Curtin Credentials

Introduction to the Internet of Things

Start:
28 February 2023*

Duration:
30 hours†

Delivery Mode:
Online^

Price:
$690 (incl. GST)§

How can you gain an understanding of the Internet of Things to help reshape your work or business practices?

The Internet of Things (IoT) connects all of us to billions of physical devices and is ever-expanding, allowing the collection and sharing of data. We have inevitably become intertwined in this massive digital network that allows for new and exciting possibilities.

What can IoT do for you and your business? How can you harness its power in the most effective ways? Gain a deep appreciation of the IoT and sow the seeds of IoT ideas within your field and area of expertise.

Make tomorrow better.

» **creds.curtin.edu.au**

Who is this credential for?

This credential is particularly suitable for:

- Professionals transitioning new working arrangements and roles into cybersecurity and privacy issues
- Professionals who aim to reskill or learn more about cybersecurity and internet operations
- Businesses are looking to understand more about fundamental aspects of Cybersecurity operations

What you will learn

By completing this credential you will learn to:

- examine the concept of IoT and start developing IoT ideas relating to your industry
- discover IoT components, and how these components connect, communicate and add value to generated data
- explore cybersecurity and privacy issues
- find out how IoT can optimise processes and improve efficiencies in your business
- complete a pass/fail authentic, industry relevant assessment to provide the opportunity to demonstrate learning mastery.

Key Topics

Your learning journey includes access to five online modules.

Module 1 – What is the IoT?

The Internet of Things, or IoT, refers to the billions of physical devices around the world that are now connected to the internet, all collecting and sharing data. This includes anything with an "on" or "off" switch. Module 1 introduces these concepts.

Module 2 – The electronics of things

Sensors are designed to respond to specific types of events/ conditions in the physical world, and then generate a signal (usually electrical). We explore typical sensor units in this module.

Module 3 – Connecting things

In practice, IoT is a networked system. All components of an IoT system are connected together in a network architecture. We cover how these components are connected in Module 3.

Module 4 – Programming of things

Controlling, storing, accessing and playing with data. In this module we cover the world of programming and software development.

Module 5 – Securing of IoT

Controlling, storing, accessing and playing with data. In this module we cover the world of programming and software development.

Assessment

To successfully complete this credential, you are required to pass a final assessment. In this final assessment, you will design and evaluate a proposed architecture and two-stage plan for an IoT system.

Earn a badge

Once you successfully complete and pass the final assessment, you'll earn a digital badge that is instantly shareable to your social networks (including LinkedIn) which showcases your new skills and knowledge mastery.
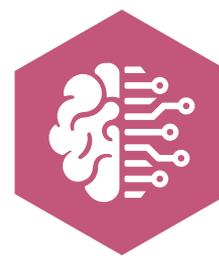
Essentials

This credential provides foundation knowledge in a discipline and doesn't require previous knowledge.

You will also earn 5 credit points which are in line with Australian Qualification Framework Level 8 criteria (https://www.aqf.edu.au/framework/aqf-levels#toc-aqf-level-8-criteria-2), ensuring comprehensive theoretical and/or technical knowledge of the credential. 100 credit points are required to earn a Graduate Certificate at Curtin.

Discover more

Curtin Credentials focus on five themes, which have been carefully curated based on what's most relevant and valuable to professionals today, and in the future. This credential fits within the following theme:

Digital Mindset

Embrace advances in digital technology, explore how it impacts our lives and learn how digital practices can optimise your business.

Make tomorrow better.

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For more information
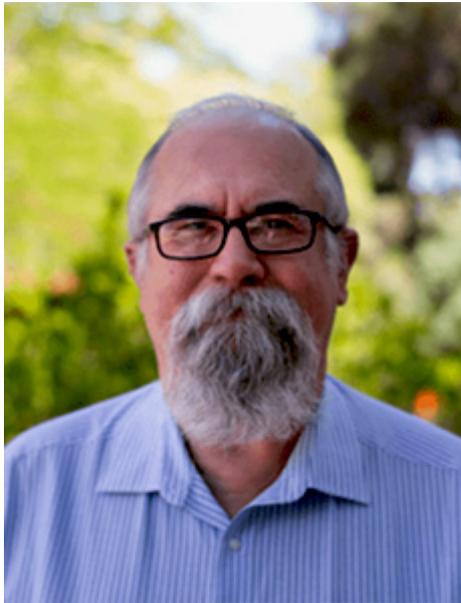
Curtin Credentials

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Meet your facilitators

Professor Iain Murray

John Curtin Distinguished Professor

Professor Iain Murray AM received his B.Eng (Hons) in Computer Systems Engineering in 1998 and his PhD titled "Instructional eLearning technologies for the vision impaired" in 2008, both at Curtin University. He has worked in the field of assistive technology for more than 25 years both as a practitioner and researcher. Currently employed as the Curriculum Lead – Engineering and in the School of Electrical Engineering, Computing & Mathematical Sciences, his research interest include; learning environments for people with vision impairment, embedded sensors in health applications, the Internet of Things and assistive technology. He founded the "Cisco Academy for the Vision Impaired" in 2002 to deliver ICT training to vision impaired people globally. He has supervised over 20 research students' completions and published in excess of 110 peer reviewed articles in the fields of IoT, engineering education and assistive technology. He is a Member of the Order of Australia, Fellow of the Australian Computer Society, Curtin Academy Fellow and a senior member of the IEEE.

Current research focusses on IoT and sensors in health/medical applications. I have been involved in the research and development of assistive technology for over 25 years. Currently I am on the board of directors for VisAbility and Guidedogs WA and am the founder of the Cisco Academy for the Vision Impaired (CAVI, a not for profit organisation that delivers ICT training to blind and vision impaired students in more than 14 countries).

in https://www.linkedin.com/in/iain-d-murray/

For more information

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