- Putting scientific results in context
- Data handling and statistical analysis
- Communication
- Presentation skills

## CAREERS THAT ARE AVAILABLE

- Sports Nutritionist
- Regulatory Advisor For Food Products
- Dietician
- Clinical Trials Researcher
- Community Education Officer
- Personal Trainer

## SUBJECTS TO CONSIDER TAKING AT SIXTH FORM OR COLLEGE

- Biology
- Chemistry
- Healthcare
- Catering
- Nutrition

## CHECK THESE OUT In Defense of Food

by Michael Pollan

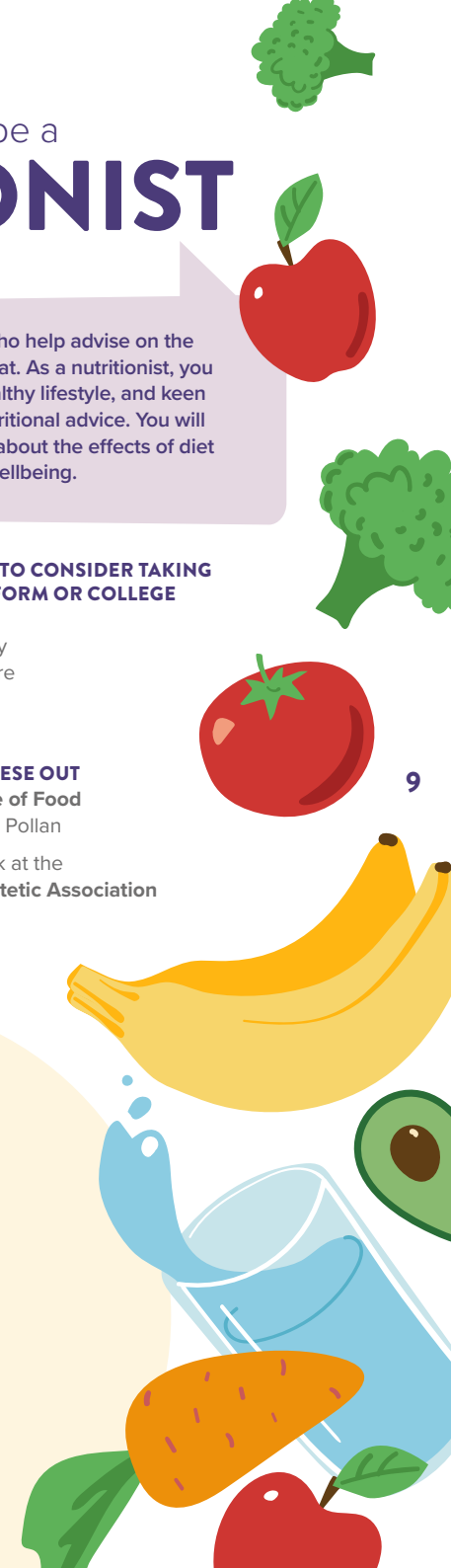
Take a look at the  
**British Dietetic Association**



Average salary

**£28,000**

with a range from  
**£24,907 to £37,890**  
37-39 hrs/week



# So you want to be a SPORTS SCIENTIST

Sports Science is the study of how the healthy human body works during exercise, and how sport and physical activity promote health physically, mentally and socially. The study of sport incorporates many other academic subjects, such as Physiology, Psychology, Anatomy, Engineering and Chemistry.

## SKILLS REQUIRED

- An interest in sport
- Excellent communication and interpersonal skills
- Leadership and decision-making
- Planning and organising
- Analytical and critical thinking
- Problem-solving
- Communication

## CAREERS THAT ARE AVAILABLE

- Activities Manager
- Coach
- Event Manager
- Fitness Centre Manager

## SUBJECTS TO CONSIDER TAKING AT SIXTH FORM OR COLLEGE

- Biology
- Chemistry
- Maths
- Physical Education
- Psychology

## CHECK THESE OUT

**Sport: Almost Everything You Ever Wanted to Know** Paperback  
by Tim Harris

**Endure Mind, Body, and the Curiously Elastic Limits of Human Performance**  
by Alex Hutchinson




Average salary  
**£30,000**  
with a range from  
**£20,000 to £60,000**  
40-45 hrs/week



# So you want to be a PSYCHOLOGIST

Being a clinical or chartered psychologist are two ways you can practice psychology professionally, with both requiring additional qualifications which can be studied after your initial degree. Psychologists attempt to understand the role of a person's cognitive functions on behaviour and how they behave in a social environment.

