A. Course identification
1. School: Computer Science and Information Technology
2. Course code and title: COSC2348 Game Studio 1
3. Credit points 12

B. Course development team
Development of the course will require the capabilities identified below. Some participants may contribute more than one capability.

<table>
<thead>
<tr>
<th>Course coordinator for design</th>
<th>Geoff Leach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching team</td>
<td>Geoff Leach, Jeremy Parker, Vincent Chau</td>
</tr>
<tr>
<td>Educational designer</td>
<td>Geoff Leach, Jeremy Parker, Vincent Chau</td>
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<tr>
<td>DLS development support</td>
<td></td>
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<tr>
<td>Library contact</td>
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<tr>
<td>Student learning skills contact</td>
<td></td>
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<tr>
<td>Research assistant (if desired)</td>
<td></td>
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</tbody>
</table>

C. Course description
Game Studio 1 is intended to provide a common base and framework of core knowledge for students intending to pursue their specialisation in either the artistic or technical direction in the games and digital art streams of the BA(Digital Art), BA(Games Design) and BDes(Games and Graphics Programming). It will provide an overview of the history, approaches, genres, gameplay, techniques, architectures, tool chains and technologies of computer games. Through a studio based project students will be provided an environment in which to learn foundational aspects of game design and development. An important aspect of the project will be working in cross disciplinary teams.

Upon completion of the course, students will have gained generic problem solving skills, project team skills, an understanding of core knowledge areas of computer games design and development, familiarity with the tools and tool chain for designing and developing games, and have built a simple game level.

D. Capability linkages
Game Studio 1 is a core course in games design and development in the games and digital art streams of the BA(Digital Art), BA(Games Design) and BDes(Games and Graphics Programming). It is intended to be taken in first year. It is followed by Game Studio 2 which further develops the topics and capabilities using a similar approach.

On successful completion of the course, students will

- be familiar with the history of computer games;
- be familiar with different game genres and gameplay styles through direct experience;
have gained a common understanding and vocabulary required for games design and
development and the ability to communicate effectively in interdisciplinary teams;
have designed and built a game level or map and gained knowledge and skills in using the
tools to do so;
be prepared to undertake further study in the area of game mapping and modding;
have further developed their general problem solving skills.

These capabilities will the enable students to undertake Games Studio 1B.

E. Course capabilities

Upon completion of this course, students will have developed their knowledge and skills in the area of
games design and development, developed a common language and understanding for effective
communication in interdisciplinary groups, and improved their general learning abilities.

a) Knowledge and skills in the area of games design and development
   1. be familiar with the history of computer games and different game genres and styles;
   2. be able to use design and development tools for game modelling and map building;
   3. be experienced in different gameplay genres.
b) Common language and framework for effective communication in interdisciplinary groups
   1. be familiar with and competent in using terms and language from both art and programming;
   2. comprehend different views as to what games are and processes for designing and developing
      such;
   3. be appreciative of different approaches and styles used within art and science practice.
c) Improved general learning abilities
   1. be able to work in project in teams in a moderately self-directed manner;
   2. be capable of finding and assessing tools and resources for games design and development;
   3. have appreciation of a wider range of learning approaches and styles through working in
      interdisciplinary groups.

F. Enabling knowledge and skills for capabilities

Students will need the following broad knowledge areas, specific skills and characteristics to develop
the capabilities given in the previous section:

a) Knowledge and skills in the area of games design and development
   1. Computer familiarity;
   2. Enthusiasm for computer games, digital art and computer graphics.
   3. Sense of space, geometry and light
b) Common language and framework for effective communication in interdisciplinary groups
   1. Willingness to learn across disciplines
   2. Ability to participate in group activities
   3. Willingness to see things from different perspectives
c) Improved general learning abilities
   1. Willingness to learn.

G. Learning objectives

The capabilities translate to the following specific learning objectives:

a) Knowledge and skills in the area of games design and development
   1. to study the history and evolution of computer games, including playing a range of games, from
      some of the first console and arcade games to latest releases
   2. to understand different gameplay types through examination and direct experience
   3. to be able to use 3D modelling packages and tools to produce textured polygonal models
4. to be able to use a selection of design and development tools available for game level design and development

b) Common language and framework for effective communication in interdisciplinary groups
   1. to learn the terminology and language of games, programming and art
   2. to have built a game level in an interdisciplinary team where expression and communication of ideas involving both art and programming is a core component
   3. to comprehend the approaches and processes by which accomplishment is achieved by creatives and technicals through working in interdisciplinary teams

c) Improved general learning abilities
   1. to develop the ability to locate and assess resources
   2. to develop the ability to work in teams and groups
   3. to develop project management skills

H. Learning activities

The course takes a studio based approach with project work - both individual and group - being the key learning activity. To support and supplement this there will be accompanying learning activities of a lecture series where new material is presented, tutorials where exercises on material are conducted to deepen understanding and structured laboratories where hands-on practical exercises are conducted using tools and resources for game design and development.

I. Assessment components

Assessment is 100% assignment work.

The first assignment (25%) is a smaller, individual modelling effort to familiarise students with polygonal modelling tools and texture mapping.

