Computer Graphics and Design

<table>
<thead>
<tr>
<th>LEVEL 3</th>
<th>15 TCE CREDIT POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>COURSE CODE</td>
<td>CGD315113</td>
</tr>
<tr>
<td>COURSE SPAN</td>
<td>2013 — 2017</td>
</tr>
<tr>
<td>COURSE STATUS</td>
<td>CLOSED</td>
</tr>
<tr>
<td>READING AND WRITING STANDARD</td>
<td>NO</td>
</tr>
<tr>
<td>MATHEMATICS STANDARD</td>
<td>NO</td>
</tr>
<tr>
<td>COMPUTERS AND INTERNET STANDARD</td>
<td>YES</td>
</tr>
</tbody>
</table>

Computer Graphics and Design focuses on contemporary digital technologies in design and computer graphics by developing skills in the use of processes and systems of 3D modelling.

Learners select an option from digital imaging or interactive design (including mobile, internet or disc based media) and an option from animation or video, motion graphics and post-production editing or game design and production. Design principles, processes and practice are applied to create digital visual content. A design process is used to plan, undertake and evaluate a variety of design projects, techniques and complete a range of design briefs and an externally assessed project.

Learning Statement

The course Computer Graphics and Design Level 3 exemplifies the pervasiveness of digital based visual content inherent in a rapidly changing knowledge based society. It provides an important opportunity to engage with the notion of digital convergence to explore and produce diverse visual solutions to problems both real and imagined.

Central to the course is the development of design skills such as the conceptualisation, exploration and development of ideas using research strategies to underpin the process. In doing so, learners will come to understand the influences and consequences of decisions in arriving at visual solutions using digital technologies with regard to functional, aesthetic, sustainable, social, environmental and technological considerations.

Learners will be provided with the opportunity to:

- engage in digital technology based processes and production using design and computational thinking
- create, design, visualise and produce innovative digitally based technological solutions
- develop high level problem solving and project management skills
- use a range of computer graphic and associated technologies
- engage with real and imagined problems that will provide a pathway for future learning and employment.
Rationale

The purpose of this course is to allow learners to develop understanding of form and functional design contexts using computer graphics and associated digital technologies along with computational thinking. In doing so the course equips learners with the capacity to solve complex problems using project management skills. Such skills are essential in existing and future work environments and are particularly relevant for learners seeking careers in design-based industries.

The 2008 Melbourne Declaration on Educational Goals for Young Australians stated in its preamble that an essential aspect of all 21st Century occupations is the development of skills in cross-disciplinary thinking and digital media. Computer Graphics and Design, while associated with the Design and Technology strand of learning, also incorporates, and provides, rich learning opportunities to embed skills and knowledge from the Arts, maths and sciences. In doing so, Computer Graphics and Design provides potential for the engagement of integrated learning opportunities and the capacity to develop skills to effectively transfer knowledge and understanding across disciplines.

The design thinking and problem solving focus of this course helps equip learners to develop skills essential for the digital age. In a future that will be characterised by rapid and continuing advances in digital technologies where visual solutions are central to the way people use, share, develop and process information; students need to learn the skills to utilise such technologies to solve problems and visually communicate knowledge and ideas.

Learning Outcomes

On successful completion of this course, learners will be able to:

- understand design process, principles and practice
- have developed an understanding of design in society and how this impacts on people, and the environment (including ethical, cultural and sustainability considerations)
- be creative, innovative, critical thinkers and enterprising problem solvers
- generate and communicate ideas and information in a variety of ways, developing skilled visual communication
- have developed understanding of the fundamentals of contemporary digital technologies in design and computer graphics
- become confident and capable users of digital technologies
- demonstrate an understanding of design standards and conventions within design based professions that use digital technologies
- have planned, organised, undertaken and evaluated a variety of design projects and an extended design project
- have developed skills to individually and collaboratively plan, manage, create, and produce solutions to design based projects in a variety of settings.

CORE SKILL

Learners must develop the following core skill through their participation in this course:

- the ability to apply design thinking and processes culminating in the production of effective solutions using computer graphics, and associated digital technologies.

Pathways

On successful completion of this course, learners will have attained the knowledge and skills to progress to tertiary study and/or vocational education and training (VET) pathways in the areas of engineering, architecture, computing, visual arts and design.

