

## DBMS C7008: Database Management

Module Details	
Module Code:	DBMS C7008
Full Title:	Database Management <b>APPROVED</b>
Valid From:	Semester 1 - 2019/20 ( June 2019 )
Language of Instruction:	English
Duration:	1 Semester
Credits:	5
Module Owner:::	Stephen Larkin
Departments:	Unknown
Module Description:	A student completing this module will have the ability to design, implement and test database transaction code, stored procedures and triggers. The student will also have gained a fundamental knowledge of Distributed Databases and non-relational databases.

Module Learning Outcome	
On successful completion of this module the learner will be able to:	
#	Module Learning Outcome Description
MLO1	Construct advanced Data Manipulation statements.
MLO2	Encapsulate procedural database operations using stored procedures, stored functions and triggers.
MLO3	Explain and apply Transaction Management theory.
MLO4	Discuss current database development technologies and issues.
Pre-requisite learning	
<p><b>Module Recommendations</b>  <i>This is prior learning (or a practical skill) that is strongly recommended before enrolment in this module. You may enrol in this module if you have not acquired the recommended learning but you will have considerable difficulty in passing (i.e. achieving the learning outcomes of) the module. While the prior learning is expressed as named DkIT module(s) it also allows for learning (in another module or modules) which is equivalent to the learning specified in the named module(s).</i></p>	
No recommendations listed	

<b>Module Indicative Content</b>
<b>Database Procedural Programming</b> Stored Procedures, Functions, Triggers, DB Objects, Cursors, Collection Objects, Packages.
<b>Fundamentals of Transaction Management</b> Transaction Concepts: ACID Properties, COMMIT & ROLLBACK; Concurrency Control: interference, locking, deadlock.
<b>Database Recovery</b> Recovery Management: transaction log, recovery process; Checkpoints.
<b>SQL: Advanced Joins &amp; Functions</b> Outer Joins; Single-row Functions.
<b>Database Application Development</b> DDL and DML; Advanced SQL; Set Operators.
<b>Contemporary Database Development</b> Non-Relational Databases, Distributed Databases

## Module Assessment

<b>Assessment Breakdown</b>	%
Course Work	100.00%

<b>Module Special Regulation</b>

### Assessments

#### Full Time

<b>Course Work</b>			
<b>Assessment Type</b>	Continuous Assessment	<b>% of Total Mark</b>	30
<b>Marks Out Of</b>	0	<b>Pass Mark</b>	0
<b>Timing</b>	Week 8	<b>Learning Outcome</b>	2,3
<b>Duration in minutes</b>	0		
<b>Assessment Description</b>	Class test		
<b>Assessment Type</b>	Continuous Assessment	<b>% of Total Mark</b>	50
<b>Marks Out Of</b>	0	<b>Pass Mark</b>	0
<b>Timing</b>	Week 11	<b>Learning Outcome</b>	1,2,3
<b>Duration in minutes</b>	0		
<b>Assessment Description</b>	Group Project		
<b>Assessment Type</b>	Continuous Assessment	<b>% of Total Mark</b>	20
<b>Marks Out Of</b>	0	<b>Pass Mark</b>	0
<b>Timing</b>	Week 12	<b>Learning Outcome</b>	4
<b>Duration in minutes</b>	0		
<b>Assessment Description</b>	Presentation		

No Project

No Practical

No Final Examination

#### Part Time

Course Work			
<b>Assessment Type</b>	Continuous Assessment	<b>% of Total Mark</b>	30
<b>Marks Out Of</b>	0	<b>Pass Mark</b>	0
<b>Timing</b>	Week 8	<b>Learning Outcome</b>	2,3
<b>Duration in minutes</b>	0		
<b>Assessment Description</b> Class test			
<b>Assessment Type</b>	Continuous Assessment	<b>% of Total Mark</b>	50
<b>Marks Out Of</b>	0	<b>Pass Mark</b>	0
<b>Timing</b>	Week 11	<b>Learning Outcome</b>	1,2,3
<b>Duration in minutes</b>	0		
<b>Assessment Description</b> Group Project			
<b>Assessment Type</b>	Continuous Assessment	<b>% of Total Mark</b>	20
<b>Marks Out Of</b>	0	<b>Pass Mark</b>	0
<b>Timing</b>	Week 12	<b>Learning Outcome</b>	4
<b>Duration in minutes</b>	0		
<b>Assessment Description</b> Presentation			
No Project			
No Practical			
No Final Examination			
Reassessment Requirement			
<b>No repeat examination</b> <i>Reassessment of this module will be offered solely on the basis of coursework and a repeat examination will not be offered.</i>			

**Module Workload**

<b>Workload: Full Time</b>					
<i>Workload Type</i>	<i>Contact Type</i>	<i>Workload Description</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>	<i>Hours</i>
Lecture	Contact	No Description	Every Week	1.00	1
Practical	Contact	No Description	Every Week	3.00	3
Directed Reading	Non Contact	No Description	Every Week	3.00	3
Independent Study	Non Contact	No Description	Every Week	1.00	1
Total Weekly Learner Workload					8.00
Total Weekly Contact Hours					4.00

<b>Workload: Part Time</b>					
<i>Workload Type</i>	<i>Contact Type</i>	<i>Workload Description</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>	<i>Hours</i>
Lecture	Contact	No Description	Every Week	1.00	1
Practical	Contact	No Description	Every Week	3.00	3
Directed Reading	Non Contact	No Description	Every Week	3.00	3
Independent Study	Non Contact	No Description	Every Week	1.00	1
Total Weekly Learner Workload					8.00
Total Weekly Contact Hours					4.00

## Module Resources

### Supplementary Book Resources

Connolly, Thomas, Begg, Carolyn. (2015), Database Systems, 6th. Addison-Wesley, [ISBN: 1292061189].

Michael Mannino. (2014), Database Design Application Development and Administration, 6th ed.. Chicago Business Press, [ISBN: 0983332428].

Feuerstein, S & Pribyl, B. (2014), Oracle PL/SQL Programming, 6th. O'Reilly, [ISBN: 9781449324452].

Stephen Morris, Peter Rob, Carlos Coronel, Keeley Crocket. (2013), Database Principles: Fundamentals of Design, Implementations and Management, 2nd Ed.. Cengage Learning, Inc., [ISBN: 140806636X].

Peter Lake, Paul Crowther. (2013), Concise Guide to Databases: A Practical Introduction (Undergraduate Topics in Computer Science),, Springer.

*This module does not have any article/paper resources*

### Other Resources

[website], MySQL Tutorial,  
<http://www.mysql.com/>

[website], PostgreSQL,  
<http://www.postgresql.org/>

[website], Oracle Inc.. Home Page,  
<http://www.oracle.com>

[Website], MongoDB,  
<http://www.mongodb.org>