## SKILLS REQUIRED

- Communication
- Critical thinking
- Data handling and analysis
- IT literacy and numeracy
- Organisation and project management
- Presentation and report writing

## CAREERS THAT ARE AVAILABLE

- Counselling Psychologist
- Drug And Alcohol Recovery Practitioner
- Educational Psychologist
- Forensic Psychologist
- High-intensity Therapist
- Mental Health Support Worker

## SUBJECTS TO CONSIDER TAKING AT SIXTH FORM OR COLLEGE

- Biology
- Chemistry
- Mathematics
- Psychology

## CHECK THESE OUT

**Reaching Down the Rabbit Hole: Extraordinary Journeys into the Human Brain**  
by Dr Allan Ropper

**Mistakes Were Made (But Not by Me)**  
by Carol Tavris



Average salary  
**£36,518**  
with a range from  
**£24,000 to £60,000**  
38-40 hrs/week



There are multiple pathways you may wish to consider including apprenticeships, higher education courses and school leaver programmes.

If you are looking to apply to university HEON has prepared the following steps to support, you:



# Student life at the UNIVERSITY OF SURREY



Molly - Dietetics student

Picture the twice-weekly 9am bioscience lecture: Austin Pierce lecture hall is 200-people strong, the majority bleary eyed and yawning, pulling out laptops, notepads and pens. 50 minutes later, we are released. Often, we will have a break until our next lecture, leaving us free for an hour or two. Many will return to their beds, a few will go to the gym or get breakfast. Rare among students, I am a morning person. For me, those in-between times are for my own work, writing up lecture notes for later revision, lab reports or preparation, research, laundry...

Average contact time is given as 24 hours/ week, which may be split into 6 hours one day, and just 1 the next. In addition to this, I do the Global Graduate Award in British Sign Language. This is a 2 hour/ week commitment with the time spent learning from a wonderful Deaf teacher and having fun in a mixed group of around 20 from any course or year of study. This requires perhaps a couple of hours per week outside of class, on average, for coursework and revision for exams. Using my time efficiently, getting things done when I can, takes away a lot of pressure and leaves plenty of room for socialising and paid work.

As a student ambassador employed by the university, I can choose which jobs to put myself forward for, meaning I have no obligation to work during busy periods but can do plenty when I have more time on my hands. Lots of the friends I have made at university are also ambassadors, seeing each other often during training, open days, school visits etc. as well as going out together. I would recommend this to anyone looking to supplement their loan and meet some great new people.

Some societies meet once a week, others less frequently. I am in the nutrition society- NutSoc. Society events tend to be open to everyone in the university and range from ski trips to bar crawls.

Although my housemates may all finish our lectures at different times, we often find ourselves cooking and eating together, sharing the day's news and gathering to watch films and TV programs in the evening. A university family; a home away from home.

If you are considering applying for an apprenticeship a similar application process would be required however you would need to apply directly. You can find out more details about this and a wealth of other information on the HEON Hub at:





If you have seen a career you would like to find out more about or would like to look at the full range of options then there is a wealth of information available online. Take a look at some of the links below to find out more.



## WHERE DO I GO FROM HERE?

### NATIONAL CAREERS SERVICE

Different pathways are explained on this interactive webpage.

### HEON STUDENTS HUB

A wide variety of resources are available to look at a range of different pathways. There are also profiles from students at a range of Higher Education providers.

### START PROFILE

Check out your options, complete activities to explore the world of work and improve your employability.

### CAREERPILOT

A page packed with information about lots of different industries.

### SUCCESS AT SCHOOL

Explore careers, get the lowdown on top employers, and search for the latest jobs, apprenticeships, courses and advice.

## I THINK I MIGHT LIKE UNIVERSITY, BUT I DON'T KNOW WHERE TO START...

### BRIGHT KNOWLEDGE

Tips on how to choose what to study both at school and university.

### WHICH? UNIVERSITY GUIDE

### A LEVEL EXPLORER

Put some subjects in and see what pops out - be sure to check the unexpected degree options.

### MOVING FROM BTECS TO UNIVERSITY STUDY

Explore your options with BTEC studies.

### CAREERPILOT

Packed with information about university, courses and additional info.

### UCAS

Search through all university courses here.

### WHAT UNI?

Compare university and degree courses with rankings, course details and profiles.

## WHAT IF I DON'T THINK UNIVERSITY IS FOR ME?

### APPRENTICESHIP FINDER

Search for different apprenticeships in a range of areas with a variety of providers.

### AMAZING APPRENTICESHIP

Explore resources, research and apply to apprenticeships.

### SKILLS FUNDING AGENCY

Find an apprenticeship guide, tips on applying and search for an apprenticeship here.

### CAREERPILOT

Use the 'Get Info' menu to find out more about apprenticeships and work based learning.

### STUDENT LADDER

Search over 2,500 positions for work experience, internships, apprenticeships and graduate schemes.

*The information in the booklet has been collected from a range of sources and all information provided is correct at the time of printing (Jan 2023) and is subject to change without notice. Please do check all details when you apply for any courses.*