

# WM243-18 Information Management

**22/23**

**Department**

WMG

**Level**

Undergraduate Level 2

**Module leader**

**Credit value**

18

**Module duration**

30 weeks

**Assessment**

100% coursework

**Study location**

University of Warwick main campus, Coventry

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## Description

### Introductory description

Information Management is primarily concerned with the capture, digitisation, representation, organisation, transformation, and presentation of information; algorithms for efficient and effective access and updating of stored information; data modelling and abstraction; and physical file storage techniques. Cyber security has to be embedded within information management.

### Module aims

Interact with repositories of information via suitable queries

Develop database solutions which comply with standards/regulations such as GDPR, and which have appropriate controls in place

### Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

#### Outline content

The content of this module will be taught from a cyber security perspective.

- Information management concepts. Data and information management regulation (GDPR and other regulation both national and international)

- Database systems - Database models such as relational, dimensional, etc. Understanding Database Management Systems (DBMS). DBMS architecture. Data independence.
- Data modelling. Data relationships (one-to-many, many-to-many, one-to-one). Entity Relationship (ER) modelling. Database optimisation and normalisation.
- relational databases
- access control
- Structured Query Language (SQL). SQL Syntax. Manipulating data, databases, and tables.

## Learning outcomes

By the end of the module, students should be able to:

- Develop a data model that meets a given information management requirement
- Implement and test a data modelling solution with appropriate controls which meets best practice requirements
- Critically evaluate the cyber consequences that flow from the management of information in a given scenario.

## Indicative reading list

Connolly, Thomas and Begg, Carolyn, "Database Systems: A Practical Approach to Design, Implementation, and Management", 6 Ed, Pearson (2014)

Cox, Sharon A., "Managing Information in Organizations: A Practical Guide to Implementing an Information Management Strategy", Palgrave Macmillan (2014)

Hills, Ted, "NoSQL and SQL Data ModelingModelling: Bringing Together Data, Semantics, and Software", Technics Publications (2016)

[View reading list on Talis Aspire](#)

## Subject specific skills

Interact with repositories of information via suitable queries

Critically evaluate the cyber consequences that flow from the management of information in a given scenario.

## Transferable skills

Information literacy

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## Study

## Study time

<b>Type</b>	<b>Required</b>
Supervised practical classes	18 sessions of 2 hours 30 minutes (25%)
Private study	49 hours (27%)
Assessment	86 hours (48%)
Total	180 hours

### **Private study description**

Independent activity between workshops, following up on activities initiated in previous workshops or preparing for upcoming workshops.

### **Costs**

No further costs have been identified for this module.

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### **Assessment**

You do not need to pass all assessment components to pass the module.

#### **Assessment group A2**

	<b>Weighting</b>	<b>Study time</b>
Coursework	50%	40 hours
The report describes the implementation of a particular type of database (relational, NoSQL, Graph) including construction of appropriate methods for the population, querying and modification of data.		
Coursework	50%	46 hours
The report requires the student to critically assess the security controls that protect some part of the information lifecycle process.		

### **Feedback on assessment**

Written feedback for each assignment  
 Verbal feedback during tutorial sessions  
 Solutions provided to tutorial questions  
 Summative feedback on assignments and exam

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### **Availability**

### **Courses**

This module is Core for:

- UWMA-H651 Undergraduate Cyber Security
  - Year 2 of H651 Cyber Security
  - Year 2 of H651 Cyber Security
  - Year 2 of H651 Cyber Security