

**The course H109 provides a four-year route to a number of BEng degree programmes from within the Engineering Group**

This course would be of interest to students who have followed Advanced level subjects, Vocational A'levels, GNVQ Science or access programmes.

**The Modules Studied**

All students will study three subjects Physics, Mathematics and Additional Mathematics over the two semesters.

**Mathematics (2 semesters compulsory):**

*The course aims to introduce students to graph work, differentiation and integration, vectors, statistics, trigonometry, logarithms, iteration and partial fractions. Students can expect to develop problem solving and analytical skills.*

**Physics (2 semesters compulsory)**

*The module explores in some depth the topics of measurement, mechanics, electricity thermodynamics, atomic physics, forces, magnetism, materials, waves and oscillations. Assignments are set on a regular basis, aimed to extend the ideas studied as part of the lecture course. Practical work is used to reinforce theory.*

**Additional Mathematics (2 semesters compulsory):**

*This module covers sequencing and series, binomials, complex numbers, polynomials, differentiation, mechanics, momentum, vectors and differential equations. Students can expect to further develop their problem solving and analytical skills.*

**Progression**

Assessment is by examination and coursework and students are expected to score an overall mark of 50% to progress to the second year of the course. In the second year students will start on the first year of one of the many programmes available in the Faculty of Engineering. (NB: For Aerospace programmes(\*), an overall average of over 50% is needed in Maths and Physics in order to progress into Year 1)

*A full list of the available programmes is given below: -*

*Industrial Design - BEng (Hons), Engineering - BEng (Hons), Civil Engineering - BEng (Hons), Mechanical Engineering - BEng (Hons), Mechanical Engineering with Business - BEng (Hons), Aerospace Engineering with Pilot Studies - BEng (Hons), Aerospace Engineering - BEng (Hons), Avionic Systems, Avionic Systems with Pilot Studies, Electrical Engineering and Electronics, Electrical Engineering and Electronics with a Year in Industry (4 yrs), Electronics, Electrical Engineering, Electronic and Communication Engineering, Electronic and Communication Engineering with a Year in Industry (4 yrs), Medical Electronics and Instrumentation, Computer Science and Elec. Eng. with a Year in Industry (4 yrs), Computer Science and Electronic Engineering, Mechatronics and Robotic Systems, Mechatronics and Robotic Systems with a Year in Industry (4 yrs), Mechanical and Material Engineering - BEng (Hons).*

**ENTRY REQUIREMENTS**

Applicants will be expected to fall into one of the following categories:

- Adult learners returning to education students with 'A' level passes.
- Adult learners returning to education with 5 GCSE /'O' level passes or more including Maths, Science and English Language.
- Sixth form leavers currently studying Advanced level Maths and Physics in combination with other subjects.
- Students from within European Union and students following access certificates

**THE STANDARD OFFER**

A typical offer is likely to be CDD or 200 points in three subjects at A2, preferably in related subjects. Students with alternative A2 combinations are welcome to apply but should expect to be made higher offers. All students must also have a pass (grade C or above) in GCSE Mathematics, Science and English Language or hold equivalent qualifications. Adult learners are should have a minimum of 5 GCSE's grade 'C' or above including Mathematics, Science and English and may be invited for interview. Students with access certificates or foreign qualifications will be considered on an individual basis.

*Students holding offers at the University of Liverpool may be made a changed course offer to H109, after the examination results, if they fail to gain the required number of points for their first choice course.*

**Further Information**

Please contact Mary Robinson at Carmel College on (01744) 452200. Alternatively, contact Marie Kendrick (Degree Administrator) on (01744) 452213 or e-mail: [degree@carmel.ac.uk](mailto:degree@carmel.ac.uk);