Faculty of Science, Engineering and Technology

Higher Education Division

# Portfolio Format and Assessment Criteria

# COS20015

# Fundamentals of Data Management

Semester 2, 2019
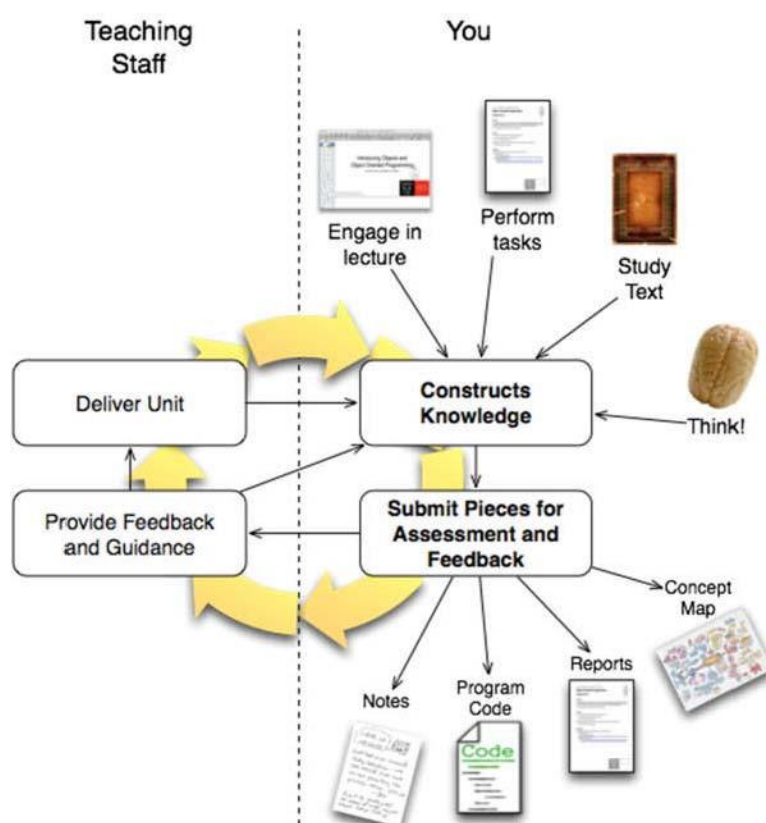
# Portfolio Format and Assessment Criteria

## Overview

Results in this unit are determined from a portfolio of work that you submit at the end of the unit. This is designed to help you achieve the best result possible, with lots of support to help you learn. This document outlines the portfolio assessment process, the format of the portfolio, and its assessment criteria.

## Learning and the Portfolio Assessment Process

Effective learning requires you to actively try to understand the topics being covered. The tasks that we provide you can help you develop your understanding but do require you to think about how the tasks relate to the underlying concepts and practices. One way that we can assist you with this task is to provide you with feedback on your progress and to answer your questions about aspects you are unsure of.

With portfolio assessment, you have many opportunities to receive feedback. Each week you will have the opportunity to submit work to your tutor for feedback. They will look at your work and give you advice that you can use to improve your understanding, and the quality of the work you submit in your final portfolio.



As shown in the image above, this process is iterative. Each week we will help you learn by introducing topics, working through tasks with you, providing resources and tasks you can complete (Deliver Unit). Using these resources, you can develop your understanding. In this process, you will create pieces of work that demonstrate your understanding. You can submit these to us so that we can help ensure that you have understood each topic correctly. The feedback we provide should then help you develop your understanding, while also providing us with ideas we can use to improve the way the unit is delivered.

At the end of the semester, you can select your best pieces of work to submit in your portfolio. Your grade is then determined from what you have submitted -which should have incorporated all the feedback you have received throughout the teaching period.

# Portfolio Format

In this unit, the portfolio you submit needs to contain the following items:

1. A **Learning Summary Report** that reflects on what you have learnt and shows how your portfolio addresses the unit's learning outcomes and its assessment criteria.
2. Several **pieces of work** that provide evidence that you have met all the unit's learning outcomes. As a minimum, this will include:

   a. Your answers to the unit's test.

   b. Work submitted for the unit's weekly pass-level tasks.

   c. A datastore and implementation of your own design if you are aiming for a Distinction grade (or above).

   d. A research report if you are aiming for High Distinction.

Each of these is explained in the following sections.

