

---

---

# VCE UNITS INFORMATION

---

---

## VCE Computing: Software Development Units 3 and 4

### CONTENT

#### Unit 3

In Unit 3, students develop a detailed understanding of the analysis, design and development stages of the problem-solving methodology and use a programming language to create working software modules. Students begin this unit by responding to given software designs and develop a set of working modules through the use of a programming language. Students examine a range of software design representations and interpret these when applying specific functions of a programming language to create working modules.

Students complete this unit by analysing a need or opportunity, plan and design a solution and develop computational, design and systems thinking skills which forms the first part of a project that is completed in Unit 4.

#### Unit 4

Students focus on how the information needs of individuals and organisations are met through the creation of software solutions used in a networked environment. They continue to study the programming language used in Unit 3. Students further their computational thinking skills by transforming their detailed design prepared in Unit 3 into a software solution. They evaluate the efficiency and effectiveness of the solution in meeting needs or opportunities. They also assess the effectiveness of the project plan in monitoring project progress.

Finally, students apply systems thinking skills when explaining the relationship between two information systems that share data and how that dependency affects the performance of the systems.

### OUTCOMES

#### Unit 3

- Students should be able to interpret designs and apply a range of functions and techniques using a programming language to develop working modules
- Students should be able to analyse and document a need or opportunity, generate alternative design ideas, represent the preferred solution design and formulate a project plan for creating the solution

#### Unit 4

- Students should be able to apply stages of the problem-solving methodology to create a solution using a programming language that fulfils identified requirements and assess the effectiveness of the project plan in monitoring progress
- Students should be able to analyse and explain the dependencies between two information systems and evaluate the controls in place in one information system to protect the integrity of its source data