

# Cheshire and Warrington Labour Market - Science Pathway

The Cheshire and Warrington Data and Labour Market Steering Group have commissioned this work which takes the qualification pathways that have been developed by the Institute for Apprenticeships and Technical Education, mapping different occupations against them and contextualising them for the Cheshire and Warrington economy.

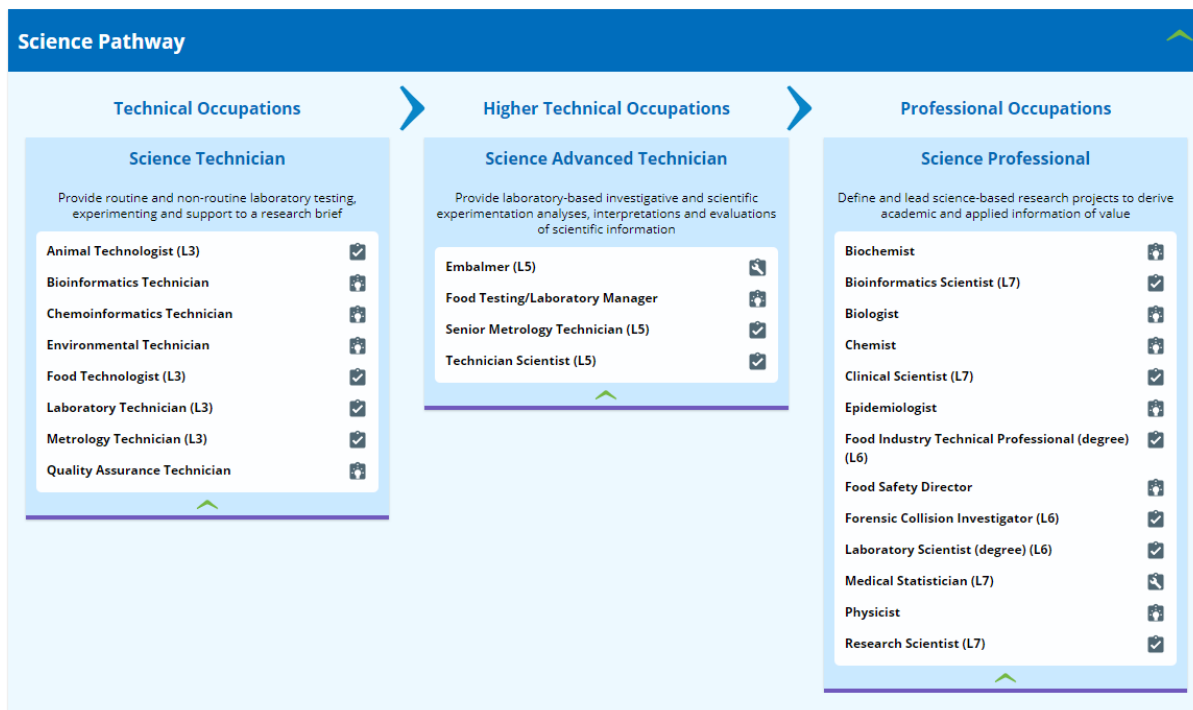
Other Pathways include:

- Care Route
- Construction – Building Services Engineering Pathway
- Construction – Design, Surveying & Planning Pathway
- Construction – Onsite Construction Pathway
- Digital Route
- Logistics Pathway
- Transport Pathway

The pathways will be updated as necessary and, by the end of October, all the draft pathways will be posted on the LEP website.

## Cheshire and Warrington Labour Market Facts – Science Pathway

### Pathway Description



Source: IFATE Occupational Maps <https://www.instituteforapprenticeships.org/occupational-maps/>

### Science pathway jobs<sup>1</sup>

- In 2021, there are about 12,500 science pathway jobs in Cheshire and Warrington<sup>2</sup>.
- About 4,500 of these jobs are at Level 3, about 1,500 of them require a Level 4 and the remainder require qualifications at degree level and above.
- On average there are about 600 openings for these types of jobs in Cheshire and Warrington each year.
- There are more jobs like this in Cheshire and Warrington than the national average and this is expected to be the case for the next few years, including for jobs like Chemical Scientists, Laboratory Technicians and Biological Scientists.
- Most roles in this pathway are at relatively low risk of automation.

