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, 2023 |
| Cluster Name (if applicable) | Intermediate Programming and Open Source |

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| National ID | Name of unit |
| ICTPRG439 | Use pre-existing components |
| ICTPRG429 | Maintain open-source code programs |
| ICTPRG443 | Apply intermediate programming skills in different languages |
| **You can access the full unit/s of competency here:**  <https://training.gov.au/Training/Details/ICTPRG429>  <https://training.gov.au/Training/Details/ICTPRG439>  <https://training.gov.au/Training/Details/ICTPRG443> | |
| Delivery Location/s (Campus/Room/Online): | Northbridge, 30 Aberdeen St., Library building, room L3-06 Online |

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| Student Learning Resources, text, equipment (Required/Optional) | | | | |
| Student to supply:  USB thumb drive | | | | |
| **College to supply:**  PC with necessary software: Python, Python IDE, PyCharm, Microsoft Office (Word, etc.)  Access to internet  Access to Blackboard  Software Requirements for assessments  Organisational Guidelines and coding standard | | | | |
| **Lecturer Name:** | **Phone:** | **Email:** | **Contact times** | **Campus / Room** |
| Rafael Avigad | n/a | rafael.avigad@nmtafe.wa.edu.au | By appointment | Northbridge |
| Adrian Gould | n/a | online@screencraft.net.au | By appointment | Northbridge |
| John Robertson | n/a | John.Robertson@nmtafe.wa.edu.au | By appointment | Northbridge |

Assessment Summary

| Assessment | Title and brief description | Due Date |
| --- | --- | --- |
| AT1 Portfolio | A **portfolio** of work demonstrating key competencies. Split into multiple parts | Parts due weeks 3, 5, 7, 8 |
| AT2 KBA | **Knowledge-based** assessment of key competencies of the course | Week 13 |
| AT3 Project | **Project Assessment**  Create or contribute to an open-source project | Week 18 |

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

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(🗹): | |
| 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**  **(Hours)** | | **Element**  **number** | **Topic** | **Learning**  **Resources\*** | **Structured out of class activities\*** | |
| **Session** | **Hrs** |  |  |  | **Hrs** | **DUE** |
| 1 | 4 | ICTPRG443: 1.1, 1.2, 1.3 | Introduction to the Course and Intermediate Python | Setting up Python environment, practicing Python exercises | 2 |  |
| 2 | 4 | ICTPRG443: 2.1, 2.2, 2.3 | Algorithms & Data Structures | Coding with modular programming, creating 2-D data structures | 2 |  |
| 3 | 4 | ICTPRG443: 2.4, 2.5 | File Handling & Binary Search | Coding file-handling solutions and binary search in Python | 3 | POR Part 1 |
| 4 | 4 | ICTPRG443: 3.1, 3.2 | Debugging & Documentation - Part 1 | Practice with debugging tools, tracing code execution | 3 |  |
| 5 | 4 | ICTPRG443: 3.3, 3.4 | Debugging & Documentation - Part 2 | Applying internal documentation to code | 3 | POR Part 2 |
| 6 | 4 | ICTPRG443: 4.1, 4.2, 4.3 | Developing Reusable Modules and Submitting to PyPI | Creating a reusable Python module, package it, prepare for submission to PyPI | 3 |  |
| 7 | 4 | ICTPRG443: 4.4, 4.5 | Advanced Programming Techniques | Advanced topics in Python programming, use of libraries | 3 | POR Part 3 |
| 8 | 4 | ICTPRG439: 1.1, 1.2 | Reusability & Components | Evaluate and compare functionality of re-use components | 3 | POR Part 4 |
| 9 | 4 | ICTPRG439: 2.1, 2.2, 2.3, 2.4, 3.1 | Licensing and Components Integration | Adding and configuring re-use components | 3 |  |
| 10 | 4 | ICTPRG439: 3.2, 3.4, 3.5 | Test and Debug Re-use Components | Construct test programs, resolve dependencies | 3 |  |
| 11 | 4 | ICTPRG429: 1.1, 1.2, 1.3 | Introduction to Open-Source | Investigate open-source communities and documentation | 3 |  |
| 12 | 4 | ICTPRG429: 1.4, 1.5, 1.6 | Open-Source Maintenance - Part 1 | Select an open-source project, register with online community groups | 3 |  |
| 13 | 4 | ICTPRG429: 2.1, 2.2, 2.3 | Open-Source Maintenance - Part 2 | Download source code, build and execute a snapshot | 3 | KBA |
| 14 | 4 | ICTPRG429: 5.1, 5.2, 5.3 | Community Participation & Documentation | Submit patches, participate in community activities | 4 |  |
| 15 | 4 | ICTPRG429: 6.1, 6.2, 6.3 | Final Project Planning and Documentation | Final project planning, requirements gathering, documentation | 4 |  |
| 16 | 4 | N/A | Final Project Implementation | Work on the final project, apply concepts learned | 4 |  |
| 17 | 4 | N/A | Final Project Testing & Debugging | Test final project, debug and make necessary corrections | 4 |  |
| 18 | 4 | N/A | Final Project Review & Submission | Review final project, submit final documentation and project code | - | PRJ |
| 19 | 4 | N/A | Resits | NA | - |  |
| **Total Hours** | **76** |  |  | **Total hours out of class activities** | **50** |  |
| **Total amount of training for this unit:** (sum of Session Hours + Out of Class Hours) | **126** |  | |  |  |  |
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\*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**

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**

Students may lodge an appeal against an academic result. Appeals must be lodged within four weeks 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 using another person's ideas and words without clearly acknowledging the source of the information. 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).