Resource Requirements

Providers of this course need to ensure learners have access to appropriate industry-standard graphics software applications and suitable hardware to enable the efficient operation of such applications.
Course Size And Complexity

This course has a complexity level of 3.

At Level 3, the learner 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. Level 3 is a standard suitable to prepare learners for further study at tertiary level. VET competencies at this level are often those characteristic of an AQF Certificate III.

This course has a size value of 15.

Course Description

This course is designed for learners to work within a contemporary design context, creating content in, and for, a digital environment, across a range of specialised design areas.

Learners will use design principles, processes and practice to explore a 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 Project (Extended Design Project).

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

Course Delivery

Design principles and processes must underpin the development of digitally created outcomes and solutions. These must be arrived at using a range of expressive techniques including written, drawn and digital.

In addition to any independent research undertaken by learners there will be a focus on the formal delivery of the design component in relation to principles and process (for example via structured lessons, tutorials or lectures) in conjunction with digital content areas.

Connections need to be made with designers working in a diverse range of contexts. This may take the form of case studies, guest speakers and excursions.
Course Content

This course consists of **three (3) compulsory** content areas. They will be studied in the order given.

The three areas are:

1. Contemporary Design with Digital Technologies
2. Computer Graphics and Digital Content Areas
3. Extended Design Project.

**AREA 1. CONTEMPORARY DESIGN WITH DIGITAL TECHNOLOGIES**

It is suggested that 20 to 30 hours is devoted to this content area.

Design underpins all computer graphics applications.

**Design Essentials**

This is a core unit to be studied by all learners:

- design principles and elements in specialised contexts
- design process – brief, research and concept development, production, appraisal
- sketching and graphic communication including orthographic, isometric and perspective drawing
- technology and design
- historical and future concepts of design
- design in society (ethical, cultural, sustainable).

**Design Extension**

In addition to the Design Essentials, the following areas are optional and can be studied in the context of specialised areas. At least one of the following 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
- collaborative practices in design projects.

**AREA 2. COMPUTER GRAPHICS AND DIGITAL CONTENT AREAS**

This is the basis for working within a field of design. Learners need a basic understanding of a number of areas and must study **at least three** of the content areas from the list below. It is expected that hardware, software, networking and other computer systems theory components are taught and embedded in these content areas.

Learners must study:

- 3D Modelling (This is a **compulsory** content area. It may be delivered in conjunction with one or more of the other content areas in the lists below.)
- **at least one** content area from List A below
- **at least one** content area from List B below.

Recommended delivery time per content area – no more than 25 hours.
Compulsory Content Area

<table>
<thead>
<tr>
<th>Content Area</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3D Modelling</td>
<td>This content area involves learning the processes and systems of 3D modeling to develop design solutions. It incorporates techniques such as polygon, spline and digital sculpting to produce solid or shell based modeling solutions. In addition, systems of texturing, lighting, camera and rendering are to be covered. Modelling based design tasks in this content area could include contexts such as product, engineering, architectural/visualisation, games, character and film/TV.</td>
</tr>
</tbody>
</table>

Content Area List A – At least 1 to be selected

<table>
<thead>
<tr>
<th>Content Area</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Imaging</td>
<td>This content area involves learning the processes and systems of raster and vector based graphics to develop functional design solutions. It incorporates understanding of different systems and tools to produce 2D graphics for particular functional design contexts, the principles of colour spaces &amp; image resolution, layering, grouping and appropriate use of file formats.</td>
</tr>
<tr>
<td>Interactive design (mobile, Internet &amp; disc based media)</td>
<td>This content area involves learning the processes and systems of interactive design solutions for mobile, Internet and disc-based media. It incorporates understanding of how systems such as image optimisation, usability, interface layout, browsers, information architecture and interaction behaviour impact on the creation of functional design solutions.</td>
</tr>
</tbody>
</table>

Content Area List B – At least 1 to be selected

<table>
<thead>
<tr>
<th>Content Area</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animation</td>
<td>This content area involves learning the processes and systems of 2D or 3D animation to develop design solutions. It incorporates understanding of different animation systems, such as pose to pose and straight ahead, and the diverse range of methods that may be used in developing design solutions. For example; cel shading, motion capture, keyframing, tweening, rotoscoping, inverse and forward kinematics, stop motion, morphing, camera walkthrough, rigging and bones.</td>
</tr>
<tr>
<td>Video, motion graphics and post-production editing</td>
<td>This content area involves learning processes and systems for the design of motion graphics that combine video and animation techniques. It incorporates understanding of how post production composting and editing techniques can be applied in the design of functional visual communication solutions.</td>
</tr>
<tr>
<td>Game Design and Production</td>
<td>This content area involves learning the processes and systems of game design and production to develop design solutions in either 2D or 3D contexts. It incorporates understanding of how computer graphic assets can be designed, created and optimised for embedding in game systems to ensure effective functionality.</td>
</tr>
</tbody>
</table>

AREA 3. EXTENDED DESIGN PROJECT (SUGGESTED 50 HOURS)

Using computer generated graphics, or digital content, in a field of design, each learner will undertake an extended design project.