# Learning Summary Report

Your Learning Summary Report will consist of two parts: a **self-assessment** and a **reflection**. The self-assessment indicates how your portfolio aligns with the assessment criteria from Table 1. Your reflection is a personal comment on what you have learnt in this unit and how your knowledge and skills have developed.

This report should be around 5 to 10 pages in length: one page for an overview, one-page overview of the pieces you have included, three or four pages aligning your evidence to the unit's learning outcomes, and two or three pages for your reflections.

The reflective section of the learning summary report should,

- Elaborate on aspects that you found challenging/inspiring/interesting or different to your expectations and why?

- Include the approach that you used to solve problems and how what you have learnt in the unit helped.

- Compare and contrast new learning/information within the context of prior learning (as well as any previous assumptions or expectations – with a discussion on how these have either been reinforced or changed).

- Present areas that you have personally explored beyond the expectations of the unit, as well as an indication of the areas where you plan to learn further on your own and why?

- Highlight ideas/techniques/principles that can be generalised and used in other areas or for further learning (with a brief discussion to support the claim).

Note: The reflective section should not be a direct summary of the content covered in the unit.

A template will be provided to help you format your Learning Summary Report. Please check Canvas for this template.

## Test

You must attend a test as part of this unit. The test will be marked as either Redo, Fix and Resubmit, or Complete and be returned to you during the teaching period. You must then include your test papers in your final portfolio with any corrections and additions you wish to make. You may use the feedback you receive to improve your answers.

It is a hurdle requirement of this unit that you must achieve the Complete grade for the test and include it in your final portfolio. Any test marked as Redo must be resat during the semester; see the unit outline for details of opportunities to resit this test. The grades for the final resit will be either Complete or Fail. Tests marked as Fix and Resubmit must be corrected and signed off by your tutor before final submission. If all issues with the Test paper are not sufficiently addressed in the final submission, the test result will be changed to Fail.

| Test Result | Action Needed to Pass Test |
|---|---|
| Complete | Get a scan of your Test to include in your portfolio. |
| Fix and Resubmit | You must address some issues with your existing answers. You must correct any issues and get your test signed off as Complete before it is included in your portfolio. The test will be changed to Fail if it is not signed off as Complete before your portfolio is submitted. |
| Redo | You must resit the test in order to improve its result. Otherwise the test is considered to have been failed. |
| Fail | This will only be given on the final sitting of a test where your result is not sufficient to be graded as Fix or Pass. |

## Weekly Tasks

Each week there will be several tasks that you are required to complete. These tasks are designed to help you understand the material presented and to give you a chance to apply the concepts studied. Your portfolio must include work from these weekly tasks that demonstrates you have successfully mastered all of the unit's learning outcomes. Tasks are related to different grade outcomes.

| | Description |
|---|---|
| Pass Tasks | Core tasks required to demonstrate the unit's learning outcomes. All these tasks must be completed in order to pass the unit. These tasks have significant guidance to help you achieve the required understanding. |
| Credit Tasks | Extend beyond the core material to help you better understand the concepts associated with the unit. These tasks have some guidance but will require you to develop a deeper understanding than the Pass Tasks. |
| Distinction Tasks | Provide an opportunity for you to demonstrate that you have a good understanding of all of the topics associated with the unit. There is little guidance with these tasks for you to have more control over how you solve these problems. |
| High Distinction Tasks | Go beyond the material covered in the unit, allowing you to demonstrate that you can use what you have learnt to explore associated concepts. |

# Datastore Design and Implementation (for Distinction grade)

In order to meet the Distinction criteria, your portfolio must demonstrate your ability to apply the concepts learnt to the design and development of a datastore for a particular domain (an application area). In collaboration with the teaching staff, you must propose a datastore that you design and implement using the techniques learnt. Your submission will include the description of the domain (What is this datastore needed for?) the scripts you have developed that create and use the datastore, along with a design report and suitable diagrams that show the structure of your datastore.

