


AMOU UNIVERSITY
“A Vehicle for Peace and Development”
AMOU UNIVERSITY



FACULTY OF COMPUTING AND ICT

BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY PROGRAMME

ACADEMIC YEAR 2015/ 2016

COURSE DESCRIPTION

BIT 221	Principles of Database Management Systems(Ms Access)	
Contact Hours	52	
Pre-requisite	BIT 212 Computer Organization and Architecture	
Purpose/Aim	The course focuses on some topics that are important aspects in database design, implementation, optimization, and distributed application. The course primarily covers database organization and the relevant techniques such as query optimization, transaction processing, physical database design, Normalization, Table relationships and the concept of Primary, Foreign and candidate keys.	
Course Objective (Indicative Learning Outcomes)	Objective Learning	<p>The objectives that the management should keep in mind when they design and organize their data base management systems are:</p> <ul style="list-style-type: none"> • Provide for mass storage of relevant data • Make access to the data easy for the user • Provide prompt response to user requests for data • Make the latest modifications to the database available immediately • Eliminate redundant data • Allow for multiple users to be active at one time • Allow for growth in the database system • Protect the data from physical harm and unauthorized access
Course Content	<ul style="list-style-type: none"> • Introduction to Databases • Database Environment • Entity-Relationship Modeling • Enhanced Entity-Relationship Modeling • The Relational Model • Relational Algebra (Introduction) • Normalization • SQL: Data Manipulation • SQL : Data Definition • Query-By-Example • Commercial DBMS: Access and Oracle • Database Planning, Design, and Administration • Fact-Finding Techniques (Introduction) • Methodology: Conceptual, Logical, and Physical Database Design 	



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	<p>Lab 1 Given relations, implement them in common Relational Database System like MS Access</p> <p>Lab 2 Given some criteria come up with queries and views.</p> <p>Lab 3 Given a scenario come up with attributes, constraints, proper type and subsequent entities</p> <p>Lab 4 Normalization</p> <p>Lab 5 Implement the results of Lab 3</p>		
Learning & Teaching Methodologies	Lectures, tutorials and computer laboratory exercises		
Instructional Materials/Equipment	Classroom with audio visual aids Computer laboratory Relational database management system e.g. Oracle		
Course Assessment	Type	Weighting (%)	
	Final Examination	60	
	Mid Term Examination	20	
	Assignment	10	
	Attendance	10	
	Total	100	
Recommended Reading	Title	Author	Publisher
	Principles of distributed database systems	Ozsu, M, Tamer Valduriez	Pearson education (1999)
Additional Reading	Fundamentals of Database Systems	Elmasri et al	Pearson education (2004)
	Database and Transaction Processing: An Application-Oriented Approach	Philip M. Lewis, Arthur Bernstein, and Michael Kifer	Addison Wesley (2002)
Other Support Material	A variety of multimedia systems and electronic information resources as prescribed by the lecturer. Various application manuals, URL search and journals.		