This project will be externally assessed. For further information see the current external assessment specifications and guidelines for this course available on the TASC website.

As part of the Extended Design Project, learners must:

- provide a clear, concise design brief
- follow a structured design process as evident in a commercial setting
- prepare a presentation and written analysis for external assessment
- use contemporary digital design methods in the presentation of the project.
Assessment

Criterion-based assessment is a form of outcomes assessment that identifies the extent of learner achievement at an appropriate end-point of study. Although assessment – as part of the learning program – is continuous, much of it is formative, and is done to help learners identify what they need to do to attain the maximum benefit from their study of the course. Therefore, assessment for summative reporting to TASC will focus on what both teacher and learner understand to reflect end-point achievement.

The standard of achievement each learner 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 learner demonstrates any achievement against a criterion less than the standard specified for the ‘C’ rating.

A ‘z’ notation is to be used where a learner provides no evidence of achievement at all.

Providers offering this course must participate in quality assurance processes specified by TASC to ensure provider validity and comparability of standards across all awards. To learn more, see TASC’s quality assurance processes and assessment information.

Internal assessment of all criteria will be made by the provider. Providers will report the learner’s rating for each criterion to TASC.

TASC will supervise the external assessment of designated criteria which will be indicated by an asterisk (*). The ratings obtained from the external assessments will be used in addition to internal ratings from the provider to determine the final award.

Quality Assurance Process

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

- a match between the standards of achievement specified in the course and the skills and knowledge demonstrated by learners
- community confidence in the integrity and meaning of the qualification.

Process – TASC 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, 5, 6, 7 & 8.

Criteria 5, 6 and 8 will be externally assessed based on the evidence of a folio.

For further information see the current external assessment specifications and guidelines for this course available in the Supporting Documents below.

Criteria

The assessment for Computer Graphics and Design Level 3 will be based on the degree to which the learner can:

1. collect, analyse, organise and evaluate information  
2. solve problems in a design based context*  
3. develop and implement a design project management plan  
4. generate and communicate ideas using a range of graphic techniques  
5. demonstrate knowledge and understanding of design principles and elements*  
6. demonstrate understanding of the context and process of design*  
7. demonstrate knowledge and understanding of contemporary computer graphics systems*  
8. competently use digital technologies to create content*

* = denotes criteria that are both internally and externally assessed
Standards

**Criterion 1: collect, analyse, organise and evaluate information**

The learner:

<table>
<thead>
<tr>
<th>Rating A</th>
<th>Rating B</th>
<th>Rating C</th>
</tr>
</thead>
<tbody>
<tr>
<td>critically analyses and evaluates a broad range of computer graphic and design ideas and issues</td>
<td>analyses and evaluates a range of computer graphic and design ideas and issues</td>
<td>analyses and evaluates a limited range of computer graphic and design ideas and issues</td>
</tr>
<tr>
<td>accurately classifies and organises computer graphic and design information from a broad range of sources into logical patterns or points of view</td>
<td>classifies and organises computer graphic and design information from a range of sources into logical patterns or points of view</td>
<td>classifies and organises computer graphic and design information from a limited range of sources into logical patterns or points of view</td>
</tr>
<tr>
<td>revises and reflects upon computer graphic and design information to check for clarity, detail, accuracy and effectiveness, and makes relevant adjustments.</td>
<td>revises and reflects upon computer graphic and design information to check for clarity, detail, accuracy and effectiveness, and makes adjustments.</td>
<td>checks computer graphic and design information for clarity, detail, accuracy and effectiveness, and makes adjustments based on feedback.</td>
</tr>
</tbody>
</table>

**Explanation of Criterion 1:**

This criterion is used to assess work samples within the course whether they are research/theory based assignments or practical computer graphic tasks. For example: the action of interpreting a brief or task; undertaking research; refining the information or concepts; producing an outcome; and evaluating the outcomes. This evaluation may be done by self, by teacher and/or peers.

