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ENGINEERING.
Institution of
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What young people
really think.
Improving the world through engineering
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About the Institution of Mechanical Engineers

The Institution of Mechanical Engineers (IMechE) represents 110,000 engineering professionals and students in the UK and across the world. The Engineering Policy Unit of the IMechE informs and responds to UK policy developments by drawing on the expertise of our members and partners.

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About Unifrog

Unifrog is the universal careers and destinations platform, supporting over 2.4 million UK students to make informed decisions about their future and build successful applications. A certified B Corp on a mission to level the destinations playing field, Unifrog is used by over 66% of UK state schools and colleges, has over 160k UK student logins per week, and is fully embedded in their partner school curricula.

unifrog.org

Executive summary

Engineering is not suffering from a lack of interest among young people. Analysis of Unifrog's platforms, used by thousands of students researching their education and career choices, shows engineering is already one of the UK's most popular subject areas, ranking third for university research and continuing to grow in popularity.

The new research also suggests the nature of engineering is changing. While boys continue to dominate traditional engineering disciplines, the gender gap is disappearing in future-focused areas such as biomedical engineering and biotechnology. This indicates that more girls are recognising engineering as a career that combines science, healthcare, digital technology and innovation rather than traditional industrial roles.

The findings challenge several long-held assumptions. Interest in engineering spans all socioeconomic backgrounds, engineering students demonstrate distinctive skills and behaviours linked to problem solving and numeracy, and they actively seek engagement with employers, universities and work experience opportunities.

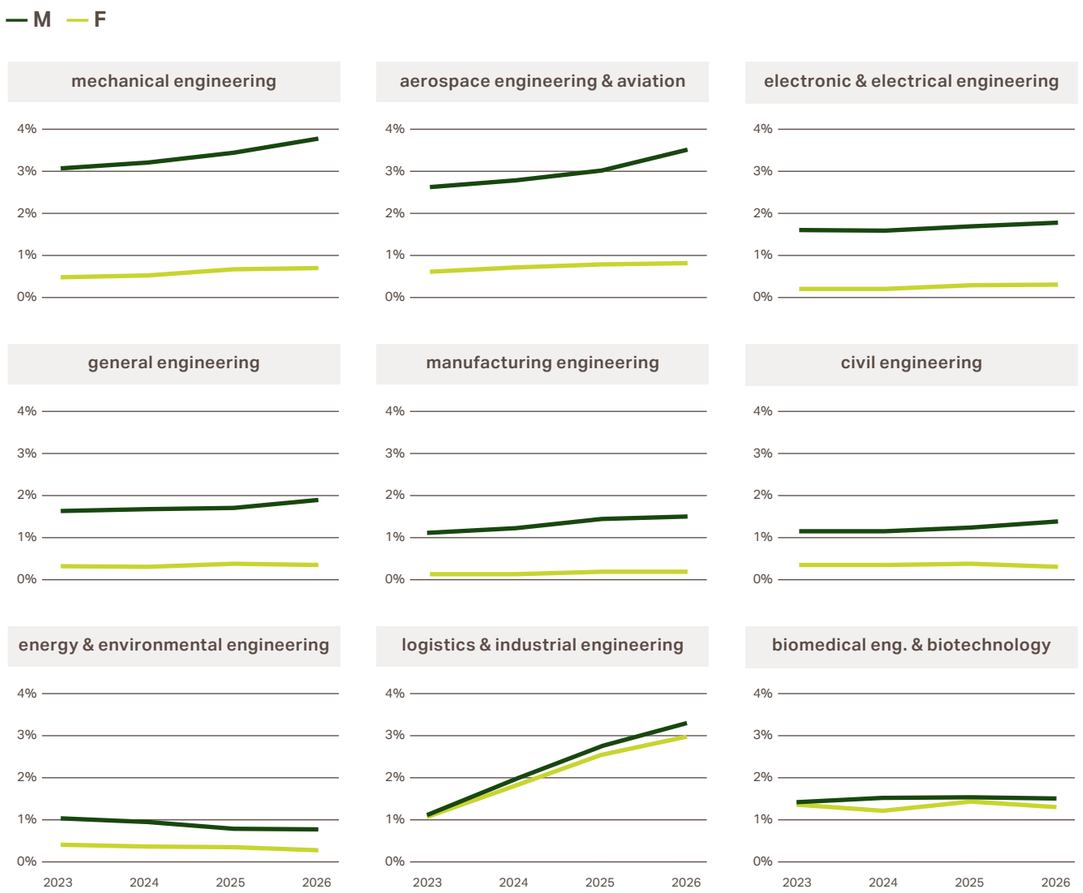
The evidence suggests that engineering already has strong appeal among young people. The challenge is no longer simply attracting interest, but ensuring that the profession continues to broaden its appeal, particularly to girls, while improving awareness and image of disciplines facing perception problems such as civil engineering and manufacturing.

