



Highfields State
Secondary College

Semester 1 Course Overview

Faculty: e-Learning
Subject: DIS
Year level: 12

Course Outline

Digital Solutions prepares students for a range of careers in a variety of digital contexts. It develops thinking skills that are relevant for digital and non-digital real-world challenges. It prepares them to be successful in a wide range of careers and provides them with skills to engage in and improve the society in which we work and play. Digital Solutions develops the 21st century skills of critical and creative thinking, communication, collaboration and teamwork, personal and social skills, and information and communication technologies (ICT) skills that are critical to students' success in further education and life.

| 2024 | |
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| Unit 3: Digital Innovation | Unit 4: Digital Impacts |
| <p>In Unit 3, students are required to engage with and learn subject matter through the use of the various phases of the problem-solving process. Students will investigate the Australian Government's open datasets to identify an opportunity for a new, innovative solution to a real-world problem. After proposing algorithms, user-interfaces and a low-fidelity prototype, students will conclude the unit by developing a data-driven solution using Microsoft Visual Studio. C#, HTML and CSS will be used to create this web application, providing students with the opportunity to experience how data can be transformed from one format to another.</p> <p>Investigation — technical proposal (20%): Using public datasets, students propose an innovative digital solution to a real-world problem. Students are to deliver a 9-11 minute multimodal presentation documenting their journey through the problem-solving process.</p> <p>Project — digital solution (30%): Students will develop a digital solution for a technical proposal that has been written for a dataset reporting on fuel prices and locations. The submission will be 8-10 A3 pages in length, accompanied by a 2-4 minute demonstration of the functionality of the coded components.</p> | <p>In Unit 4, students learn how data is shared in both local and global contexts, particularly how digital solutions are increasingly required to exchange data securely and efficiently. Students will generate solutions that interact with external data sources through an application programming interface (API), transforming input into a relational model that is able to be rendered for use on the web. Finally, the encryption and decryption of data will be investigated, as well as the social and economic impacts associated with public and private exchanges of information online.</p> <p>Project — folio (25%): Students are to develop a trivia application that uses data from an open source API. The task will be 8-10 A3 pages in length, and is to be accompanied by a 1-2 minute demonstration of the functionality of the data exchange solution by video recording.</p> <p>Examination — combination response (25%): Summative external assessment that is developed and marked by the QCAA. The external assessment is common to all schools and is administered under the same conditions, at the same time, on the same day across the state.</p> |