

# G408 COMPUTER SCIENCE FOUNDATION



**The course G408 provides a four-year route to a BSc (Hons) Degree programme in Computer Science.**

This course would be of interest to students who have followed Advanced level Mathematics in conjunction with other Science A levels or those studying relevant access programmes.

## **The Modules Studied**

All students will study Maths and two other modules over the two semesters. Students can choose modules to make up their own programme, certain subjects are compulsory for entry into specific degree courses, degree titles, these are marked on the course selection chart. [E] for essential, [P] preferred modules, [R] recommended modules and [O] optional modules.

### **Mathematics (2 semesters compulsory)**

*This module 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.*

### **Additional Mathematics (2 semesters preferred):**

*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.*

### **Physics: (2 semesters optional):**

*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.*

### **Biology (2 semesters optional)**

*This module looks at cell structure and function, biological molecules, cell division, genetics and metabolism in the first semester. During the second semester students will study hormonal control, transport systems in mammals and multicellular animals, the action of drugs, pharmacology and immunity. Biology is a practical subject and students will have opportunities to take part in laboratory investigations and practicals.*

### **Chemistry (2 semesters optional)**

*This module covers atomic structure, atoms and moles, the periodic table, chemical bonding, chemical energy, kinetics and an introduction to Organic Chemistry, alkanes and alkenes. In the second semester ideas are extended and the key areas of Organic Chemistry, the Chemistry of the main group elements and Equilibria are studied in further depth.*

### **Information Technology (2 semesters optional)**

*This module covers the following: Hardware & Software, General Purpose Packages (Word processing, spreadsheets, databases and graphics), Data & Information handling, Range, Scope & Impact of Information Technology, Communication Systems and Computer Security.*

### **Geography (2 semesters optional)**

*The module takes an enquiry approach into the investigation of the way people interact with their varied environments. Topics include ecosystems, atmospheric processes, natural hazards and environmental pollution. Students will develop a range of case studies concerning the questions, issues and problems that these geographical areas present.*

## **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 *Computer Science, Computer Science with a Year in Industry (4 yrs), Artificial Intelligence, Artificial Intelligence with a Year in Industry (4 yrs), Mathematics and Computer Science, E-Finance.*

## **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 related Advanced level subjects.
- Students from within European Union and students following access certificates

## **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 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 G408, after the examination results, if they fail to gain the required number of points for their first choice course.*

## **Further Information**

Please contact Carmen Nunez or Mary Williams at Carmel College on (01744) 452200 or 452224.  
Alternatively, contact Marie Kendrick (Degree Administrator) on (01744) 452213 or e-mail:  
[degree@carmel.ac.uk](mailto:degree@carmel.ac.uk);