Highlights

Biomedical engineering bucks the trend, with the gender gap effectively disappearing.

The gender gap is noticeably small in biomedical engineering and biotechnology

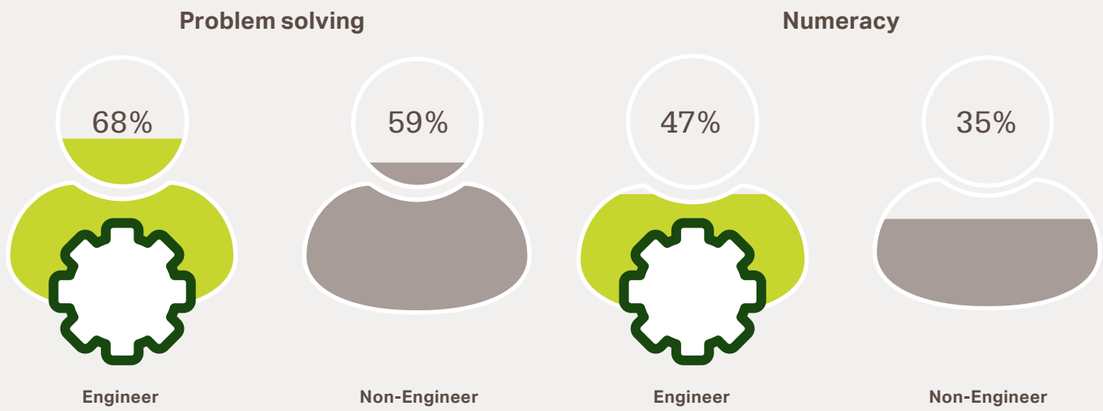
Split by gender



Source: Subject library favourites

Students interested in engineering are much more likely to describe themselves as strong problem-solvers and confident with numeracy than their peers.

Source: Skills and Activities Tools



Engineering-minded students are also more likely to engage with employers, attend careers events and visit universities.

Source: UK Student Survey

Engineering students are less motivated by fame or prestige than their peers, and all students place a greater value on practical experience, employer engagement and understanding future career opportunities.

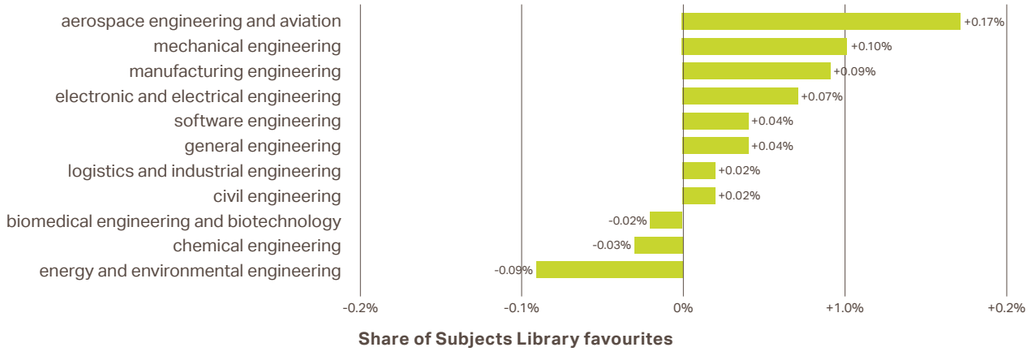
Source: UK Student Survey

Aerospace/aviation is the most popular engineering sector with mechanical engineering coming in a close second

