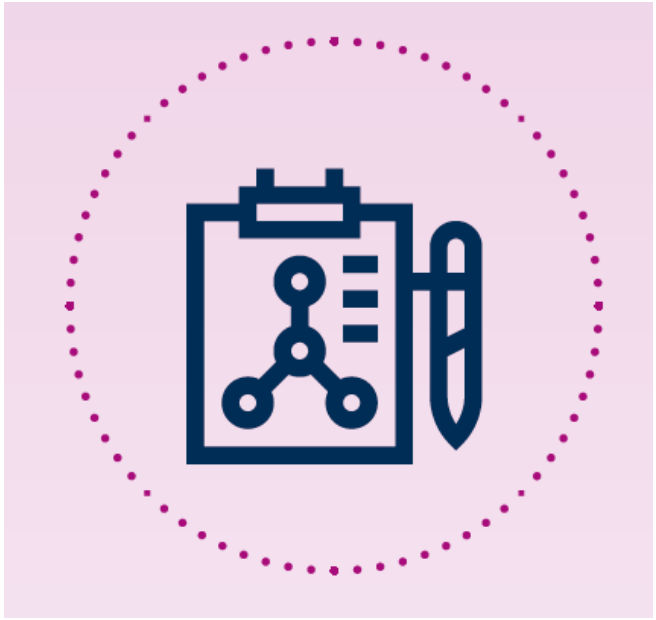
Chemistry in UK higher education data pack

Updated 15 September 2025

Purpose and contents

The purpose of this document is to set out RSC messaging and key evidence on chemistry in UK higher education. This includes:

- RSC messaging and recommendations
- Chemistry provision in higher education across the UK
- Chemistry undergraduate student numbers
- Chemistry postgraduate student numbers
- Research grants and contract income for chemistry (HESA cost centre)
- Appendix: HESA definitions and codes



Information about the data sources

What do we mean by chemistry:

- In this data pack, we have used HESA's definition for chemistry. See appendix for more information.

HESA:

- HESA data represented in this slide deck is from the open data and official statistics pages - https://www.hesa.ac.uk/data-and-analysis. More detail can be found on the HESA webpage.
- Student numbers are rounded to the nearest five in accordance with HESA's Rounding Methodology.

UCAS:

- The UCAS data represented in this slide deck is from UCAS Undergraduate end of cycle data resources 2024 page - https://www.ucas.com/data-and-analysis/undergraduate-statistics-and-reports/ucas-undergraduate-end-cycle-data-resources-2024. The sector-level end of cycle data resources cover applicants and applications to courses recruited through UCAS.

Additional information:

- HESA and UCAS both offer ways of measuring undergraduate student numbers **but are slightly different**. UCAS statistics are based on numbers of applications and acceptances on courses whereas HESA statistics are records of students who actually enrolled on courses. In some cases, accepted applicants never actually enrol on the course on which they have been accepted.
- All calculated percentages are rounded to the nearest whole figure.

RSC messaging and recommendations

RSC messaging and recommendations

- **Chemistry skills, knowledge and research benefit the economy and society**. They are crucial to delivering the UK Government's Industrial Strategy and devolved governments' priorities, as well as sustainable development goals. Chemistry research and innovation improves lives through advances in healthcare, environment, and sustainability, among others.
- **Chemistry higher education is central to achieving the UK Government's ambitions and delivering the jobs growth potential of the chemical sciences sector**, which is projected to outstrip the rest of the UK labour market by 30% by 2032.
- **UK higher education is facing a financial sustainability crisis** and is undergoing changes in response to this challenge, including department and course closures, and mergers.
- **Universities provide a major training pathway through chemistry degrees** with sector employers and priority Government sectors (e.g. advanced manufacturing, clean energy and life sciences) dependent on the practical, digital and sustainability skills and knowledge that chemistry degrees provide.

RSC messaging and recommendations

- **Current financial pressures are forcing universities to take difficult decisions**. Recent cuts and closures to chemistry provision, including University of Hull, Bangor University, and the University of Bradford, are already impacting local and national course availability.
- **Decision-making at institutional level may not always account for the local, regional or national skills and research capability needs** when closing or merging courses or departments. The financial crisis in higher education also exacerbates the financial pressures experienced by students, threatening the diversity of the chemical sciences and undermining the resilience and future of the UK workforce.
- **We are extremely concerned about the risk of universities closing chemistry programmes and departments that provide substantial long-term benefits to local and national economies**. We recognise the need for change in UK higher education to achieve financial sustainability and will work with Governments and other actors to shape this, whilst seeking to ensure the continued supply of the skills and capabilities needed for the future of the chemical sciences profession.

RSC messaging and recommendations

We call on the Government to work in partnership with higher education and its stakeholders, including professional bodies, to:

1. Facilitate action to address the financial sustainability of teaching and research in higher education ensuring quality chemistry learning, research and innovation that meets economic, employer and student need across the UK.
2. Support the provision of high-quality chemistry education and training, including higher education, vocational and technical routes that are locally accessible for all.
3. Recognise the vital role chemistry higher education plays in delivering the innovations, skills and talent needed to deliver government priorities, including Industrial Strategy.
4. Address the cost-of-living pressures affecting students, reducing barriers to access, participation and continuation in chemistry.

For more detail on these recommendations, **see our Policy briefing: Tackling the challenges facing chemistry in UK higher education**.

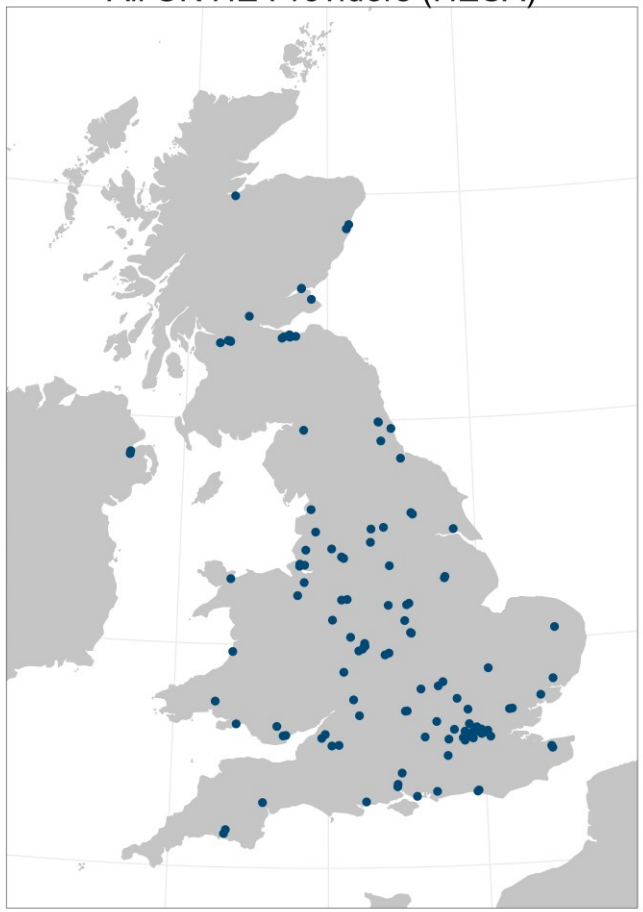
Additional resources and links

- Policy Briefing: Tackling the challenges facing chemistry in UK higher education (2025)
  - → This policy briefing sets out the RSC's recommendations and evidence on chemistry higher education.
- Future workforce and educational pathways (2025)
  - → This report sets out what the chemical sciences industry needs and how to equip today's and tomorrow's workforce with the skills to succeed.
- Insights from REF2021 (2023)
  - → This report highlights the varied contributions that chemical scientists at UK universities make through new discoveries and transferring knowledge.
- A future in chemistry: Making the difference
  - → Our webpage showing some of the ways chemists are making a difference to our world, including job profiles, how to find work experience and information for teachers and employers.
- What do chemists earn?
  - → Our members' Pay and Reward Report gives you the facts to support your next career decision.
- Science Horizons (2021)
  - → Our report shows how leading-edge scientific research is helping the economy, society and the environment.

Chemistry provision in higher education across the UK

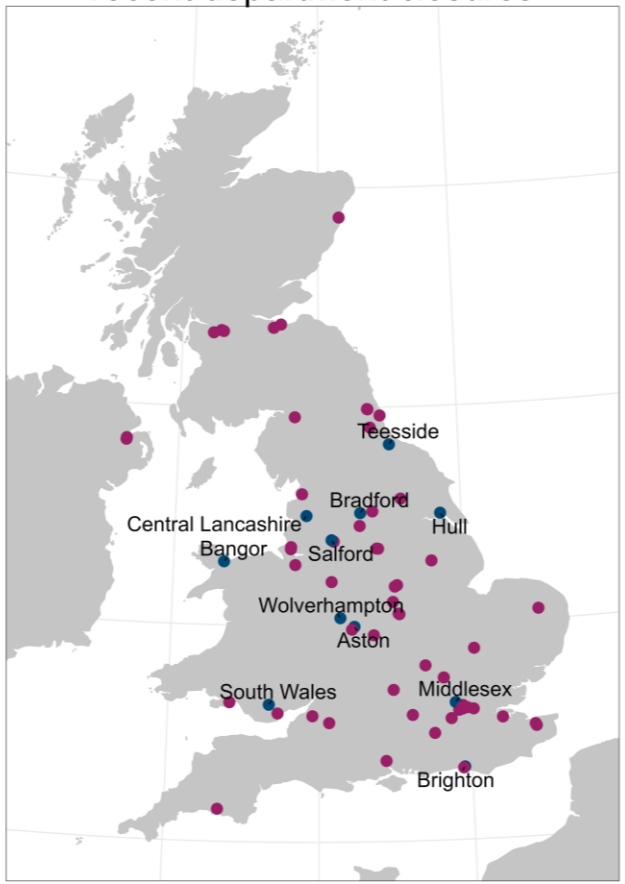
Universities and provision of chemistry undergraduate courses across the UK

All UK HE Providers (HESA)



Source: HESA

Universities with 2023/24 Chemistry undergraduates plus recent department closures



• Active • Closed

Source: HESA, RSC internal research

Please note: This map is up to date at the time of publishing. The departments marked as closed have either closed in the last few years, announced they will be closing and have stopped future student recruitment, and/or are teaching out.

Key points:

- There are **61 universities providing an active chemistry undergraduate course* in the UK** (of which: 50 in England, 2 in Northern Ireland, 7 in Scotland, 2 in Wales).
- **Since 2022/23, 11 universities have stopped providing chemistry undergraduate courses in the UK** (of which: 9 in England, 2 Wales).

*We have used HESA's definition to capture active chemistry undergraduate courses (see appendix 2 for more information).

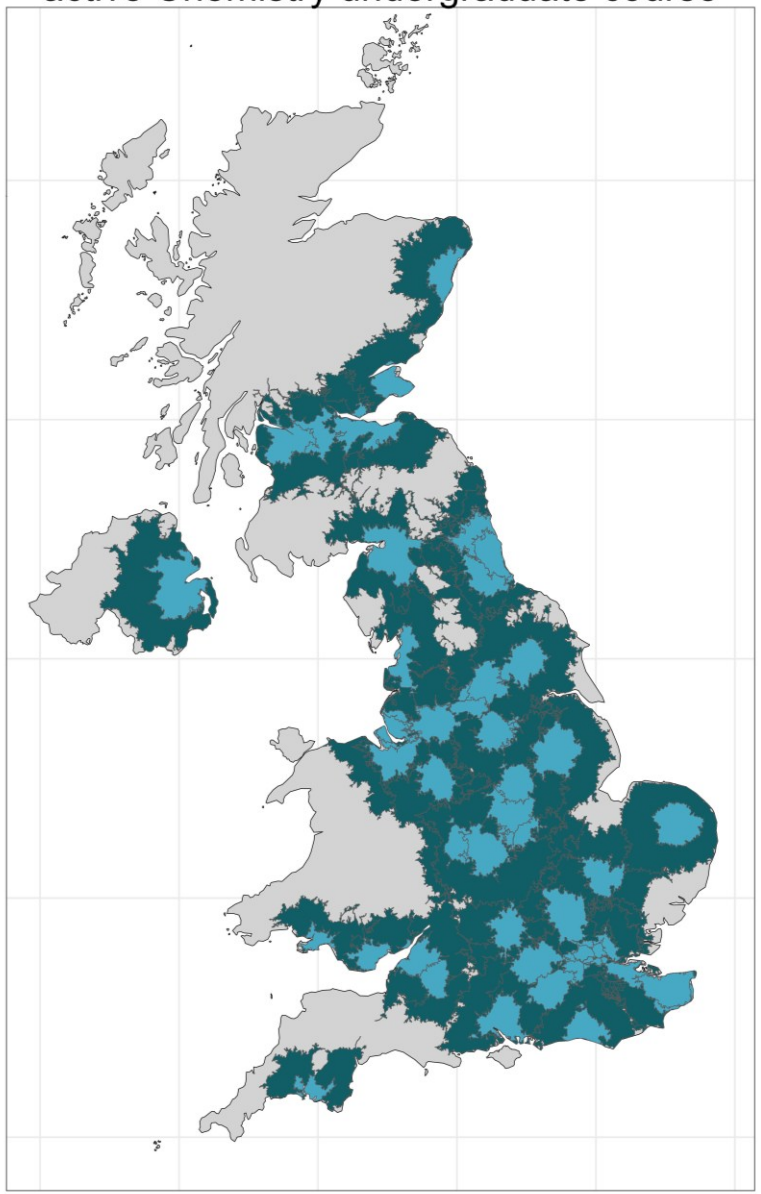
ROYAL SOCIETY OF CHEMISTRY

Provision of chemistry undergraduate courses across the UK with travel time

Key points:

- In recent years, the financial pressure on universities has led to cuts and closures of chemistry courses and departments in the UK, resulting in **“cold spots”** where no provision of chemistry is available within a reasonable travel time.
- Cold spots are emerging in East Yorkshire and the Humber with the closure of the University of Hull’s chemistry department, and in North Wales with the closure of Bangor University’s department
- Other potential closures could further worsen this picture.

