**INTI INTERNATIONAL UNIVERSITY**
**COURSE STRUCTURE**

Programme: **DIPLOMA IN INFORMATION AND COMMUNICATIONS TECHNOLOGY (DICTN)**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1. | Name of Course/Module : **DATABASE MANAGEMENT** | | | | | | | |
| 2. | Course Code: **ICT1104** | | | | | | | |
| 3. | Rationale for the inclusion of the course/module in the programme: Provide fundamental principles of database management systems. | | | | | | | |
| 4. | **Student Leqarning Time (SLT)** | **Total Face to Face** | | | | | **Total Student Independent Learning Time** | |
| | | **L** | **T** | **P** | **O** | **A** | **B/O** | **IL** |
| | L = Lecture<br>T = Tutorial<br>P = Practical(Lab)<br>O= Others<br>A= Assessment<br>B/O=Blended /Online learning<br>IL= Independent learning | 28 | 0 | 14 | | 4 | 14 | 100 |
| 5. | Credit Value: 4 | | | | | | | |
| 6. | Prerequisite (if any): None | | | | | | | |
| 7. | Learning outcomes:<br>On completion of the course, students will be able to:<br><br>1. Explain how data and information processing and management are executed.<br>2. Describe the main process of database design in practical programming underpinning the manipulation of information and the analysis of data.<br>3. Employ SQL Server to create simple tables and queries.<br>4. Organize in group to create a simple database and present the application using Microsoft SQL server . | | | | | | | |
| 8. | Synopsis:<br>This is an introduction to relational databases course. It covers data modelling, database development methodology and implementation. The course will discuss fundamental principles of databases, the relational model, conceptual design and query languages. An implementation of simple application using Microsoft SQL Server is covered during the practical classes. | | | | | | | |
| 9. | Mode of Delivery: Lectures, Practical, Small Group Discussion and Tutorials are conducted online. | | | | | | | |
| 10. | Assessment Methods and Types:<br><br>Coursework and Examination<br>Tests, Online Quiz, Project, Assignments and Final Exam | | | | | | | |

CERTIFIED TRUE COPY

Jaya Kumari Krishnan
Senior Officer
Admissions & Records
INTI International University

11. Content outline of the course/module and the SLT per topic:

| Sessions | Topics | LO | L | T | P | B/O | O | A | IL |
|---|---|---|---|---|---|---|---|---|---|
| 1-4 | **Basic Concepts**<br>Overview of Data, Information, database, database management and | 1 | 4 | | | 2 | | | |
| 5-8 | **Introduction to Relational Database**<br>Overview of Relational database, Traditional File Approach, Advantages of DBMS, Three layers of abstraction, users of DBMS | 1 | 4 | | | 2 | | | |
| 9-14 | **Overview of SQL Server**<br>Create Tables for Database, defines data types, properties of data, primary keys.<br><br>**Create Tables for Database Application**<br>Building tables using SQL server , define data types, properties of data, primary keys, adjusting layout of tables. Entering data into tables. Relate tables in SQL | 2 | 6 | | 4 | 3 | | | |
| 15-18 | **Designing Database**<br>Designing the database and defining its relationships.<br>Introducing various data types (e.g: Char, varchar, enum, auto-increment, not null) | 3,4 | 4 | | 4 | 2 | | | |
| 19-22 | **Creating Queries part 1**<br>Populating the database and introducing import & export functions<br>Querying the database Part 1 | 2 | 4 | | 2 | 2 | | | |
| 23-25 | **Creating Queries part 2**<br>Populating the database and introducing import & export functions<br>**Querying the database Part 2** | 3,4 | 3 | | 2 | 1 | | | |
| 26-28 | **Referential And Entity Integrity Rules and relationships** | 3,4 | 3 | | 2 | 2 | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | TOTAL | | 28 | | 14 | 14 | | 4 | 100 |

*Lecture (L), Tutorial (T), Practical (P), O (Other), Assessment (A), B/O ((Blended/Online learning); Independent Learning (IL); Learning Outcome (LO)*

CERTIFIED TRUE COPY

Jaya Kumari Krishnan
Senior Officer
Admissions & Records
INTI International University

12. **Main reference(s) supporting course:**

- Connolly T. and Begg C.,(2014), Database Systems: A Practical Approach to Design, Implementation and Management, 6th edition, Addison Wesley.

**Additional references:**

- Carlos Coronel , Steven Morris (2014), Database Systems: Design, Implementation, & Management, 11th Edition, Cengage Learning.

13. Other additional information (if any):

**LABORATORY WORK:**

| Week | Practical Work |
|---|---|
| 3 | Introduction to tables, creating data field, key-in data, create more tables |
| 4 | Linking the tables |
| 5 | Creating forms and designing forms |
| 6 | Creating reports and designing reports |
| 7 | Creating simple query |
| 8 | Integrating forms, Integrating reports and query |
| 9 | Creating a simple database application |

**ASSESSMENT:**

| | |
|---|---|
| Test | 20% |
| Online Quiz | 10% |
| Assignment | 10% |
| Project | 20% |
| Final Exam | 40% |

**FINAL EXAMINATION FORMAT:**
Duration: 2 hours
Section A: Answer TWO compulsory questions.
Section B: Answer any TWO out of THREE questions.
All questions carry equal marks.

**GRADING SCALE:**
A+ (90-100), A (80-89), A- (75-79), B+ (70-74), B (65-69), B- (60-64), C+ (55-59), C (50-54), C- (45-49), D (40-44), F (0-39).
Resit Pass (50-100), Resit Fail (0-49).

**Important Note:**
**A student who obtains a grade C- (45 -49 marks) in a 100% coursework module is required to resubmit the coursework component determined by the lecturer and ascertained at the Exam Board. Resubmission marks will be capped at a maximum of 50 marks or a grade C.**

**A passing mark can only be achieved when the student attempts both the coursework and final exams.**

CERTIFIED TRUE COPY

Jaya Kumari Krishnan
Senior Officer
Admissions & Records
INTI International University