

# *Coverage of examination board specifications*

The table on the following pages shows how the chapters in this book cover the different examination specifications.

- ✓ = provides coverage for this element of the exam board specification
- = is not a requirement of this exam board specification

Ch no	Chapter title and Topics covered in the chapter	AQA Spec B Short	AQA Spec B Full	AQA Spec A Full	AQA Spec A Short	AQA Spec A Short	WJEC Short	WJEC Full	Edexcel Full	Edexcel Short	OCR Spec A Short	OCR Spec A Full
<b>1</b>	<b>What is an Information System?</b>											
	Data	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Information	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	The three stages of doing tasks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Manual information systems	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Computerised information systems	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Examples of computerised information systems	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>2</b>	<b>The Components of an Information System</b>											
	Hardware and software	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Why use computers?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Are there any drawbacks in using computers?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Processing data	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Types of computer	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Peripheral devices	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Embedded computers	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>3</b>	<b>The 'Ins' and 'Outs' of systems: Input and Output</b>											
	The 'ins' and 'outs' of a video library	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Input devices	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Output devices	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Computerised numerical control	-	-	✓	✓	✓	✓	✓	-	-	-	-
	Computer-aided-manufacturing	-	-	✓	✓	✓	✓	✓	-	-	-	-
<b>4</b>	<b>Storing data</b>											
	The storage of data	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Memory (main store)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Magnetic media	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Optical disks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓



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<b>8</b>	<b>How Data Is Stored: Databases</b>										
	The parts of a database (files, fields and records)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	A card box filing system	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Record design	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Manual filing systems	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Computerised databases (advantages and disadvantages)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	File organisation (serial, sequential and random)	-	✓	-	-	-	-	✓	-	-	-
	Types of file (master, transaction, backup, and log)	-	-	✓	-	-	✓	✓	-	-	-
	The grandfather-father-son principle	-	-	✓	-	-	✓	✓	-	-	-
	Fixed and variable length fields	-	-	✓	✓	✓	✓	-	-	-	-
	Common file processes	-	✓	✓	✓	✓	✓	✓	✓	-	-
	File manipulation	-	✓	✓	✓	✓	✓	✓	-	-	-
	Geographical Information Systems	✓	✓	-	-	-	✓	-	-	-	-
<b>9</b>	<b>Types of Computer Operation</b>										
	Life in the fast lane	-	-	✓	-	-	✓	✓	✓	-	✓
	Real-time processing	-	-	✓	-	-	✓	✓	✓	-	-
	Doing all the processing in one go: batch processing	-	-	✓	-	-	✓	-	-	-	✓
	Multitasking and multiprogramming	-	-	✓	-	-	✓	-	-	-	✓
	Transaction processing	-	-	✓	-	-	✓	-	-	-	✓
	Multi-access and timesharing	-	-	✓	-	-	✓	✓	-	-	✓
<b>10</b>	<b>Data Transfer</b>										
	File conversion	✓	✓	✓	✓	-	✓	✓	✓	-	-
	ASCII files	✓	✓	✓	✓	-	✓	✓	✓	-	-
	Transferring data between wordprocessors	✓	✓	✓	✓	-	✓	✓	✓	-	-
	Data/file compression	✓	✓	✓	✓	-	✓	✓	✓	-	-
	Sound sampling	-	-	-	-	-	-	-	-	-	-
	Digital and analogue computers	-	-	-	-	-	-	-	-	✓	✓

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<b>11</b>	<b>Ways of Presenting Your Data</b>										
	Hard copy	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	Presentation graphics	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	Multimedia	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	CD-ROM	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	Sound	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	MIDI	✓	✓	✓	✓	✓	✓	-	-	-	✓
	Virtual reality	✓	✓	✓	✓	✓	✓	-	-	-	✓
<b>12</b>	<b>How to Describe an Information System</b>										
	Describing systems	✓	✓	✓	-	-	✓	✓	✓	-	✓
	Structure diagrams	✓	✓	✓	-	-	✓	✓	-	-	✓
	Data flow diagrams	✓	✓	✓	-	-	✓	✓	-	-	✓
	Systems flowcharts	✓	✓	✓	-	-	✓	✓	-	-	✓
<b>13</b>	<b>Systems Analysis</b>										
	Harlequin Aquatics	✓	✓	✓	-	-	✓	✓	✓	-	✓
	Fact finding	✓	✓	✓	-	-	✓	✓	✓	-	✓
	Feasibility study	✓	✓	✓	-	-	✓	✓	✓	-	✓
	Analysis phase	✓	✓	✓	-	-	✓	✓	✓	-	✓
	System design	✓	✓	✓	-	-	✓	✓	✓	-	✓
	Testing the system	✓	✓	✓	-	-	✓	✓	✓	-	✓
	Implementing (or introducing) the new system	✓	✓	✓	-	-	✓	✓	✓	-	✓
	Documentation	✓	✓	✓	-	-	✓	✓	✓	-	✓
	System evaluation	✓	✓	✓	-	-	✓	✓	✓	-	✓
<b>14</b>	<b>Weather forecasting: An Application of Data Logging</b>										
	Weather reporting the old way	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
	Weather reporting	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
	The sensors	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
	Analogue-to-digital conversion	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
	Advantages of data logging	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
	Transferring weather data to another package	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
	Weather satellites	✓	✓	✓	✓	-	✓	✓	✓	✓	✓