### Science pathway wages in Cheshire and Warrington

The table below sets out details on the median wages that different occupations that fall into the science pathway attract in Cheshire and Warrington.

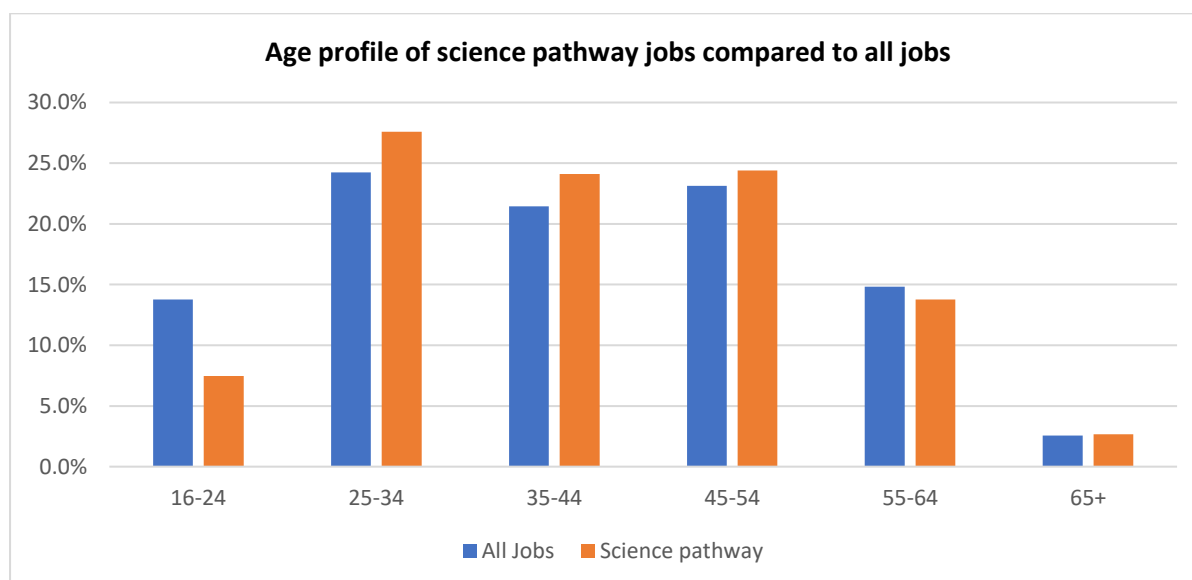
<sup>1</sup> For mapping of the science pathway to 4-digit SOC codes see Annex 1.

<sup>2</sup> Data in this section from EMSI Analyst



Median wages of occupations in the science pathway in Cheshire and Warrington	
Description	Median Wages (£)
Managers and Proprietors in Other Services n.e.c.	22090
Engineering Professionals n.e.c.	42661
Biological Scientists and Biochemists	42203
Laboratory Technicians	23275
Inspectors of Standards and Regulations	34287
Chemical Scientists	32094
Science, Engineering and Production Technicians n.e.c.	25126
Undertakers, Mortuary and Crematorium Assistants	25355
Actuaries, Economists and Statisticians	43098
Quality Assurance Technicians	29883
Physical Scientists	43519
Natural and Social Science Professionals n.e.c.	38189
Social and Humanities Scientists	34744
Conservation and Environmental Associate Professionals	23712
<i>Source: EMSI Analyst</i>	

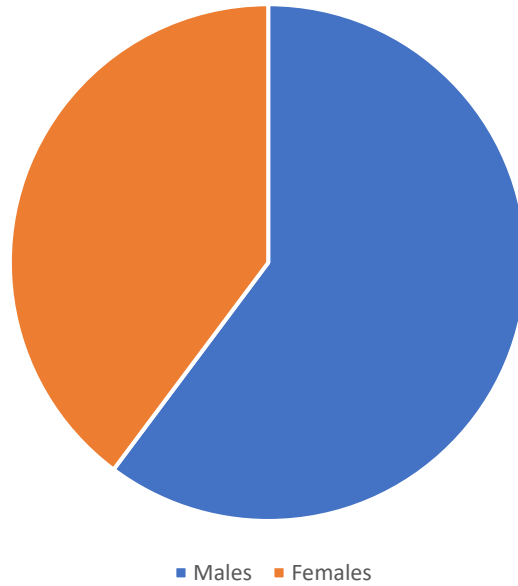
### Age and Gender of current employees in the science pathway



*Source: EMSI Analyst*



### Males and Females employed in science pathway occupations



Source: EMSI Analyst

### Demand from residents

Data from Opportunities Portal?

