Computer Science will encourage you to understand and apply the fundamental principles and concepts of Computer Science, including abstraction, decomposition, logic, algorithms and data representation. You will analyse problems in computational terms through practical experience of solving such problems, including designing, writing and debugging programs using Python. You will use skills which encourage thinking creatively, innovatively, analytically, logically and critically, understand the impacts of digital technology to the individual and to wider society and apply mathematical skills relevant to Computer Science

Students are required to study:

Computer Systems (01) –This component investigates hardware, logical operations, communications, data representation and data types, operating systems, principles of programming, software engineering, program construction, security and data management and the impacts of digital technology on wider society.

Computational thinking, algorithms and programming (02) – This component investigates problem solving, algorithms and programming constructs, programming languages, data structures and data types and security and authentication.

Programming Project (03) – This component requires learners to produce a programmed solution to a problem. They must analyse the problem, design a solution to the problem, develop a final programmed solution, test the solution and give suggestions for further development of the solution. Throughout the production of the solution learners are required to produce a refinement log that evidences the development of the solution. The component does not contribute to the final mark or qualification grade.

Career pathway:

This course will allow students to gain valuable ICT and computing skills for future employment or the academic achievement required to go on to a Level 3 course in Higher Education. Computer science is one of the EBacc subjects.