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<b>15</b>	<b>Transferring Data Around</b>										
	A company communication problem	✓	✓	✓	-	✓	✓	✓	✓	✓	✓
	Networks	✓	✓	✓	-	✓	✓	✓	✓	✓	✓
	Local area networks (LANs)	✓	✓	✓	-	✓	✓	✓	✓	✓	✓
	Wide area network (WANs)	✓	✓	✓	-	✓	✓	✓	✓	✓	✓
	Advantages and disadvantages of networks	✓	✓	✓	-	✓	✓	✓	✓	✓	✓
	Network topologies	-	✓	-	-	-	✓	-	-	✓	✓
	Modems	-	✓	-	-	-	✓	-	-	-	✓
	The bits which make up a network	✓	✓	✓	-	✓	✓	✓	✓	✓	✓
	Data transmission (communication links and cable media)	-	✓	-	-	-	✓	-	-	✓	✓
	Keeping unauthorised people out of networks	-	✓	-	-	-	✓	-	-	✓	✓
	ISDN	-	✓	-	-	-	✓	-	-	✓	✓
	Protocols and handshakes	-	✓	-	-	-	✓	-	-	✓	✓
	File compression	-	✓	-	-	-	✓	-	-	✓	✓
	Speed of access	-	✓	-	-	-	✓	-	-	✓	✓
	Bandwidth	-	✓	-	-	-	✓	-	-	✓	✓
	Cost of installation	-	✓	-	-	-	✓	-	-	✓	✓
	Electronic Data Interchange (EDI)	-	✓	-	-	-	✓	-	-	✓	✓
<b>16</b>	<b>System Security</b>										
	Computer security	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Physical security	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Computer theft	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Protection from fires	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Protection from dust and extremes of temperature	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Software security	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Protecting your files	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Project advice	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	The difference between security and integrity	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Transaction logs	-	✓	-	-	-	✓	-	-	-	✓

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<b>17</b>	<b>Data and You: The Data Protection Act</b>											
	Computers and privacy	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	Loyalty cards	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	The reasons behind the Data Protection Act	-	-	✓	-	✓	-	✓	✓	✓	-	✓
	The 1998 Data Protection Act	-	-	✓	-	✓	-	✓	✓	✓	-	✓
	Data subjects and data controllers	-	-	✓	-	✓	-	✓	✓	✓	-	✓
<b>18</b>	<b>Computers and the Law</b>											
	Computer crime	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	Credit card use	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	Automated teller machines (ATMs)	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	Credit card fraud	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	Electronic fraud	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	Phantom withdrawals	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	Smart cards	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	Software piracy	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	The Copyright, Designs and Patents Act 1989	-	✓	✓	-	✓	-	✓	✓	✓	✓	✓
	The Computer Misuse Act 1990	-	✓	✓	-	✓	-	✓	✓	✓	✓	✓
<b>19</b>	<b>The Social Effects of Information Systems</b>											
	Social and economic effects of IT	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Is information technology a good thing?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Changing employment patterns	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	Identity cards move a step closer	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	The shape of things to come	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	Environmental, ethical, moral and social issues raised by IT	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
<b>20</b>	<b>Controlling Things</b>											
	Robots	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	Computers in control	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	Process control	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	Pseudo-code	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	Computers in greenhouses	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	Computers and safety of cars	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	Data logging	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓

