This learning and assessment plan outlines how this unit or cluster of units will be delivered and assessed. The schedule of learning topics, assessments and the due date for assessments is included.

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| Qualification national code and title: | ICT40120 Certificate IV in Information Technology (Programming) |
| Delivery Period: | Semester 2, 2025 |
| Cluster Name (if applicable) | Data Driven Applications |

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| National ID | Name of unit |
| [ICTPRG431](https://training.gov.au/Training/Details/ICTPRG431) | [Apply query language in relational databases](https://training.gov.au/Training/Details/ICTPRG431) |
| [ICTPRG432](https://training.gov.au/Training/Details/ICTPRG432) | [Develop data-driven applications](https://training.gov.au/Training/Details/ICTPRG432) |
| **You can access the full unit/s of competency here** (insert web address to unit of competency at [**www.training.gov.au**](http://www.training.gov.au) or equivalent link if available) | |

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| Delivery Location/s (Campus/Room/Online): | Perth Building 2, Rooms 4-06, 3-13; Online |

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| Student Learning Resources, text, equipment (Required/Optional) | | | | |
| Student to supply:  Removable storage (such as a portable SSD or USB drive), stationery and note-taking supplies as needed | | | | |
| College to supply:  PC with Windows 10 or later; Laragon for Mariadb/Mysql; Visual Studio 2019 or later; Internet access | | | | |
| **Lecturer Name:** | **Phone:** | **Email:** | **Contact times** | **Campus / Room** |
| Chris Arnold |  | [chris.arnold@nmtafe.wa.edu.au](mailto:chris.arnold@nmtafe.wa.edu.au) | Tuesday, Thurs evening, or by email | Tuesday rooms 3-03 and 4-06 |
| Alex Schmidt |  | [alexander.schmidt@nmtafe.wa.edu.au](mailto:alexander.schmidt@nmtafe.wa.edu.au) | Class time or by appointment | PIN Staffroom |

## Assessment Summary

| Assessment | Title and brief description | Due Date |
| --- | --- | --- |
| Assessment 1 | **Knowledge-based assessment**  These cover the underpinning knowledge required for the units of competency in this cluster.  These KBAs consist of a few quizzes to be completed in class. | KBA1: Week 4; midnight 17/8/2025 KBA2: Week 5; midnight 24/8/2025 KBA3: Week 8; midnight 14/9/2025 |
| Assessment 2 | **Portfolio of Work**  Covers SQL Data Definition Language (DDL), Data Control Language (DCL) & Data Manipulation Language (DML) components including creating of databases, users, and tables, plus the insertion, deletion, updates, queries, and joins that form the underlying actions for BREAD/CRUD. | Portfolio 1: Week 6; midnight 31/8/2025 Portfolio 2: Week 7; midnight 7/9/2025 Portfolio 3: Week 9; midnight 21/9/2025  Portfolio 4: Week 13; midnight 26/10/2025 |
| Assessment 3 | Data Driven Application using C#, WPF and SQL  Covers the creation of a small data driven application for a client using C#, WPF and SQL to implement the classic BREAD/CRUD operations. | Week 18: midnight 29/11/2025 |

**You will receive more detailed instructions on each assessment from your lecturer.**

The regular learning requirements to develop the skills and knowledge for this unit are outlined below.

Please refer to your timetable for session times.

**Please note:** This plan is to be used as a guide and may be adapted to meet the needs of students.

You will be notified of changes as they occur.

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| Your training will include **structured in and out of class activities\*** to be completed for this unit. | |
| *\*Out of class activities* may include(þ): | |
| lectures or tutorials, online tasks and forums  assessments (when integrated with learning)  workplace experience  prescribed reading and research | workshop activities  projects, assignments  prescribed follow-up activities  other (please specify) |