Source: Subjects Library

Aerospace engineering and aviation are driving interest in engineering

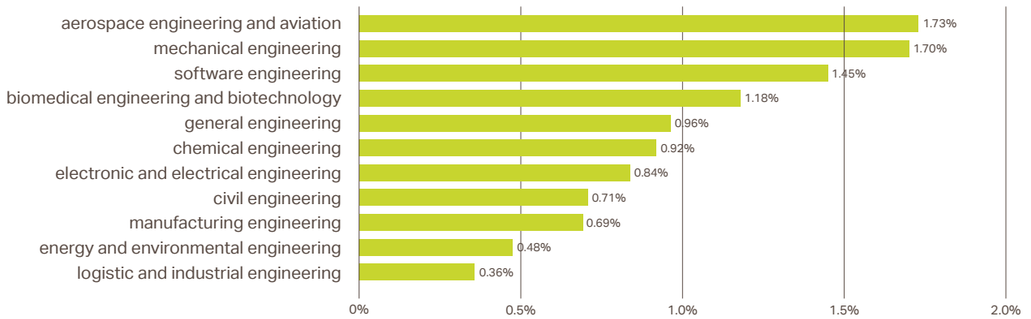
Based on change in share of favourited guides (2026 cycle – 2023 cycle)



Share of Subjects Library favourites

Popularity of engineering subject guides

Based on share of favourited guides graduation year 2026



Share of Subjects Library favourites

Introduction and background

The IMechE's Virtual Work Experience programme provides an insight into the engineering profession and the critical role of mechanical engineers in addressing global challenges. It is aimed at students aged 13-16. By participating in the programme, young people can find out what mechanical engineers do, what skills they need, and what opportunities are available.

The modules available are:

- What is mechanical engineering?
- Exploring the future of energy: space-based solar power
- Artificial intelligence, machine learning and automation in engineering
- Healthcare, biomedical and sports engineering
- How to become an engineer: routes into the profession

The online programme uses the Unifrog platform, which is able to provide a breakdown of (anonymised) data by gender and socioeconomic background. Unifrog were commissioned by IMechE to provide data and insights to understand how interest in engineering compares against other subjects for students based in the UK.

Unifrog explored the following data sources to provide observations on student behaviour and to highlight potential insights in the sector.

- UK Universities Search Tool (referred to as the University Tool)
- UK Apprenticeships Search Tool (referred to as the Apprenticeship Tool)
- Careers Library
- Subjects Library
- Skills and Activities Tools
- 2025 UK Student Survey

More details on each of these six sources can be found in the appendix and on the **Unifrog website**.

This report provides a summary of the key findings.

Engineering ranks third in university subject interest

Contrary to perceptions, engineering is already one of the UK's most popular subjects among young people. The challenge is not creating interest, but converting that interest into engineering careers.

Unifrog data shows that engineering is very popular amongst young people researching university courses. It is the third most popular subject out of 21 in the University Tool (behind law and medicine/dentistry) and also the third most popular subject group out of 26 in the Subjects Library.

Within the engineering disciplines, mechanical engineering, electrical and electronic engineering, and aeronautical and aerospace engineering are of particular interest to students, while manufacturing and civil engineering are less popular. However, interest in most engineering disciplines is high and continuing to grow.

Engineering is also a popular choice for students shortlisting apprenticeship subjects. Vehicle, mechanical, and electrical and electronic engineering show the fastest growth, respectively ranking seventh to ninth out of 30 (finance and accounting being top).

The Unifrog survey data is backed up by real world analysis of degree courses being chosen at university. Subjects categorised as 'engineering and technology' by the Higher Education Statistics Agency (HESA) are the fifth most popular with students in 2024/25 according to EngineeringUK, with 'computing' being fourth.[1]

Comparing and contrasting Unifrog data with real world outcomes in terms of subject breakdown is complicated by the fact that 'engineering' as a subject can be categorised in many different ways. By HESA's categorisation, there are subjects that could broadly fall under the wide umbrella of engineering.[2] This includes relatively new courses like artificial intelligence (AI) and computer games and animations. For first undergraduate degrees, enrolments in traditional engineering courses have been broadly stable over the last five years, with most showing either moderate growth or decline. Civil engineering is a small outlier, showing a 10% reduction in new enrolments at undergraduate level.[3] As indicated by Unifrog data, civil engineering suffers from an image problem amongst young people, which is a concern given this sector will be increasingly important in upgrading the country's transport, energy, and water infrastructure to deliver Net Zero and adapt to rising temperatures.

Reflecting the growing importance of digitalisation and automation in engineering, AI and software engineering are major outliers with 85% and 61% growth respectively.

This analysis is limited by the fact that it does not control for the availability of degree courses at universities nationwide. For example, the popularity of mechanical engineering may be driven by the fact that it is widely available at universities across the UK, whereas energy and environmental engineering are less widespread, particularly at undergraduate level.

The gender gap persists, but exceptions are changing the sector

The well-known gender disparity in engineering degree preferences persists, with one clear outlier being biomedical engineering (and associated subjects) where results suggest the gap is zero or even slightly reversed.

