



CGD315108 - TQA Level 3, 15 size value.

## THE COURSE DOCUMENT

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## COURSE SIZE AND COMPLEXITY

This course has been assessed as having a complexity level of TQA level 3.

At TQA level 3 the student is expected to acquire a combination of theoretical and/or technical and factual knowledge and skills and use judgement when varying procedures to deal with unusual or unexpected aspects that may arise. Some skills in organising self and others are expected. TQA level 3 is a standard suitable to prepare students for further study at the tertiary level. It is an approximate match to current Tasmanian Certificate of Education (TCE) level 5 courses and VET competencies at this level are often those characteristic of an AQF Certificate III.

This course has a size value of 15 (150 hour design-time).

This course contributes to the calculation of Tertiary Entrance Ranks.

## COURSE DESCRIPTION

Computer Graphics and Design CGD315108 enables students to work within a contemporary design context, creating content in, and for, a digital environment, across a range of specialised areas.

Students will use design principles, processes and practice to explore the diverse range of possibilities available for designing and creating visual content in the digital world that has a function and purpose. They will have the opportunity to extend and apply their understanding of these processes by undertaking an extended design project and content area study.

The course has three components:

- Contemporary Design in Computer Graphics
- Computer Graphics and Digital Content Areas
- Major Research Project (Extended Design Project)

Computer Graphics contributes to the development of technological and visual literacy as well as the communication, analytical and problem solving skills of students.

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## LEARNING OUTCOMES

Students studying Computer Graphics and Design will:

- understand design process, principles and practice
  - have an understanding of design in society and how this impacts on people and the environment
  - acquire conceptual and practical skills to solve problems creatively, becoming creative and critical thinkers and enterprising problem solvers
  - generate and communicate ideas and information in a variety of ways, developing skilled visual communicators
  - develop skills, knowledge and understanding of the fundamentals of technology (hardware and software) in design and graphics
  - become confident and capable users of technology
  - demonstrate an understanding of standards and conventions within specialised areas that use computer graphics
  - plan, organise, undertake and evaluate a variety of design projects and an extended design project.
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## COURSE CONTENT

This course is made up of three core content areas.

The three areas are:

1. Contemporary Design in Computer Graphics (25 hours)\*
2. Computer Graphics and Digital Content Areas (75 hours)\*
3. Major Research Project (Extended Design Project) (50 hours)\*

\* These are recommended study hours, they are not prescriptive.

## 1. CONTEMPORARY DESIGN IN COMPUTER GRAPHICS

Design underpins all computer graphics applications. This unit should take approximately 25 hours and will include the following core units to be studied by all students:

- design principles
- design process
- drawing and design
- technology and design
- history and future concepts of design
- design and society

In addition to these, the following areas are optional and can be studied in the context of specialised areas. At least one of these optional areas should be covered:

- contemporary designers
- design analysis
- design and client / manufacturing
- managing resources and design projects
- aesthetics and expression in design
- visual communication and design

An expanded version of the course content for the contemporary design in computer graphics can be found in the *Teaching and Learning Guide*.

## 2. COMPUTER GRAPHICS AND DIGITAL CONTENT AREAS

This is the basis for working within a specialised area. Students need a basic understanding of a number of areas and must study at least three of the content areas. It is expected that hardware, software, networking and other computer systems theory components are taught and embedded in the practical application.

This part of the course should be approximately 75 hours and include:

- digital imaging
- 3D modelling
- 2D and 3D animation
- web design
- solid modelling
- video, motion graphics and post-production editing
- game design and making.

An expanded version of the course content for the computer graphics and digital content areas can be found in the *Teaching and Learning Guide*.

## 3. MAJOR RESEARCH PROJECT

Using computer generated graphics, or digital content, in a specialised area, each student will undertake a 50 hour major research project.

This project will be externally assessed and needs to be presented in a format that suits the requirements of the area of specialisation.

Examples of specialised areas are given in the *Teaching and Learning Guide*.

As part of the Major Research Project, students are expected to:

- provide a clear, concise design brief describing the full nature and limitations of the project
- follow a structured design process
- prepare a presentation and written analysis for external assessment
- use contemporary design methods in the presentation of the project.

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## ASSESSMENT

Criterion-based assessment is a form of assessment which identifies the extent of student achievement at an appropriate end-point of study. Assessment in the classroom is continuous, much of it is formative, and is done to help students identify what they need to do to attain the maximum benefit from their study of the course. Therefore, assessment for summative reporting should focus on what both teacher and student understand to reflect end-point achievement.

The primary audience for assessment and reporting is the student and the teacher, but may also include parents when appropriate.

The standard of achievement each student attains on each criterion is recorded as a rating 'A', 'B', or 'C', according to the outcomes specified in the standards section of the course.

A 't' notation must be used where a student demonstrates any achievement against a criterion less than the standard specified for the 'C' rating. The 't' notation is not described in course standards.

