



Australian Government

Department of Education, Employment and Workplace Relations

ICA50211 Diploma of Digital and Interactive Games

Release: 1

ICA50211 Diploma of Digital and Interactive Games

Modification History

Release	Comments
Release 1	This Qualification first released with <i>ICAll Information and Communications Technology Training Package version 1.0</i>

Description

This qualification provides the skills and knowledge for an individual to be competent in a variety of skill areas within the digital and interactive games industry. It provides an opportunity to develop the design, graphic/digital media and programming skills required in the development of digital games briefs, either as a small independent specialist or as part of a larger team. The qualification also provides opportunities to work in new and emerging games genres, such as online game development, mobile device gaming, interactive internet and TV game development.

Job roles

Possible job titles relevant to this qualification include:

- 2-D/3-D artist
- animator
- designer
- games developer
- graphic/media designer
- interactive digital media developer
- PC games programmer
- mobile games programmer
- web designer.

Pathways Information

Pathways into the qualification

Preferred pathways for candidates considering this qualification include:

- after achieving ICA40911 Certificate IV in Digital and Interactive Games, or other relevant qualifications or units equivalent to the core of ICA40911

OR

- with demonstrated vocational experience in a range of work environments, such as digital media, games development, animation, graphics design or similar roles.

Pathways from the qualification

ICA11 Advanced Diploma or Vocational Graduate Certificate qualifications or other higher education sector qualifications.

Licensing/Regulatory Information

There is no link between this qualification and licensing, legislative or regulatory requirements. However users should confirm requirements with the relevant federal, state or territory authority. There may be some alignment with industry standard certification competencies.

Entry Requirements

There are no entry requirements for this qualification.

Employability Skills Summary

The following table contains a summary of the employability skills required by industry for this qualification. The employability skills facets described here are broad industry requirements that may vary depending on qualification packaging options.

Employability skill	Industry/enterprise requirements for this qualification
Communication	<ul style="list-style-type: none">• communicating with work team members and clients using a variety of media and techniques• communicating central ideas of a message, such as a game concept presentation, in an informative and engaging manner• establishing rapport with clients• interpreting and clarifying game design documents and creative briefs• writing complex technical briefs and reports• interpreting and applying information in user manuals for software applications
Teamwork	<ul style="list-style-type: none">• managing project team members and activities• working with team members in an open and collaborative manner• collaborating with colleagues to develop products or services• seeking feedback from team members and clients on work in progress
Initiative and enterprise	<ul style="list-style-type: none">• contributing creative ideas to projects• suggesting ways to improve products• ensuring there is an intuitive and logical flow to the navigation of game interfaces• generating a range of ideas for game products that meet the needs of target users and audiences• thinking laterally when developing ideas• maintaining design integrity• visualising and interpreting creative concepts
Planning and organising	<ul style="list-style-type: none">• undertaking background research• preparing and making presentations• managing budgets and projects• planning the development process for and managing the testing of games
Problem-solving	<ul style="list-style-type: none">• finding solutions to interactivity challenges• finding solutions to game design problems, such as balancing a game• finding ways to minimise the effect of technical constraints• troubleshooting and solving problems as they arise during the development of products

Self-management	<ul style="list-style-type: none">• working to deadlines• providing appropriate and timely documentation• managing and marketing oneself as a freelancer• ensuring that workplace practices comply with OHS requirements• managing own finances
Learning	<ul style="list-style-type: none">• developing and participating in industry or community networks• extending own knowledge and skills through experimentation and practice• improving performance/product through self-reflection and revision to incorporate feedback from colleagues or clients• keeping up-to-date with industry developments and trends• seeking expert advice as required
Technology	<ul style="list-style-type: none">• creating complex games from game design documents and specifications• using a range of software applications

Packaging Rules

Total number of units = 16

5 core units *plus*

11 elective units

The elective units consist of:

- 5 from one of the following specialist groups
 - Group A Programming
 - Group B Art
 - Group C Digital media
- of the remaining units:
 - up to 6 may be from the specialist elective groups below or from Group D general elective units below
 - up to 3 may be from elsewhere in ICA11 or any other Training Package or accredited course at Diploma or Advanced Diploma level.

The elective units chosen must be relevant to the work outcome and meet local industry needs.

Core units

BSBOHS402B Contribute to the implementation of the OHS consultation process

ICAGAM501A Create design concepts for digital games and 3-D media

ICAGAM503A Create a complex 3-D interactive computer game

ICAGAM523A Collaborate in the design of 3-D game levels and environments

ICAICT419A Work effectively in the digital media industry

Elective units

Specialist elective units

Group A Programming

ICAGAM419A Build a database to support a computer game

ICAGAM506A Create complex code for mobile game devices

ICAGAM507A Develop intermediate 3-D software for games and interactive media

ICAGAM508A Develop complex 3-D software for games and interactive media

ICAGAM509A Design interactive 3-D applications for scientific and mathematical modelling

ICAGAM510A Prepare games for different platforms and delivery modes

ICAGAM511A Manage testing of games and interactive media

ICAGAM527A Integrate database with online game

ICAPRG425A Use structured query language

ICAPRG501A Apply advanced object-oriented language skills

ICAPRG515A Review developed software

ICAPRG523A Apply advanced programming skills in another language

ICAWEB508A Develop website information architecture

Group B Art

ICAGAM512A Create and implement designs for a 3-D games environment

ICAGAM514A Design and create models for a 3-D and digital effects environment
ICAGAM515A Design and create advanced particles, fluids and bodies for 3-D digital effects
ICAGAM516A Animate a 3-D character for digital games
ICAGAM517A Produce a digital animation sequence
ICAGAM518A Animate physical attributes of models and elements
ICAGAM519A Manage technical art and rigging in 3-D animation
ICAGAM520A Create and combine 3-D digital games and components
ICAGAM526A Create complex 3-D characters for games

Group C Digital media

CUFDIG502A Design web environments
CUFDIG503A Design e-learning resources
CUFDIG507A Design digital simulations
CUSSOU403A Perform advanced sound editing
ICAGAM521A Create interactive 3-D environments for digital games
ICAGAM522A Complete digital editing for the 3-D and digital effects environment
ICAGAM524A Integrate multiple data sources into interactive 3-D environments
ICAGAM525A Apply digital texturing for the 3-D environment in digital games

General elective units

Group D

BSBCRT501A Originate and develop concepts
BSBSUS501A Develop workplace policy and procedures for sustainability
ICAGAM504A Manage interactive media production
ICAGAM528A Create games for mobile devices
ICAGAM529A Analyse business opportunities in the digital games environment
ICAGAM530A Develop and implement physics in a 3-D digital game
ICAGAM531A Complete compositing to create elements for the 3-D and digital effects environment
ICAICT408A Create technical documentation
ICAICT511A Match IT needs with the strategic direction of the enterprise
ICAICT514A Identify and manage the implementation of current industry-specific technologies
ICAPMG501A Manage IT projects
ICAWEB411A Produce basic client-side script for dynamic web pages
ICAWEB429A Create a markup language document to specification