The second assignment (75%) is a group project involving students working collaboratively across disciplines to design and produce a game level.
A. COURSE IDENTIFICATION
1. Portfolio: Design and Social Context
2. School or Department: Computer Science and Information Technology
3. Course code and title: COSC2348 Game Studio 1
4. Credit points: 12
5. Teacher guided hours: 48
6. Learner directed hours: 96
7. Duration: 1 semester
8. Mode of delivery: on campus
9. Pre-requisites: none
10. Co-requisites: none
11. Course coordinator: Geoff Leach
12. Contact details: gl@cs.rmit.edu.au, 99253207

B. COURSE DESCRIPTION

What is this course about?

Game Studio 1 is intended to provide a a common base and framework of core knowledge for students intending to pursue their specialisation in either the artistic or technical direction in the games and digital art streams of the BA(Digital Art), BA(Games Design) and BDes(Games and Graphics Programming). It will provide an overview of the history, approaches, genres, gameplay, techniques, architectures, tool chains and technologies of computer games. Through a studio based project students will be provided an environment in which to learn foundational aspects of game design and development. An important aspect of the project will be working in cross disciplinary teams.

Upon completion of the course, students will have gained generic problem solving skills, project team skills, an understanding of core knowledge areas of computer games design and development, familiarity with the tools and tool chain for designing and developing games, and have built a simple game level.

A. OBJECTIVES / LEARNING OUTCOMES

What can I expect to learn by studying this course?

This course has the following learning objectives:

a) Knowledge and skills in the area of games design and development
1. to study the history and evolution of computer games, including playing a range of games, from some of the first console and arcade games to latest releases
2. to understand different gameplay types through examination and direct experience
3. to be able to use 3D modelling packages and tools to produce textured polygonal models
4. to be able to use a selection of design and development tools available for game level design and development

b) Common language and framework for effective communication in interdisciplinary groups
1. to learn the terminology and language of games, programming and art
2. to have built a game level in an interdisciplinary team where expression and communication of ideas involving both art and programming is a core component
3. to comprehend the approaches and processes by which accomplishment is achieved by creatives and technicals through working in interdisciplinary teams

c) Improved general learning abilities
1. to develop the ability to locate and assess resources
2. to develop the ability to work in teams and groups
3. to develop project management skills

B. LEARNING ACTIVITIES

What opportunities does the course provide for me to learn? What will I be expected to do?

The course takes a studio based approach with project work - both individual and group - being the key learning activity. To support and supplement this there will be accompanying learning activities of a lecture series where new material is presented, tutorials where exercises on material are conducted to deepen understanding and structured laboratories where hands-on practical exercises are conducted using tools and resources for game design and development.

C. ASSESSMENT

How will I demonstrate my learning in this course?

Assessment Tasks and Value

Assessment is 100% assignment work.

The first assignment (25%) is a smaller, individual modelling effort to familiarise students with polygonal modelling tools and texture mapping. Students will be expected to create a polygonal model of a character in certain poses and capable of specific animations.

The second assignment (75%) is a group project involving students working collaboratively across disciplines to design and produce a game level.

Assessment Criteria

What will you be looking for when you assess my work?

The first assignment will be assessed on both technical and creative merit. Technical considerations will include the range of poses and animations, the polygon budget used, file size, and level-of-detailing. Creative considerations will include visual appeal and use of animation principles.

The group project will also be assessed on both technical and creative merit. Technical considerations include polygon budget, texture sizes, performance and functionality. Creative considerations include visual appeal, playability and originality. The level will need to be demonstrated.

Provide assessment criteria for each assessment task. These need to be related to each specific assessment task (not generalised) and genuinely answer the questions of what you will be looking for in the work and how you will make judgements about its quality.

Submission of Assessment Tasks

Assignments are to be submitted via turnin or a similar electronic submission procedure.

Return of Assessment Tasks

Assignment submissions, being copies, will not be returned. Results and feedback will be by email.

Course Grades available

The following table lists the possible grades for the course, and the corresponding percentages that apply, as appropriate.

HD - (80 - 100) High Distinction
DI - (70 - 79) Distinction
D. ACADEMIC ADMINISTRATION PROCEDURES

What do I do if I need help with deadlines or have become ill?

If you need help with deadlines or have become ill please see:

E. COURSE EVALUATION AND FEEDBACK

How can I let you know about my experience of this course?

Student feedback is encouraged through a range of mechanisms - including questionnaires and staff student consultative committee (SSCC) meetings - see:

F. ACADEMIC MISCONDUCT

Students are reminded that cheating, whether by fabrication, falsification of data, or plagiarism, is an offence subject to University disciplinary procedures. Students are responsible for ensuring that their work is kept in a secure place. It is also a disciplinary offence for students to allow their work to be plagiarised by another student. Students should be aware of their rights and responsibilities regarding the use of copyright material.

G. LEARNING RESOURCES

What will I need to access and read for this course?

Students will need access to a personal workstation with reasonable 3D graphics capabilities. A games studio facility with such workstations will be available.

Prescribed Text

TBA

References

TBA

H. STUDENT LEARNING PROGRAM

Where do I start?

The lecture series will include the following topics: history of games, games genres and styles, digital story telling, gameplay design, texturing and skinning, game development tool chains, 3D modelling tools, level design, bsp modelling, polygon budgets, optimisation and terrain modelling. An integrated of structured hands-on tutorials will dovetail with the lectures.