



# COURSE GUIDE 2022

ICT50220 Diploma of Information Technology



# Why Equinim College?

At Equinim College we understand what it takes for someone to truly learn and we go beyond the recommendations of industry to make sure the training includes real-world practical skills and everything you need to be career-ready. To us you are not just another student, you are a valued person whose experience matters. The Equinim College way:

- High quality spacious campuses that students enjoy going to
- Trainers who not only know their industry but are great teachers
- Team members who are people focussed with great interpersonal skills
- Management team that is focused on providing quality
- Industry relationships that are vetted for student experience
- College and campus standards of respect, inclusiveness and community
- Modern leading education framework that challenges and evolves



## Government Accredited

We work hard to provide our students with unsurpassed levels of education and service. We run courses in nationally recognised and accredited qualifications which means they have been found to meet the stringent education quality standards developed by industry and endorsed by the Government.

Equinim College is a Registered Training Organisation (RTO) and is approved to deliver the following IT course:

- ICT50220 Diploma of Information Technology

For other courses which Equinim College is approved to offer, please see our website, at [www.equinimcollege.com](http://www.equinimcollege.com)

Government Accredited qualifications are highly valued by employers and are sought after by those developing a career.

## Job Ready Skills

At Equinim College we understand the importance of needing to be 'job ready' when you graduate. This means that upon graduation you should be able to commence working in your chosen industry with little to no on-the-job training. Being job ready allows the graduate to commence working and earning from completion. It also relieves the stress and burden on employers to spend time and money on training graduates for job roles.

We achieve job ready by focusing on the practical skills that are actually performed in the job. We make sure our training is up to date and relevant to what workers actually experience.



## Your Qualification

On successful completion of the qualification you will receive a:

- certificate of award of the qualification, recognised within the Australian Qualifications Framework
- official academic transcript

With a strong emphasis on practical training, Equinim College graduates emerge job ready and at the leading edge of the industry.

## Nationally Recognised Training

Equinim College is registered to deliver Nationally Recognised Training in the below IT qualification. Therefore, your qualification will include the Nationally Recognised Training Logo.

Equinim College's Registered Training Organisation Number is 45758.

ICT50220 Diploma of Information Technology



## // Course Information

The Diploma of Information Technology is designed to teach you the foundational and specialising skills associated with performing information technology tasks. This includes core skills such as understanding IT frameworks, developing ideas and concepts, and working with clients and teams as well as specialist skills such as back-end web development, blockchain solutions and artificial intelligence. This hands-on course takes a person with no prior skills into a capable IT worker.

### Course Details

Equinim College delivers nationally recognised training for the ICT50220 Diploma of Information Technology. This course is delivered by highly qualified and industry expert trainers.

<b>Qualification</b>	ICT50220 Diploma of Information Technology
<b>School</b>	Science & Technology
<b>Study Method</b>	On-Campus Online (Domestic Students Only)
<b>Duration</b>	12 Months
<b>Class Hours (per week)</b>	15 On-campus, 5 Online
<b>Delivery Locations</b>	Sydney, Brisbane, Perth

# ICT50220 Diploma of Information Technology

## COURSE SUBJECTS:

The Diploma of Information Technology consists of 10 subjects.

- 1 Concepts and Strategic Direction
- 2 Security and Privacy
- 3 Manage Clients and Teams
- 4 Design and Create Databases
- 5 Monitor and Improve Data Processes
- 6 Back End Web Development 1
- 7 Back End Web Development 2
- 8 Artificial Intelligence 1
- 9 Artificial Intelligence 2
- 10 Blockchain Solutions

This qualification reflects the role of individuals in a variety of information and communications technology (ICT) roles who have established specialised skills in a technical ICT function.

## YOU WILL BE ABLE TO WORK IN A:

Individuals in these roles carry out moderately complex tasks in a specialist field, working independently, as part of a team or leading a deliverable with others. They may apply their skills across a wide range of industries, business functions and departments, or as a business owner (sole trader/contractor).

## OCCUPATIONAL TITLE:

- Information Technology Specialist
- IT Developer

## SPECIALISATIONS ACHIEVED:

- (Back End Web Development)
- (Database and Data Management)

## INFORMATION AND COMMUNICATIONS TECHNOLOGY TRAINING PACKAGE

Upon completion of Diploma of Information Technology (Subjects 1–10) students will achieve the following Qualification and Units of Competency from the Information and Communications Technology Training Package.



