**Year 12 Information Technology Applications :: 2011 – 2014**

Semester: 1 - Year Level: 12 Course Outline.

|  |  |  |  |
| --- | --- | --- | --- |
| **Cycle.** | **Learning Focus.** | **Learning Activities/Resources** | **Assessment.** |
| 1 | Area of Study 1 - Web Authoring Software  Application : Adobe-Dreamweaver | Teacher generated Adobe-Dreamweaver folio pieces. Location RSB Folders  Textbook - Potts, C et al 2010, IT Applications VCE Units 3 & 4, 3rd edn, Thomson Nelson, Melbourne  Chapter 1 - Networks  Key knowledge This knowledge includes: - types, purposes and functionality of websites that support information exchange within online communities - types of networks and the functions of their key hardware and software components - capabilities of wired and wireless communications technology to support local and remote communications - hardware and software requirements for setting up websites on servers, including operating system, web server software, protocols, security and proxy servers - stages of the problem-solving methodology - types and purposes of online communities including social, work-based, project/interest-based that support the purposes of collaboration, knowledge sharing and collective identity - needs of online community members that affect the nature of their websites, including access requirements (open or closed) - non-technical constraints on website solutions, including privacy, copyright and human rights requirements and social online protocols - design elements that influence the functionality and appearance of websites - design tools for representing website solutions - functions of web authoring software used to manipulate data - manual and electronic validation techniques - formats and conventions applied to websites in order to improve their effectiveness for intended users - methods and techniques for testing that the solutions perform as intended. | Adobe-Dreamweaver Folio  Key Knowledge - Theory |

|  |  |  |  |
| --- | --- | --- | --- |
| 2 | Area of Study 1 - Web Authoring Software  Application : Adobe-Dreamweaver | Teacher generated Adobe-Dreamweaver folio pieces. Location RSB Folders  Textbook - Potts, C et al 2010, IT Applications VCE Units 3 & 4, 3rd edn, Thomson Nelson, Melbourne  Chapter 2 - Online Communities  Key knowledge This knowledge includes: - reasons why organisations acquire data via websites, including 24-hour customer access, improved efficiencies through direct data entry by customers, improvements in effectiveness and access to global market economies - reasons why individuals and organisations supply data via websites, including purchasing of goods and services, voting, social networking and exchanging information - techniques used by organisations to acquire data on websites and reasons for their choice - techniques used by organisations to protect the rights of individuals and organisations supplying data, including security protocols and stating policies regarding privacy, shipping and returns - stages of the problem-solving methodology - purposes and structure of an RDBMS - naming conventions to support efficient use of an RDBMS - data types, including text (string), number, date/time, Boolean (true/false) - data formats used for display, including fixed decimal places, various date formats, 12 hour/ 24 hour time, true/false, yes/no - a methodology for creating an RDBMS structure: identifying tables and fields; normalising tables, defining data types and field sizes, identifying primary key and foreign key fields - ways in which normalisation can ensure the integrity of data in an RDBMS - design tools for describing data types, and the value of entity relationship (ER) diagrams for representing the structure of an RDBMS - design tools for representing solutions - functions and techniques within an RDBMS to efficiently and effectively manipulate and validate data - functions and techniques to retrieve required information through searching, sorting, filtering and querying data sets - methods and techniques for testing that the solutions perform as intended. | Adobe-Dreamweaver Folio  Key Knowledge -Theory |

|  |  |  |  |
| --- | --- | --- | --- |
| 3 | Area of Study 1 - Web Authoring Software  Preparation for Unit 3 - Outcome 1 | Key skills These skills include the ability to: - identify types of websites suitable for different online communities - analyse online communities in order to identify solution requirements and technical and nontechnical constraints - select and apply appropriate design tools to represent the functionality and appearance of prototype websites - use web authoring software and select and apply suitable functions, methods, formats, conventions, techniques and design elements to develop prototype websites that operate as intended - justify websites that suit the needs of different online communities - explain the technical requirements of the networks hosting the websites. | Theory - Key Skills |
| 4 | Area of Study 1 - Web Authoring Software  Unit 3 - Outcome 1 | Teacher generated case study, criteria sheet, authentication sheet. Location: RSB Folders | Unit 3 - Outcome 1 |

