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: | ICT50220 Diploma of Information Technology (Advanced Programming) |
| Delivery Period: | Semester 1, 2024 |
| Cluster Name (if applicable) | SaaS 1: Front-End Development |

|  |  |  |  |
| --- | --- | --- | --- |
| National ID | Name of unit (+ Link to original) | | |
| ICTPRG556 | Implement and use a model view controller framework <https://training.gov.au/Training/Details/ICTPRG556> | | |
| ICTDBS507 | Integrate databases with websites <https://training.gov.au/Training/Details/ICTDBS507> | | |
| Delivery Location/s (Campus & Room): | | Campus | Room |
| Perth | 30 Aberdeen Street, Rm 3-06 See your Office 365 Outlook calendar for your class times |
| Online | n/a |

|  |  |
| --- | --- |
| Lecturer Name: | Adrian Gould |
| Phone: | 08-9374-6415 |
| Email: | We operate a helpdesk for our face to face and online students.  Your PRIMARY contact after any in-class or online sessions is this helpdesk.  Use this link to log a request:   * [Submit a Ticket - SQuASH (help.screencraft.net.au)](https://help.screencraft.net.au/help/2680392001) (<https://help.screencraft.net.au/help/2680392001>) |
| Contact times: | Mr. Gould is generally available when not in class or meetings.  To arrange a meeting, please use the following link:   * [https://outlook.office.com/bookwithme/](https://outlook.office.com/bookwithme/user/94d31908185748adb77f57749b5d6002@nmtafe.wa.edu.au?anonymous&ep=lap) |
| Campus / Room: | Perth Campus, 30 Aberdeen Street, 3rd level Staff Room |
| Teams: | <teams://Adrian.Gould@nmtafe.wa.edu.au>  Please use teams when urgent, we also have Certificate III, IV and Diploma Teams for discussion and requesting assistance. |

| Student Learning Resources, text, equipment (Required/Optional) | |
| --- | --- |
| Student to supply:  * Notebook & Pens (two colours preferred). * Headphones (Preferably USB or 3.5mm). * External Storage (backup purposes). * Willingness to learn, participate and develop your skills. * External compulsory courses   + Traversy Media PHP from Scratch  Out of Class Study Requirements: To complete work outside of class, you will require access to the equivalent to the resources shown in the right-hand column. Highly Recommended: Items with (**✅**) are highly recommended, and at Perth campus are installed and will be used in the teaching environment.  Some rooms have alternative configurations. Other Options Operating systems such as MacOS 12+ and Linux are options to be used at home. | College to supply: PC with required software:   * Windows 10 (or 11) * Laragon v6 or later (**✅**) * PhpStorm (**✅**) / Visual Studio Code * Internet connection * Learning resources via Blackboard * Office 365 access (Word, Excel, PowerPoint, OneDrive) * Microsoft Terminal |

### Important:

Lecturers are NOT obligated to support personal systems, such as laptops.

If you need technical assistance, then you MUST organise an appointment with your lecturer for a time mutually agreeable.

They have every right to decline to support your personal equipment.

# Assessment Summary

| Assessment | Title and brief description | Due Date | |
| --- | --- | --- | --- |
| Assessment 1 | **Knowledge Based Assessments.**   * Two KBA, one per unit. * Open Book. * 100% required for satisfactory result. * Conducted under supervised conditions. | ICTPRG556 | Two sessions, approximately week 11 and 14. |
| ICTDBS507 |
| Assessment 2 | **Portfolio of Work**  The portfolio of work covers:   * Dynamic Web pages. * Database interaction. * MVC Principles. * Laravel Basics. * Authentication and Authorisation. | Various weeks up to and including | Various sessions from week 3 to 13. |
| Assessment 3 | **Small project**   * Implementation of Web Based Administration pages (minimum). * Usually tied with the Innovation Project cluster. | Submission Session 17  Demonstrations Session 17 & 18  Resubmission Session 19  Demonstrations 19 | |

**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.

# In Class and Out of Class Training

| 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 in space provided) |
|  |