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| **Sessions** | | **Element**  **number** | **Assessment** | **Topic** | **Learning**  **Resources\*** | **Structured out of class activities\*** | |
| **Session** | **Hrs** |  | **Hrs** |  |  | **Activity** | **Hrs** |
| 1 | 4 | ICTPRG431 (1) |  | **Database Basics**  • Introduction  • Definitions  • Terminology.  Introduction to Laragon. | Blackboard session 1 learning materials | Video overview of SQL  <https://youtu.be/h0nxCDiD-zg> | .75 |
| 2 | 3 | ICTPRG431 (1) | 1 | **SQL Data types and Creating Tables**  • Tables, Field names, Records  • Data Types Integer, Float, Date, Char, Varchar etc.  **Assessment Work**  Knowledge Based Assessment 1: Database Terminology and Design | Blackboard session 2 learning materials | <https://youtu.be/E4WwzjCEeto>  <https://youtu.be/3AYBudFm4nw>  <https://youtu.be/3AYBudFm4nw>  <https://youtu.be/btjcNSOUTOg>  <https://youtu.be/-NUYXD6B-io>  <https://youtu.be/GquwVjgnKDc>  <https://youtu.be/qhFkXAWl9s4>  <https://youtu.be/ekX6Mgi3TWE> | .75 |
| 3 | 3 | ICTPRG431 (1) | 1 | **SQL queries** DDL-Data Definition Language Create/Alter/Drop/Rename  DML-Data Manipulation Language  Insert/Update/Delete/Select  Basic calculations  Assessment Work:  Knowledge Based Assessment 2 | Blackboard session 3 learning materials | <https://youtu.be/9Pzj7Aj25lw> | 1 |
| 4 | 3 | ICTPRG431 (Knowledge evidence) | 1 | **Relations in Databases (SQL)**  Data Type Constraints  Default, Null, Not Null  Primary Key & Foreign Key  Table Relations  1:1,1:M, M:M  **Assessment Work: AT1 KBA 3**  Knowledge Based Assessment 3 | Blackboard session 4 learning materials | <https://www.youtube.com/watch?v=Q45sr5p_NmQ>  <https://www.youtube.com/watch?v=lDnL1gwCE0o>  <https://www.youtube.com/watch?v=KjA2LhT4TRU>  <https://www.youtube.com/watch?v=a-o0d_e9mW8>  <https://www.youtube.com/watch?v=9WP35xwZ3tk> | 0.5 |
| 5 | 3 | ICTPRG431 (Knowledge evidence) | 1 | **Normalising and Relating Tables** Normalisation  Repeated data  Data consistency  ACID  Relating Tables  Assessment Work:  SQL Portfolio Part 1 – Design & DDL  Covers designing tables, creating databases, users and tables. | Blackboard session 5 learning materials | <https://youtu.be/J-drts33N8g>  <https://www.youtube.com/watch?v=l5DCnCzDb8g> | 0.7 |
| 6 | 3 | ICTPRG431 (3) | 1 | **Relational Queries (SQL)**  Join  Union  Nested queries  **Assessment Submission:** Completion and submission of SQL Portfolio Part 1 | Blackboard session 6 learning materials | <https://www.youtube.com/watch?v=pJWCwfv983Q>  <https://youtu.be/EpW6YBVx-zc>  <https://www.youtube.com/watch?v=2HVMiPPuPIM> | 0.8 |
| 7 | 3 | ICTPRG431 (3) | 1 | **Views in SQL**  Virtual Tables/View Tables  Create View,  Update View  Delete View  **Assessment Work:**  SQL Portfolio Part 2 – Browse, Add and Read  Covers basic queries and data insertion. | Blackboard session 7 learning materials |  |  |
| 8 | 3 | ICTPRG431 (4) | 1 | **Procedures in SQL**  Creating Procedures  Executing Procedures  Deleting Procedures  **Assessment Work:**  Portfolio Part 3 – Edit, Delete and Browse  Covers editing, deleting and more data queries.  **Assessment Submission: AT2 PORT SQL Pt 2**  Completion and submission of Portfolio Part 2 | Blackboard session 8 learning materials | <https://youtu.be/nEAAtj8jbBI>  <https://www.youtube.com/watch?v=eNFNN3coJVU>  <https://www.youtube.com/watch?v=vLLkNI-vkV8> | 0.25 |
| 9 | 3 | ICTPRG431 (4) | 1 | **Operations and Calculations in SQL**  Calculations  View & procedures.  **Assessment Work:**  SQL Portfolio Part 4 – Relationships  Covers joins, View & Procedures  **Assessment Submission:**  Completion and submission of Portfolio Part 3 | Blackboard session 9 learning materials | <https://youtu.be/UhHY-deC8Xo> | 2 |
| 10 | 3 | ICTPRG431 (all) | 1 | **Review of SQL**  Complete Assessments AT2  **Assessment Submission:**  Completion and submission of SQL Portfolio Part 4 | Blackboard session 10 learning materials |  |  |
| 11 | 2 | ICTPRG432 (2) | 2 | **C# Refresher**  C# basic programming concepts  **WPF Introduction, XAML and C#**  Basic concepts of XAML, C# and WPF  **Assessment Submission: AT2 POR SQL Pt 4**  Completion and submission of SQL Portfolio Part 4 | Blackboard session 11 learning materials | <https://youtu.be/Vjldip84CXQ> | 1 |
| 12 | 2 | ICTPRG432 (2, 3) | 2 | **WPF Data Controls**  WPF Features & connecting with SQL.  **Assessment Work:**  This portfolio covers the Design and Layout of Applications in WPF including data controls for a small desktop application. | Blackboard session 12 learning materials | <https://www.youtube.com/watch?v=66K5Nmmc9g8&list=PLEKPb3_Ne8orC6DcnkGXtnvxNN97BCb4G&index=20>  <https://youtu.be/-zM486rVopk> | 1 |
| 13 | 4 | ICTPRG432 (3)  ICTPRG431 (all) |  | **WPF Data Controls**  **SQL and WPF**  Insert  Delete  Update  Browse a table in WPF. | Blackboard session 13 learning materials | <https://youtu.be/dMOSd0yyKI4>  <https://youtu.be/dNwEd48o8J0> | 1 |
| 14 | 4 | ICTPRG432 (3)  ICTPRG431 (all) |  | **SQL and WPF Data binding concept**  Traffic database using SQL and WPF | Blackboard session 14 learning materials | <https://youtu.be/vMVLat7xAK4?list=PLEKPb3_Ne8orC6DcnkGXtnvxNN97BCb4G> | 0.5 |
| 15 | 1 | ICTPRG432 (all)  ICTPRG431 (all) | 3 | **No Formal Lecture**  **Project starts with Employee database using SQL and WPF**  Students should attend the session to be able to ask questions and gain assistance in any assessment work. | Blackboard session 15 learning materials | <https://www.youtube.com/watch?v=5k6z7KrES04&list=PLEKPb3_Ne8orC6DcnkGXtnvxNN97BCb4G&index=10> | 0.5 |
| 16 | 1 |  | 3 | **No Formal Lecture**  Students should attend the session to be able to ask questions and gain assistance in any assessment work |  |  |  |
| 17 | 1 |  | 3 | **No Formal Lecture**  Students should attend the session to be able to ask questions and gain assistance in any assessment work |  |  |  |
| 18 | 0 |  | 4 | **No Formal Lecture**  Students should attend the session to be able to ask questions and gain assistance in any assessment work |  |  |  |
| 19 | 4 |  |  | **Cluster Review**  A review and feedback session for students and lecturers on the content of the cluster. |  |  |  |
| 20 |  |  |  | **Resulting and tidying up**  No formal lecture. |  |  |  |
| **Total Hours** | **50** |  | **26** | **Total hours out of class activities** | | | **10** |
| **Total amount of training for this unit:** | | | | | | | **60** |
| **Total amount of assessment for this unit:** | | | | | | | **26** |

