BN2237 - DATABASES

Module Number: BN2237

Module Title: Databases

Number of Aston Credits: 10

Total Number of ECTS Credits: 5
(European Credit Transfer)

Staff Member(s) Responsible for the Module

Paul Bocij
Operations & Information Management Group

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Availability: Please use WASS (Web Appointment Scheduling System) or contact group administrator, John Morley, ABS266, Extension 3236

Other Staff Contributing to the Module: None

Pre-requisite(s) for the Module: None

Module Learning Outcomes:

Upon successful completion of the module students will be able to:

1. Formulate a database design using entity-relationship modelling.

2. Normalise a relational database design to 3rd Normal Form.

3. Design database systems that are technically sound and effectively meet the requirements of users.

4. Implement database systems that are technically sound and effectively meet the requirements of users.

5. Appreciate the role of databases in meeting the need for information management in business organisations.

6. Appreciate the close relationship and differences between database, application and usability.

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Module Content:

This module focuses on equipping students with the knowledge and skills needed to be able to design, create and test fully working database applications to a professional standard. By the end of the module, you should have sufficient knowledge, skills and experience to be able to develop powerful database applications for a client, such as a placement organisation or employer.

The early part of the module concentrates on the theory and understanding needed to be able to design databases correctly. You will learn a number of common techniques that are used to produce efficient and robust designs.

By the end of the module, you will have learned to create user interfaces, queries, reports, macros, test plans and other documentation to a professional standard. You will also have been introduced to SQL (Structured Query Language) and VBA (Visual Basic for Applications).

You will gain practical experience of working with well-known database systems including MS Access and MySQL.

International Dimensions:

Database software products comprise the spearhead of the biggest IT companies worldwide i.e. Microsoft, Oracle, IBM, Informix, etc., but also the most frequently installed software program in business organisations around the world. Almost every business solution is based on a commercial or proprietary database. The teaching of databases module is based on universally-accepted standards and tools, thus ensuring that student knowledge and skills are applicable around the world.

Corporate Connections:

Students will benefit from becoming familiar with two of the most popular database software products in the world, Microsoft Access and MySQL. Mastery of databases combined with hands-on Microsoft Access and SQL experience is an essential qualification for students undertaking one year professional placement as well as for their future professional career.

Links to Research:

Students will benefit from becoming familiar with industry-standard applications and technologies, such as Microsoft Access and SQL. The knowledge, skills and practical experience gained will help to equip students for the one year professional placement as well as for their future professional career. In addition, the ability to manipulate large volumes of data efficiently is an essential research skill.

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Learning and Teaching Rationale and Methods:

Formal descriptions of the theoretical principles, the IT-software and the practical design and development processes will be given in lectures. Scheduled tutorial sessions will be available for familiarisation with the database software. During the tutorial sessions, students will acquire hands-on experience on designing and developing database application systems. Some practical work will be undertaken outside scheduled tutorial sessions. The lecture format is efficient for motivating and directing learning; the tutorials are important to check and support the students' practical learning.

How are the 100 Learning Hours per Module Achieved?

Contact Hours	24 hours
Directed Learning	56 hours
Private Study/Group work	20 hours
Total	**100 hours**

Ethical Approval:

This module does not require any primary research and no ethical approval will be necessary.

Assessment and Feedback Rationale and Methods:

The module will be assessed primarily through individual assignments based on design and implementation (100%).

This matches the learning outcomes as shown in Section 3. For details see separate specification document.

Detailed and specific feedback will be provided for both part 1 and part 2, at both individual and overall class levels.