Boys are still far more likely to shortlist engineering degrees overall in the Subjects Library, with 14% compared with 4% of girls. However, when broken down by sub-topic, biomedical engineering bucks the trend, with the gender gap effectively disappearing.

Gender imbalance is a longstanding and persistent feature of the engineering profession; women still only comprise 20% of the undergraduate population. However, Unifrog findings show biomedical engineering and associated subjects as an outlier.

Although biomedical engineering remains relatively small as a sector and academic discipline, it is growing, driven by significant societal change from an ageing population to rapid technological advancement. Rising demand in this sector could encourage more women into engineering roles, creating a more diverse engineering profession. Salaries are relatively high in the bioengineering sector, and sector expansion offers a level of job security, both factors highlighted by young people as important in choosing a future career.

Analysis of those using the Apprenticeship Tool, suggests that the gender split has been widening, driven primarily by boys becoming increasingly interested in vehicle, mechanical, and electrical and electronic engineering. Manufacturing is the only area where interest has reduced for both boys and girls.

The engineering mindset

Students interested in engineering report strong numeracy and problem-solving skills.

The biggest split in self-reported skillsets between students interested in engineering and those who are not is in numeracy (48% v 37%) and problem solving (68% v 59%). The lowest differences were found to be reading and writing.

Engineering-interested students are:

- more likely to record skills
- stronger at numeracy
- stronger at problem solving
- more engaged with careers education
- more interested in employer talks
- more interested in work experience
- more interested in open days
- more willing to hear from employers

Career advice

Engineering students are less motivated by fame or prestige than their peers, and all students place a greater value on practical experience, employer engagement and understanding future career opportunities.

The 2025 Unifrog UK Student Survey found that students across the board are most likely to go to their parents and teachers/staff at schools for advice about their future and least likely to seek advice from their fellow students and social media influencers.

Socioeconomic differences

Socioeconomic differences in preferences are small across all engineering disciplines.

Students from more advantaged socioeconomic backgrounds are more likely to study engineering at university. However, both the Unifrog university and apprenticeship tools indicate that there is very little difference in interest between students from the least and most deprived areas across engineering sub-disciplines.

Apprenticeship data shows a small preference for chemical and mechanical engineering among IMD 4-10 compared with IMD 1-3, no difference in preference for building and civil engineering, and a small reversal in electrical engineering.

Vehicle and mechanical engineering are more popular amongst students from the least deprived neighbourhoods, while their peers from more deprived areas prefer building and electrical and electronic engineering.

1 EngineeringUK (2026). *Engineering and technology in higher education*. https://www.engineeringuk.com/research-and-insights/our-research-and-evaluation-reports/engineering-and-technology-in-higher-education/#subject
2 HESA. (n.d.). *Definitions and data standards.* https://www.hesa.ac.uk/support/definitions
3 EngineeringUK. (2026). *Engineering and technology in higher education: subject breakdown.* https://www.engineeringuk.com/media/sxjjx43w/engineering-technology-in-higher-education-subject-analyses-engineeringuk-april-2026.pdf

Key takeaways

- Engineering is a popular subject amongst young people researching future careers.
- The engineering sector is changing, with major growth likely in emerging sectors like biotechnology and AI.
- The gender disparity in engineering shows signs of persisting, with one clear outlier being biomedical engineering (and associated subjects).
- Mechanical engineering, electrical and electronics engineering, and aeronautical and aerospace engineering are of particular interest to students, while manufacturing and civil engineering are less popular.
- Socioeconomic differences in engineering degree preferences are negligible, but there is evidence of small disparities in apprenticeship preference.

Appendix
Overview of tools and data sources used

A note on the limitations of the datasets

The analysis in this report is limited by the fact that it does not control for the availability of apprenticeship programmes nationwide. For example, the popularity of apprenticeships could be driven by the availability of mechanical engineering apprenticeships as well as the levels of apprenticeships available within each region.

The data is based on engaged Unifrog users and has not been statistically controlled for confounders. The user base leans heavily towards the South East and London, it cannot be assumed that this sample is fully representative of the broader UK Y10–Y13 population.

UK Universities Tool

The UK Universities Tool makes it easy to compare different courses and universities and decide which ones to apply to.

Students can:

- Search for a course that matches up to 10 subjects at a time
- Search for all the courses a particular university offers
- Filter by distance from home, type of course, type of university, and entry requirements

The tool also compares the entry requirements of every course with the grades a student is likely to get to determine whether each course is an aspirational, solid, or safe application for them.

