NOTE

This course is still to be confirmed subject to student demand and TEC funding approval.

RECOMMENDED LEVEL OF ATTAINMENT

No prerequisites.

INTRODUCTION

There has never been a higher demand for suitably qualified computer science graduates.

This course provides students with a very good basic understanding of computer languages and computer science and is an ideal way to find out if ICT might be the career path for you.

This is a new Level 1 Achievement Standards course.

Classes are very much hands-on with students learning to build web pages from scratch and learning the basics of computer programming and an introduction to game design.

HARDWARE

Students must bring to each class a laptop computer that meets the following specifications:

- Windows 7/8/10 (10 preferred)**
- 1.6GHz dual core processor
- 250GB hard drive
- 2GB RAM
- Wireless capability. 802.11 a/b/g/n
- 10” screen minimum but 13”+ is highly recommended
- Keyboard recommended if considering a hybrid device like the Surface
- Battery life 5+ hours (if used in other subjects)
- Warranty – faults must be fixed quickly, and a temporary replacement service is desirable.
- Insurance (the school is not responsible for damage or loss of the device.)

** *A Windows computer is highly recommended as Microsoft Access is currently unavailable for Mac*

SOFTWARE

- Microsoft Word (essential)
- Microsoft Access (essential)

Note: The Microsoft Office suite is provided through an Office 365 login to which all CBHS students have access.

RECOMMENDED LEVEL OF ATTAINMENT

It is unlikely that students who cannot demonstrate a good understanding of Level 1 Mathematics, especially algebra would succeed in this course. At least one Merit will be required.

INTRODUCTION

There has never been a higher demand for suitably qualified computer science graduates. This course provides students with a very good basic understanding of computer languages and computer science and is an ideal way to find out if ICT might be the career path for you.

Classes are very much hands on with students learning to build web pages from scratch and learning the basics of computer programming and computer science.

No prior knowledge or experience in these areas is expected.

This course is a prerequisite for our Year 13 course which is an approved University Entrance subject. At least 10 internal credits must be at Merit or above for Course Endorsement, as well as the external AS91371.

FUTURE PATHWAYS

This is the first of a two-year pathway intended for students aspiring eventually (from Year 13) to degree level careers in computer programming. At Level 3 this is a University Entrance approved subject.

Programming skills are relevant to almost any economic sector. Please refer to Vocational Pathways at http://youthguarantee.net.nz. for more information.

COSTS

$10 will be invoiced in March to cover printing and copyrighted software costs throughout the year.

NCEA STANDARDS – 12DTC

Not all standards will necessarily be assessed.

	Level	Credits	UE Rdg.	UE Wrtg.	
Internal					
91368 v4	2	6	no	no	Digital Technologies 2.42 - Demonstrate understanding of advanced concepts of digital media
91369 v4	2	4	no	no	Digital Technologies 2.43 - Implement advanced procedures to produce a specified digital media outcome
91370 v4	2	4	no	no	Digital Technologies 2.43 - Implement advanced procedures to produce a specified digital
91372 v4	2	3	no	no	Digital Technologies 2.45 - Construct a plan for an advanced computer program for a specified task
91373 v1	2	3	no	no	Digital Technologies 2.46 - Construct an advanced computer program for a specified task

EQUIPMENT

Students must bring to each class a laptop computer that meets the following specifications:

Hardware

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- 2GB RAM
- Wireless capability. 802.11 a/b/g/n
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- Insurance (the school is not responsible for damage or loss of the device.)

*** A Windows computer is highly recommended as Microsoft Access is currently unavailable for Mac.*

Software

- Microsoft Word (essential)
- Microsoft Access (essential)

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RECOMMENDED LEVEL OF ATTAINMENT

It is unlikely that students who have not demonstrated a good understanding of computer programming at Level 2, would succeed in this course.

INTRODUCTION

Students will develop creative solutions for various design briefs as their understanding of computing grows through problem-based learning. Topics will include computer science, programming, databases and digital media. This course delivered collaboratively by Ara Institute of Technology and the University of Canterbury, is designed to engage and support Year 13 students to gain the skills, experiences, and academic qualifications to transition into tertiary education.

COURSE CONTENT

Students will participate in hands-on, real-world STEM problems and ethical challenges to improve their understanding of computing concepts, skills and global career trends in technology. They will benefit from early immersion across two tertiary environments (Ara and UC) to develop the skills necessary for successful tertiary study including academic study skills, critical thinking, and pathways to degree programmes.

ASSESSMENTS

Approx. 18 Level 3 credits. This is a university approved course.

FUTURE PATHWAYS

This course is suitable for those students with a real interest in the creative and/or manufacturing and technology pathways e.g. programmer, web/game developer, software engineer, database administrator, or systems developer.

NCEA STANDARDS – 13 DTC

Not all standards will necessarily be assessed.

	Level	Credits	UE Rdg.	UE Wrtg.	
External					
91636 v3	3	4	yes	yes	Digital Technologies 3.44 - Demonstrate understanding of areas of computer science
Internal					
91633 v3	3	6	yes	yes	Digital Technologies 3.41 - Implement complex procedures to develop a relational database embedded in a specified digital outcome
91635 v3	3	4	yes	yes	Digital Technologies 3.43 - Implement complex procedures to produce a specified digital media outcome
91637 v3	3	6	no	no	Digital Technologies 3.46 - Develop a complex computer program for a specified task

EQUIPMENT

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Hardware

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- 2GB RAM
- Wireless capability. 802.11 a/b/g/n
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