The Design Report must capture the structure and key elements of your datastore. It must contain text and appropriate diagrams to communicate both the design and the usage of your datastore. It should be written for professionals who understand data storage, with a focus on clearly communicating the core data storage and information retrieval requirements.

| Custom Project – Design Report | |
| --- | --- |
| **Distinction Requirement** | Your design report must include the following:<br>▪ An overview of the requirements for a datastore (description of the domain)<br>▪ A data storage solution.<br>▪ An illustration of the design (e.g. an ER diagram).<br>▪ Scripts necessary to create the data storage.<br>▪ Scripts necessary for typical use cases of the datastore.<br>▪ A description of the main usages of the datastore. |
| **Custom Project – Script Quality** | |
| **Distinction Requirement** | Your datastore must have a clear application domain which requires the data storage to support defined functionality. Therefore, your scripts must<br>▪ Be a logical and fully functional implementation of the type of datastore needed for the application.<br>▪ Include scripts that demonstrate the usage of the datastore for the designated purpose.<br><br>You must demonstrate the following data modelling aspects:<br>▪ Subdivision of data entities into logical units that support the intended purpose.<br>▪ Relationships between entities that facilitate its usage.<br>▪ A data model and data access that consider consistency and performance issues.<br><br>Your design must follow an accepted naming convention.<br>▪ Every entity, such as a table, column, document, element, etc. must follow an acceptable naming convention consistently. |

## Research Report (for High Distinction grades)

Top results in the High Distinction grade require you to demonstrate your ability to research a question related to the unit's concepts and to document your findings in a research report.

A Research Report aims to communicate your research undertaking, the results, and their significance. It is expected to be around 6 pages in length and divided into sections including an Abstract, Introduction, Method, Results, Discussion, Conclusion and References, with at least 4 to 5 relevant references. The report should also make use of figures and/or tables to help convey its message.

The research component can build upon a Distinction grade datastore, e.g. by implementing the datastore according to two different models, such as relational and document-based, and/or two different technologies, such as MariaDB and MongoDB, and presenting relevant differences in performance, or similar.

The research report can also subsume a Distinction project (you do not build a custom database) and explore a reasonably advanced database-related topic. High Distinction projects may not be purely literature-based research without an applied component. Any project must be based on a specific case study; generic investigations are not accepted.

| Research Report | |
|---|---|
| **High Distinction Requirement** | The research report must:<br>▪ Aim to answer a question related to the unit's learning outcomes that has been accepted by the unit convenor.<br>▪ Propose a method by which the question can be answered.<br>▪ Demonstrate that the method was carried out and show appropriate summaries of the data collected.<br>▪ Present an analysis of the data showing insights into the underlying concepts.<br>▪ Discuss findings and their relevance to software development. |

## Assessment Criteria by Grade

**Pass Criteria**

| | |
|---|---|
| **Required Pieces** | ▪ Learning Summary Report.<br>▪ All Pass tasks are marked as Complete.<br>▪ The test is marked as Complete.<br>▪ The portfolio includes work demonstrating coverage of all learning outcomes |
| **Borderline (50P)** | ▪ Learning Summary Report.<br>▪ All Pass tasks are marked as Complete.<br>▪ The test is marked as Complete.<br>▪ The portfolio includes work demonstrating coverage of all learning outcomes. |
| **Submission** | ▪ PDF generated from work submitted to Doubtfire.<br>▪ Due first week of exam period — see unit outline for the date. |

## Credit Criteria

| | |
|---|---|
| **Required Pieces** | ▪ Learning Summary Report.<br>▪ All Pass tasks are marked as Complete.<br>▪ All Credit tasks are marked as Complete.<br>▪ The test is marked as Complete.<br>▪ The portfolio includes work demonstrating good coverage of all learning outcomes. |
| **Borderline (60C)** | ▪ Learning Summary Report.<br>▪ All Pass Tasks are marked as Complete.<br>▪ All Credit Tasks are marked as Complete.<br>▪ The test is marked as Complete.<br>▪ The portfolio includes work demonstrating good coverage of all learning outcomes. |
| **Submission** | ▪ PDF generated from work submitted to Doubtfire.<br>▪ Due first week of exam period — see unit outline for the date. |