Travel times by car to nearest university with active Chemistry undergraduate course



Source: Open Route Service
The Open University excluded

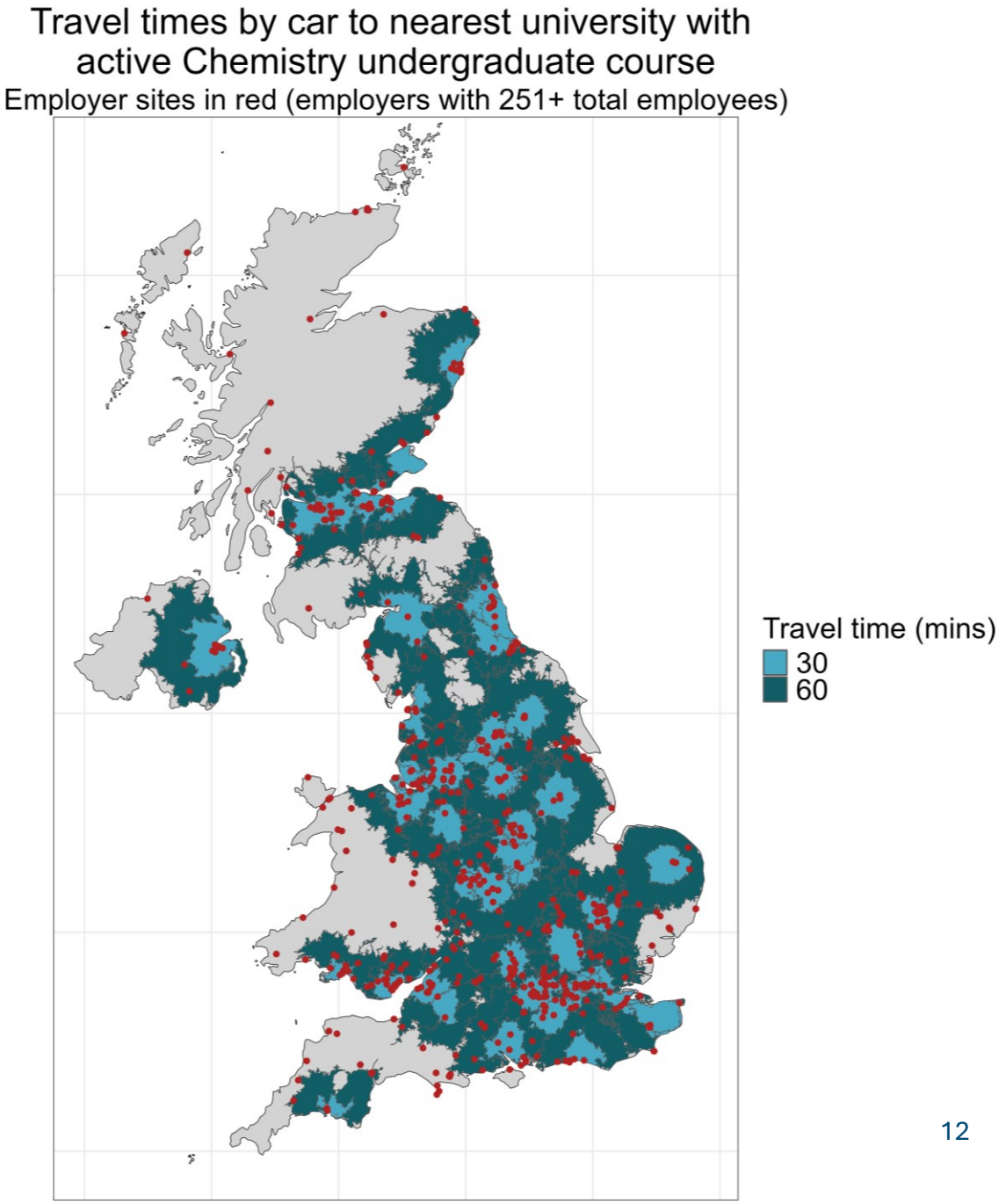
This map shows, for each institution with an active chemistry undergraduate course, the 30-minute and 60-minute driving range. Grey areas indicate where there is a driving time of one hour or more.

ROYAL SOCIETY OF CHEMISTRY

Provision of chemistry undergraduate courses across the UK with travel time and chemistry employers

Key points:

- This map overlays internally-collected chemistry employer data, plotting employer sites from organisations with 251+ employees.
- The maps shows that **chemistry employers are often located close to chemistry departments**. If more chemistry cold spots were to emerge, this could have an impact on employers in their local area.



ROYAL SOCIETY OF CHEMISTRY

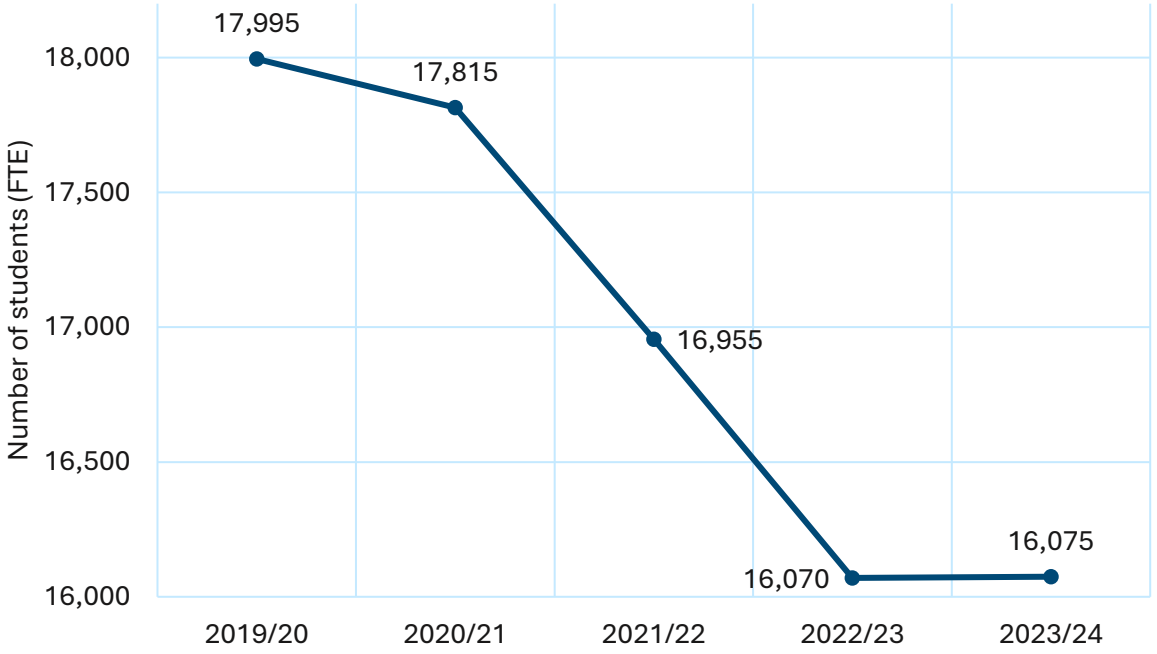
Chemistry undergraduate student numbers

Key findings

- Since 2019/20, the **total number of undergraduates studying chemistry in the UK has fallen**.
- However, in the most recent two years, the **total number of first year undergraduate enrolments in chemistry has started to rise.** This is being driven by increases in students from the UK nations.
- The number of **undergraduates studying chemistry from the EU has fallen sharply in recent years**, while the number of **undergraduates studying chemistry from non-EU countries has risen**.
- The total number of **applications which received an offer for undergraduate chemistry has been rising in the last two years** and has surpassed 2019/20 levels.

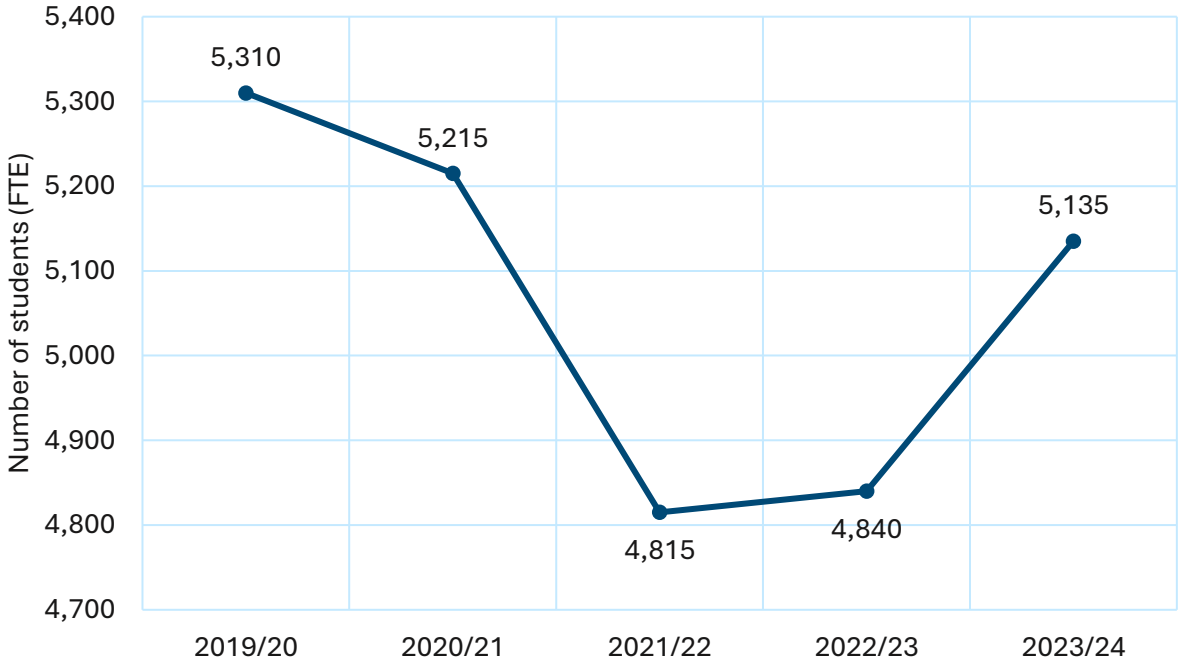
Undergraduate enrolments in chemistry

Total number of chemistry undergraduate enrolments, 2019/20 to 2023/24



[**Data source:** HESA, Table 52: Subject of study: 'CAH level 3', '07-02-01 Chemistry'; Level of study: 'All undergraduate'; Mode of study: 'All'; Entrant marker: 'All'. Accessed 8/09/2025.]

