

Engineering Day Overview

Imaging Partnership is pleased to offer a service to Key Stage 4 and Key Stage 5 students that brings the subject of optics (photography) together with exciting areas within the subject of engineering.

The day is a leading-edge, creative product development course that involves experimentation, design, engineering and enterprise activities through the prism of photography.

These areas include:

- Optical Engineering
- Fiber Optic Engineering
- Aerospace Engineering
- Medical Healthcare Engineering

This day programme aims to prepare and equip students by presenting:

- A good general understanding of all the main engineering disciplines
- Project management and teamwork skills, developed through a range of interdisciplinary research and design projects
- Specialist expertise in a specific engineering discipline

Additional topics within this area of engineering will include:

- Documenting engineering experiments and aerospace prototypes (Documentary photography)

Aerodynamics, concerning the flow of air over bodies such as wings or through objects such as wind tunnels.

Astrodynamics – the study of orbital mechanics including prediction of orbital elements when given a select few variables.

Statics and Dynamics (engineering mechanics) – the study of movement, forces, moments in mechanical systems.

Mathematics – in particular, calculus, differential equations, and linear algebra ('differential focusing').

Electro technology – the study of electronics within engineering.

- Optical Engineering Design: learning the processes and techniques used in making photographic lenses, practical – layering different lenses and filters to see the effect.