A learner’s understanding can be demonstrated through the preparation and production of essays, talks/discussions, the solving of design briefs and other assignment based tasks. Learner work will demonstrate academic rigour and integrity.

**Criterion 2: solve problems in a design based context**

This criterion is both internally and externally assessed.

The learner:

<table>
<thead>
<tr>
<th>Rating A</th>
<th>Rating B</th>
<th>Rating C</th>
</tr>
</thead>
<tbody>
<tr>
<td>anticipates, identifies and separates problems and issues to achieve specific outcomes</td>
<td>recognises and separates existing and potential problems to achieve desired outcomes</td>
<td>recognises existing problems and works towards a desired outcome</td>
</tr>
<tr>
<td>selects appropriate methods and initiates actions to efficiently solve existing and potential problems, and critically evaluates solutions.</td>
<td>selects appropriate methods and uses them to solve problems and evaluate the solution.</td>
<td>selects methods to solve problems and evaluate their solution.</td>
</tr>
</tbody>
</table>

**Explanation of Criterion 2:**
This criterion is used to assess the performance a learner displays in problem solving through the application of the design process and in terms of problems associated with the application of computer graphics and associated digital technologies. Problems may be directly related to the development of the design solution or may arise as a consequence of working through the design solution.

For example, problems can be in relation to understanding hardware/software routines, difficult phases within the designing process or in the interpretation of limitations imposed by a design brief.

A learner can provide evidence via teacher-observation, personal reflection documents and folios which include personal and teacher evaluations.

**Criterion 3: develop and implement a design project management plan**

The learner:

<table>
<thead>
<tr>
<th>Rating A</th>
<th>Rating B</th>
<th>Rating C</th>
</tr>
</thead>
<tbody>
<tr>
<td>uses a wide range of planning and self-management strategies which consistently enable the effective completion of tasks within agreed time frames</td>
<td>uses a range of planning and self-management strategies which usually enable the effective completion of tasks within agreed time frames</td>
<td>uses planning and self-management strategies which facilitate the successful completion of most tasks within agreed time frames</td>
</tr>
<tr>
<td>critically evaluates and adapts plans to ensure the outcomes desired, either individually or as part of a design team</td>
<td>critically evaluates their process and planning, either individually or as part of a design team</td>
<td>contributes towards an evaluation of planning and processes, either individually or as part of a design team</td>
</tr>
<tr>
<td>in a collaborative design project, effectively employs a range of strategies, identifies and addresses issues which affect achievement of team goals, and effectively adopts appropriate leadership roles.</td>
<td>in a collaborative design project, effectively employs a range of strategies, addresses issues which affect achievement of team goals, and adopts appropriate leadership roles when required.</td>
<td>in a collaborative design project, employs strategies and addresses issues which affect achievement of team goals, and can lead when required.</td>
</tr>
</tbody>
</table>

**Explanation of Criterion 3:**

This criterion is used to assess the degree to which a learner can meet realistic project time frames. Emphasis is placed on meeting deadlines as an outcome of strategic task planning. There are a number of key planning targets that need to be met to ensure that a project is complete by the deadline. Project targets can be designed by the learner, in consultation with the teacher. This criterion can be assessed using either individual design projects or collaborative design projects.

For example, the project planning for the extended project must include completion and performance targets for the stages design brief, concept development, production and evaluation to provide evidence that each stage of the design project has been appropriately project managed.
**Criterion 4: generate and communicate ideas using a range of graphic techniques**

The learner:

<table>
<thead>
<tr>
<th>Rating A</th>
<th>Rating B</th>
<th>Rating C</th>
</tr>
</thead>
<tbody>
<tr>
<td>considers, selects and competently uses a range of appropriate design content and styles to communicate ideas visually</td>
<td>selects and uses appropriate design content and styles to communicate ideas visually</td>
<td>selects and uses design content to communicate ideas visually</td>
</tr>
<tr>
<td>creatively and appropriately adjusts communication in response to changed conditions, and effectively communicates conceptual and expressive intentions by the production of design works and by exploring, experimenting with and refining ideas.</td>
<td>creatively adjusts communication in response to changed conditions, and effectively communicates conceptual and expressive intentions by the production of design works and by exploring, experimenting with and developing ideas.</td>
<td>communicates conceptual and expressive intentions by the production of design works and by exploring and experimenting with ideas.</td>
</tr>
</tbody>
</table>

**Explanation of Criterion 4:**

This criterion is used to assess the degree to which a learner can communicate design based ideas using a range of methods and technologies. Significant emphasis must be placed on a range of drawing techniques including orthographic, isometric and perspective drawing. The ability to evolve a design concept on paper prior to using a range of computer based technologies is an important skill set. Communication of design concepts using a range of 2D and 3D drawing, modelling, animating and rapid prototyping software and hardware options must be used where appropriate.

