

COLLABORATION

CREATIVITY

PROBLEM SOLVING

ANALYSIS

2017

DIGITAL INFORMATION TECHNOLOGY AND COMPUTER SCIENCE



OBJECTIVES



Gain up to 18 Achievement standard credits at Level 1



Gain Course Endorsement for Digital Technologies at Level 1



Provides a good overview of Computer Science topics



Choose software to make a prototype



Gain 3 credits in Literacy

TECHNOLOGIES



Algorithms

Use algorithms/Flow charts to plan a solution for a range of problems.



Python

Widely used general-purpose, high-level programming language.



HARDWARE I

Dismantle and reassemble a PC while exploring the technical aspects of the PC's parts.



HARDWARE II

Explore and specify the best build for a PC taking into account cost, inter-activity, efficiencies.



THEORY

Explore and report on algorithms, programming, compilers and human interaction design.



DATABASES

Examine the design, construction and querying of relational databases using XAMPP and SQL environment.



PROTOTYPING

Students choose a project and applicable application then use these to produce their prototype.

ASSESSMENTS

AS91075 v4

3 crs

Construct a plan for a basic computer program

AS91076 v4

3 crs

Construct an basic computer program for a specified task

AS91074 v3

3 crs

EXTERNAL
Demonstrate understanding of basic concepts from computer science

AS91047 v3

6 crs

Undertake development to make a prototype to address a brief

AS91080 v3

3 crs

Demonstrate understanding of the common components of a digital infrastructure.

AS91081 v3

4 crs

Demonstrate understanding of the common components of a digital infrastructure.

(Optional for joint students)

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HOMework

Homework will be used to strengthen the students knowledge base and practice skills essential for project work. Students will need to download free software to allow them to do their Python programming at home. Students will need to be signed up for Codeavengers as this form part of homework tasks.



PRE-REQUISITES

Working at Level 5 or above in the Technology process.
Achieved or above on the Algorithim assessment.
Passed unit standard 18739 as this course focuses on Computer Science skills.



FUTURE COURSES/

Success on this course would allow entry to the DDIT201 or DITCS201 courses.

If you didn't already know, there are so many job vacancies out there in the big wide world for people with Computer Science qualifications. There just aren't enough of you! They also reckon that there will be huge shortages in Computer Scientists for the coming 15-20 years. So if you enjoy the subject and take it all the way to Uni, you could find yourself fighting off job offers when you graduate.



AUTHENTICITY

All assessment and project work must be the students own work. Any plagiarism or breach of copyright will likely result in a Not Achieved grade for that assessment and there will be no opportunity to be re-assessed. For assessments requiring more than one period, most of the assessment development and documentation must be created in the classroom environment under supervision. If a student is absent for an assessment, they require a note from home explaining the absence, if they wish to be considered for reassessment otherwise a Not Achieved grade will be awarded.

All assessments must be handed in on the due date. Resubmits are only available to students whose work is at a level close to achieving. Multiple resubmits will not usually be permitted.

Due to the project nature of the course, most assessments do not have resits



COURSE COSTS

1E4 - 7mm Quad Book 28 pages, pen, pencil, eraser, ruler and a set of headphones (ear plugs). Students are expected to pay \$5 for the codeavengers Python course. Also have credit on their Papercut account for printing assessments.