### Job postings<sup>3</sup>

- In the last five years, employers in Cheshire and Warrington were as likely to repeat advertise these roles as average.
- In this time, there have been about 9.5k job postings for this type of role in C&W with about 3.5k of those in Cheshire West and Chester, about 3.5k in Cheshire East and about 2.5k in Warrington.
- These jobs were advertised in Warrington (2,331); Chester (1,405); Macclesfield (1,086); Crewe (835); Northwich (818); Ellesmere Port (400); Knutsford (30); Wilmslow (299); Winsford (168); Alderley Edge (148); and Nantwich (108).
- The average number of times a role gets advertised in Cheshire and Warrington has increased from 4 in 2016 to 8 in 2021. This may indicate that employers are finding these roles harder to fill recently.
- Top recruiters in Cheshire and Warrington include AstraZeneca, NHS, Atkins plc, Inchcape plc, Amec Foster Wheeler plc, Jacobs, and Mid Cheshire Hospitals NHS Foundation Trust.
- The most advertised roles in Cheshire and Warrington are for Science, engineering and production technicians, and Engineering professionals.

### Advertised apprenticeships

In the past five years, there have been 381 apprenticeships advertised in occupations in the science pathway. For most of those that advertised a salary, it was in the range £10k-£20k.

<sup>3</sup> All data in this section and the next is from EMSI Analyst.

