## Databases 2

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| *SMS Code* | IN605001 | *Directed Learning hours* | 60 |
| *Level* | 6 | *Workplace or Practical Learning hours* | 0 |
| *Credits* | 15 | *Self-Directed Learning hours* | 90 |
| Prerequisites | IN505001, IN511001 | *Total Learning Hours* | 150 |
| *This course partially replaces IT206001*  *Name of other Programme: Bachelor of Information Technology (version 2)* | | | |

***Aims***

To give an understanding of the fundamentals of database management systems with emphasis on relational systems.

***Learning Outcomes***

At the successful completion of this course, students will be able to:

1. Apply the formal theory underlying relational database management systems.
2. Construct an appropriate data and database (ERD) model for a specified problem and build the corresponding database.
3. Construct and apply syntactically correct database queries using an appropriate query language.
4. Implement basic data checking and validation for security controls?

***Indicative Content***

* Role of relational databases and relational database management systems
* Formal database theory – relational algebra, functional dependencies and normalisation
* Architecture of relational database management systems
* Query construction and optimisation
* Data modelling
* Design and implementation of relational databases
* Principles of database administration and database security

***Assessment***

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| **Assessment Activity** | **Weighting** | **Learning Outcomes** |
| SQL Worksheet | 10% | 3 |
| XML Worksheet | 10% | 3 |
| Data model | 20% | 2 |
| Build database | 20% | 1,3,4 |
| Examination | 40% | 1,3,4 |

***Resources* Required:**

Churcher, Clare (2007) Beginning database design: From novice to professional. Apress.