

## What does ICT1 cover?

AS Module 1 (ICT1)
<b><i>Information: Nature, Role and Context</i></b>
1.1 Knowledge, information and data
1. Understand the distinction between knowledge, information and data.
2. Information has context and its meaning is determined by the context.
3. Understand the nature of data: recorded facts, events or transactions.
4. Understand the different ways in which data can arise: (direct capture or as a by-product of another operation).
5. Describe the effect of the quality of the data source on the information produced.
6. Understand the need to encode information as data.
7. Understand the problems associated with the coding of value judgements.
1.2 Value and importance of information
1. Understand that information is a commodity and as such can have a monetary value, the level of which depends on its accuracy, its potential use and its particular intended use.
2. Describe the overheads involved in ensuring that information is up-to-date.
1.3 Control of information
1. Describe the legal rights and obligations on holders of personal data to permit access. Understand that the sale of entitlement to access to data may mean paying for a more convenient form of access, the right of which already exists.
2. Understand that files on individuals and on organisations that are non-disclosable have commercial value.
1.4 Capabilities and limitations of information and communication technology
1. Understand that ICT systems offer fast repetitive processing, vast storage capability, the facility to search and combine data in many different ways which would otherwise be impossible. This can provide quality information.
2. Understand that the response speed of technology within ICT systems facilitates the use of feedback, e.g. maintenance of optimum stock levels, electronic fund/money management systems.
3. Understand that there are limitations in the use of ICT systems and in the information they produce. Factors could include hardware, software and communications limitations in addition to inappropriate data models and data control mechanisms.
1.5 The social impact of information and communication technology
1. Explain the benefits and drawbacks of the use of information and communication technology in manufacturing, industry, commerce, medicine, the home and education and teleworking.
1.6 Role of communication systems
1. Explain the use of global communications between single or multiple sources and recipients, including public networks such as the INTERNET.
2. Describe the hardware, software and services required to access the Internet.
3. Describe the facilities offered and the relative merits of: telephone, fax, e-mail, teleconferencing, viewdata, teletext, remote databases and other relevant communication systems. Explain the use of the Internet for a range of activities including communication, information searching and information publication.
Candidates should be aware of the recent developments in the area of communication systems.
1.7 Information and the professional
1. Recall the personal qualities and general characteristics necessary for a person working effectively within the ICT industry and as part of an ICT team.
1.8 Information systems malpractice and crime
1. Explain the consequences of malpractice and crime on information systems.

2. Describe the possible weak points within information technology systems. Describe the measures that can be taken to protect information technology systems against internal and external threats.
3. Describe the particular issues surrounding access to, and use of the Internet; e.g. censorship, security, ethics.
1.9 The legal framework
This section applies to current British legislation and its relationship to the Council of Europe Convention directives.
<b>Software and data misuse</b>
1. Describe the anti-hacking provisions of the Computer Misuse Act.
2. Describe the principles of software copyright and licensing agreements.
<b>Data protection legislation</b>
1. Recall the nature, purpose and provisions of the current data protection legislation of the Public Register.
2. Recall the type of data covered and various exemptions from the legislation.
3. Recall the definitions of processing and consent to process.
4. Explain how the requirements of the legislation impact on data.
5. Collection and use.
6. Describe the obligations of data users under the legislation.
7. Recall the rights of individuals under the legislation.
8. Recall the role of the Registrar in encouraging good practice, acting as Ombudsman and enforcing legislation.
<b>Health and Safety</b>
1. Describe the provisions of the current health and safety legislation in relation to the use of information systems.
2. Recognise that health and safety guidelines cover the design and introduction of new software.