Total number of chemistry first year undergraduate enrolments, 2019/20 to 2023/24

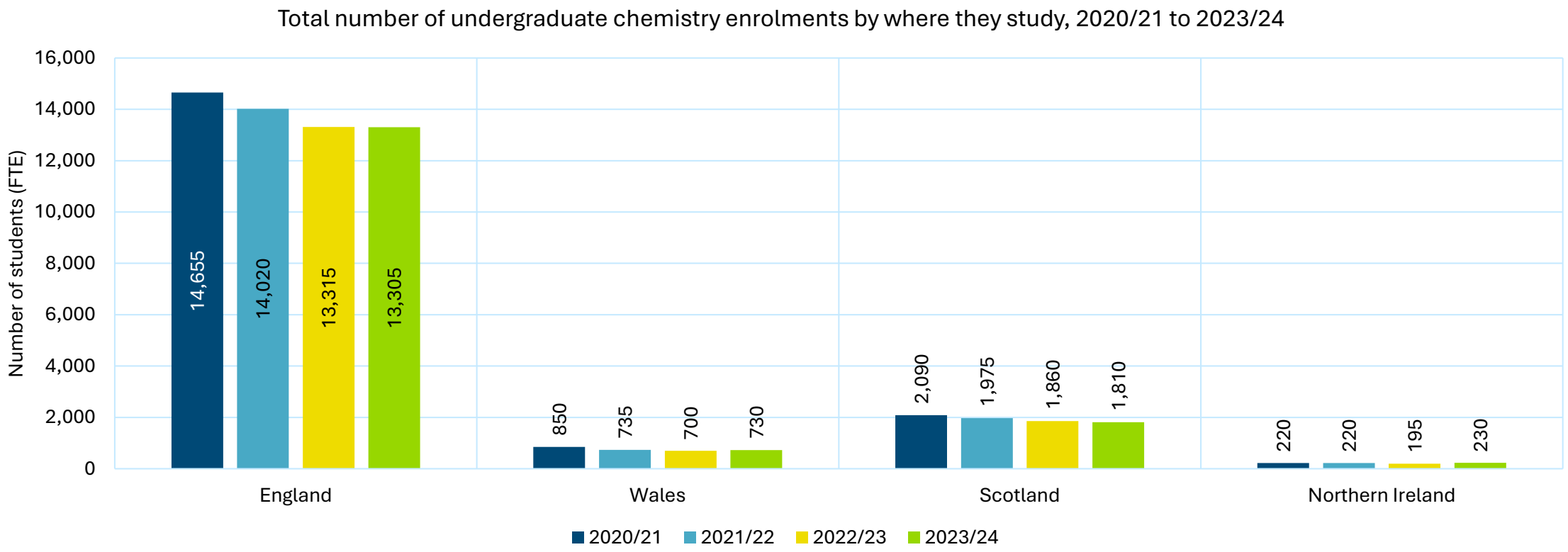


[**Data source:** HESA, Table 52: Subject of study: 'CAH level 3', '07-02-01 Chemistry'; Level of study: 'All undergraduate'; Mode of study: 'All'. Entrant marker: 'Entrant'. Accessed 8/09/2025.]

Key points:

- The total number of **chemistry undergraduate enrolments (i.e., chemistry undergraduates in all years) fell by 11%** between 2019/20 and 2023/24.
- The total number of **first year undergraduate chemistry enrolments** fell between 2019/20 and 2021/22 but **has risen in the last two years** (2022/23 and 2023/24).

Undergraduate enrolments in chemistry by where they study

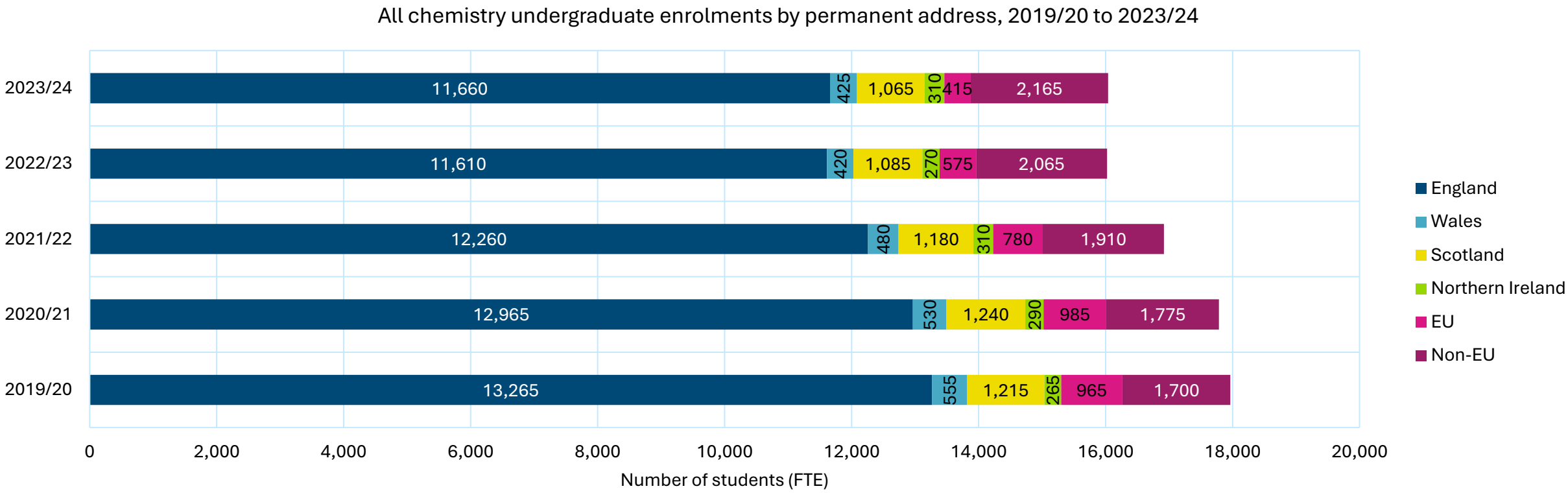


[**Data source:** HESA, Table 49: Subject of study: 'CAH level 3', '07 Physical sciences'; Level of study: 'All undergraduate'; Mode of study: 'All'. Accessed 8/09/2025.]

Key points:

- This figure shows **how many undergraduate chemistry enrolments there are in each of the four UK nations**.
- Over the past four years, **Wales has seen the biggest decrease (14%)**, followed by **Scotland (13%)** and **England (9%)**. **Northern Ireland has seen a small increase (5%).**

Undergraduate enrolments in chemistry by permanent address (all years)

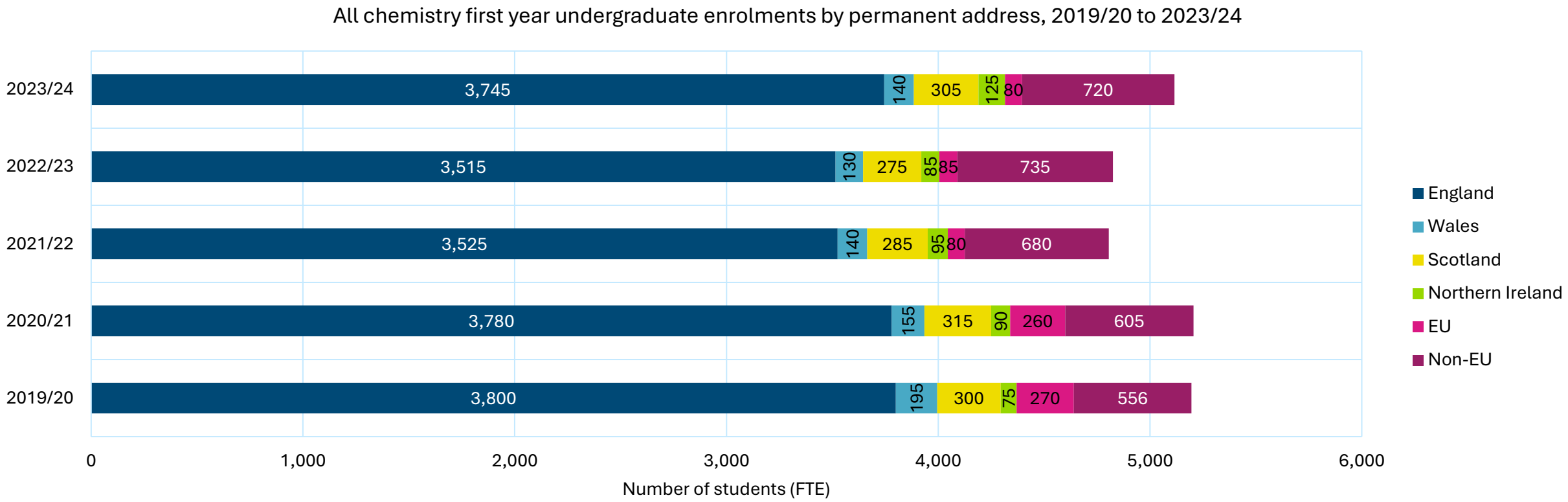


[**Data source:** HESA, Table 52: Subject of study: 'CAH level 3', '07-02-01 Chemistry'; Level of study: 'All undergraduate'; Mode of study: 'All'. Entrant marker: 'All'. Accessed 8/09/2025.]

Key points:

- There has been **a drop in overall chemistry undergraduate enrolments from UK nations between 2019/20 and 2022/23,** but there have been **small increases from England, Wales and Northern Ireland in 2023/24**.
- The number of chemistry undergraduate enrolments from the **EU has fallen by 57% between 2019/20 and 2023/24.**
- The number of chemistry undergraduate enrolments from **non-EU countries has risen by 27% between 2019/20 and 2023/24**.

Undergraduate enrolments in chemistry by permanent address (first years)



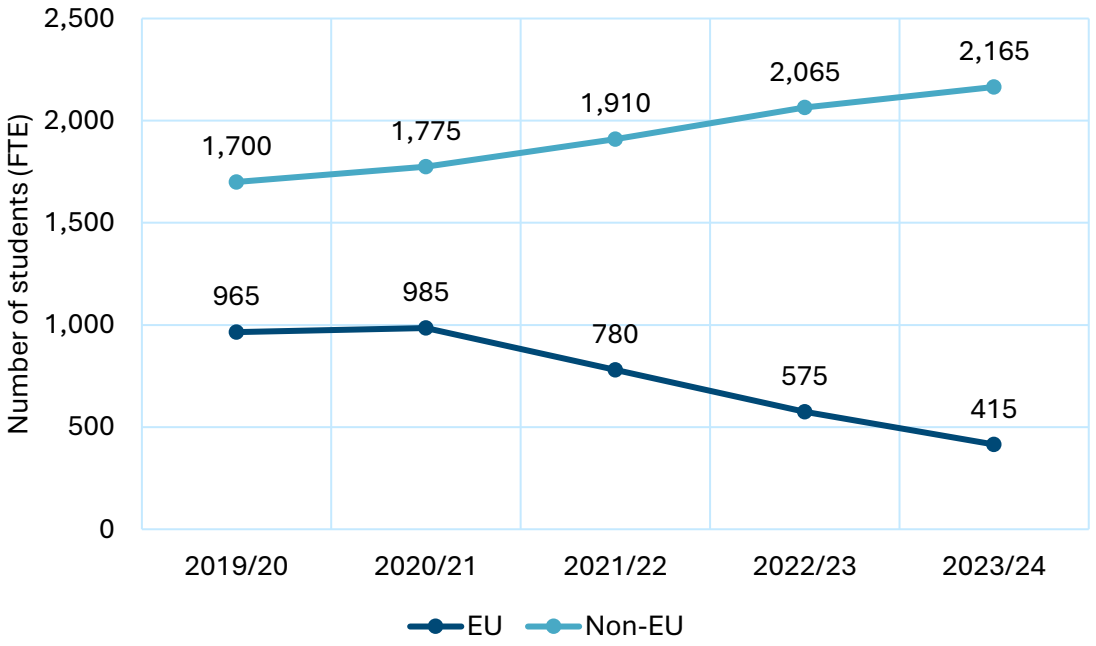
[**Data source:** HESA, Table 52: Subject of study: 'CAH level 3', '07-02-01 Chemistry'; Level of study: 'All undergraduate'; Mode of study: 'All'. Entrant marker: 'Entrant'. Accessed 8/09/2025.]

Key points:

- The number of students who **started an undergraduate chemistry degree from all UK nations has increased in 2023/24** compared to the previous year. The biggest increase was seen in Northern Ireland which increase by 47%, followed by Scotland (11%), Wales (8%) and England (7%) respectively.
- The number of first year chemistry undergraduate enrolments from the **EU appears to have stagnated at around 80 students per year.**
- The number of first year chemistry undergraduate enrolments from **non-EU countries has fallen slightly in 2023/24**.