\*Learning Resources - to enable learners to meet the requirements of this unit of competency or cluster.

## Recognition of Prior Learning (RPL) / Credit

You may be eligible for Recognition of Prior Learning (RPL) / Credit towards your studies if you have relevant existing skills, knowledge, or formal qualifications. Please discuss available options with your lecturer.

## Reasonable Adjustment / Inclusive Practice

We recognise that every student has different learning styles and needs. Please let your lecturer know if there is anything that may have an effect on your learning so they may be able to adjust your plan.

## Results and Appeals

As a student you may lodge an appeal against an academic result if you believe the assessment decision or process was unfair or incorrect. Appeals must be lodged within 20 working days from notification of the assessment result. Please see details under Academic Appeals on the NMT website.

## Absences

If you are unable to attend any class or assessment session, you must inform your lecturer as soon as possible.

If you miss an assessment due to illness, please provide your lecturer with a medical certificate in order to negotiate an alternate time for the assessment.

## Plagiarism

Plagiarism is the copying, paraphrasing, or summarising of work, in any form, including AI generated, without acknowledgement of sources, and presenting this as your own work. It is not acceptable to submit an assessment that is based on another person's work and claim it as your own. If you submit an assessment that is significantly or recognizably the same or similar in content as submitted by another student (current or past) you may have to submit another assessment.

## Assessment Resit/Resubmission

You shall be permitted to have at least two attempts to demonstrate competency against a unit of competency or cluster of units of competency.

To qualify for re-assessment:

* you must have made a reasonable attempt to complete the assessment satisfactorily, and
* you must have submitted the original assessment by the due date, or
* you must have attended and participated in the original assessment event.

In the case of a re-assessment opportunity, your lecturer will give you a due date for your second attempt. Should you not achieve a Satisfactory result on the second attempt, you will need to re-enrol (R) in the unit.

Be aware, in certain situations there are limited reassessment options (such as one-off Performances and Exhibitions).