

Electrical, Control & Instrumentation (E,C&I) with GCSE Design & Technology

Technical Pathway:
Engineering T Level

Faculty Lead – Mrs J Hall

GCSE Design and Technology enables students to use creativity and imagination to design and make prototypes that solve real and relevant problems, considering their own and others' needs, wants and values. This GCSE course will help you to understand and apply iterative design processes through which you will explore, create and evaluate a range of products or outcomes. You will develop an awareness of practices and skills from the creative, engineering and manufacturing industries, which are highly desirable for securing apprenticeships or further study in these fields.

You will study a core curriculum of design, materials and manufacturing skills, which is underpinned by maths and scientific principles. You will analyse products and the work of existing designers.

As part of your chosen specialist of ECI/ID, you learn about:

Electrical, control & instrumentation:

- Technical design contexts
- Electronic components and their characteristics
- Microcontroller circuit design and programming
- System development processes

Assessments:

- Formal end of year examination
- Coursework portfolio

Both examinations will reflect your chosen specialism.

Co – Curricular Opportunities:

- F1 in Schools
- British Schools Karting Club
- Practical Skills Workshops
- Autodesk Masterclasses

Employer Links:

- Sellafield
- Jacobs
- Tenet Consultants
- Apple
- Dyson

Careers linked to this subject:

- Mechanical Engineer
- Electrical Engineer
- Design Engineer
- Aerospace Industry
- Marine Engineer
- Mechatronics Development
- Pneumatics/Hydraulics Engineer
- Project Management