

# VICTORIA OUTCOMES Grid

© Cambridge University Press 2006

	Learning Outcome	Ch 1	Ch 2	Ch 3	Ch 4	Ch 5	Ch 6	Ch 7	Ch 8	Ch 9	Ch 10	Ch 11	Ch 12	Ch 13	Ch 14
3.1.1	Information systems and settings in which they are used	X													
3.1.2	Information systems goals and objectives						X								
3.1.3	Types of networks, and strengths and weaknesses of different network topologies			X											
3.1.4	Purpose and functions of operating systems and network operating systems				X										
3.1.5	Purpose, functions and capabilities of communications technology, including network interface cards, transmission media (cables and wireless), routing devices and protocols			X											
3.1.6	Economic, social and technical factors prompting organisations to change information systems						X								
3.1.7	Threats to data integrity and security of information, including deliberate actions, accidental actions and technical failures											X			
3.1.8	Technical underpinning of actions that threaten the security of information stored and transmitted, including viruses, trojans, spyware, hacking and denial of service											X			
3.1.9	Security devices and procedures available to protect data and information											X			
3.1.10	The systems development life cycle (SDLC) and techniques for managing this, including a detailed study of the waterfall model of the SDLC and an overview of rapid application development (RAD), prototyping, and Agile models					X									
3.1.11	The analysis phase of the SDLC, including identification of what systems currently do and what new or modified systems have to do						X								
3.1.12	Tools for representing the logical designs of networked information systems, including context diagrams, data flow diagrams, data dictionaries						X		X						
3.1.13	Methods for collecting data for analysis, including direct observation, surveys, interviews, reading system program documentation and logs						X								
3.1.14	The design phase of the SDLC, including identification of the components (people, procedures, data and equipment) that will enable the logical design specifications to be implemented						X								
3.1.15	Tools for representing the physical design of the new or modified systems, including system flow charts, structure charts						X								

	Learning Outcome	Ch 1	Ch 2	Ch 3	Ch 4	Ch 5	Ch 6	Ch 7	Ch 8	Ch 9	Ch 10	Ch 11	Ch 12	Ch 13	Ch 14
3.1.16	Functions and characteristics of hardware and software components, including security devices available to protect data and information			X								X			
3.1.17	Physical design specifications for the input, processing and output requirements that will enable the new or modified information systems to achieve their goals.						X								
3.2.1	Stages of software development, including design, development and testing					X		X	X						
3.2.2	Handling and managing files, including security, archiving, backing up and disposal of files	X										X			
3.2.3	Data types, data structures and data representation methods							X	X						
3.2.4	Data validation strategies	X							X						
3.2.5	Types and specifications of portable (mobile) computing devices, including personal digital assistants (PDAs), mobile phones, laptops, gaming consoles			X											
3.2.6	Methods of expressing software design using data tables and algorithms, including an overview of flow charts, pseudocode, Nassi-Shneiderman diagrams, object descriptions and a detailed understanding of one of them							X							
3.2.7	Purpose and characteristics of internal documentation								X						
3.2.8	Naming conventions for program elements							X							
3.2.9	Legal obligations of programmers and ethical considerations regarding the development of programming solutions													X	
3.2.10	Characteristics of high-quality user interface							X							
3.2.11	Criteria for evaluating software, including effectiveness, efficiency, stability, reliability, usability, maintainability										X				
3.2.12	A programming language as a method for developing software							X							
3.2.13	Techniques for checking that coded programs meet design specifications, including construction of test data								X	X					
3.2.14	Principles of hardware operation essential to the development of software modules			X									X		
4.1.1	Types of information system goals and objectives						X								
4.1.2	Stages of software development: analysis, design, development, testing, documentation, implementation					X	X	X							

	Learning Outcome	Ch 1	Ch 2	Ch 3	Ch 4	Ch 5	Ch 6	Ch 7	Ch 8	Ch 9	Ch 10	Ch 11	Ch 12	Ch 13	Ch 14
4.1.3	and evaluation Methods of organizing files to suit particular software needs, including serial, sequential and random access								X						
4.1.4	Factors affecting access of data, including file size, storage medium, organisation of files			X						X					
4.1.5	Naming conventions for program elements							X							
4.1.6	The syntax of a programming language							X					X		
4.1.7	Factors affecting software design, including user interface, end-user needs, processing efficiency, development time							X					X		
4.1.8	Forms and uses of data structures to organise and manipulate data						X	X							
4.1.9	Methods and techniques of representing an algorithm							X							
4.1.10	Data validation and testing strategies								X	X					
4.1.11	Forms of user documentation, including printing, CD, online Internet site, and types of user documentation, including quick start guide, tutorial, content sensitive help and manual								X						
4.1.12	Applications and purposes of utilities in a programming environment												X		
4.1.13	The relationship between the developers of purpose-designed software and end-users													X	
4.2.1	Organisations using information systems in a global environment	X													
4.2.2	Advantages and disadvantages for organisations and society in using information systems in a global environment													X	
4.2.3	The development phase of the systems development life cycle (SDLC), including the realisation of the physical design specifications with respect to acquiring the identified hardware requirements, acquiring and/or developing software, identifying required personnel and their knowledge and skills, and assembling and testing the new information systems						X		X						
4.2.4	Project management tools and techniques to schedule and monitor tasks, assign resources, identify milestones and determine contingency plans						X								
4.2.5	Technical, human, procedural, economic and management factors influencing the acquisition of specific hardware and software components to fulfill design specifications						X								
4.2.6	Testing techniques to ensure that the														

	Learning Outcome	Ch 1	Ch 2	Ch 3	Ch 4	Ch 5	Ch 6	Ch 7	Ch 8	Ch 9	Ch 10	Ch 11	Ch 12	Ch 13	Ch 14
4.2.7	components operate as intended and to gain acceptance of the networked system The implementation phase of the SDLC, including preparation of user documentation, designing and conducting training programs, preparation of disaster recovery plans and the changeover to new systems									X					
4.2.8	Types of system support documentation to assist end-users with the implementation of the proposed information systems									X		X			
4.2.9	Training requirements for the users of the proposed information system, including location of training and nature of training									X					
4.2.10	Methods for implementing the proposed information systems, including direct, phased, pilot and parallel conversions									X					
4.2.11	Procedures to protect and secure stored and communicated data and information											X			
4.2.12	The evaluation phase of the SDLC, including determining if the information system is fulfilling its design specifications										X				
4.2.13	Criteria and strategies for evaluating the performance of the proposed information systems										X				

