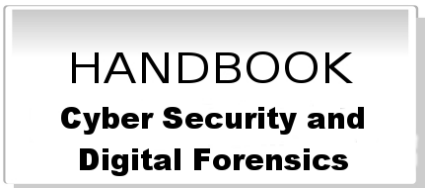
Cyber Security and Digital Forensics



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Please note: guidance is being added over the next few days, but is in the handbook already.

Support also available through Cisco **[4]** Introduction to Cybersecurity **[5] and** Cybersecurity Essentials **[6].**

Level 2

Level 2, Unit 1 - Understanding Cyber Security and Online Threats (3 credits)

1. Understand the range and variety of cyber threats	2. Analyse and detail the types of threat currently in operation	3. Evaluate the impact of threats on various individuals and organisations
1.1 I can explain the basic nature of a cyber threat [7]	2.1 I can describe the motivations of people behind threats [8]	3.1 I can describe the impact on the economy of cyber threats [9]
1.2 I can list some of the more common threats [10]	2.2 I can analyse the main threats in terms of the mechanisms they use [11]	3.2 I can assess the level of threat to my home environment [12]
1.3 I can explain the main features of threats to individuals [13]	2.3 I can describe how the features of threats make them operate [14]	3.3 I can determine the threat to a website in a safe and controlled environment [15]
1.4 I can explain the main features of threats to companies [16]	2.4 I can describe how attacks on companies are designed to work [17]	3.4 I can determine the threat to a server in a safe and controlled envieonment [18]
1.5 I can summarise the	2.5 I can describe threats	3.5 I can produce a

variety of threats for an audience [19]	in terms of their hierarchy of damage [20]	presentation or report on my findings [21]

Level 2, Unit 2 - Analysing and Evaluating Cyber Threats (3 credits)

1. Understand the parts of a system that are attacked	2. Analyse and detail the parts of a system that are attacked	3. Evaluate how and why systems are attacked
1.1 I can understand the basics of the OSI model [23]	2.1 I can analyse the commonplace threats associated with the upper layers of OSI model [24]	3.1 I can evaluate how the different layers of the OSI model can be attacked [25]
1.2 I can explain the main hardware features of an IT system [26]	2.2 I can describe the hardware features that protect an IT system [27]	3.2 I can evaluate how effective the hardware protection services are for an IT system [28]
1.3 I can explain the main software features of an IT system [29]	2.3 I can describe the software features that protect an IT system [30]	3.3 I can evaluate how effective the software protection services are for an IT system [31]
1.4 I can understand the different user services that run on systems, such as email [32]	2.4 I can describe the key services offered by a server [33]	3.4 I can assess the vulnerabilities of each service offered on a server [34]
1.5 I can list the main ports used for different services [35]	2.5 I can analyse the function of each port used on a server in relation to the key services [36]	3.5 I can evaluate the vulnerabilities of each key service running on a server [37]

Level 2, Unit 3 - Applying and Deploying Security Tools and Best Practice (3 credits)

1. Understand the tools used for cyber security	2. Plan, use and practice with common cyber forensic tools	3. Evaluate the tools used and recommend best practices

1.1 I can list the main tools used in cyber security [39]	2.1 I can explain the main features of valid cyber security tools [40]	3.1 I can evaluate commonly used cyber security tools for overall effectiveness [41]
1.2 I can explain the tools used to protect personal identity [42]	2.2 I can select and use tools to protect my personal identity [43]	3.2 I can evaluate the tools selected for the protection of personal identity [44]
1.3 I can list the range of tools used to protect data [45]	2.3 I can set-up a range of tools to protect data for myself or others [46]	3.3 I can assess and recommend different tools to protect personal or organisational data [47]
1.4 I can describe the way devices are compromised [48]	2.4 I can plan and execute a basic set of tasks to protect a device against attack [49]	3.4 I can assess and recommend a range of tools to protect different devices [50]
1.5 I can describe the need for policies and procedures in cyber security [51]	2.5 I can plan and design some how to documents for protecting devices, data and personal identity [52]	3.5 I can evaluate and recommend policies and procedures for efficient and effective cyber security [53]
1.6 I can list a range of laws that apply to cyber crime [54]	2.6 I can explain the purpose of laws that deal with cyber crime [55]	3.6 I can assess the effectiveness of current laws on cyber crime [56]

Level 2, Unit 4 - Extended Project: Securing and Defending Online Systems (6 credits)

1. Research a working cyber security system	2. Plan to build a cyber safe web site or server	3. Develop a cyber safe web site or server	4. Test the system against common threats	5. Evaluate the effectiveness of the system
1.1 I can investigate a working system to determine the main components [58]	2.1 I can make a working skeletal plan of a system [59]	3.1 I can prepare a system in terms of specifications [60]	4.1 I can develop a basic test regime [61]	5.1 I can analyse the results in terms of the objectives [62]
1.2 I can explain the main system components	2.2 I can set clear objectives and outcomes to build a	3.2 I can explain the specification in terms of	4.2 I can explain the purpose of the main test	5.2 I can evaluate some of the features of the system

[63]	system against [64]	performance needs [65]	procedures [66]	and their purpose [67]
1.3 I can describe how the components fit together [68]	2.3 I can list the main safety features that will need to be addressed for success [69]	3.3 I can describe the way a web site functions [70]	4.3 I can explain the expected results from tests [71]	5.3 I can justify some design decisions in terms of objectives [72]
1.4 I can make detailed notes of my findings [73]	2.4 I can explain the main hardware requirements needed [74]	3.4 I can describe the main pieces of software required [75]	4.4 I can describe the test results and what they mean [76]	5.4 I can analyse possible improvements to the system based on usage and end user feedback [77]
1.5 I can present my notes to an audience for feedback [78]	2.5 I can explain the main software aspects of the system [79]	3.5 I can describe the configuration settings for a working system [80]	4.5 I can adjust the system in light of test results [81]	5.5 I can analyse the effectiveness of the system by viewing the different log files [82]
1.6 I can list some key objectives of the system I will design [83]	2.6 I can make a final plan for a system [84]	3.6 I can recommend final adjustments before going live [85]	4.6 I can document the test results for third party support people [86]	5.6 I can recommend improvements to the system for future-proofing [87]

Links
[1] https://theingots.org/community/sites/default/files/uploads/user4107/TLM%20L2%20Cyber%20Handbook%201.3_1.pdf
[2] https://register.ofqual.gov.uk/Detail/Index/39715?category=qualifications&query=603%2F1452%2F7
[3] https://theingots.org/community/RQF_Levels
[4] https://www.netacad.com
[5] https://www.netacad.com/courses/intro-cybersecurity/
[6] https://www.netacad.com/courses/cybersecurity-ess/
[7] https://theingots.org/community/csdfl2u1x#1.1
[8] https://theingots.org/community/csdfl2u1x#2.1
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