Unit 3 Software development – Introduction

Slide 1:

* Welcome to the Unit 3 Software development presentation as part of the VCE Applied Computing Study Design for 2020-2023.
* The purpose of this presentation is to introduce you to Unit 3 Software development and to provide you with a brief overview of the outcomes.

Slide 2:

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Slide 3:

* We will now have a look at Unit 3 Software development.

Slide 4:

* In Unit 3 Software development there are the two following outcomes:
* Outcome 1 – Programming
* Outcome 2 – Analysis and design

Slide 5:

* We will now have a look at Unit 3 Outcome 1 Programming.

Slide 6:

* This table gives you an overview of the relationship between the:
* Key concepts
* Problem-solving methodology stages
* and the key knowledge within the outcome
* In Unit 3 Outcome 1 Programming we are dealing with:
* Data and information
* and Problem-solving with the stages of analysis, design and development to produce spreadsheets, databases and data visualisations
* This outcome is an extension of Unit 1 Outcome 2.
* The key knowledge is briefly listed on the right of the table.

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* In Unit 3 Outcome 1 Programming, students should be able to:
* interpret teacher-provided solution requirements and designs
* apply a range of functions and techniques, and
* use a programming language to develop and test working software modules.
* Software tools will involve:
* An appropriate programming language.
* The task will contribute 10 per cent to the study score and the total marks will be out of 100.

Slide 8:

* Students will:
* interpret solution requirements and designs
* use a range of data types and data structures
* use and justify a range of appropriate processing features
* develop and apply suitable validation, testing and debugging techniques, will
* use of internal documentation.
* The assessment task is a SAC whereby:
* students will respond to teacher-provided solution requirements and designs to create working modules, and
* students will address the VCAA performance descriptors.

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* We will now have a look at Unit 3 Outcome 2 Analysis and design.

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* This table gives you an overview of the relationship between the:
* Key concepts
* Problem-solving methodology stages
* and the key knowledge within the outcome
* In Unit 3 Outcome 2 Analysis and design we are dealing with:
* Digital systems
* Data and information
* Problem-solving with the stages of analysis and design to produce a software solution
* and Interactions and impact.
* The key knowledge is briefly listed on the right of the table.

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* In Unit 3 Outcome 2 Analysis and design, students should be able to:
* analyse and document a need or opportunity
* justify the use of an appropriate development model
* formulate a project plan
* generate alternative design ideas, and
* represent the preferred solution design for creating a software solution.
* Software tools will involve:
* A Unified Modelling Language (UML) and UML tools to create use cases and an appropriate tool for documenting project plans.
* The SAT task for Unit 3 Outcome 2 will contribute 15 per cent to the study score. Both Unit 3 Outcome 2 and Unit 4 Outcome 1 contribute 30 per cent to the study score.

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* Students will:
* collect and interpret data
* select and justify the use of a development model
* apply analysis tools and techniques
* determine solution requirements, constraints and scope
* document a software requirements specification
* generate alternative design ideas
* develop evaluation criteria to select designs
* produce detailed designs, and
* create, monitor and modify project plans.
* The assessment task is Part 1 of the SAT whereby:
* students will address the analysis and design stages of the problem-solving methodology, and
* students will address the VCAA SAT Criteria.

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* For further information please contact:
* The Curriculum Manager of Digital Technologies at the Victorian Curriculum and Assessment Authority.
* Thank you for watching this video.