## Distinction Criteria

| | |
|---|---|
| **Required Pieces** | ▪ Learning Summary Report.<br>▪ All Pass and Credit tasks are marked as Complete.<br>▪ The test is marked as Complete.<br>▪ Pass and Credit tasks have been completed mostly on time.<br>▪ The custom datastore, design and implementation meeting distinction standards.<br>▪ Datastore description and demonstration of fitness for purpose meeting distinction standards. |
| **Borderline (70D)** | ▪ Learning Summary Report.<br>▪ All Pass and Credit tasks are marked as Complete.<br>▪ The test is marked as Complete.<br>▪ Pass and Credit tasks have been completed mostly on time.<br>▪ The custom datastore, design and implementation meeting distinction standards.<br>▪ Datastore description and demonstration of fitness for purpose meeting distinction standards. |
| **Submission** | ▪ PDF generated from work submitted to Doubtfire.<br>▪ Portfolio interview during exam period — see unit outline for the date.<br>▪ Due just before the portfolio interview — see unit outline for a date. |

## High Distinction Criteria

| | |
|---|---|
| **Required Pieces** | ▪ Learning Summary Report.<br>▪ All Pass and Credit tasks are marked as Complete.<br>▪ The test is marked as Complete.<br>▪ The portfolio includes work demonstrating good coverage of all learning outcomes.<br>▪ Research project and report meeting high distinction requirements. |
| **Submission** | ▪ PDF generated from work submitted to Doubtfire.<br>▪ Portfolio interview during exam period — see unit outline for the date.<br>▪ Due just before the portfolio interview - see unit outline for the date. |

## Assessment Process

The teaching staff will assess portfolios using the process shown in the following figure. The process includes the following steps:

1. Initially, your portfolio will be compared with the grade criteria. Your work will then be assigned a grade from Fail through to High Distinction based on the criteria it meets. The self-assessment from your Learning Summary Report will be used to guide this process.

2. Your portfolio will be assumed to be "average", and the teaching staff will look for evidence that you should be awarded a higher or lower result within the grade. The staff will use your Learning Summary Report and the pieces you include to determine which result you will be awarded. The timeliness of your completed tasks will also be considered.

3. All portfolios that receive a result of 97 will be re-examined by the unit panel to determine if any deserve to be awarded a result of 100.

| | Portfolio not submitted. Test not signed off as Complete, and/or Fails to demonstrate coverage of all unit learning outcomes to the required standards. | | | | |
|---|---|---|---|---|---|
| **Fail** Does not meet Pass standard. | | | | | |
| **Pass** Test signed off as Complete, and all Pass tasks are Complete. | 50 P Test passed, all outcomes covered, but a at most two Pass tasks are not complete. | 53 P Meets Pass, but basic reflections and learning summary. | 55 P Meets Pass with acceptable reflections and learning summary. | 57 P Meets Pass with good reflections and learning summary, task on time. | Learning Summary Report + Test + Pass tasks |
| **Credit** Passed, and all Credit tasks are Complete (>50%). | 60 C All Pass tasks are Complete, but some issues with Credit tasks. | 63 C Meets Credit, but some issues with tasks, reflections, or learning summary. | 65 C Meets Credit, with generally good tasks, reflections and learning summary. | 67 C Meets Credit with good tasks, reflections and learning summary, tasks on time. | + Credit tasks |
| **Distinction** Passed, all Credit tasks are Complete, and Distinction tasks are Complete, custom database provided, and attended interview. | 70 D All Credit tasks are Complete and a meaningful database design and implementation has been submitted. | 73 D Meets Distinction, but some issues with the design or implementation, reflections or learning summary. | 75 D Meets Distinction, with good design and implementation, reflections and learning summary. | 77 D Meets Distinction, with well thought-through design and implementation, reflections and learning summary. | + Distinction tasks = custom database tasks + Interview (2 staff) |
| **High Distinction** Distinction met and discussion of alternative design and technologies added. | | 83 HD Excellent outcomes, discussion of alternatives added, but some weaknesses. | 85 HD Excellent outcomes, discussion of alternatives added, good reflections and learning summary. | 87 HD All outcomes are excellent with very high quality finish, including the discussion of alternatives. | - Distinction tasks + Research project which may build on Distinction tasks + Research report |
| High Distinction, plus a research report that demonstrates ability to conduct a small research project, analyse findings and make conclusions Research outcomes are related to the database concepts learnt. | | 93 HD All outcomes are excellent, some small issues with research report. | 95 HD All outcomes are excellent, good research report and analysis | 97 HD All outcomes are excellent, including research method, report and analysis. | 100 HD Something special. |

+ exceptionally high standard of work

1. Categorise based on grade first. Use self-assessment with sanity check.
2. Assume middle grade initially, then work up or down based on evidence
3. Review 97s with unit panel To check for 100s