**Criterion 5: demonstrate knowledge and understanding of design principles and elements**

This criterion is both internally and externally assessed.

The learner:

<table>
<thead>
<tr>
<th>Rating A</th>
<th>Rating B</th>
<th>Rating C</th>
</tr>
</thead>
<tbody>
<tr>
<td>recognises, identifies and accurately describes a broad range of design principles and elements</td>
<td>recognises, identifies and describes a range of design principles and elements</td>
<td>identifies and describes a limited range of design principles and elements</td>
</tr>
<tr>
<td>uses a comprehensive range of design principles and elements to create computer graphics</td>
<td>uses a varied range of design principles and elements to create computer graphics</td>
<td>uses a limited range of design principles and elements to create computer graphics</td>
</tr>
<tr>
<td>identifies, analyses and resolves in own design competing sustainability, environmental and social factors.</td>
<td>identifies and analyses competing sustainability, environmental and social factors, and addresses most of these in own design.</td>
<td>identifies competing sustainability, environmental and social factors, and addresses some of these in own design.</td>
</tr>
</tbody>
</table>

**Explanation of Criterion 5:**
This criterion is used to assess the degree to which a learner can employ the elements and principles of design when solving design problems in a range of contexts. The knowledge of elements and principles appropriate to the design context are an important consideration.

For example, a scenario may be to design a consumer product. The solution to such a problem may be found by applying the appropriate rules of form, function and aesthetics while also considering sustainable, ethical, social and environmental impacts.

A learner's understanding may be demonstrated by various means, including: the manipulation of design principles and elements in the production of design solution; and verbal or written discussions.

**Criterion 6: demonstrate understanding of the context and process of design**

This criterion is both internally and externally assessed.

<table>
<thead>
<tr>
<th>The learner:</th>
<th>Rating A</th>
<th>Rating B</th>
<th>Rating C</th>
</tr>
</thead>
<tbody>
<tr>
<td>always follows the design process in their work, and incorporates ethical and social issues into their design projects</td>
<td>follows the design process in their work, and has a clear understanding of how design fits within an ethical social framework</td>
<td>follows the design process with provided resources</td>
<td></td>
</tr>
<tr>
<td>explores a diverse range of ideas and critically analyses these by reflecting on the design brief, aims, and other related design principles to refine design decisions</td>
<td>explores a wide range of ideas and analyse these by reflecting on the design brief and related design principles to refine design decisions</td>
<td>explores a range of ideas and considers these by reflecting on the design brief to refine design decisions</td>
<td></td>
</tr>
<tr>
<td>recognises, identifies and accurately describes a diverse range of contexts with critical reflection and analysis of the social and historical evolution of design</td>
<td>identifies and describes a wide range of contexts with reflection of the social and historical evolution of design</td>
<td>identifies and describes a limited range of contexts related to the social and historical evolution of design</td>
<td></td>
</tr>
<tr>
<td>clearly identifies the information, images, ideas and words of others used in the learner's work</td>
<td>clearly identifies the information, images, ideas and words of others used in the learner's work</td>
<td>identifies the information, images, ideas and words of others from the learner's own</td>
<td></td>
</tr>
<tr>
<td>clearly identifies sources of the information, images, ideas and words that are not the learner's own. Referencing conventions and methodologies are followed with a high degree of accuracy.</td>
<td>clearly identifies sources of the information, images, ideas and words that are not the learner's own. Referencing conventions and methodologies are followed correctly.</td>
<td>identifies the sources of information, images, ideas and words that are not the learner's own. Referencing conventions and methodologies are generally followed correctly.</td>
<td></td>
</tr>
<tr>
<td>creates appropriate, well structured reference lists/ bibliographies.</td>
<td>creates appropriate, structured reference lists/ bibliographies.</td>
<td>creates appropriate reference lists/ bibliographies.</td>
<td></td>
</tr>
</tbody>
</table>

**Explanation of Criterion 6:**

This criterion is used to assess the degree to which a learner can apply the process of design in developing solutions to teacher directed and self generated scenarios. It
also provides scope for learners to develop understanding of the historical context of
design and how this has impacted on the social, economic and environmental fabric
of contemporary society.