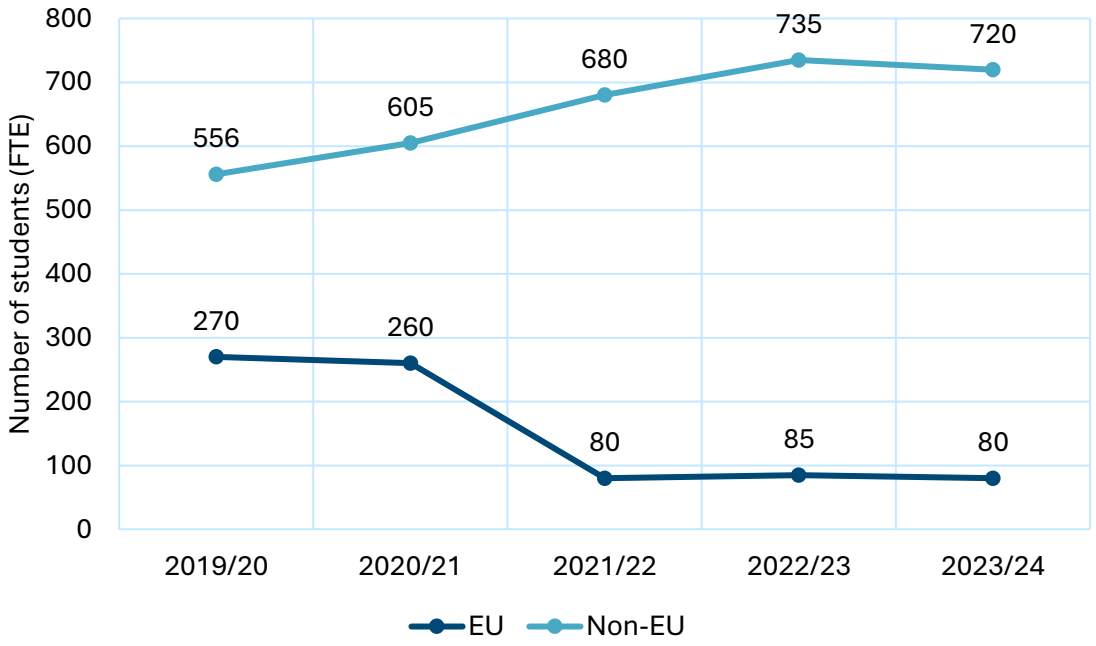
International undergraduate enrolments in chemistry

Number of international chemistry undergraduate enrolments, 2019/20 to 2023/24



[**Data source:** HESA, Table 52: Subject of study: 'CAH level 3', '07-02-01 Chemistry'; Level of study: 'All undergraduate'; Mode of study: 'All'. Entrant marker: 'All'. Accessed 8/09/2025.]

Number of international chemistry first year undergraduate enrolments, 2019/20 to 2023/24



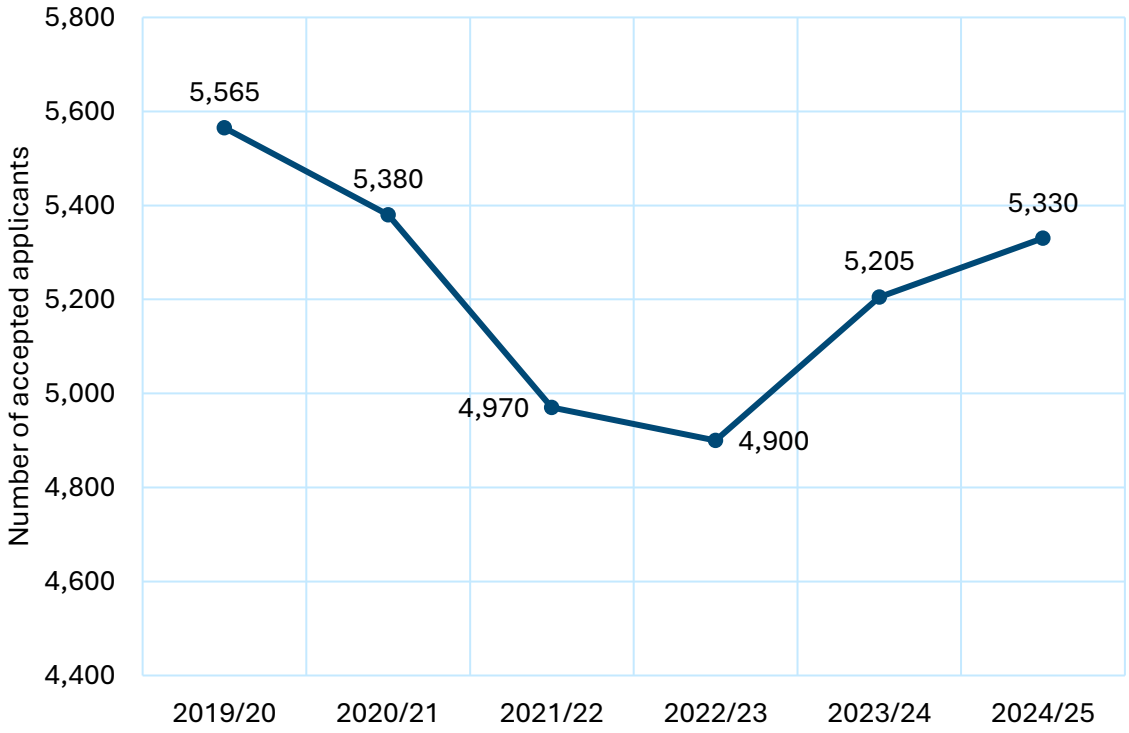
[**Data source:** HESA, Table 52: Subject of study: 'CAH level 3', '07-02-01 Chemistry'; Level of study: 'All undergraduate'; Mode of study: 'All'. Entrant marker: 'Entrant'. Accessed 8/09/2025.]

Key points:

- The number of first year chemistry undergraduate enrolments from the **EU appears to have stagnated at around 80 students per year.**
- The number of first year chemistry undergraduate enrolments from **non-EU countries has fallen slightly in 2023/24.**

Undergraduate acceptances in chemistry

Total number of accepted applicants for undergraduate chemistry, 2019/20 to 2024/25

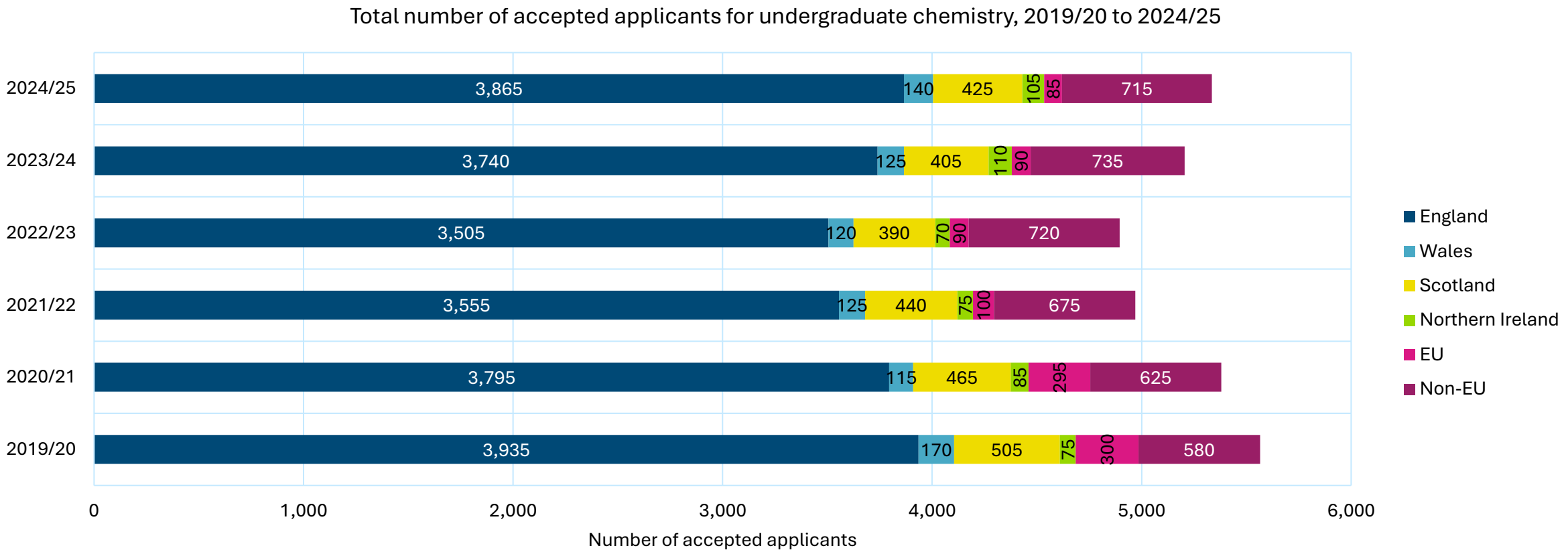


[**Data source:** UCAS Undergraduate end of cycle data resources 2024, 'Applicants & acceptances', 'Subject group – HECoS (detailed)', '(CAH7) physical sciences', '(CAH07-02-01) chemistry'. Accessed 8/09/2025.]

Key points:

- This UCAS data shows the number of students that have been **accepted** onto an undergraduate chemistry courses.
- **The total number of chemistry undergraduate acceptances started to increase in 2023/24 and 2024/25.**

Undergraduate acceptances in chemistry by permanent address



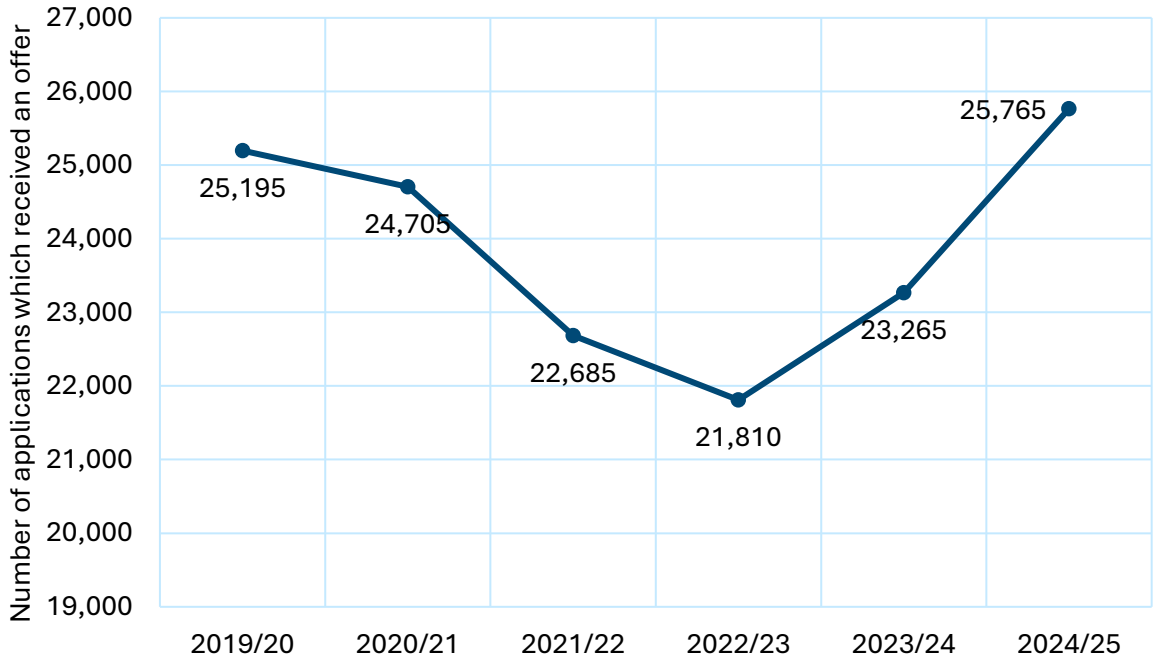
[**Data source:** UCAS Undergraduate end of cycle data resources 2024, 'Applicants & acceptances', 'Subject group – HECoS (detailed)', '(CAH7) physical sciences', '(CAH07-02-01) chemistry'. Accessed 8/09/2025.]

Key points:

- The figure shows that the **number of chemistry undergraduate acceptances has started to increase in 2023/24 and 2024/25** compared to previous years, and this is largely driven by increases in students from UK nations.