|  |  |  |  |
| --- | --- | --- | --- |
| 5 | Area of Study 2 - Organisations and data management  Application : MS-Office (Access) | Teacher generated MS-Office (Access) folio pieces. Location RSB Folders  Textbook - Potts, C et al 2010, IT Applications VCE Units 3 & 4, 3rd edn, Thomson Nelson, Melbourne  Chapter 3 - Data Management Tools  Key Knowledge This knowledge includes: - reasons why organisations acquire data via websites, including 24-hour customer access, improved efficiencies through direct data entry by customers, improvements in effectiveness and access to global market economies - reasons why individuals and organisations supply data via websites, including purchasing of goods and services, voting, social networking and exchanging information - techniques used by organisations to acquire data on websites and reasons for their choice - techniques used by organisations to protect the rights of individuals and organisations supplying data, including security protocols and stating policies regarding privacy, shipping and returns - stages of the problem-solving methodology - purposes and structure of an RDBMS - naming conventions to support efficient use of an RDBMS - data types, including text (string), number, date/time, Boolean (true/false) - data formats used for display, including fixed decimal places, various date formats, 12 hour/ 24 hour time, true/false, yes/no - a methodology for creating an RDBMS structure: identifying tables and fields; normalising tables, defining data types and field sizes, identifying primary key and foreign key fields - ways in which normalisation can ensure the integrity of data in an RDBMS - design tools for describing data types, and the value of entity relationship (ER) diagrams for representing the structure of an RDBMS - design tools for representing solutions - functions and techniques within an RDBMS to efficiently and effectively manipulate and validate data - functions and techniques to retrieve required information through searching, sorting, filtering and querying data sets - methods and techniques for testing that the solutions perform as intended.  Chapter 5 - Developing a Solution Using Database Software | MS-Office (Access) Folio  Key Knowledge - Theory |

|  |  |  |  |
| --- | --- | --- | --- |
| 6 | Area of Study 2 - Organisations and data management  Preparation for Unit 3 - Outcome 2 | Key skills These skills include the ability to: - explain reasons why data is acquired and supplied via websites - propose techniques for acquiring data via websites and for protecting the rights of data providers - select and apply design tools and techniques for describing data types and representing the functionality of solutions - use RDBMS functions and techniques to manipulate and validate data - apply functions and techniques to construct queries that efficiently retrieve required information - select and apply testing methods and techniques to confirm whether the solutions operate as intended. | Theory - Key Skills |
| 7 | Area of Study 2 - Organisations and data management  Unit 3 - Outcome 2 | Teacher generated case study, criteria sheet, authentication sheet. Location: RSB Folders | Unit 3 - Outcome 2 |
| 8 | Revision of Unit 3 | Textbook - Potts, C et al 2010, IT Applications VCE Units 3 & 4, 3rd edn, Thomson Nelson, Melbourne | Online Quizes, What you should know, Apply your knowledge |

|  |  |  |  |
| --- | --- | --- | --- |
| 9 | [Unit 4]  Area of Study 1 - Spreadsheet software & Web authoring or multimedia authoring software  Application : MS-Office (Excel) | Teacher generated MS-Office (Excel) folio pieces. Location RSB Folders  Textbook - Potts, C et al 2010, IT Applications VCE Units 3 & 4, 3rd edn, Thomson Nelson, Melbourne  Chapter 4 - Organisations and Information Needs  Key knowledge This knowledge includes: - types of goals of organisations and information systems - role of components of information systems - characteristics of strategic, tactical and operational decisions made in organisations - stages of the problem-solving methodology - problem-solving activities relating to the analysis of ongoing information problems - design tools for representing the functionality and appearance of solutions - criteria for evaluating the efficiency and effectiveness of solutions to ongoing information problems - functions, techniques and procedures for efficiently and effectively manipulating data using an RDBMS or spreadsheet software, including the application of formats and conventions, the validation of data and the management of files - techniques for testing solutions and user acceptance - strategies for evaluating the extent to which solutions meet organisations%u2019 needs - content and types of onscreen user documentation, including quick start guide, tutorial, content sensitive help and manual - characteristics of efficient and effective user interfaces and information architecture - functions, techniques and procedures for efficiently and effectively manipulating data using web authoring or multimedia authoring software. | MS-Office (Excel) Folio  Key Knowledge - Theory |

