

WM243-18 Information Management

22/23

Department

WMG

Level

Undergraduate Level 2

Module leader

Credit value

18

Module duration

30 weeks

Assessment

Multiple

Study location

University of Warwick main campus, Coventry

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

Study

Study time

Type	Required
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.

Assessment

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

Assessment group A2

	Weighting	Study time
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.		

Assessment group R1

	Weighting	Study time
Coursework (Resit)	100%	

Feedback on assessment

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

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