Undergraduate applications which received an offer in chemistry

Total number of applications which received an offer for undergraduate chemistry, 2019/20 to 2024/25



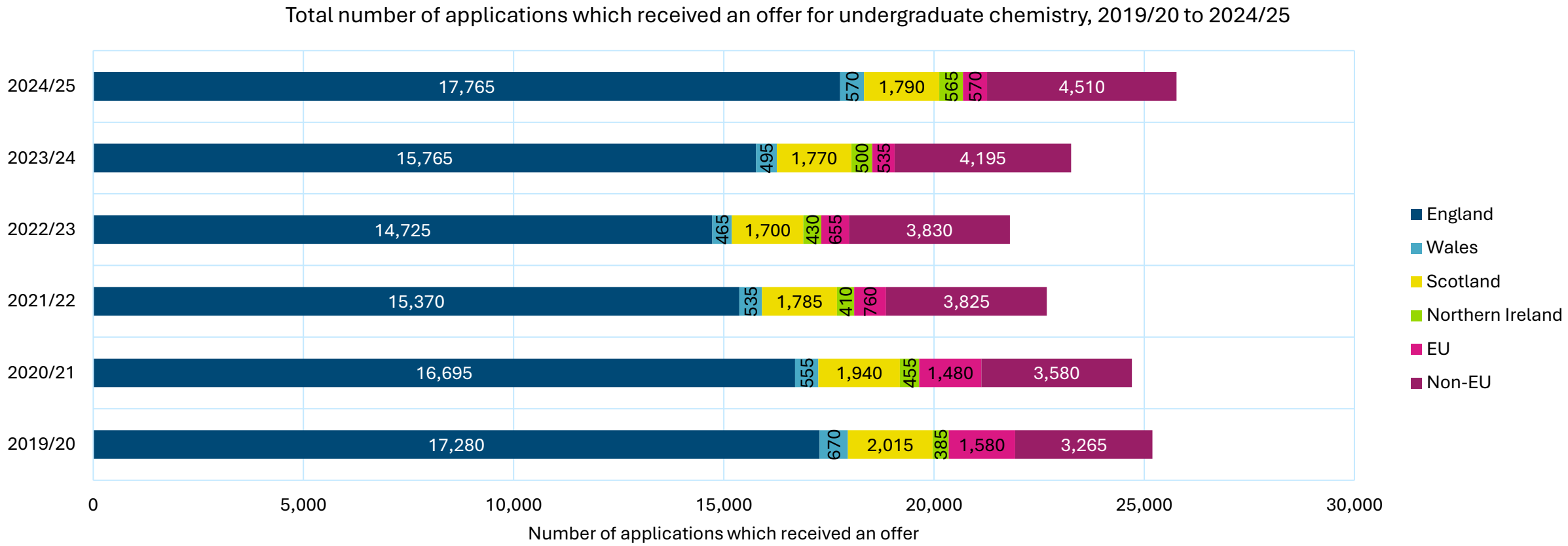
[**Data source:** UCAS Undergraduate end of cycle data resources 2024, 'Applications & offers', 'Subject group – HECoS (detailed)', '(CAH7) physical sciences', '(CAH07-02-01) chemistry'. Accessed 8/09/2025.]

Key points:

- This UCAS data shows the number of **applications which received an offer*** to study undergraduate chemistry in the UK.
- The total number of applications for undergraduate chemistry has been **rising in the last two years** and has surpassed 2019/20 levels.

*An application which received an offer is defined as an application to a course at a provider made by an applicant in the UCAS main scheme. Applicants may make up to five main scheme applications.

Undergraduate applications which received an offer in chemistry

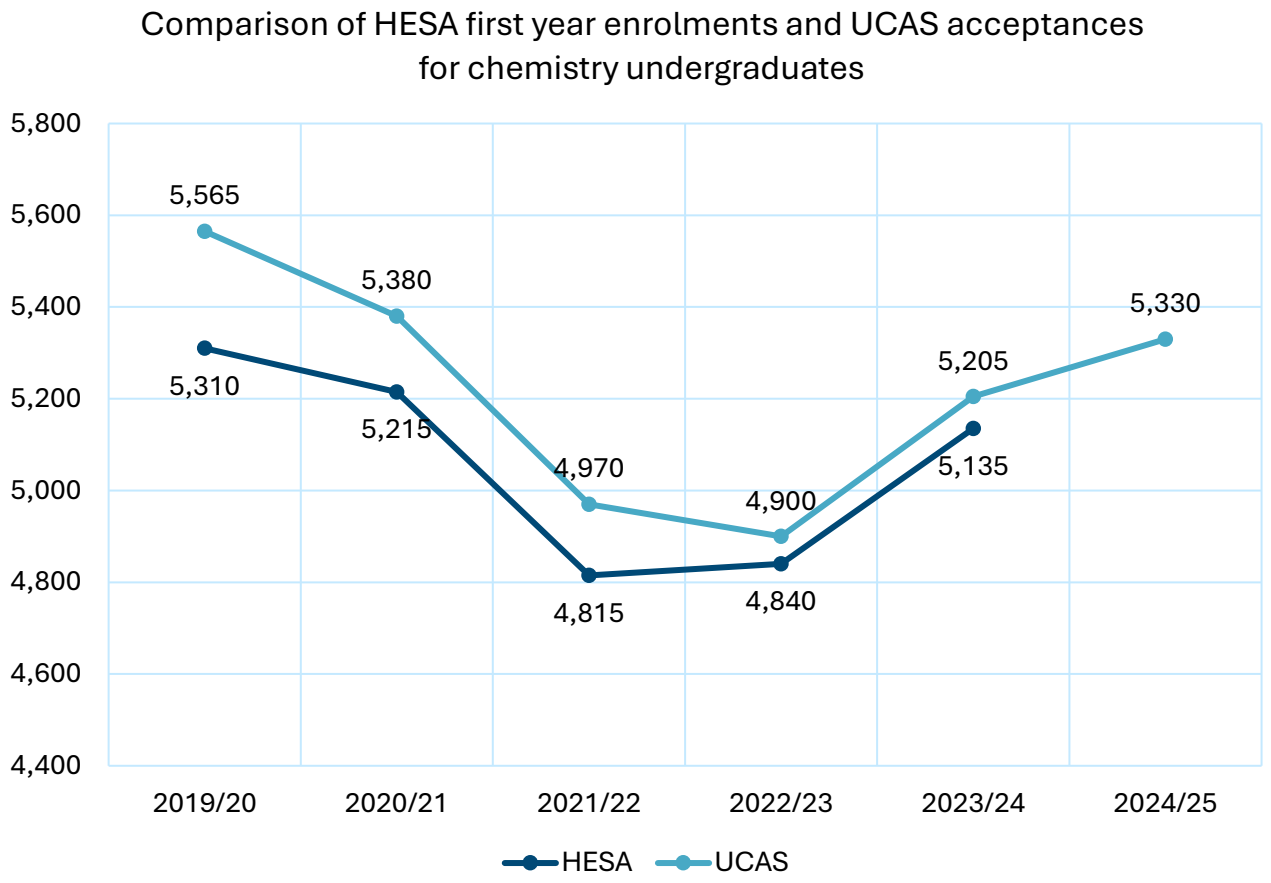


[**Data source:** UCAS Undergraduate end of cycle data resources 2024, 'Applications & offers', 'Subject group – HECoS (detailed)', '(CAH7) physical sciences', '(CAH07-02-01) chemistry'. Accessed 8/09/2025.]

Key points:

- The figure shows that the **number of applications for undergraduate chemistry has started to increase in 2023/24 and 2024/25** compared to previous years.

Comparison between undergraduate enrolments (HESA) and acceptances (UCAS) in chemistry

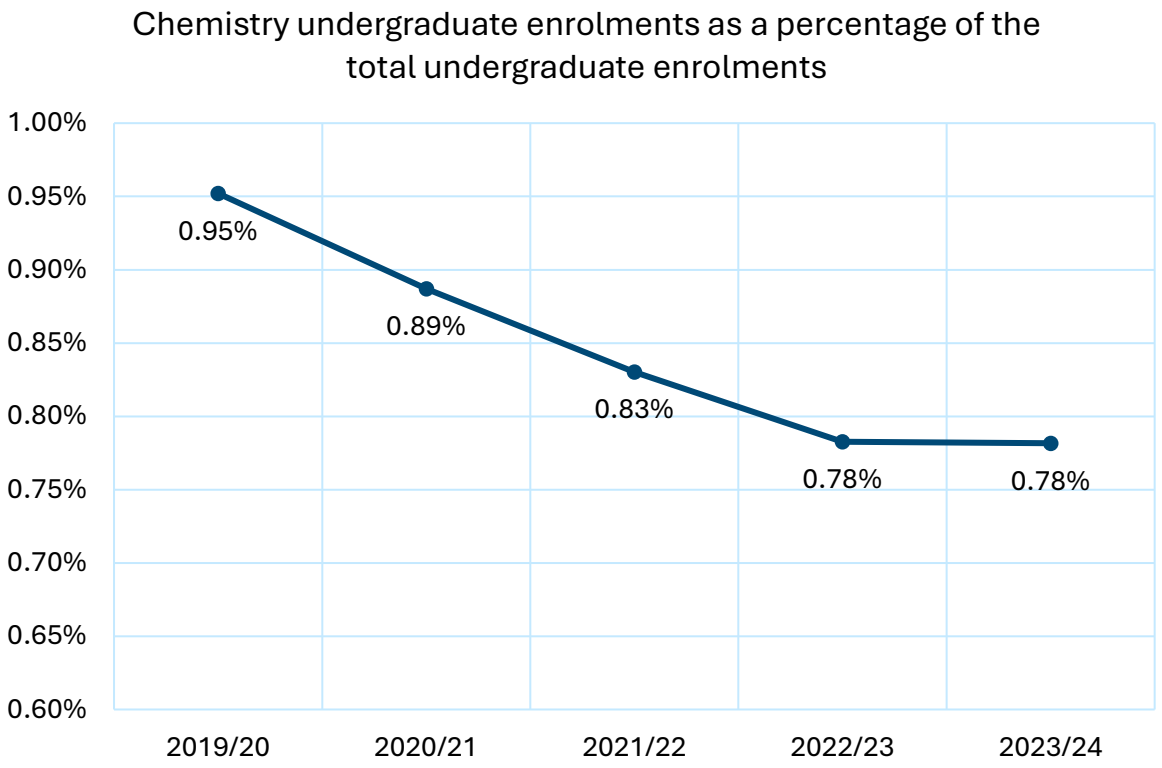


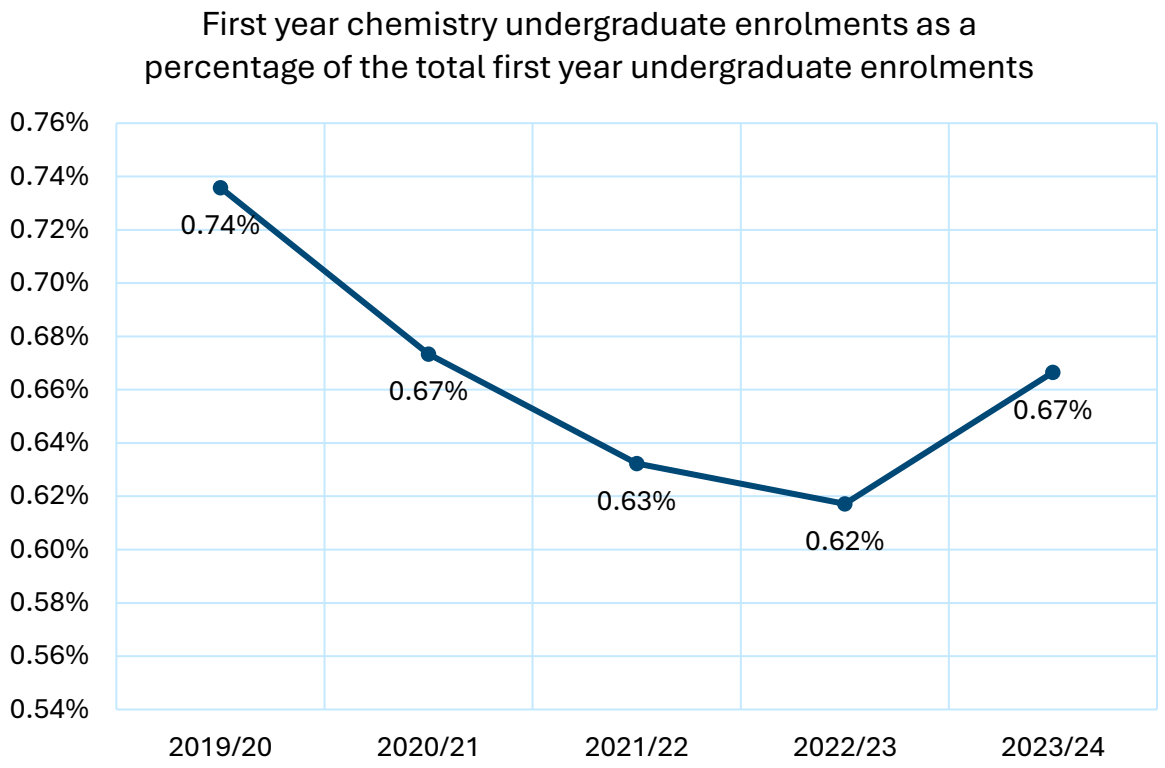
Key points:

- UCAS acceptances data shows the number of students that have been accepted on chemistry courses and hence will differ slightly from HESA data which measure the number of students that enrol on a course, but **the general trend will be similar**.
- HESA data shows that the number of first year chemistry undergraduate enrolments has started to increase in 2022/23 and 2023/24, whereas UCAS acceptances only started to increase in 2023/24 (and also the most recent year, 2024/25).
- **The gap between acceptances (UCAS) and enrolments (HESA) has narrowed** in the most recent years we have available.