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<b>21</b>	<b>Computers and your Health</b>											
	The problems	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Protecting the workforce	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Things to consider when designing an office	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>22</b>	<b>The Electronic Office</b>											
	The paper chase	-	✓	✓	-	✓	✓	✓	✓	✓	✓	✓
	Equipment and facilities in an electronic office (fax, e-mail, EDI, teleconferencing and telecommuting)	-	✓	✓	-	✓	✓	✓	✓	✓	✓	✓
<b>23</b>	<b>Simulations</b>											
	Modelling	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Games	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
	Model Builder	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
	Expert systems	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
	Expert Builder	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
	Simulations	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
	An example IT task	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
<b>24</b>	<b>Bulmer's: A Case Study</b>											
	HP Bulmer Ltd (cider makers)	✓	✓	✓	✓	✓	-	✓	✓	✓	-	✓
	Bulmer's information systems	✓	✓	✓	✓	✓	-	✓	✓	✓	-	✓
	Process control by computers	✓	✓	✓	✓	✓	-	✓	✓	✓	-	✓
	Computers in the laboratory	✓	✓	✓	✓	✓	-	✓	✓	✓	-	✓
	Using computers to help with presentations	✓	✓	✓	✓	✓	-	✓	✓	✓	-	✓
	Possible new developments	✓	✓	✓	✓	✓	-	✓	✓	✓	-	✓

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<b>25</b>	<b>Computer Applications</b>										
	Information Technology: helping to solve crime	✓	✓	✓	✓	-	✓	✓	✓	-	✓
	Information technology in the supermarket	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
	Information technology in the music industry	✓	✓	✓	✓	-	✓	✓	✓	-	✓
	IT and the TV/video industry	✓	✓	✓	✓	-	✓	✓	✓	-	✓
	Information technology and medicine	✓	✓	✓	✓	-	✓	✓	✓	-	✓
	Information technology and banking	✓	✓	✓	✓	-	✓	✓	✓	-	✓
	Traffic control systems	✓	✓	✓	✓	-	✓	✓	✓	-	✓
	Pollution monitoring	✓	✓	✓	✓	-	✓	✓	✓	-	✓
	ICT in education	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ICT in the home and leisure activities	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>26</b>	<b>The Internet</b>										
	Internet Service Provider (ISP)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Content provider	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	The Internet	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	World Wide Web	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Website hosts	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Electronic mail	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Aspects of the Internet	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Communication features common to net software	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Finding your way around the Internet	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Features of common Internet services	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Advantages and disadvantages of the Internet as a source of information	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	E-commerce	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Aspects of the Internet and other ICT developments that affect society	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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<b>27</b>	<b>Advice on Coursework</b>										
	What software can I use?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Hints and tips	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	How much do I write?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Can my teacher help me?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Do you get marks for your English?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	What is entailed in the coursework?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Coursework for your examination board	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>28</b>	<b>Wordprocessing and Wordprocessing Exercises</b>										
	Hardware and software for wordprocessing	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	The advantages of wordprocessing	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	What can you do with wordprocessing software?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Choosing a wordprocessing package	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>29</b>	<b>Spreadsheets and Spreadsheet Exercises</b>										
	What is a spreadsheet?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Entering data correctly	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Let the spreadsheet do the work for you	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Tips for building a spreadsheet	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Mathematical operators	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Using conditions in spreadsheets	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Printing spreadsheets	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Graphs	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Business decisions	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Finding the maximum volume of a box	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Lookup tables	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Testing a spreadsheet	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Documenting your spreadsheet	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Ch no	Chapter title and Topics covered in the chapter	AQA Spec B		AQA Spec A		AQA Spec A		WJEC Full		Edexcel Full		Edexcel Short		OCR Spec A		OCR Full	
		Short	Full	Short	Full	Short	Full	Short	Full	Short	Full	Short	Full	Short	Full	Short	Full
<b>30</b>	<b>Desktop Publishing</b> Equipment needed Some features of desktop publishing Advantages of desktop publishing When to use a DTP package Basic techniques used in DTP Summary of the main features of a DTP package Glossary of terms used in desktop publishing	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>31</b>	<b>Database Coursework</b> Creating a database Using the database Sorting and indexing Creating an information system using a database	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>32</b>	<b>Measurement and Control</b> Turtle graphics Monitoring physical quantities (temperature, pressure etc.) using a computer Other examples of computer control	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>33</b>	<b>Modelling</b> Modelling coursework Modelling a supermarket queue Break-even analysis	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>34</b>	<b>Graphics Packages</b> Graphics packages Bit map and vector graphics Clip art Presentation software Multimedia (hypermedia) presentations Colour Computer aided design (CAD)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