# 12 supercurriculars that strengthen your child's Engineering application.

*What top universities actually want to see beyond A-level grades.*

@EduStrategyCaroline

*the activities:*

*Your child doesn't need to do all 12. Pick 2-3 that genuinely interest them and go deep. Admissions tutors can spot a checklist approach immediately.*

## 1. UKMT Maths Challenges

Engineering degrees are mathematically intensive. UKMT proves your child can handle the maths, and it is valued by admissions tutors at every top engineering school.

**Start here:** Enter via school or register at ukmt.org.uk. Start with the Intermediate Challenge in Year 9-11, progress to Senior in Year 12.

## 2. ESAT Preparation

The Engineering and Science Admissions Test is required by Cambridge, Imperial, UCL, and Durham for engineering. It replaced the old subject-specific tests.

**Start here:** Register and find past papers at esat-tmua.ac.uk. Engineering applicants need Maths 1 + Maths 2 + Physics. Start prep in summer of Year 12.

## 3. British Physics Olympiad (BPhO)

Engineering is applied physics. BPhO shows you can think beyond the A-level syllabus and handle the kind of problem-solving engineering degrees demand.

**Start here:** Enter via school. Past papers and solutions at bpho.org.uk. Even attempting the problems builds the skills admissions tutors look for.

## 4. Build Something Real

A tangible project is the strongest personal statement evidence there is. It doesn't need to be complex. It needs to work and you need to explain what you learned building it.

**Start here:** Start with an Arduino kit (under £30). Build a sensor, a robot, or an automated system. Document it. The process matters more than the result.

*the activities (continued):*

## 5. Arkwright Engineering Scholarships

The most prestigious pre-university engineering award in the UK. Apply in Year 11, runs through sixth form. Includes mentoring, industry events, and university visits.

**Start here:** Applications open in Year 11. Details at smallpeicetrust.org.uk. Even if you don't win, the application process forces you to articulate why engineering.

## 6. Smallpeice Trust Residential Courses

Free or funded multi-day engineering courses at UK universities. Hands-on projects, real labs, real engineers. Looks outstanding on a personal statement.

**Start here:** Browse courses at smallpeicetrust.org.uk/courses. Book early. The popular ones fill fast, especially summer residentials.

## 7. Read Engineering Books

Shows you understand what engineering actually is, not just what you think it is. J.E. Gordon's books are the gold standard for accessible structural engineering.

**Start here:** Structures by J.E. Gordon is the classic. Also: The New Science of Strong Materials. Both are short, readable, and admissions tutors know them.

## 8. Learn CAD or Programming

Top engineering courses increasingly expect digital literacy from day one. Fusion 360 is free for students. Python is used everywhere in engineering.

**Start here:** Fusion 360 (free for students) for CAD. Python via freeCodeCamp or Codecademy for programming. Build one small project in each.

*the activities (continued):*

## 9. Engineering Work Experience

Even informal work experience matters. A day shadowing a civil engineer on site gives you more personal statement material than a week of reading about it.

**Start here:** Ask your school careers office, email local engineering firms directly, or check your parents' networks. One day is enough if you reflect on it properly.

## 10. Free Online Courses

MIT OpenCourseWare and Khan Academy offer real engineering content for free. Complete one course, not three introductions.

**Start here:** ocw.mit.edu for university-level. Khan Academy for foundations. Focus on one area: structures, electronics, or thermodynamics.

## 11. Lead a STEM Club or Engineering Society

Admissions tutors value initiative. If your school has a STEM club, lead it. If it doesn't, start one.

**Start here:** Propose it to your Head of Physics or DT. Organise one build project or speaker per half-term. Document what you did and what you learned.

## 12. University Taster Days & Headstart Courses

The 'Why this university?' question needs a specific answer. Engineering taster days let you compare lab facilities, project styles, and teaching approaches.

**Start here:** Check engineering department websites from Year 11 onwards. Headstart courses are residential tasters at top engineering departments. Apply early.

*Pick 2-3. Go deep, not wide. Quality over quantity.*

# Need a personalised plan for your child?

Whether it's GCSE planning, A-level choices, university applications, or supercurricular strategy, I can help you build a clear plan for your child's next step.

Book a 1:1 Education Advice Call. 30 minutes. Your specific situation. A clear plan forward.

**This guide shows what to do. The Engineering Requirements Bundle shows where to apply. 3 cheat sheets covering Mechanical, Electrical, and Chemical Engineering.**

**uniplan.me/shop**

**£50 / 30 minutes / book this week**

Find your child's actual matches (free, grade-matched) at

**uniplan.me/courses**

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