[**Data sources:**
(1) HESA, Table 52: Subject of study: 'CAH level 3', '07-02-01 Chemistry'; Level of study: 'All undergraduate'; Mode of study: 'All'; Entrant marker: 'All'. Accessed 8/09/2025.
(2) UCAS Undergraduate end of cycle data resources 2024, 'Applicants & acceptances', 'Subject group – HECoS (detailed)', '(CAH7) physical sciences', '(CAH07-02-01) chemistry'. Accessed 8/09/2025.]

Chemistry undergraduates as a percentage of the total undergraduate population





Key points:

- As a percentage of the total undergraduate enrolments, **chemistry enrolments have been falling since 2019/20 but have stagnated in the most recent year**.
- As a percentage of the total first year undergraduate enrolments, **chemistry first year enrolments have risen in the most recent year**.

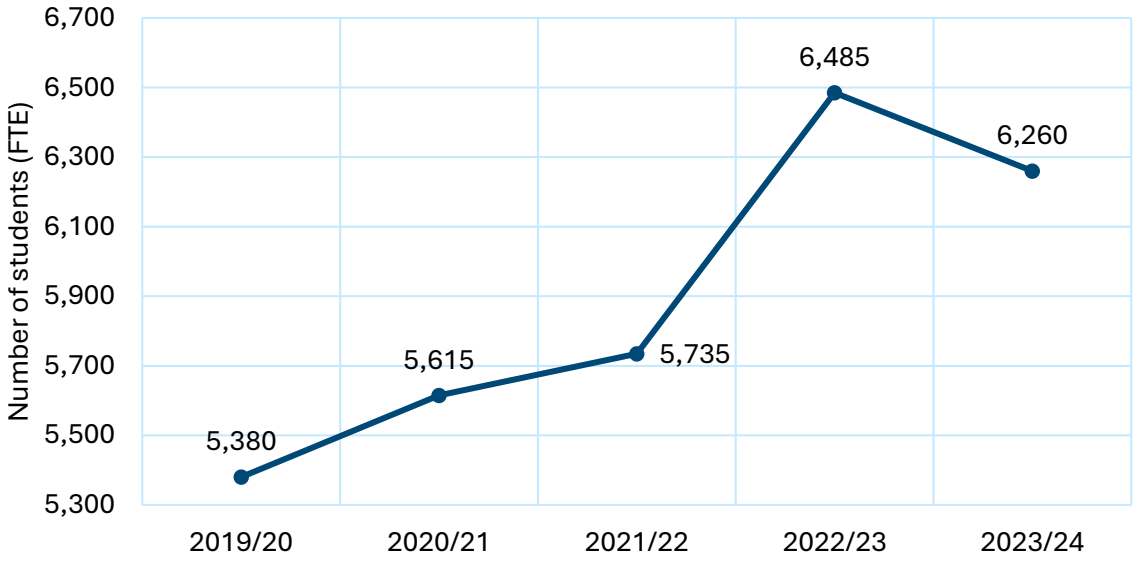
Chemistry postgraduate student numbers

Key findings

- The total number of **postgraduates studying chemistry increased between 2019/20 and 2022/23** but has **fallen in the most recent year** of available data (2023/24).
- While the total number of chemistry **research postgraduate students has remained relatively constant over the past five years**, the total number of **taught postgraduate students has increased significantly, almost doubling** between 2019/20 and 2022/23.
- This **increase** was driven by students from **non-EU countries starting taught postgraduate chemistry courses**.

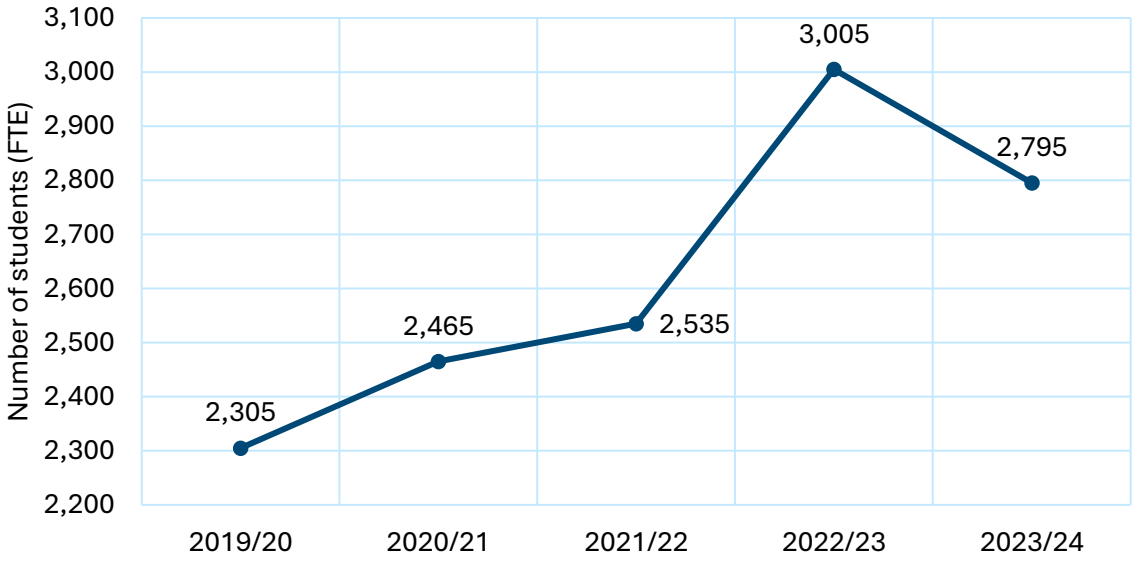
Postgraduate enrolments in chemistry

Total number of chemistry postgraduate enrolments, 2019/20 to 2023/24



[**Data source:** HESA, Table 52: Subject of study: 'CAH level 3', '07-02-01 Chemistry'; Level of study: 'All postgraduate'; Mode of study: 'All'; Entrant marker: 'All'. Accessed 8/09/2025.]

Total number of chemistry first year postgraduate enrolments, 2019/20 to 2023/24



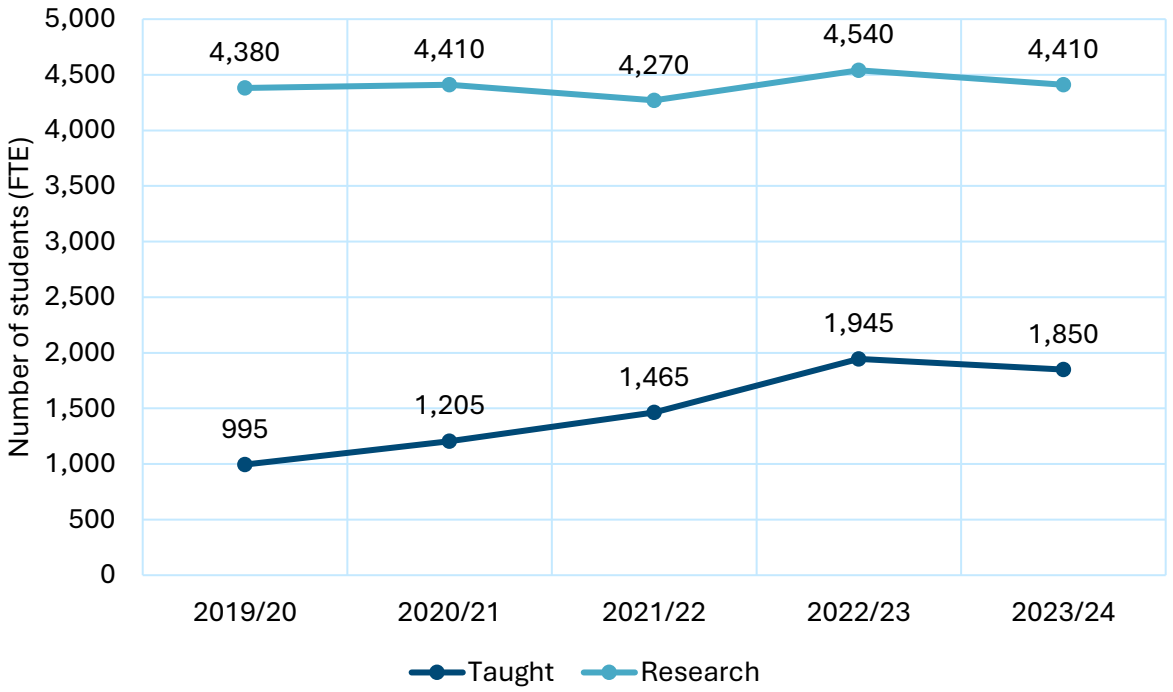
[**Data source:** HESA, Table 52: Subject of study: 'CAH level 3', '07-02-01 Chemistry'; Level of study: 'All postgraduate'; Mode of study: 'All'; Entrant marker: 'Entrant'. Accessed 8/09/2025.]

Key points:

- The total number of chemistry postgraduate enrolments have **risen by 20%** between 2019/20 and 2022/23 but have fallen slightly in the most recent year (2023/24).
- The total number of chemistry **first year** postgraduate enrolments have **risen by 30%** between 2019/20 and 2022/23 but have fallen slightly in the most recent year (2023/24).

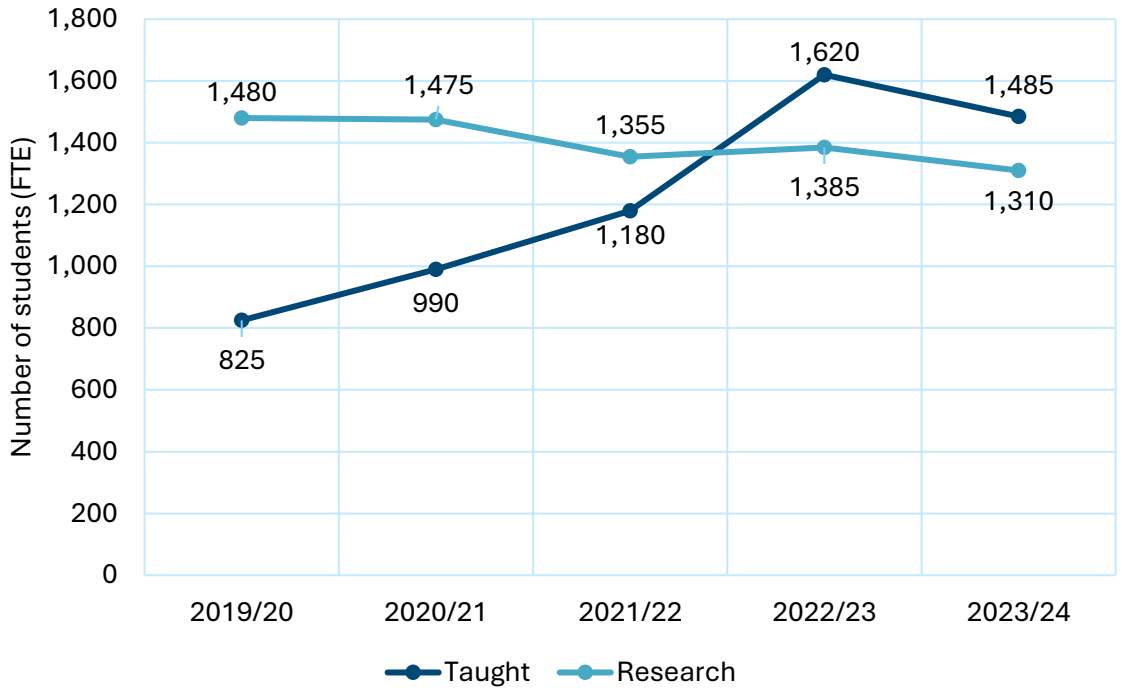
Research and taught postgraduate enrolments in chemistry

Total number of chemistry postgraduate enrolments (taught and research), 2019/20 to 2023/24



[**Data source:** HESA, Table 52: Subject of study: 'CAH level 3', '07-02-01 Chemistry'; Level of study: 'Postgraduate (research)' & 'Postgraduate (taught)'; Mode of study: 'All'; Entrant marker: 'All'. Accessed 8/09/2025.]

