

American College Dublin

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IB 302 Networks and Databases

Credits:	3 US credits / 6 ECTS credits
Credit level:	Stage two
Prerequisites:	IB204C Business Computing
Mandatory:	Yes
Contact hours:	40
Academic Year:	2016 – 2017
Semester:	1
Lecturer:	Mr. Rowland Crawte

MODULE DESCRIPTION

An introduction to the basic concepts of database management, this includes focusing on using the relational database Access. Students will also study networks, covering topics such as protocols, topology and types. The internet will also be explored.

INTENDED LEARNING OUTCOMES

At the end of this class, students will have:

1. Explored the practical application of database theory to develop real-world business solutions.
2. Developed knowledge of the theory and structure of modern databases comparing traditional file-based approach to data management to the DBMS approach.
3. Gained skills to build database systems and how to manage it by applying Microsoft Access 2007 Database system as a form of a relation DBMS.
4. Attained knowledge of the theory and structure of computer networks and the principles of data communication, communications media, switching and routing technology.
5. Developed skills to set up a Local Area Network.
6. Developed knowledge of the main network architectures and the security issues related to them.

LEARNING OUTCOMES MAP

Learning Outcomes	Content	Delivery	Assessment
1	Section 1-9	Lectures, readings, class exercises and discussions.	Class exercises, assignments, exam and participation.
2	Sections 1-3	Lectures, class exercises and practical tutorial.	Class exercises, assignment and participation.
3	Sections 4-9	Lectures, readings, class exercises and discussions,	Class exercises, assignment and participation.
4	Sections 10-20	Lectures class exercises, Practical tutorials.	Class exercises, class test and participation.
5	Sections 14-16	Lectures, readings, class exercises and discussions.	Class exercises.
6	Sections 17-20	Lectures, practical tutorial and discussions.	Class exercises and participation.

COURSE OUTLINE

WEIGHTING

Database Systems

50%

1. File management
2. Characteristics of database management systems
3. Database models, Entity-relationship modelling
4. Physical database organisation
5. Designing a database in Access 2010
6. Write queries, reports and forms
7. Create applications
8. Security and administration
9. Data warehousing and data mining

Computer Networks

50%

10. Communications media
11. Characteristics of communications media
12. Transmission terminology
13. Protocols (SMP, HTTP, TCP/IP, etc)
14. Network functionality (file services print services, access control)
15. Network interface card (Ethernet, Token Ring)
16. OSI model
17. Network topology and types
18. Client/server architecture, Peer-to-peer architecture
19. Open systems and enterprise networking
20. The internet and security

READING LIST

No set textbook will be used for this course; the student should refer to the reading list below, which will be referenced in lectures.

SUPPLEMENTARY READING LIST

Johnson, Steve (2004), Brilliant Microsoft Access 2003, Pearson Education

Thomas Connolly & Carolyn Begg, (2009) Database systems, 5th Edition

Frank Derfler (1998), Using Networks

Andrew S. Tanenbaum (2010), Computer Networks, 5th Edition

ASSESSMENT / GRADING

N.B: Assignments handed in late will be deducted marks for every day late. The lecturer may refuse to accept any late hand-ins, if the student has exceeded the deadline. If an assignment is found to be copied, BOTH parties will be graded an F and reported to the Dean of Faculty.

Assessment will take the form of:

Participation	10%
Assignment	25%
Class Test	15%
Final Exam	<u>50%</u>
Total	100%

Grading

Each component of the course will be assessed separately. Students will be graded according to the information contained in the ACD Catalogue and the QA Manual which can be found at <http://www.iamu.edu/academics/publications>

ATTENDANCE

Class attendance is necessary for the achievement of intended learning outcomes. In the case of illness it is the student's responsibility to telephone the College office to notify the lecturer (see Academic Policies and Procedures in the ACD Catalogue and the QA Manual).

ACADEMIC DISCIPLINE

Refer to the subsection on Academic Discipline in the current ACD Catalogue and QA Manual.