Semester: 2 - Year Level: 12 Course Outline.

|  |  |  |  |
| --- | --- | --- | --- |
| **Cycle.** | **Learning Focus.** | **Learning Activities/Resources** | **Assessment.** |
| 1 | Area of Study 1 - Spreadsheet software & Web authoring or multimedia authoring software  Application : MS-Office (Excel) | Teacher generated MS-Office (Excel) folio pieces. Location RSB Folders  Textbook - Potts, C et al 2010, IT Applications VCE Units 3 & 4, 3rd edn, Thomson Nelson, Melbourne  Chapter 6 - Developing a Solution Using Spreadsheet Software | MS-Office (Excel) Folio  Key Knowledge - Theory |
| 2 | Area of Study 1 - Spreadsheet software & Web authoring or multimedia authoring software  Preparation for Unit 4 - Outcome 1 | Key skills These skills include the ability to: - identify how information systems enable the creation of information needed by organisations - analyse current practices in order to identify the requirements, constraints and scope of solutions - select and apply appropriate design tools to represent solutions - determine criteria to evaluate the quality of solutions - use an RDBMS or spreadsheet software and apply suitable functions, formats, conventions and data validation techniques to develop solutions - use web authoring or multimedia authoring software to create onscreen user documentation - select and apply testing methods and techniques to confirm whether the solutions operate as intended - propose strategies and apply criteria to evaluate the extent to which solutions and user documentation meet the information needs of organisations. | Theory - Key Skills |
| 3 | Area of Study 1 - Spreadsheet software & Web authoring or multimedia authoring software  Unit 4 - Outcome 1 | Teacher generated case study, criteria sheet, authentication sheet. Location: RSB Folders | Unit 4 - Outcome 1 |

|  |  |  |  |
| --- | --- | --- | --- |
| 4 | Area of Study 2 - Information management  Unit 4 - Outcome 2 | Textbook - Potts, C et al 2010, IT Applications VCE Units 3 & 4, 3rd edn, Thomson Nelson, Melbourne  Chapter 7 - Information Management  Key knowledge This knowledge includes: - reasons why data and information are important to organisations - key legislation that affects how organisations control the storage, communication and disposal of their data and information - threats to the integrity and security of data and information stored, communicated and disposed of by organisations - procedures and equipment for preventing unauthorised access to data and information and for minimising the loss of data accessed by authorised and unauthorised users - the advantages and disadvantages of using cloud computing for storing, communicating and disposing of data and information - ethical dilemmas arising from information management strategies used by organisations - strategies for resolving legal, ethical and social tensions between stakeholders arising from information management strategies - possible consequences for organisations of the violation of, or failure to follow, security measures - disaster recovery strategies and the testing of these strategies - criteria for evaluating the effectiveness of information management strategies. | Key Knowledge - Theory |
| 5 | Area of Study 2 - Information management  Preparation for Unit 4 - Outcome 2 | Textbook - Potts, C et al 2010, IT Applications VCE Units 3 & 4, 3rd edn, Thomson Nelson, Melbourne  Chapter 8 - Security and Ethical Considerations  Key skills These skills include the ability to: - explain why particular information management strategies are used by organisations to monitor and control their data and information - discuss the nature of particular threats to the integrity and security of data and information - discuss possible consequences of ineffective information management strategies - propose strategies to minimise tensions between stakeholders - propose and apply criteria to evaluate the effectiveness of information management strategies - recommend information management strategies to improve current practices. | Key Skills - Theory |
| 6 | Area of Study 2 - Information management  Unit 4 - Outcome 2 | Teacher generated case study, criteria sheet, authentication sheet. Location: RSB Folders | Unit 4 - Outcome 2 |
| 7 | Revision of Unit 4  Exam Preparation | Textbook - Potts, C et al 2010, IT Applications VCE Units 3 & 4, 3rd edn, Thomson Nelson, Melbourne | Online Quizes, What you should know, Apply your knowledge |