For example, the extended project must document the design brief, concept
development, production and evaluation stage to provide evidence that each stage
of the design process has been addressed.

A learner’s understanding may be demonstrated by various means including:
addressing the stages of design in the production of design solutions; and verbal or
written discussions.

Standard elements relating to academic integrity are included here to ensure that
there is an externally assessed focus on academic integrity.

**Criterion 7: demonstrate knowledge and understanding of contemporary
computer graphics systems**

This criterion is both internally and externally assessed.

The learner:

<table>
<thead>
<tr>
<th>Rating A</th>
<th>Rating B</th>
<th>Rating C</th>
</tr>
</thead>
<tbody>
<tr>
<td>recognises, identifies and accurately describes a diverse range of features of a computer’s graphic system and applies and adapts this knowledge to a range of design problems</td>
<td>identifies and describes a wide range of features of a computer graphic system and applies this knowledge to appropriate design problems</td>
<td>identifies a range of features of a computer graphic system and applies this knowledge to a design problem</td>
</tr>
<tr>
<td>analyses a diverse range of historical developments in computer graphic technologies and makes logical predictions about possible future developments</td>
<td>explains relative significance of a diverse range of historical developments in computer graphic technologies and makes logical predictions about possible future developments</td>
<td>identifies and describes a range of key historical developments in computer graphic technologies</td>
</tr>
<tr>
<td>communicates detailed understanding of how components of a graphic workstation may be customised and optimised to improve productivity in creation of complex design solutions</td>
<td>communicates understanding of components of a graphic workstation and how these may be customised to improve productivity in creation of design solutions</td>
<td>communicates understanding of core components of a graphic workstation in creation of design solutions</td>
</tr>
<tr>
<td>communicates detailed understanding of the specific function and customisation of tools and routines when working with graphics applications to produce complex design solutions</td>
<td>communicates understanding of the specific function of tools and routines when working with graphics applications to produce design solutions</td>
<td>communicates understanding of the functions of basic tools and routines when working with graphics applications to produce design solutions</td>
</tr>
<tr>
<td>identifies and describes with detail the correct function of a range of files types and data management systems to effectively produce design outcomes.</td>
<td>identifies and describes the function of a range of files types and data management systems to produce design outcomes.</td>
<td>identifies and describes a limited range of files types and data management systems in the production of design outcomes.</td>
</tr>
</tbody>
</table>

**Explanation of Criterion 7:**
This criterion is used to assess the degree to which a learner can demonstrate knowledge and understanding of contemporary computer graphics systems across a range of design contexts in order to produce effective design solutions. It also provides scope for learners to develop understanding of the historical context of computer graphics systems and how systems may develop into the future to assist in the development of design based solutions.

For example, learners may consider how motion capture systems have developed in order to capture human movement, the evolution of systems and technologies and the potential for future improvements.

**Criterion 8: competently use digital technologies to create content**

This criterion is both internally and externally assessed.

The learner:

<table>
<thead>
<tr>
<th>Rating A</th>
<th>Rating B</th>
<th>Rating C</th>
</tr>
</thead>
<tbody>
<tr>
<td>selects appropriately from a wide range of technologies and techniques to express and responsibly develop their own design ideas</td>
<td>selects appropriately from a wide range of technologies and techniques to express and responsibly develop their own design ideas</td>
<td>selects appropriately from a range of technologies to express and develop their own ideas</td>
</tr>
<tr>
<td>competently and creatively achieves subtle and complex intentions with refinement of technique, materials and technologies in the application of computing technology in specific design tasks</td>
<td>competently and creatively uses a variety of techniques in the application of computing technology in specific design tasks</td>
<td>uses a variety of techniques in the application of computer graphics technology to design tasks</td>
</tr>
<tr>
<td>demonstrates the correct application of specific and appropriate standards and conventions in the completion of design tasks</td>
<td>demonstrates the application of appropriate standards and conventions in the completion of design tasks</td>
<td>demonstrates a basic application of standards and conventions in the completion of design tasks</td>
</tr>
<tr>
<td>uses and maintains technologies in accordance with established safety procedures.</td>
<td>uses and maintains technologies in accordance with established safety procedures.</td>
<td>uses and maintains technologies in accordance with established safety procedures.</td>
</tr>
</tbody>
</table>

**Explanation of Criterion 8:**

This criterion is used to assess the degree to which a learner can express their design ideas using a range of techniques and software applications. It enables the learner to comply with standards and conventions across a range of design contexts that are teacher directed or within their chosen area of specialisation. This could be as simple as knowing and applying appropriate screen resolution and frame rate settings to an animation.