## ICT50220 DIPLOMA OF INFORMATION TECHNOLOGY

### CORE UNITS

BSBCRT512 Originate and develop concepts  
ICTICT517 Match ICT needs with the strategic direction of the organisation  
BSBXCS402 Promote workplace cyber security awareness and best practices  
ICTICT532 Apply IP, ethics and privacy in ICT environments  
ICTSAS527 Manage client problems  
BSBXTW401 Lead and facilitate a team

### ELECTIVE UNITS

ICTDBS503 Create a data warehouse  
ICTDBS506 Design databases  
ICTDBS507 Integrate databases with websites  
ICTDBS505 Monitor and improve knowledge management systems  
ICTSAD502 Model data processes  
ICTPRG553 Create and develop REST APIs  
ICTWEB525 Implement quality assurance process for websites  
ICTWEB522 Develop website information architecture  
ICTPRG554 Manage data persistence using noSQL data stores  
ICTAII401 Identify opportunities to apply artificial intelligence, machine learning and deep learning  
ICTAII501 Automate work tasks using machine learning  
ICTAII502 Train and evaluate machine learning models  
ICTAII503 Build natural language processing models and pipelines  
ICTICT527 Develop and maintain blockchain solutions





## // World Class Training

Equinim College uses a unique training system so your learning is more effective and can be achieved in a shorter space of time. Our world-class training provides you with lots of hands-on practical sessions and only the essential, up-to-date skills and knowledge are taught.

## // Awesome Career

Information technology, developer roles and the world of computer systems is growing rapidly with job demand and opportunity one of the highest globally. Information technology can be an exciting and rewarding career, filled with challenges, success and life changing opportunities. Join this essential industry with the foundational and leading training at Equinim College.

## // Learning Made Easy

Equinim College provides world class training that works for you. We use a unique flexible training system to maximise the value you get from your learning. As well as meeting all government guidelines, our flexible course timetable allows you to learn the way you need with maximum support and all the right challenges.

### SUBJECT 1

#### Concepts and Strategic Direction

BSBCRT512

Originate and develop concepts

ICTICT517

Match ICT needs with the strategic direction of the organisation

This subject teaches you the skills and knowledge to originate and develop concepts in a range of different areas, such as programs, products, processes or services. You will also be taken through how to match ICT needs to the needs of an organisation so that as soon as you begin your profession, you can become a valued and much needed team member.

#### SUMMARY OF CONTENT:

- Scoping and getting to understand issues within an organisation
- Generating and presenting solutions
- Refining solutions and gathering feedback
- Evaluating the strategic plans of an organisation
- Determine ICT gaps within an organisation
- Develop change proposals
- Develop action plans

### SUBJECT 2

#### Security and Privacy

BSBXCS402

Promote workplace cyber security awareness and best practices

ICTICT532

Apply IP, ethics and privacy in ICT environments

This subject explores the aspects of security and privacy across users, browsers, networks and more. Learn the practical application and need to know aspects of maintaining security and privacy. Learn to maintain professional and ethical conduct, as well as to ensure that personal information of stakeholders is handled in a confidential and professional manner.

#### SUMMARY OF CONTENT:

- Securely managing information
- Encryption protocols
- Data classification and management
- Media/document labelling
- Data governance
- ICT codes of ethics
- Privacy
- Copyright
- Intellectual property



# ICT50220

## Diploma of Information Technology

### Course Program

#### SUBJECT 3

### Manage Clients and Teams

ICTSAS527

Manage client problems

BSBXTW401

Lead and facilitate a team

Learn to apply high level technical and specialised knowledge in assisting clients to support, manage and resolve problems. Learn the important interpersonal skills when working in groups and team to support the best outcomes for the organisation and project requirements

#### SUMMARY OF CONTENT:

- Quality assurance practices
- Service level agreements
- Stakeholder roles
- Industry standard hardware and software
- Professional behaviours
- Styles of communication
- Conflict resolution
- Mentoring and coaching

#### SUBJECT 4

### Design and Create Databases

ICTDBS503

Create a data warehouse

ICTDBS506

Design databases

ICTDBS507

Integrate databases with websites

Learn an essential part of IT and design, develop and implement a data warehouses. Learn how to integrate databases with website and provide the back database foundation for website access. Understand the principles for clean and simple design structures.

#### SUMMARY OF CONTENT:

- Data warehousing and data mining
- Dimension tables and fact tables
- Warehouse agents and agent sites
- Data access speeds and processing
- Structured query language (SQL)
- Data warehousing and data mining
- Dimension tables and fact tables
- Warehouse agents and agent sites
- Data access speeds and processing
- Structured query language (SQL)





### SUBJECT 5

## Monitor and Improve Data Processes

ICTDBS505

Monitor and improve knowledge  
management systems

ICTSAD502

Model data processes

Learn about knowledge management systems and how to create improvements within them, as well as distribute and monitor them. Be taken through how to gather process data and business information so as to model data processes within an organisation. Explore both these concepts with ease and simplicity.