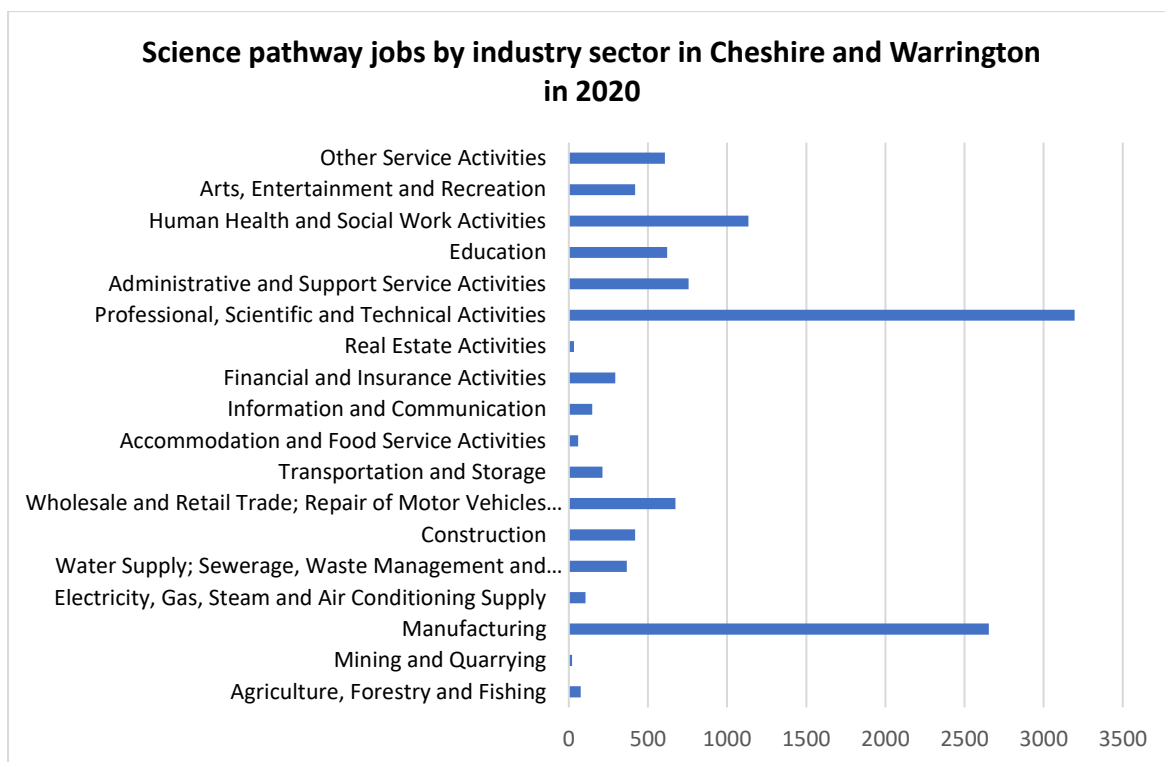


## Hard skills sought by employers

Hard skills sought of employees in the science pathway in Cheshire and Warrington	
Skill	Frequency in Postings
Pharmaceuticals	9%
Chemistry	8%
Auditing	7%
Good Manufacturing Practices	6%
Risk Analysis	5%
New Product Development	4%
Customer Satisfaction	4%
Safety Assurance	4%
Quality Control	4%
Environment Health and Safety	4%
Project Engineering	3%
Quality Management Systems	3%
Biology	3%
Data Analysis	3%
Analytical Techniques	3%
Customer Experience	3%
Key Performance Indicators (KPIs)	3%
Quality Management	3%
Project Management	3%
AutoCAD	3%
<i>Source: EMSI Analyst</i>	

Which sectors in Cheshire and Warrington employ people in the science pathway?





Source: EMSI Analyst

### Apprenticeships

There were 5 apprenticeship starts (all Level 4+) by Cheshire and Warrington residents in the Science Pathway in 2019/20 – 4 as Technician Scientists and 1 as a Food Industry Technical Professional.

### College Courses

In 2019/20, young people (16-18) started a variety of academic (mostly A level) and vocational (mostly BTEC) courses in the science pathway. 97% of these 1980 courses were at Level 3. The Government is currently rolling out a T-level in science with the intention that this should replace other vocational programmes in science.

Science courses with >30 starts taken by 16-18 year olds living in Cheshire and Warrington 2019/20			
	Level 2	Level 3	Total
GCE A Level in Psychology		454	454
GCE A Level in Biology		264	264
GCE A Level in Chemistry A		217	217
BTEC Subsidiary Diploma in Applied Science (QCF)		180	180
BTEC Extended Diploma in Applied Science (QCF)		142	142
GCE A Level in Physics A		105	105
GCE AS Level in Psychology		96	96
GCE AS Level in Biology		66	66
GCE A Level in Chemistry		65	65
GCE A Level in Physics		54	54



GCE AS Level in Chemistry		48	48
BTEC National Extended Certificate in Applied Science		41	41
BTEC First Extended Certificate in Applied Science	35		35
GCE A Level in Biology A (Salters-Nuffield)		34	34
GCE AS Level in Physics		34	34
BTEC Diploma in Applied Science (QCF)		32	32
<b>Source: ESFA Localities data cube (residency) 2019/20</b>			

There were 124 courses started by adults in the science pathway in Cheshire and Warrington in 2019/20, mostly at Level 2 and Level 3. The most popular courses were GCSE (9-1) in Biology (Level 2), Access to HE Diploma - Science (Level 3), and BTEC Extended Diploma in Applied Science (Level 3).

<b>Science courses with &gt;5 starts taken by adults living in Cheshire and Warrington 2019/20</b>			
	Level 2	Level 3	Total
GCSE (9-1) in Biology	18		18
Access to HE Diploma (Science)		15	15
BTEC Extended Diploma in Applied Science (QCF)		8	8
<b>Source: ESFA Localities data cube (residency) 2019/20</b>			



## Annex 1 Mapping of SOC 2010 codes to the science pathway

There is no simple mapping of the IFATE Occupational Maps to 4-digit SOC codes. The codes below will contain the occupations included in the Science pathway but may also include others.

<b>4-digit SOC (2010) code mapping to the IFATE Science Pathway</b>	
1259	Managers and proprietors in other services n.e.c.
2111	Chemical scientists
2112	Biological scientists and biochemists
2113	Physical scientists
2114	Social and humanities scientists
2119	Natural and social science professionals n.e.c.
2129	Engineering professionals n.e.c.
2425	Actuaries, economists and statisticians
3111	Laboratory technicians
3115	Quality assurance technicians
3119	Science, engineering and production technicians n.e.c.
3550	Conservation and environmental associate professionals
3565	Inspectors of standards and regulations
6148	Undertakers, mortuary and crematorium assistants
<i>Source: Brennan Wilson Ltd analysis</i>	

