

**MODULE SPECIFICATION**

|  |
| --- |
| **Part 1: Information** |
| **Module Title** | Information management and security |
| **Module Code** | CY204 | **Level** | 5  |
| **For implementation from** | September 2020  |
| **UWE Credit Rating** | 30 | **ECTS Credit Rating** | 15 |
| **Faculty** | Environment and Technology | **Field** |  |
| **Department** | Computer Science and Creative Technologies |
| **Contributes towards**  | BSc (Hons) Cyber Security Technical Professional Compulsory |
| **Module type:**  | Standard  |
| **Pre-requisites**  | None |
| **Excluded Combinations**  | None  |
| **Co- requisites**  | None  |
| **Module Entry requirements** | None |
|  |
| **Part 2: Description**  |
| Information security is concerned with protecting an organisations’ electronic or physical data. It should protect the confidentiality, availability and integrity of data. This module is concerned with the way in which electronic data is handled within the organisation. How it is made available, manipulated and analysed. It then examines how management systems are employed to minimise risk without impacting business productivity. The initial part of the module teaches apprentices the basic concepts of information management and how to use database management systems.The latter part covers the standards, policies and procedures for information security. These will cover human behaviour as well as physical and electronic assets.Lecture sessions cover the technical knowledge required. Designated practical work is included to ensure that apprentices have absorbed and understood the key principles involved.This module will be based on ensuring that apprentice’s practical skills and knowledge gained in the block release sessions are carried into the workplace to inform their employment and generation of evidence of competency. You will cover* information management concepts, e.g.:
	+ information storage and retrieval;
	+ information capture and representation;
	+ searching, retrieving, linking, navigating
* database concepts, e.g.:
	+ components of database systems;
	+ design of core DBMS functions (e.g. query mechanisms, access methods);
	+ database architecture and query language
* big data, e.g.:
	+ benefits and limitations
	+ components and architectures employed in systems for big data (e.g. Hadoop cluster)
	+ tools and techniques for analysing large heterogeneous data sets, including statistics
	+ graph theory
* key concepts and benefits of information security management system
* internationally recognised standards – e.g., ISO27001, or similar
* governance, organisational structure, roles, policies, standards and guidelines for cyber and information security
* how an organisation’s security policies, standards and governance are supported by provisioning and access rights – e.g., how identity and access management are implemented and maintained for a database application or physical access control system
* how cyber security policies and procedures are used in different organisational environments and affect individuals and organisations
* the roles of experts in the cyber security industry, how they are recognised, and the work they do.
* how to use organisations such as a CERT, OSINT provider, incident response provider
 |
| **Part 3: Assessment**  |
| This module is assessed by a combination of techniques: a presentation and a practical portfolio. **Component A:** Part 1: Apprentices will design, create and use a database through a DBMS and explain information concepts (1,500 words or equivalent)Part 2: Apprentices will extract and present data (including graphs) from a large dataset. They will explain potential issues with the management of large datasets (1,500 words) **Component B:** A presentation (30 minutes) of an information security plan for the apprentice’s organisation. It should cover:* Compliance with ISO27001
* The organisation’s security policies and procedures
* The use of CERT and OSINT
 |
|  |
| Identify final timetabled piece of assessment (component and element) | **Component B** |
| **% weighting between components A and B** (Standard modules only) | **A:**  | **B**:  |
| **50%** | **50%** |
|  |
| **First Sit** |
| **Component A** (controlled conditions)**Description of each element** | **Element weighting****(as % of component)** |
| 1: Report (1,500 words) | 50% |
| 2: Report (1,500 words) | 50% |
| **Component B** **Description of each element** | **Element weighting****(as % of component)** |
| 1. Presentation (30 minutes)  | 100% |
| **Resit (further attendance at taught classes is not required)** |
| **Component A** (controlled conditions)**Description of each element** | **Element weighting(as % of component)** |
| 1: Report (1,500 words) | 50% |
| 2. Report (1,500 words) | 50% |
| **Component B Description of each element** | **Element weighting(as % of component)** |
| 1. Presentation (30 minutes) | 100% |
|  |
| **Part 4: Learning Outcomes & KIS Data** |
| **Learning Outcomes** | On successful completion of this module apprentices will be able to:1. Apply statistical techniques to large data sets. Identify vulnerabilities in big data architectures and deployment. Component A Part 2)
2. Apply a management system and develop an information security management plan. (Component B)
3. Explain the key concepts of information management (Component A Part 1)
4. Design a relational database using best practice techniques (Component A Part 1)
5. Create and use a database via a DBMS (Component A Part 1)
 |
| **Key Information Sets Information (KIS)****Contact Hours****Total Assessment** |  The table below indicates as a percentage the total assessment of the module which constitutes a;**Written Exam**: Unseen or open book written exam**Coursework**: Written assignment or essay, report, dissertation, portfolio, project or in class test **Practical Exam**: Oral Assessment and/or presentation, practical skills assessment, practical exam (i.e. an exam determining mastery of a technique)  |
| **Reading List** | Reading list to be added |

***FOR OFFICE USE ONLY***

|  |  |
| --- | --- |
| **First Approval Date (and panel type)** | *Date of first {panel} approval*  |
| **Revision ASQC Approval Date** *Update this row each time a change goes to ASQC* |  | **Version**  | *1* | *Link to RIA*  |
|  |  |  |
|  |  |  |
|  |  |  |