#### SUMMARY OF CONTENT:

- Prepare to improve knowledge management system
- Create knowledge management system improvements
- Distribute and monitor knowledge management system documentation
- Gather feedback
- Gather process data
- Identify relevant data processes and sources of information
- Identify information gathering method and modelling methodologies
- Develop and validate data models

### SUBJECT 6

## Back End Web Development 1

ICTPRG553

Create and develop REST APIs

ICTWEB525

Implement quality assurance process  
for websites

Learn how to create and implement representational state transfer (REST or RESTful) application program interfaces (APIs), to proficiently be able to request and manipulate data from data sources. Learn how to implement processes to ensure website quality review and maintenance structures are in place and sustainable for ongoing deployment.

#### SUMMARY OF CONTENT:

- Site validation processes
- Benchmark review processes
- Channels for interaction
- Quantifying performance standards
- Methodologies applicable to websites
- Anatomy of REST API HTTP
- HTTP GET, POST, PUT and OPTIONS
- CORS methodology
- HTTP network protocol

### SUBJECT 7

## Back End Web Development 2

ICTWEB522

Develop website information architecture

ICTPRG554

Manage data persistence using noSQL data stores

The education within this subject first teaches how to liaise with clients to adapt e-business into their corporate strategy, applying high-level knowledge of technical languages and design principles. Learn to implement a data store and manage data persistence using non structured query language (NoSQL) to provide automatic scaling as well as high performance and availability over semi-structured data.

#### SUMMARY OF CONTENT:

- Cascading style sheets
- Hypertext markup language (HTML)
- World Wide Web Consortium (W3C)
- Client and business liaison
- Documenting technical specifications
- Cascading style sheets
- Hypertext markup language (HTML)
- World Wide Web Consortium (W3C)
- Client and business liaison
- Documenting technical specifications

### SUBJECT 8

## Artificial Intelligence 1

ICTAI401

Identify opportunities to apply artificial intelligence, machine learning and deep learning

ICTAI501

Automate work tasks using machine learning

Learn how to identify opportunities where the automation of work tasks can be supported through the application of artificial intelligence (AI), machine learning (ML) and deep learning (DL). Gain the necessary knowledge to improve organisational productivity using machine learning (ML) principles and techniques to support the automation of procedural tasks.

#### SUMMARY OF CONTENT:

- Industry-recognised ML principles and techniques
- Functions and features of machine training datasets in relation to automating work tasks
- Key algorithms
- Creating and managing email campaigns
- Functions and features of industry-recognised AI, ML and DL technologies
- Organisational formats for documentation and reports
- Policies and procedures, and legislative requirements relating to work tasks
- Analysing trends within datasets



### SUBJECT 9

## Artificial Intelligence 2

ICTAI502

Train and evaluate machine learning models

ICTAI503

Build natural language processing models and pipelines

Gain an understanding of how to train and evaluate the operations of machine learning (ML) models when processing previously unseen data, as well as developing and applying routine natural language processing (NLP) pipelines to decode, interpret and manipulate human speech and text.

#### SUMMARY OF CONTENT:

- Key features and functions of ML
- Procedures for training, testing and validating data parameters
- Determining predictive accuracy of ML models using target data
- Analysing NLP models and pipelines,
- Key functions and features of components used to build NLP models and pipelines
- Text processing

### SUBJECT 10

## Blockchain Solutions

ICTICT527

Develop and maintain blockchain solutions

In this subject, dive into the interesting and useful world of blockchain and learn various blockchain solutions that can be used in modern IT applications. Blockchain is a new area of IT with large future growth potential.

#### SUMMARY OF CONTENT:

- Underlying blockchain principles applicable to developing and maintaining solutions
- Objectives, purpose and requirements of blockchain solutions
- Suitability of blockchain different transaction and data types
- Techniques to debug, scale and test blockchain solutions
- Capabilities and purpose of blockchain technology
- Industry-standard uses for applications
- Transactional types and components suitable for blockchain technology







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**Diploma of Information Technology**  
Course Guide V23.01

**Sydney**

**Melbourne**

**Brisbane**

**Perth**

**Adelaide**

**Newcastle**

**Darwin**

**Launceston**

**Townsville**