# Session Plan

| **Sessions**  **(Hours)** | | **Element**  **Number** | **Topic** | **Learning**  **Resources\*** | **Structured activities\*** | |
| --- | --- | --- | --- | --- | --- | --- |
| **#** | **Hrs** | **Activity** | **Hrs** |
| **1** | 4 | ICTPRG556  ICTDBS507 1 | **Introduction / Induction**  **Overview of Web Dev**   * Definition. * Importance. * Server Side. * Client Side. * SaaS.   **Technologies**   * HTML5, CSS3, JavaScript. * Servers. * The Cloud. * DNS. * FTP. * Version Control. * SSL & TLS. * Microservices. * Monolith Applications. * Other…   **Licenses for software**   * JetBrains. * Laragon. * Required Resources.   **External Resources**   * Traversy Media.   **Technologies Revision**   * HTML5 Revision. * CSS3 Revision. * TailwindCSS Revision.   **Challenges**   * Challenges act to provide practice and direct feedback on how you are understanding the topics covered. * Challenges will vary in level of complexity. * Challenges are not assessed. | BB9-S01 | Research Exercise:   * SaaS development technology trends * Career Paths in SaaS development * Trends in SaaS, FED and BED   **Traversy Media: PHP from Scratch**   * Intro & Setup * Data Types, Variables and Built in Functions | 2 |
| **2** | 4 | ICTPRG556  ICTDBS507 | **PHP introduction**   * Relationship with HTML. * Tags. * Variables. * Comments. * Expressions. * Built-in functions. * …   **Databases**   * Importance. * Types. * Selection. * CRUD & BREAD. * SQL Review. * …   **Web Revision II**   * HTML, CSS and TailwindCSS.   **Challenges** | BB9-S02 | **PHP from Scratch:**   * Arrays * Iteration * Control Structures * Conditionals | 2 |
| **3** | 4 | ICTPRG556  ICTDBS507 | **PHP**   * Arrays. * Iteration. * Control Structures. * Conditionals.   **Portfolio Part 1**   * Work on Portfolio part 1 officially commences.   **Challenges** | BB9-S03 | **PHP from Scratch:**   * Functions | 2 |
| **4** | 4 | ICTPRG556  ICTDBS507 | **Functions**  **OOP Review**   * Class. * Object. * Method. * Property. * Instance. * …   **Challenges** | BB9-S04 | **PHP from Scratch:**   * Superglobals * Databases & PDO | 2 |
| **5** | 4 | ICTPRG556  ICTDBS507 1, 2, 3 | **PHP**   * Superglobals.   **Databases**   * Integration plan. * Connecting PHP and Databases. * Connections and Pools.   **Portfolio Part 1 Submission**  **Challenges** | BB9-S05 | **PHP from Scratch:**   * Workopia Project * Custom Router | 2 |
| **6** | 4 | ICTPRG556  ICTDBS507 | **Routers**   * Custom router.   **Portfolio Part 2**  **Challenges** | BB9-S06 | **PHP from Scratch:**   * Database class * Fetch & Display Listings | 2 |
| **7** | 4 | ICTPRG556  ICTDBS507 | PHP  Database Class  Retrieve  Display  **Challenges** | BB9-S07 | **PHP from Scratch:**   * Namespaces * Controller classes * Router Refactor | 2 |
| **8** | 4 | ICTPRG556  ICTDBS507 | **Portfolio Part 2 Submission**  **Challenges** | BB9-S08 | **PHP from Scratch:**   * CRUD * Authentication * Authorisation * Final touches * Listing Search | 2 |
| **9** | 4 | ICTPRG556  ICTDBS507 | **Portfolio Part 3**  **Challenges**  MVC  What is MVC  Frameworks | BB9-S09 | **PHP from Scratch:**   * Deployment * Wrap up   **Laravel from Scratch:**  <https://www.youtube.com/watch?v=MYyJ4PuL4pY>   * [0:00](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=0s) - Intro * [1:30](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=90s) - Linode Sponsor * [2:13](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=133s) - Project Demo * [6:21](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=381s) - Setting Up Laravel * [13:50](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=830s) - Routing & Responses * [19:28](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=1168s) - Wildcard Endpoints | 2 |
| **10** | 4 | ICTPRG556  ICTDBS507 | Introduction to Laravel  **Challenges** | BB9-S10 | **Laravel from Scratch:**  <https://www.youtube.com/watch?v=MYyJ4PuL4pY>   * [20:16](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=1216s) - Route Constraints * [21:06](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=1266s) - Die Dump Helpers * [22:30](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=1350s) - Request & Query Params * [26:26](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=1586s) - API Routes * [28:26](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=1706s) - View Basics & Passing Data * [32:36](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=1956s) - Blade Templates & Basic Directives * [36:42](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=2202s) - Creating a Basic Model * [43:46](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=2626s) - Database Setup & Config | 2 |
| **11** | 4 | ICTPRG556  ICTDBS507 | **KBA ICTDBS507**   * FIRST attempt must be completed by end of the scheduled session in this week.   **Portfolio Part 3 Submission**  **Challenges** | BB9-S11 | **Laravel from Scratch:**  <https://www.youtube.com/watch?v=MYyJ4PuL4pY>   * [46:03](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=2763s) - Create Database & User * [48:44](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=2924s) - Creating Database Migrations * [52:44](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=3164s) - Running Migrations * [54:06](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=3246s) - Database Seeding * [58:29](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=3509s) - Create an Eloquent Model * [1:02:49](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=3769s) - Creating a Factory * [1:07:18](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=4038s) - Creating a Layout & Sections * [1:09:54](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=4194s) - Adding the Theme HTML | 2 |
