

# Chemicals

## Chemicals Overview

The chemical industry comprises the companies that produce industrial chemicals. Central to the modern world economy, it converts raw materials (oil, natural gas, air, water, metal, fibres, paints, pharmaceutical ingredients and minerals) into more than 70,000 different products.



## 1% of employment in the Humber is in chemicals

### Useful subjects

- Maths
- IT
- Science
- English

### Examples of Key Employers in the Humber



### Did you know?

- The chemical industry employs approximately 5,000 in the Humber area
- The Humber has the UK's 2nd largest chemical cluster
- Total Lindsey Oil refinery at Killingholme is the UK's third largest oil refinery
- Phillips66 supply of high grade graphite coke production puts 500,000 new cars on the road
- Phillips66 Refinery supplies 20% of all UK's petroleum products, enough to keep 500,000 cars on the road each day
- The region has 5 power stations and 2 major oil refineries providing 27% of the UK's oil refinery production
- BP's chemical manufacturing facility in Hull is the largest producer of acetic acid (used in production of resin, adhesive & textiles) and acetic anhydride in Europe

### Will there be opportunities available?

- By 2030, the UK Chemical Industry will have further reinforced its position as the country's leading manufacturing export and enabled the chemistry-using industries to increase their GVA contribution to the UK Economy by 50%, from £195 billion to £300 billion'
- The pharmaceutical industry is seeing competition from emerging economies for bulk manufacture. However, development and innovation still remain strong, so is likely to remain an important sector of the economy over the coming decades. Manufacturing will be dependent on the quality of research and development activity.

### For further information visit:

- [nationalcareers.service.gov.uk](http://nationalcareers.service.gov.uk)
- [www.lmihumber.co.uk](http://www.lmihumber.co.uk)
- [www.careersyandh.co.uk](http://www.careersyandh.co.uk)
- [www.bridgingthegaphumber.co.uk](http://www.bridgingthegaphumber.co.uk)
- [www.cogentskills.com](http://www.cogentskills.com)
- Look in your local newspapers
- Pop in to you local Job Centre
- Check out Social Media
- Attend events and seminars
- Check out YouTube
- And talk to family and friends

**Good to know:**  
A lot of newer and really exciting jobs in the chemical sector that offer a good salary package need a science, technology or maths base.

# Planning ahead...

Some jobs do not formally state entry requirements but most of these require the employee to have basic skills and be capable of undertaking on-the-job training and working towards professional qualifications.

## Entry Level

Involves building basic knowledge and skills and is not geared towards specific occupations

Traineeship  
Study Programme  
Entry level certificate  
Entry level Skills for Life  
Entry level award, certificate and diploma  
Entry level Functional Skills  
Entry level Foundation Learning  
English for speakers of other languages

## Level 1

Involves activities which mostly relate to everyday situations and may be linked to job competence

GCSE (grades D-G or 1-3)  
Traineeship  
Study Programme  
Key Skills level 1  
NVQ level 1  
Skills for Life level 1  
Foundation diploma  
BTEC award, certificate and diploma level 1  
Foundation Learning level 1  
Functional Skills level 1  
OCR National

## Level 2

Involves building knowledge and or skills in relation to an area of work or subject area appropriate for many job roles

GCSE (grades A\*-C or 4-9)  
Apprenticeship  
Key Skills level 2  
NVQ level 2  
Skills for Life level 2  
Higher diploma  
BTEC award, certificate and diploma level 2  
Functional Skills level 2

## Level 3

Involves obtaining knowledge and skills. It is appropriate for people wishing to go to university, working on their own or in some areas, supervising others in their field of work

AS and A level  
T Level  
Advanced Apprenticeship  
Advanced Extension Award  
Cambridge International award  
International Baccalaureate  
Key Skills level 3  
NVQ level 3  
Advanced diploma  
Progression diploma  
BTEC award, certificate and diploma level 3  
BTEC National  
OCR National  
Cambridge National

## Level 4

Appropriate for people working in technical and professional jobs, and/or managing and developing others

Certificate of higher education  
Key Skills level 4  
NVQ level 4  
BTEC Professional award, certificate and diploma level 4  
HNC

## Level 5

Appropriate for people working as higher grade technicians, professionals or managers

HND  
NVQ level 4  
Higher Level Apprenticeship  
Higher diploma  
BTEC Professional award, certificate and diploma level 5  
HNC  
Diploma of higher education  
Diploma of further education  
Foundation degree

## Level 6

Involves achievement of high level professional knowledge and is appropriate for people working as knowledge based professionals or in professional management positions

NVQ level 4  
Higher Level Apprenticeship  
BTEC Advanced Professional award, certificate and diploma level 6  
Bachelor's degree  
Graduate certificate  
Graduate diploma

## Level 7

Involves achievement of high level professional knowledge and is appropriate for people working as knowledge based professionals or in professional management positions

BTEC Advanced Professional award, certificate and diploma level 7  
Fellowship and fellowship diploma  
Postgraduate certificate  
Postgraduate diploma  
NVQ level 5  
Degree Level Apprenticeship  
BTEC Advanced Professional award, certificate and diploma level 7  
Master's degree

## Level 8

Involves achievement of high level professional knowledge and is appropriate for people working as knowledge based professionals or in professional management positions

NVQs level 5  
Vocational qualifications level 8  
Doctorate  
Degree Level Apprenticeship

Production Worker

Warehouse Operator

Forklift truck Operator

Process Operator

Laboratory Technician

Laboratory Assistant

Marketing Assistant

Clerical Assistant

Laboratory Technician

Sales Manager

Credit Manager

Chemical Engineering Technician

Chemical Engineer

Senior Technician

Production Manager

Sales Engineer

Research Chemist

Analytical Chemist

Bio-Chemist

Forensic Scientist