

CEA GCE Northern Ireland A Level Chemistry and Careers in Chemistry

Find examples of the most relevant careers for subsections of the curriculum and link through to up to five job profiles for further information. The profiles will give your students real world examples of jobs in the aspects of chemistry they enjoy most. They are written by teachers for teachers.

Simply click on the job title to go to the job profile on A Future in Chemistry.



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AS 1 –Basic concepts in physical and inorganic chemistry

1.1 Formulae, equations and amounts of substance

- Head of computational toxicology
- Senior laboratory technician
- > School science technician
- > Technical services chemist, cosmetics
- Scientist, food and pharmaceuticals

1.2 Atomic structure

- > Chemistry engineer, nuclear
- Research assistant
- > Radioactive waste consultant
- Secondary school science teacher

1.3 Bonding

- Analytical technician, plastics
 - Bionanotechnology PhD student
- Co-founder and machine learning lead of tech startup Ignota Labs
- Laboratory scientist apprentice
- > <u>Technical services chemist, cosmetics</u>

1.4 Intermolecular forces

- Analytical technician, plastics
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- Associate principal scientist, food
- > Technical services chemist, cosmetics

> Development chemist, printing and

Bionanotechnology PhD student

1.5 Structure

- Bionanotechnology PhD student
- Co-founder and machine learning lead of tech startup Ignota Labs
- > Computational toxicologist
- Senior software developer
- > Technical services chemist, cosmetics



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1.6 Shapes of molecules and ions

- Bionanotechnology PhD student
- Co-founder and machine learning lead of tech startup Ignota Labs
- Laboratory scientist apprentice
- Nanotoxicologist
- Postdoctoral research associate

1.7 Redox

- > Laboratory scientist apprentice
- Scientist, food and pharmaceuticals

- > PhD researcher
- Product and process development manager
- Secondary school science teacher

1.8 Halogens

Analytical chemists, Thames Water

1.9 Acid-base titrations

- Development chemist, printing and inks
- > Laboratory analyst and higher degree > Senior laboratory technician apprentice, water
- Pollution control officer

- School science technician

1.10 Qualitative tests

- <u>Laboratory analyst and higher degree</u> >> apprentice, water
- Principal air quality consultant
- Scientist, food and pharmaceuticals
- Scientist, Incident Management & **Crisis Resolution**
- Senior laboratory technician



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AS 2 -Further physical and inorganic chemistry and an introduction to organic chemistry

2.1 Formulae and amounts of a substance

- Analyst higher apprentice, organic Senior laboratory technician chemistry

Medicinal chemist

- > Technical services chemist, cosmetics
- Scientist, food and pharmaceuticals

2.2 Nomenclature and isomerism in organic compounds

- Associate principal scientist, food
- > Executive editor, scientific publishing
- Co-founder and machine learning lead of tech startup Ignota Labs
- Nanotoxicologist
- Computational toxicologist

2.3 Alkanes

- Chief technology officer and cofounder of Lixea, a sustainable solutions company
- Principal air quality consultant

Marine biogeochemist

Senior principal scientist

Pollution control officer

2.4 Alkenes

- Analytical technician, plastics
- Market development manager
- Microplastics toxicologist
- → R&D chemist
- > Research innovations manager



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2.6 Alcohols

Forensic scientist

- Senior science manager
- Secondary school science teacher

2.7 Infrared spectroscopy

- Analyst higher apprentice, organic >> Pollution control officer chemistry
- Associate scientist, pharmaceuticals
- Scientist, food and pharmaceuticals

Forensic toxicologist

2.8 Energetics

- > Chemistry engineer, nuclear
- Director

Chief chemist

Senior principal scientist

Chief executive officer

2.9 Kinetics

- Chemistry engineer, nuclear
- > Secondary school science teacher

Chief executive officer

Senior principal scientist

2.11 Group II elements and their compounds

Scientist, food and pharmaceuticals



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A2 1 –Further physical and organic chemistry

4.2 Enthalpy, entropy and free energy

- > Chemistry engineer, nuclear
- Project leader in enhanced experimentation, oil & gas

> Chief chemist

4.3 Rates of reaction

- > Chemistry engineer, nuclear
- Secondary school science teacher

Chief chemist

Senior principal scientist

4.5 Acid-base equilibria

- Analytical chemists, Thames Water
- School science technician
- <u>Laboratory analyst and higher degree</u> → apprentice, water
- Scientist, food and pharmaceuticals

4.6 Isomerism

- Associate principal scientist, food
- al scientist, food > Nanotoxicologist
- Co-founder and machine learning lead of tech startup Ignota Labs
- Research innovations manager

Medicinal chemist

4.7 Aldehydes and ketones

> Flavourist and innovation director



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4.9 Derivatives of carboxylic acids

Flavourist and innovation director

4.10 Aromatic chemistry

Research fellow
Senior scientist, household goods

A2 2 –Analytical, transition metals, electrochemistry and organic nitrogen chemistry

5.1 Mass spectrometry

- > Analytical chemist > Pollution control officer
- <u>Laboratory analyst and higher degree</u>
 <u>Principal air quality consultant</u>
 <u>apprentice, water</u>
- > Nanotoxicologist

5.2 Nuclear magnetic resonance spectroscopy

- Associate scientist, pharmaceuticals

 Scientific associate, NMR

 spectroscopy
- Bioanalytical scientist Teaching technical specialist
- Laboratory analyst and higher degree apprentice, water

5.3 Volumetric analysis

- Development chemist, printing and inks
- Laboratory analyst and higher degree

 apprentice, water
- > Pollution control officer

- Scientist, food and pharmaceuticals
- Senior laboratory technician



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5.4 Chromatography

- Analyst higher apprentice, organic chemistry
- > Soil scientist

> Senior laboratory technician

- Analytical chemist
- Scientist, Incident Management & Crisis Resolution

5.5 Transition metals

- > Bioleaching lab technician
- Product and process
 development manager
- > Environmental process specialist
- › Project manager, world gold council
- Laboratory scientist apprentice

5.6 Electrode potentials

- > PhD researcher
- Professor and enterprise,partnerships and innovation lead
- > Research fellow, battery recycling
- Scientific consultant
- > Solar technology engineer

5.7 Amines

Development chemist, printing and inks

5.9 Amino acids

- > Nanotoxicologist
- Postdoctoral research associate
- > Research innovations manager
- > Senior laboratory technician
- Sports scientist, British Olympic Association



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5.10 Polymer chemistry

- Analytical technician, plastics
- Chief executive officer
- > Head of research and sustainability
- > R&D chemist
- Section leader, wind

5.11 Chemistry in medicine

- Analytical chemist
- Co-founder and machine learning lead of tech startup Ignota Labs
- Medicinal chemist

- Process chemist higher apprentice, pharmaceuticals
- University laboratory technician apprentice