A 'z' notation is to be used where a student provides no evidence of achievement at all.

Providers offering this course must participate in quality assurance processes specified by the Tasmanian Qualifications Authority to ensure provider validity and comparability of standards across all awards. Further information on quality assurance processes, as well as on assessment, is available in the TQA Senior Secondary Handbook or on the website at <http://www.tqa.tas.gov.au>

Internal assessment of all assessment criteria will be made by the school. Schools will report the student's rating for each criterion to the Tasmanian Qualifications Authority.

The Tasmanian Qualifications Authority will supervise the external assessment of designated criteria (\*) in TQA courses that include an external assessment regime. The ratings obtained from the external assessments will be used in addition to those provided from the school to determine the final award.

## QUALITY ASSURANCE PROCESSES

The following processes will be facilitated by the TQA to ensure there is:

- a match between the standards for achievement specified in the course and the standards demonstrated by students
- community confidence in the integrity and meaning of the qualifications.

**Processes** – the Authority gives course providers feedback about any systematic differences in the relationship of their internal and external assessments and, where appropriate, seeks further evidence through audit and requires corrective action in the future.

## EXTERNAL ASSESSMENT REQUIREMENTS

The following criteria will be externally assessed: 2, 4, 5 and 7.

Further information regarding external assessment processes and requirements is given in TQA issued [Assessment Guidelines](#).

## COURSE CRITERIA

The assessment for TQA level 3 Computer Graphics and Design will be based on the degree to which the student can:

1. Collect, analyse, organise, and evaluate information
2. \*Solve problems
3. Develop and implement a project management plan
4. \*Generate and communicate ideas
5. \*Demonstrate knowledge and understanding of design principles and elements
6. Demonstrate understanding of the context and process of design
7. \*Demonstrate a knowledge and understanding of contemporary computer graphics systems
8. Competently use technology to create digital content.

\* denotes criteria that are externally assessed.

## STANDARDS

**CRITERION 1 COLLECT, ANALYSE, ORGANISE, AND EVALUATE INFORMATION**

<b>C RATING</b>	Using a range of sources, a student can collect and analyse information, organise it into categories, evaluate the quality of the information and its source, and use it.
<b>B RATING</b>	Using a diverse range of sources, a student can collect and analyse relevant information, organise it into categories, evaluate the quality of information and its source and participate in evaluation of information gathering and analysing.
<b>A RATING</b>	Using diverse sources, a student can collect and analyse relevant information, organise it into appropriate categories, critically evaluate its quality and validity, and analyse the process.

**\*CRITERION 2 SOLVE PROBLEMS**

<b>C RATING</b>	A student can recognise existing problems and work towards a desired outcome. A student can choose methods to solve problems and evaluate their solution.
<b>B RATING</b>	A student can recognise and separate existing and potential problems and desired outcomes. A student can choose appropriate methods and use them to solve problems and evaluate the solution.
<b>A RATING</b>	A student can anticipate, identify and separate problems and issues. A student can also choose appropriate methods to solve problems, initiate action to efficiently solve existing and potential problems and to critically evaluate solutions.

**CRITERION 3 DEVELOP AND IMPLEMENT A PROJECT MANAGEMENT PLAN****C RATING**

A student can follow the design process, using provided resources, to achieve goals within a set timeframe. They can also contribute towards an evaluation of planning and processes. This process can be completed as part of a design team approach.

**B RATING**

A student follows the design process to achieve goals within a set timeframe. They can also adapt plans to meet changed conditions. They are able to critically evaluate their process and planning. They are also competent in archiving storage and retrieval of data and working as part of a team.

**A RATING**

A student can determine and achieve goals by using the design process. They can critically evaluate and adapt plans to ensure the outcomes desired. They constructively evaluate planning and processes, and confidently archive, store, retrieve and share data.

**\*CRITERION 4 GENERATE AND COMMUNICATE IDEAS****C RATING**

A student can select and use design content to communicate ideas visually. A student can communicate conceptual and expressive intentions by the production of design works and by exploring and experimenting with ideas.

**B RATING**

A student can select and use appropriate design content and styles to communicate ideas visually. A student can creatively adjust communication in response to changed conditions, and effectively communicate conceptual and expressive intentions by the production of design works and by exploring, experimenting with, and developing ideas.

**A RATING**

A student considers, selects and competently uses a range of appropriate design content and styles to communicate ideas visually. A student can creatively and appropriately adjust communication in response to changed conditions, and effectively communicate conceptual and expressive intentions by the production of design works and by exploring, experimenting with and refining ideas.