Students can shortlist as many courses as they like and save it to their 'locker' for review at a later date.

Unifrog uses this 'shortlisting data' as a clear demonstration of interest in a subject/institution, as opposed to having simply viewed a page, which is considered a weaker signal.

UK Apprenticeships Tool

The UK Apprenticeships Tool helps students to find apprenticeships, degree apprenticeships, and school leaver programmes.

Students can also explore vacancies based on location, level of qualification they'll receive, apprenticeship standard, weekly wage and duration amongst other filters. They can shortlist as many apprenticeships as they like and save it to their "locker" for review at a later date

Careers Library

The Careers Library hosts over 600 careers across a range of sectors and is useful for students considering apprenticeships or university. The careers library tool enables students to:

- Search the library by keyword, school subject, career sector, competency, subject group, theme, working environment, and personality/ interests type
- Filter by subject area, labour market information, and education requirements
- Favourite career profiles so they can come back to review them at a later date

Within the career profiles students are able to:

- Navigate to university courses, apprenticeship programmes or organisations who specialise in the career
- Compare labour market information for the career across different regions or internationally
- Understand the entry requirements and key skill the career needs

Unifrog uses the 'favourite' feature as a clear demonstration of interest in a career, as opposed to having simply viewed a page, which is considered a weaker signal.

Subjects Library

It helps students to explore university level subjects, but is useful even if they're not considering university.

For example:

- In 'In a nutshell', the summary of what it means to study that subject at a higher level will also help them if they're considering an apprenticeship or training programme in the same subject area.
- The 'Prospects' section provides information on average salary, the percentage of graduates in a range of industries, and more. They can also compare salary and employment information on the homepage under 'Compare earnings and outcomes'.
- The 'Geek Out' and 'Recommendations' sections are helpful if they're writing an essay, EPQ, or independent study project related to that subject area.
- The 'Explore' section shows related apprenticeships and further education courses as well as university courses, so they can search for opportunities that suit their needs.

They will also be shown suggestions of related careers and relevant 'Know-how' library guides they can read, and for most profiles, they will be able to watch a video of someone studying the subject at university discussing their course.

The profile information for each subject was created by Unifrog after extensive research and consulting experts in each field, as well as hiring students and teachers with relevant expertise.

The key metric is 'share of favouriting students' – a percentage of the unique students who saved a Subject Library guide (in the parent group).

Skills and Activities Tools

These two tools have been grouped together as they both relate to recording the same skills.

Skills Tool

As students need to evidence their skills both in job applications and university applications, the Skills Tool allows students to:

- Record examples of things they've done where they've shown a particular skill
- Receive feedback from teachers on the examples given
- Pull their skill examples automatically into their CV/Resumé on the Unifrog platform

Activities Tool

You can use the Activities Tool to:

- Record examples of academic and extra-curricular activities
- Get feedback from teachers on your examples
- Associate skills (the same ones as in the skills tool) with the activity

The key metric here is 'share of recording students' – a percentage of the unique students (in the parent group) who recorded a skill on either the activities tool OR the skills tool.

In the analysis, we compared students interested in engineering (demonstrated via the UK Universities Tool, UK Apprenticeships Tool, Subjects Library, Careers Library) vs those that are not.

2025 UK Student Survey

This survey was conducted in March 2025 and open to UK students logging into the Unifrog platform (Year 7–13). There were over 40,000 respondents, whose answers were linked to their Unifrog account. In the analysis, Unifrog compared students interested in engineering (demonstrated via the UK Universities Tool, UK Apprenticeships Tool, Subject Library, and the Careers Library) vs those that are not. All students had demonstrated interest in apprenticeships on the Unifrog platform.

Questions asked

- Who or where do you go for advice about your future?
- How do you rate the following for researching your next steps after school?
- How useful have the following been for deciding on your future options?
- How important are the following to you when choosing a career?
- Would you consider accepting a job/apprenticeship without first visiting the company? Why not?
- How would you like to hear from employers and universities?
- Which of the following are you interested in hearing about?
- Would you be more likely to apply to these opportunities if the university/employer sent you a personalised message encouraging you to apply?
- AI is increasingly being used in recruitment processes. In light of this, do you think you are likely to use AI to support you with any parts of the application process?
- Would you consider attending a university without visiting it first?
- How important are the following to you when choosing a university?

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