

Syllabus outline: Managing Information Systems

**Subject title: Managing Information Systems**  
**NQF Level 6**

**Prescribed reading: Information Systems in a Business Environment. Wessels et al published by LexisNexis**

**Note: the prescribed reading comes with an interactive CD which is for students who are not familiar with Microsoft Office products. See learning outcome 5.**

Disclaimer: Please note the following:

- A prescribed textbook may not necessarily cover every aspect of a syllabus. The Institute examines the syllabus and any omissions should be researched personally or be provided by your tuition provider.
- ISBN numbers may have changed since the publication of this list. Our policy is that you should always use the latest edition of the textbook.
- Many publishers are no longer publishing hard copies and have switched to e-books.
- Some modules require prescribed readings which can be downloaded for personal use from the internet or the CSSA student portal.

The overall aim of the module is to understand basics of information systems, the role of hardware and software, modern communications and networks, managing of information systems and some commonly used information systems

Syllabus topics	Syllabus detailed content	Suggested texts and readings
<b>Learning Outcome 1: Understand the role of Information and technology in a business environment.</b>		
Introduction. Need for Information. Processing of information.	<ul style="list-style-type: none"> <li>• Introduction</li> <li>• What is information?</li> <li>• Role of information and technology</li> <li>• Determining the information needs</li> <li>• Process of creating information</li> <li>• Deciding an appropriate infrastructure</li> <li>• Managing the environment in which information is created</li> <li>• Users of information</li> <li>• Evaluating and coordinating activities.</li> <li>• Monitoring and Control</li> <li>• Recording events</li> <li>• Calculations on data</li> <li>• Sorting, summarising and transforming data.</li> <li>• Databases</li> <li>• Communicating information to users</li> </ul>	Chapters 1, 2 and 3
<b>Learning Outcome 2: Understand the role of hardware and software.</b>		
Hardware supporting processing of data. Software	<ul style="list-style-type: none"> <li>• Input devices</li> <li>• Processing devices</li> <li>• Secondary storage devices</li> <li>• Output devices</li> </ul>	Chapters 4 and 5.

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	<ul style="list-style-type: none"> <li>• Communication devices</li> <li>• Classification of computers</li> <li>• Comparing computer hardware</li> <li>• Data centres</li> <li>• System software</li> <li>• Operating system</li> <li>• Network management software</li> <li>• Utility software</li> <li>• System development software</li> <li>• Database management systems</li> <li>• System support programs</li> <li>• Application software</li> <li>• General application software</li> <li>• New trends in software</li> </ul>	
<b>Learning Outcome 3: Understand modern communication and network concepts.</b>		
Communications and Networks	<ul style="list-style-type: none"> <li>• Reference framework for communication</li> <li>• Connecting computers</li> <li>• Stand-alone computer systems</li> <li>• Multi-user computer systems</li> <li>• Components of a data communication network</li> <li>• Data channels</li> <li>• Specific hardware needed for communication</li> <li>• Data communication protocol</li> <li>• Software needed for communication</li> <li>• Data communication networks</li> <li>• Network topologies</li> <li>• Geographic scope</li> <li>• Network services</li> <li>• Selecting a suitable network configuration</li> <li>• The Internet and World Wide Web technologies</li> <li>• Internet architecture</li> <li>• Applications enabled by the Internet infrastructure</li> <li>• Searching the Internet and World Wide Web</li> <li>• Internet governance and security</li> <li>• Intranets and extranets</li> <li>• Trends</li> </ul>	Chapter 6
<b>Learning Outcome 4: Understand managing and controlling information systems and security of information systems.</b>		
Management, Monitoring and control of information	<ul style="list-style-type: none"> <li>• Management of information systems.</li> </ul>	Chapters 8 and 9

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systems	<ul style="list-style-type: none"> <li>• Information Technology Infrastructure Library Common underlying concepts</li> <li>• Information systems strategy</li> <li>• The need for a strategy</li> <li>• Formulating an information systems strategic plan</li> <li>• Contents of an information systems strategic plan</li> <li>• Information systems strategy approaches</li> <li>• Costs and benefits of information strategies</li> <li>• Risks of developing a particular information systems strategy</li> <li>• Creating and acquiring information systems solutions and services</li> <li>• Stakeholders and their requirements</li> <li>• Project management</li> <li>• Acquiring hardware and software</li> <li>• Information systems operations</li> <li>• Information systems organisational structures</li> <li>• Roles in the information systems operations</li> <li>• Change management</li> <li>• Incident and problem management</li> <li>• Demonstrate a working knowledge of the issues of computer security.</li> <li>• IT governance (King IV)</li> </ul>	
<b>Learning Outcome 5: Understand the workings and use of a variety of information systems</b>		
Using Information technology, accounting and other information systems	<ul style="list-style-type: none"> <li>• Types of information systems–based on their uses</li> <li>• Transaction processing system</li> <li>• Management information systems</li> <li>• Decision support system</li> <li>• Executive information system</li> <li>• Data warehousing and data mining</li> <li>• Knowledge management systems</li> <li>• Trends in the use of information systems</li> <li>• The workings of a transaction processing system</li> <li>• The accounting cycle</li> <li>• Business processes               <ul style="list-style-type: none"> <li>○ The sales/collection process</li> <li>○ The acquisition/payment process</li> <li>○ The conversion process</li> </ul> </li> <li>• Support business processes</li> <li>• The link between the various processes</li> <li>• End of accounting period</li> <li>• Developing and designing a transaction processing system</li> </ul>	Chapters 10 and 11

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	<ul style="list-style-type: none"><li>• Enterprise Resource Planning Systems</li><li>• Accounting on the Internet</li><li>• Financial reporting using XBRL</li><li>• Electronic business systems</li><li>• Internet Application Service Providers</li></ul>	
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Practical work

- Install a software program
- Access information from the Internet and the World Wide Web
- Use e-mail software
- Access the CIPC website and other online services
- Given a short case study, evaluate information processing and usage of IT in a business to determine risks and compliance with IT governance requirements