A learner’s understanding may be demonstrated by the completion of teacher-directed design tasks and through the completion of the externally assessed folio.
Qualifications Available

Computer Graphics and Design Level 3 (with the award of):

- EXCEPTIONAL ACHIEVEMENT
- HIGH ACHIEVEMENT
- COMMENDABLE ACHIEVEMENT
- SATISFACTORY ACHIEVEMENT
- PRELIMINARY ACHIEVEMENT

Award Requirements

The final award will be determined by the Office of Tasmanian Assessment, Standards and Certification from 13 ratings (8 from the internal assessment, 5 from the external assessment).

The minimum requirements for an award in Computer Graphics and Design Level 3 are as follows:

- Exceptional Achievement (EA)
  11 'A', 2 'B' ratings (4 'A', 1 'B' from external assessment)

- High Achievement (HA)
  5 'A', 5 'B', 3 'C' ratings (2 'A', 2 'B', 1 'C' from external assessment)

- Commendable Achievement (CA)
  7 'B' ratings 5 'C' ratings (2 'B', 2 'C' from external assessment)

- Satisfactory Achievement (SA)
  11 'C' ratings (3 'C' from external assessment)

- Preliminary Achievement (PA)
  6 'C' ratings

A learner 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.

Course Evaluation

The Department of Education's Curriculum Services will develop and regularly revise the curriculum. This evaluation will be informed by the experience of the course's implementation, delivery and assessment.

In addition, stakeholders may request Curriculum Services to review a particular aspect of an accredited course.

Requests for amendments to an accredited course will be forwarded by Curriculum Services to the Office of TASC for formal consideration.

Such requests for amendment will be considered in terms of the likely improvements to the outcomes for learners, possible consequences for delivery and assessment of the course, and alignment with Australian Curriculum materials.

A course is formally analysed prior to the expiry of its accreditation as part of the process to develop specifications to guide the development of any replacement course.

Course Developer

The Department of Education acknowledges the significant leadership of the Tasmanian Academy and Kent Moore, Philip Goss, John Mainsbridge and Michael Dowling in the development of this course.

Accreditation

The accreditation period for this course is from 1 January 2013 to 31 December 2017.
Version History


Version 1.a – 10 December 2013. Correction to CA award requirement (8 'B' ratings changed to 7 'B' ratings).

Supporting documents including external assessment material

- CGD315113 Assessment Report 2015.pdf (2017-07-21 01:05pm AEST)
- CGD315113 AuthenticityAndAcademicIntegrityReport2015.pdf (2017-07-21 01:05pm AEST)
- CGD315113 Exam Paper 2013.pdf (2017-07-21 01:05pm AEST)
- CGD315113 Exam Paper 2014.pdf (2017-07-21 01:05pm AEST)
- CGD315113 Exam Paper 2015.pdf (2017-07-21 01:05pm AEST)
- CGD315113 Exam Paper 2016.pdf (2017-07-21 01:05pm AEST)
- CGD315113 Extended Design Project Proforma.pdf (2017-07-21 01:05pm AEST)
- CGD315108 Assessment Report 2012.pdf (2017-07-26 02:09pm AEST)
- CGD315108 Exam Paper 2012.pdf (2017-07-26 02:09pm AEST)
- CGD315113 Assessment Report 2014.pdf (2017-07-26 02:10pm AEST)
- CGD315113 Assessment Report 2013.pdf (2017-07-26 02:10pm AEST)
- CGD315113 Project Guidelines.pdf (2017-07-26 02:11pm AEST)
- CGD315113 Assessment Report 2016.pdf (2017-07-26 02:11pm AEST)
- 2017 External Assessment Dates.pdf (2017-07-26 02:18pm AEST)
- CGD315113 Exam Paper 2017.pdf (2017-11-23 05:09pm AEDT)