| **12** | 4 | ICTPRG556  ICTDBS507 | **Front End Development**  Portfolio Part 4  **Challenges** | BB9-S12 | **Laravel from Scratch:**  <https://www.youtube.com/watch?v=MYyJ4PuL4pY>   * [1:19:02](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=4742s) - Template Partials * [1:22:54](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=4974s) - Single Listing Formatting * [1:26:00](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=5160s) - Route Model Binding * [1:28:18](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=5298s) - Blade Components * [1:32:53](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=5573s) - Component Attributes * [1:35:20](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=5720s) - Tags Component * [1:40:38](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=6038s) - Controllers * [1:44:09](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=6249s) - Resource Method Naming * [1:46:34](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=6394s) - Using a Layout Component * [1:49:08](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=6548s) - Tag Filter | 2 |
| **13** | 4 | ICTPRG556  ICTDBS507 | **Front End Development**  **KBA ICTPRG556**   * FIRST attempt must be completed by end of the scheduled session in this week.   **Challenges** | BB9-S13 | **Laravel from Scratch:**  <https://www.youtube.com/watch?v=MYyJ4PuL4pY>   * [1:57:31](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=7051s) - Search Filter * [2:01:29](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=7289s) - Clockwork Package * [2:04:05](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=7445s) - Create Listing Form * [2:10:39](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=7839s) - Validation & Store Listing * [2:23:30](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=8610s) - Mass Assignment Rule * [2:27:20](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=8840s) - Flash Messages * [2:32:49](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=9169s) - Alpine.js For Message Removal * [2:36:33](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=9393s) - Keep Old Data In Form | 2 |
| **14** | 4 | ICTPRG556  ICTDBS507 | **Front End Development**  **Project Requirements**  **Portfolio Part 4 Submission**  **Challenges** | BB9-S14 | **Laravel from Scratch:**  <https://www.youtube.com/watch?v=MYyJ4PuL4pY>   * [2:38:46](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=9526s) - Pagination * [2:45:20](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=9920s) - File Upload * [2:57:24](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=10644s) - Edit Listing * [3:09:16](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=11356s) - Delete Listing * [3:13:32](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=11612s) - User Registration * [3:30:00](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=12600s) - Auth Links * [3:32:46](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=12766s) - User Logout * [3:37:20](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=13040s) - User Login * [3:47:02](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=13622s) - Auth & Guest Middleware * [3:51:30](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=13890s) - Relationships * [3:59:05](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=14345s) - Tinker Tinkering | 2 |
| **15** | 4 | ICTPRG556 ALL  ICTDBS507 ALL | **Project work**  **Challenges** | BB9-S15 | **Laravel from to** **Scratch:**  <https://www.youtube.com/watch?v=MYyJ4PuL4pY>   * [4:01:35](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=14495s) - Add Ownership Listings * [4:05:31](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=14731s) - Manage Listings Page * [4:14:22](https://www.youtube.com/watch?v=MYyJ4PuL4pY&t=15262s) - User Authorization | 2 |
| **16** | 4 | ICTPRG556 ALL  ICTDBS507 ALL | **Project Work**  **Portfolio Demonstrations** | BB9-S16 |  | 2 |
| **17** | 4 | ICTPRG556 ALL  ICTDBS507 ALL | **Project Work**   * Project code MUST be submitted before the close of business on the Friday of this scheduled session | BB9-S17 |  | 2 |
| **18** | 4 | ICTPRG556 ALL  ICTDBS507 ALL | **Project Demonstrations**  **Project submissions**  **Assessing** | BB9-S18 |  | 2 |
| **19** | 4 | ICTPRG556 ALL  ICTDBS507 ALL | **Resits for Projects**  **Finalising results** | BB9-S19 | - | 0 |
| **20** | 4 | ICTPRG556 ALL  ICTDBS507 ALL | **Debrief and Review** | BB9-S20 | - | 0 |
| **Total Hours** | **80.0** |  | |  | **Total hours out of class activities** | **36.0** |
| **Total amount of training for this uni**t: (sum of Session Hours + Out of Class Hours) | | | | | **116.0** | |

\*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 influence 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 to allow for the negotiation of 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 reenroll (R) in the unit.

In certain situations, a re-assessment is not possible; please refer to your assessment instructions.