Total number of chemistry first year postgraduate enrolments (taught and research), 2019/20 to 2023/24

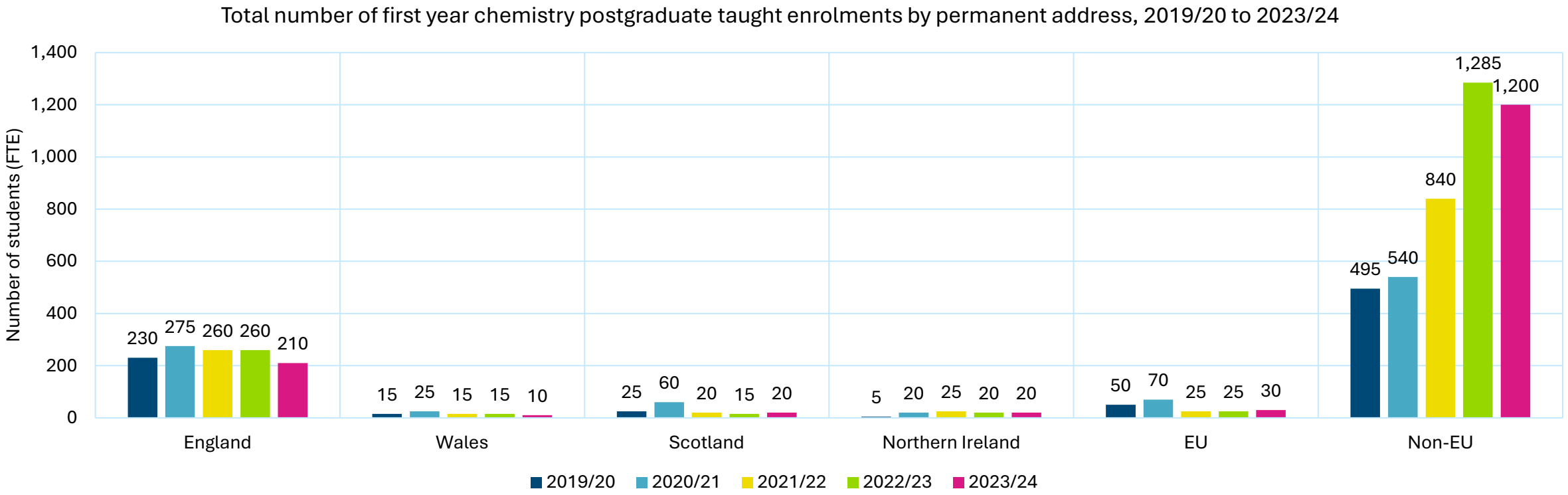


[**Data source:** HESA, Table 52: Subject of study: 'CAH level 3', '07-02-01 Chemistry'; Level of study: 'Postgraduate (research)' & 'Postgraduate (taught)'; Mode of study: 'All'; Entrant marker: 'Entrant'. Accessed 8/09/2025.]

Key points:

- The total number of ***research*** postgraduate enrolments in chemistry has **remained relatively constant** over the last five years (light blue). The number of first year research postgraduate enrolments has fallen slightly between 2019/20 and 2023/24 by 11%.
- However, the number of ***taught*** postgraduate enrolments has **risen significantly**, almost doubling between 2019/20 and 2022/23. There has been a decrease of 8% for the number of first year taught postgraduate enrolments between 2022/23 and 2023/24.

Taught postgraduate enrolments in chemistry by permanent address (first years)



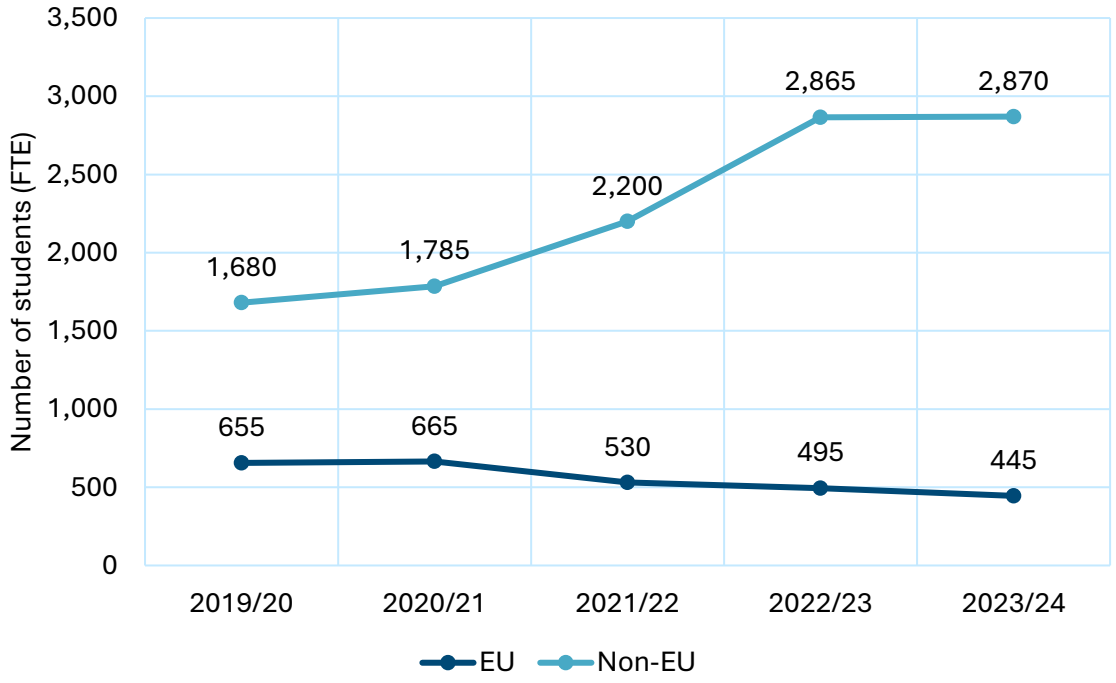
[**Data source:** HESA, Table 52: Subject of study: 'CAH level 3', '07-02-01 Chemistry'; Level of study: 'Postgraduate (taught)'; Mode of study: 'All'; Entrant marker: 'Entrant'. Accessed 8/09/2025.]

Key points:

- The driver behind the large increases seen in taught postgraduate enrolments is **a rapid increase in the number of first year students from non-EU countries**.
- In the most recent year (2023/24), there has been a **decline** in the number of first year taught postgraduate enrolments. This is **due to a drop in students from England and non-EU countries**.
- This is likely related to **recent changes in UK immigration policies and geopolitics**, including stopping taught postgraduate students bringing dependents into the UK, and the proposed reduction in the duration of the Graduate visa, impact the attractiveness of the UK as a study destination.

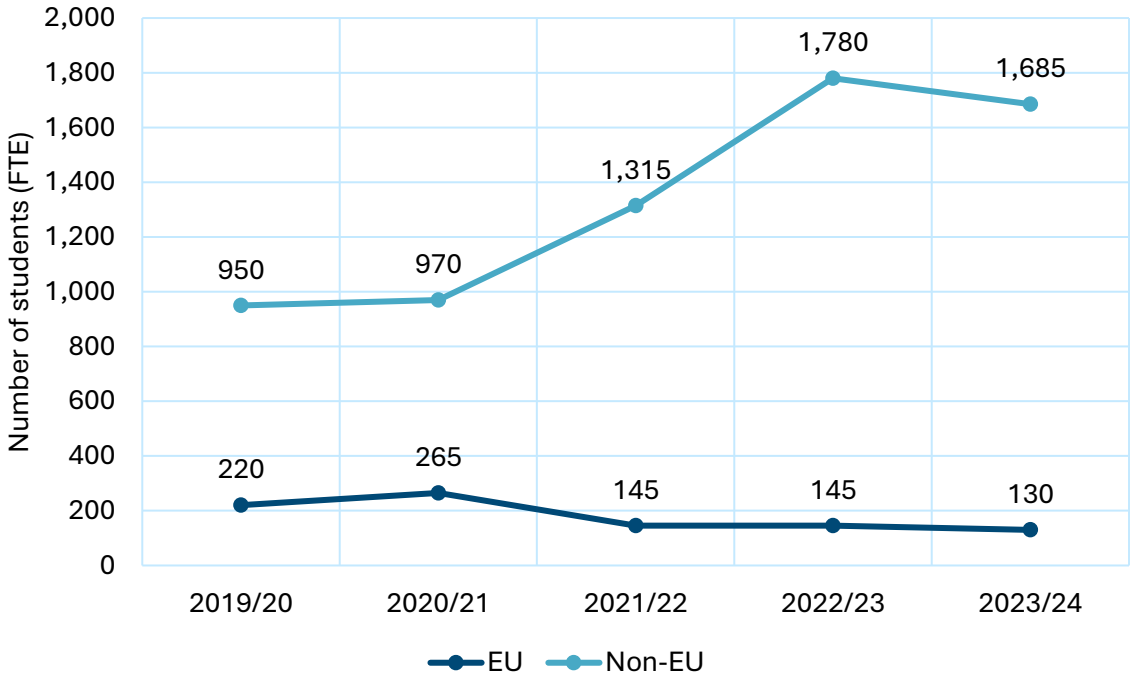
International postgraduate enrolments in chemistry

Total number of international chemistry postgraduate enrolments, 2019/20 to 2023/24



[**Data source:** HESA, Table 52: Subject of study: 'CAH level 3', '07-02-01 Chemistry'; Level of study: 'All postgraduate'; Mode of study: 'All'; Entrant marker: 'All'. Accessed 8/09/2025.]

Total number of international chemistry first year postgraduate enrolments, 2019/20 to 2023/24



[**Data source:** HESA, Table 52: Subject of study: 'CAH level 3', '07-02-01 Chemistry'; Level of study: 'All postgraduate'; Mode of study: 'All'; Entrant marker: 'Entrant'. Accessed 8/09/2025.]

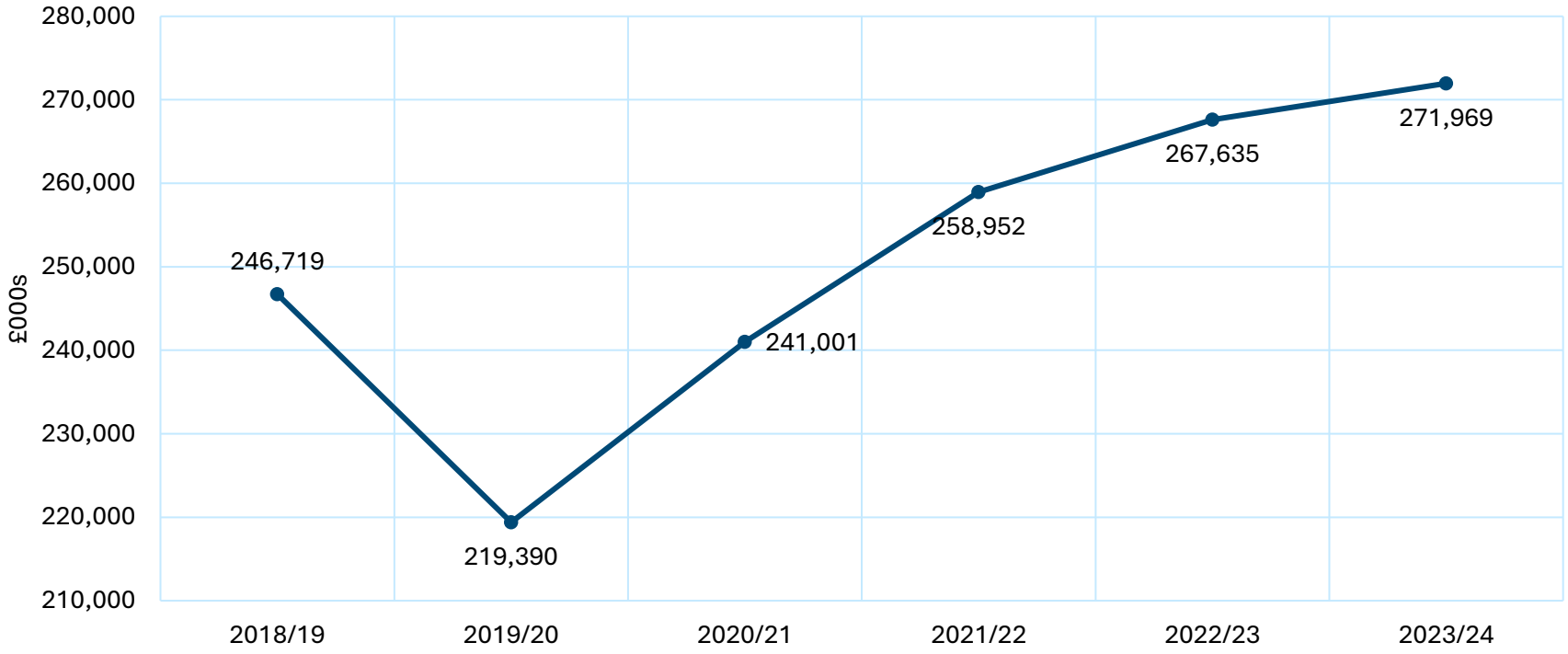
Research grant and contracts income for chemistry (HESA cost centre)

What is research grant and contract income?