**\*CRITERION 5 DEMONSTRATE KNOWLEDGE AND UNDERSTANDING OF DESIGN PRINCIPLES AND ELEMENTS**

<b>C RATING</b>	A student is aware of the elements and principles of design and attempts to use them in finding solutions to design problems. They can produce a folio with reference to a specialised computer graphics area.
<b>B RATING</b>	A student uses the elements and principles of design appropriately in finding solutions to design problems. They can produce a comprehensive folio from a specialised computer graphics area.
<b>A RATING</b>	A student consistently uses the elements and principles with competence and capability to find design solutions that both embrace and challenge conventional modes. They can produce a comprehensive folio which illustrates specified design implications for specialised computer graphics areas.

**CRITERION 6 DEMONSTRATE UNDERSTANDING OF THE CONTEXT AND PROCESS OF DESIGN**

<b>C RATING</b>	A student can follow the design process with provided resources and has an understanding of how design impacts on society, including historical aspects.
<b>B RATING</b>	A student follows the design process in their work, and has a clear understanding of how design fits within an ethical and social framework. They have a clear understanding of the historical evolution of design.
<b>A RATING</b>	A student always follows the design process in their work, and incorporates ethical and social issues into their design projects. They have a comprehensive understanding of the historical evolution of design.

**\*CRITERION 7 DEMONSTRATE A KNOWLEDGE AND UNDERSTANDING OF CONTEMPORARY  
COMPUTER GRAPHICS SYSTEMS**

<b>C RATING</b>	A student can demonstrate a basic understanding of a range of computer graphics systems. They have an understanding of hardware design and configuration, and software applications including design and industrial standards.
<b>B RATING</b>	A student can demonstrate an understanding of a range of computer graphics systems and how these impact on a designer. They have an understanding of hardware design and configuration, and software applications including design and industrial standards.
<b>A RATING</b>	A student can demonstrate a high level understanding and knowledge of complex computer graphics systems, and apply this knowledge to a range of design problems. This includes hardware, software, industrial standards and future developments.

**CRITERION 8 COMPETENTLY USE TECHNOLOGY TO CREATE DIGITAL CONTENT**

<b>C RATING</b>	A student can choose appropriately from a wide range of systems technologies to express and develop their own ideas. A student can use a variety of techniques in the application of computing technology.
<b>B RATING</b>	A student can choose appropriately from a wide range of technologies and techniques to express and responsibly develop their own design ideas. A student can competently and creatively apply these to their practice. They can meet the standards and conventions of their area of specialisation.
<b>A RATING</b>	A student can choose appropriately from a wide range of technologies and techniques to express and responsibly develop their own design ideas. A student can achieve subtle and complex intentions with refinement of technique, materials and technologies in a body of work. They can meet high level standards and conventions for their area of specialisation.

## QUALIFICATIONS AVAILABLE

Computer Graphics and Design (*with the award of*):

PRELIMINARY ACHIEVEMENT  
SATISFACTORY ACHIEVEMENT  
COMMENDABLE ACHIEVEMENT  
HIGH ACHIEVEMENT  
EXCEPTIONAL ACHIEVEMENT

## AWARD REQUIREMENTS

The final award will be determined by the Tasmanian Qualifications Authority from the 12 ratings (8 ratings from the internal assessment and 4 ratings from the external assessment).

The minimum requirements for an award in this course are as follows:

### EXCEPTIONAL ACHIEVEMENT (EA)

10 'A', 2 'B' ratings (3 'A', 1 'B' from external assessment)

### HIGH ACHIEVEMENT (HA)

4 'A', 5 'B', 3 'C' ratings (1 'A', 2 'B' and 1 'C' from external assessment)

### COMMENDABLE ACHIEVEMENT (CA)

6 'B', 5 'C' ratings (2 'B', 1 'C' from external assessment)

### SATISFACTORY ACHIEVEMENT (SA)

10 'C' ratings (2 'C' from external assessment)

### PRELIMINARY ACHIEVEMENT (PA)

6 'C' ratings

A student who otherwise achieves the ratings for a CA (Commendable Achievement) or SA (Satisfactory Achievement) award but who fails to show any evidence of achievement in one or more criteria ('z' notation) will be issued with a PA (Preliminary Achievement) award.

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## COURSE EVALUATION

Formal evaluations of the course will be undertaken during the second and fourth years of accreditation. An evaluation report will be provided to the TQA.

The evaluations will focus on identifying any issues with regard to:

- the match between the standards for achievement specified in the course and the standards demonstrated by students
- community confidence in the integrity and meaning of the qualifications
- access, delivery and resources

and, if appropriate, make recommendations regarding changes to the course.

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## **COURSE DEVELOPER**

Department of Education, Tasmania.

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## **ACCREDITATION**

The accreditation period for this course is from 1 January 2008 to 31 December 2012.

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## **VERSION HISTORY**

Version 1 – Accredited Version (4 October 2007).

Version 1.a – Clarification of Course Size and Complexity (6 March 2008).

Version 2 – New quality assurance regime as per the Authority's decision on 1 October 2008 (28 November 2008).