DIGITAL SOLUTIONS

WHAT TYPE OF SUBJECT IS DIGITAL SOLUTIONS?

Digital Solutions enables students to learn about algorithms, computer languages and user interfaces through generating digital solutions to problems. Students engage with data, information, and applications to create digital solutions that filter and present data in timely and efficient ways while understanding the need to encrypt and protect data. They understand computing's personal, local and global impact, and the issues associated with the ethical integration of technology into our daily lives.

Students use problem-based learning to write computer programs to create digital solutions that: use data; require interactions with users and within systems; and affect people, the economy and environments. They develop solutions using combinations of readily available hardware and software development environments, code libraries or specific instructions provided through programming.

Students create, construct and repurpose solutions that are relevant in a world where data and digital realms are transforming entertainment, education, business, manufacturing and many other industries.

PATHWAYS

A course of study in Digital Solutions can establish a basis for further education and employment in the fields of science, technologies, engineering and mathematics.

OBJECTIVES

By the conclusion of the course of study, students will:
- recognise and describe elements, components, principles, and processes
- symbolise and explain information, ideas, and interrelationships
- analyse problems and information
- determine solution requirements and criteria
- synthesise information and ideas to determine possible digital solutions
- generate components of the digital solution
- evaluate impacts, components, and solutions against criteria to make refinements and justified recommendations
- make decisions about and use mode-appropriate features, language, and conventions for particular purposes and contexts

STRUCTURE

Unit 1	Unit 2	Unit 3	Unit 4
Creating with Code	**Application & Data Solutions**	**Digital Innovation**	**Digital Impacts**
Understanding Digital Problems User Experiences & Interfaces Algorithms & Programming Techniques Programmed Solutions	Data-Driven Problems & Solution Requirements Data & Programming Techniques Prototype Data Solutions	Interactions Between Users, Data & Digital Systems Real-World Problems & Solution Requirements Innovative Digital Solutions	Digital Methods for Exchanging Data Complex Digital Data Exchange Problems & Solution Requirements Prototype Digital Data Exchanges

ASSESSMENT

In Units 1 and 2, all assessment is formative. However, the assessment in Units 1 and 2 will model that which students will encounter in Units 3 and 4. In Units 3 and 4 students complete four summative assessments. The results from each of the assessments are added together to provide a subject score out of 100. Students will also receive an overall subject result (A – E).

Unit 3		Unit 4	
Summative Internal Assessment 1 (IA1): Technical Proposal	20%	Summative Internal Assessment 3 (IA3): Project - Folio	25%
Summative Internal Assessment 2 (IA2): Digital Solution	30%	Summative External Assessment (EA): Examination	25%