Digital Technologies: Level 2 Programming

Standards

Standard	Title	SubDomain	Level	Credits
91368	Implement advanced procedures to produce a specified digital information outcome with dynamically linked data	Digital Technologies	2	6
91372	Construct a plan for an advanced computer program for a specified task	Digital Technologies	2	3
91373	Construct an advanced computer program for a specified task	Digital Technologies	2	3
91371	Demonstrate understanding of advanced concepts from computer science	Digital Technologies - External	2	4

Course Overview

Term	Topic	Teaching Sequence	Key Skills
1	Introduction	Course overview Direction and pathways Assessment	
1	Project Management	**Intros, skills and exercises:** Deadlines in Google Calendar Planning projects over time (breaking down the year into available time slots and planning projects within that time) Using the Design process to set milestones for a project	time planning project management practice and tools personal portfolio
1-2	Python: Introduction	Running Python Error messages Datatypes and Operators Variables Input Formatting Functions Lists For and While Loops Example programmes	
1-2	Planning a programme	Writing a Proposal	

		Requirements: what does the programme need to do and achieve? Specifications: technical details that support the requirements Defining Variables, Datatypes, Data Structure and Functions Testing: writing a test schedule, testing specific functionality, documenting tests	
1-3	Programming project	Students propose a programme related to a topic of personal interest and then create a working programme. The project forms the assessable part of this course.	
2-3	Databases	Flatfile Integrate with Python programme	
2-4	Computer Science	http://www.csfieldguide.org.nz/ http://www.cosc.canterbury.ac.nz/csfieldguide/teacherguide03022015/index.html data representations encoding usability heuristic	