- The **research grant and contract data** displayed in this section includes all income in respect of externally sponsored research carried out by the HE provider or its subsidiary undertaking for which directly related expenditure has been incurred.
- Research grant and contract data excludes research funding from Research England, The Scottish Funding Council (SFC), The Higher Education Funding Council for Wales (HEFCW) and The Department for Education Northern Ireland (DfE (NI)).
- Definitions can be found on the HESA website - https://www.hesa.ac.uk/support/definitions/finances

Research grants and contracts income for chemistry

Total research grants and contracts income at UK higher education institutions for chemistry
HESA cost centre, 2018/19 to 2023/24

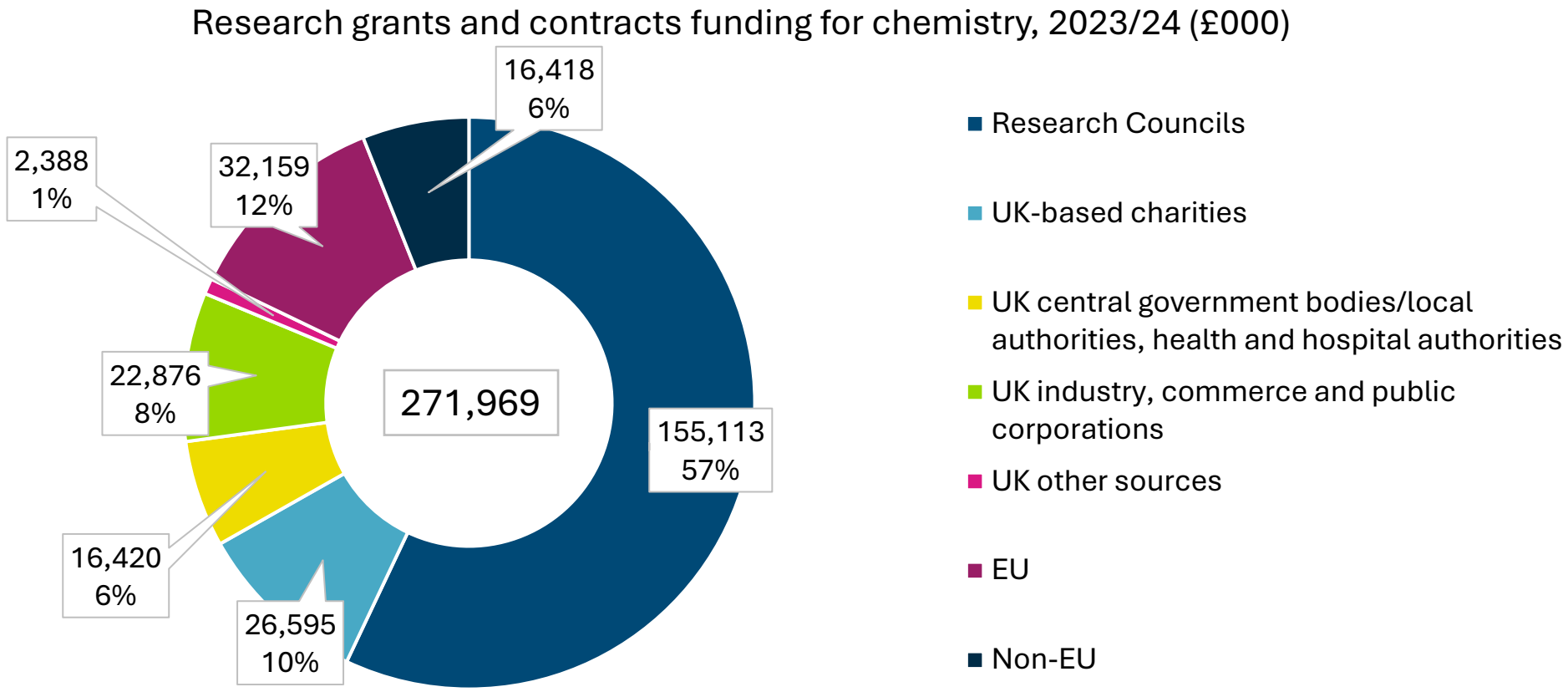


Key points:

- Since 2019/20, the income chemistry departments received for research has increased in real terms.

[**Data source:** HESA, Table 5: HESA cost centre: '113 Chemistry'. Accessed 8/09/2025.]

Research grants and contracts income for chemistry

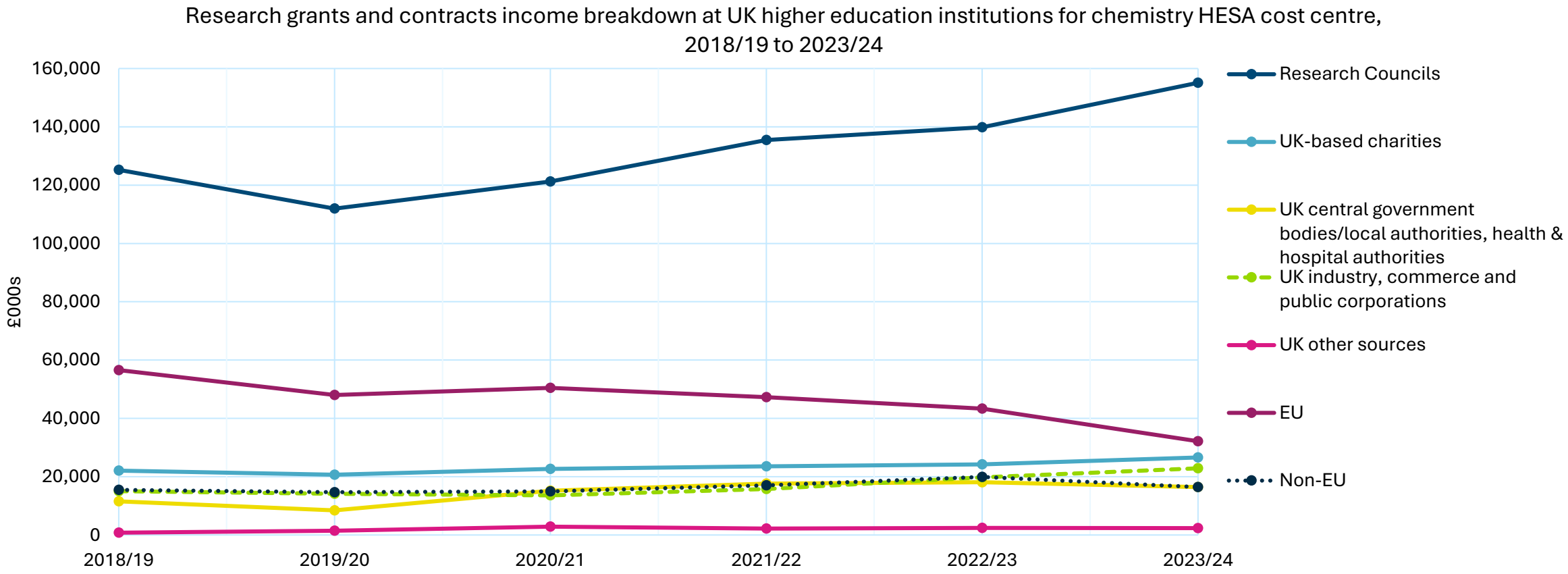


[**Data source:** HESA, Table 5: HESA cost centre: '113 Chemistry'. Accessed 8/09/2025.]

Key points:

- Chemistry departments receive **over half their income for research from Research Councils**.

Research grants and contracts income for chemistry

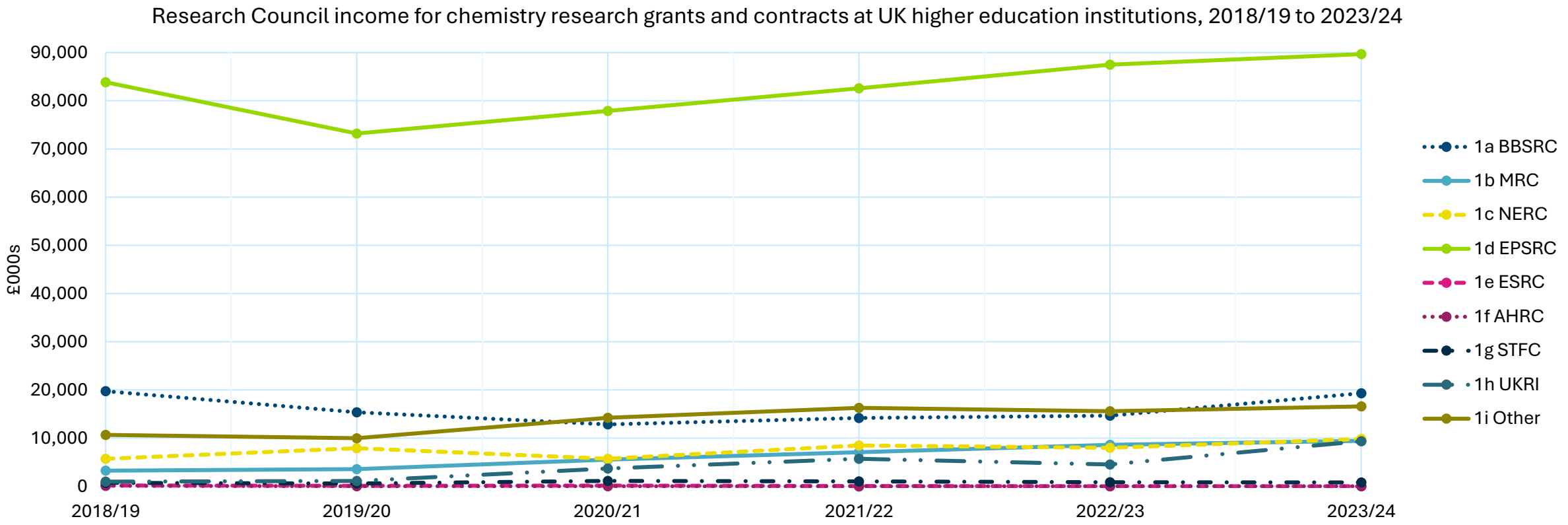


[**Data source:** HESA, Table 5: HESA cost centre: '113 Chemistry'. Accessed 8/09/2025.]

Key points:

- Over the period shown, **income from Research Councils has increased** (see next slide for a break down between Councils)
- **Income from the EU has fallen during the period**, likely as a result of uncertainty around association to Horizon Europe.

Research Council research grants and contracts income for chemistry



[**Data source:** HESA, Table 5: HESA cost centre: '113 Chemistry'. Accessed 8/09/2025.]

Key points:

- Chemistry receives **most** of its income for research grants and contracts **through EPSRC**.
- The next biggest sources of income for chemistry for research grants and contracts is through BBSRC and 'Other' which includes income from National Academies.

Appendix

Appendix: HESA definitions and codes

- Since 2019/20, HESA uses the Higher Education Classification of Subjects (HECoS) to code subjects (replacing the Joint Academic Coding System (JACS).
- They group subject codes using a standardised hierarchical aggregation using the Common Aggregation Hierarchy (CAH).
- See the next slide for the codes and definitions.

Chemistry CAH and HECoS codes and definitions

CAH code	HECoS code	Definition
CAH07-02-01 (chemistry)	100413 (analytical chemistry)	The study of the development and application of methods to determine the chemical composition of substances.
	100417 (chemistry)	The study of individual atoms and molecules and the way they react together naturally and synthetically.
	100420 (medicinal chemistry)	The study of aspects of chemistry, such as drug design, of importance to medical science.
	100422 (organic chemistry)	The study of organic compounds and their reaction mechanisms.
	100423 (pharmaceutical chemistry)	The study of drug function.
	101038 (applied chemistry)	The study of topics in chemistry of commercial or social importance.
	101041 (industrial chemistry)	The study of chemical processes of industrial significance.
	101042 (colour chemistry)	The study of the chemical science of dyes and pigments.
	101043 (inorganic chemistry)	The study of inorganic elements, compounds and reaction mechanisms.
	101044 (crystallography)	The study and application of techniques for determining crystal structure.
	101045 (environmental chemistry)	The study of environmental issues related to the chemical sciences.
	101046 (marine chemistry)	The study of topics in the chemical sciences concerned with understanding the marine environment.
	101050 (physical chemistry)	The study of atomic and molecular structure, chemical bonding, energetics and dynamics.
	101053 (polymer chemistry)	The study of the properties of macromolecular compounds and their synthesis.
	101054 (oil and gas chemistry)	The study of the chemical science of petroleum and petroleum compounds.
	101389 (organometallic chemistry)	The study of reactions between organic compounds and metals.