MONASH University

FIT3023
Interactive environments

Unit guide

Semester 2, 2008

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FIT3023 Interactive environments - Semester 2 , 2008

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Introduction

Welcome to FIT3023, Interactive Environments.

The purpose of this unit information is to give you an overview of the unit, the content of the unit, the way the unit will be taught and the method of assesment. It is very important that you read this material thoroughly - if you are unsure about any of the issues listed you should consult your unit adviser as soon as possible. This document represents your contract of study in this unit for the current semester.

As games have developed over the years from humble, almost abstract beginnings, so too has the desire to merge gaming with the narrative tradition. Advances in technology have seen games begin to rival cinema in terms of sound and visual effects, but are they competing within the same paradigm? Students will learn to differentiate between modes of interactivity, and to navigate the representational issues invoked by combining the sometime conflicting narrative models they employ.

Unit synopsis

In this unit students will study the various types of interaction, simulation and visualisation related to creating interactive games based content, covering topics such as genres of immersive interactive environments; the principles and techniques of game design and game play. In addition, students will learn how to design and develop their own immersive and interactive environments following industry development methods.

Learning outcomes

At the completion of this unit students will have a theoretical and conceptual understanding of:

- the principles underlying interactive environments;
- a wide variety of interactive and immersive environments;
- the impact of a variety of interactive environments on audiences/users;
- industry requirements in developing a commercial product, including production teams, production phases and development environments issues.

Students will have developed attitudes that enable them to:

- appreciate the ethical issues involved with game development;
- value the contributions of peers, cooperating within the class unit, reflecting the development team in industry.

They will have the skills to:

- create an interactive environment using a set middleware or authoring tool.

and the teamwork skills needed to

- critically discuss developmental processes and techniques within a group environment.

Workload

For on campus students, workload commitments are:

- two-hour lecture and
- two-hour laboratory, sometimes requiring advance preparation and

- a minimum of 2-3 hours of personal study for every hour of contact time in order to satisfy reading and assignment expectations

Unit relationships

Prerequisites

Before attempting this unit you must have satisfactorily completed FIT2015 or equivalent.

Relationships

FIT3023 is a core unit in the Multimedia major of the Bachelors of Information Technology and Systems.

You may not study this unit and MMS3405 in your degree.

Continuous improvement

Monash is committed to ‘Excellence in education' and strives for the highest possible quality in teaching and learning. To monitor how successful we are in providing quality teaching and learning Monash regularly seeks feedback from students, employers and staff. Two of the formal ways that you are invited to provide feedback are through Unit Evaluations and through Monquest Teaching Evaluations.

One of the key formal ways students have to provide feedback is through Unit Evaluation Surveys. It is Monash policy for every unit offered to be evaluated each year. Students are strongly encouraged to complete the surveys as they are an important avenue for students to "have their say". The feedback is anonymous and provides the Faculty with evidence of aspects that students are satisfied and areas for improvement.

Student Evaluations

The Faculty of IT administers the Unit Evaluation surveys online through the my.monash portal, although for some smaller classes there may be alternative evaluations conducted in class.

If you wish to view how previous students rated this unit, please go to
http://www.monash.edu.au/unit-evaluation-reports/

Over the past few years the Faculty of Information Technology has made a number of improvements to its courses as a result of unit evaluation feedback. Some of these include systematic analysis and planning of unit improvements, and consistent assignment return guidelines.

Monquest Teaching Evaluation surveys may be used by some of your academic staff this semester. They are administered by the Centre for Higher Education Quality (CHEQ) and may be completed in class with a facilitator or on-line through the my.monash portal. The data provided to lecturers is completely anonymous.
Monquest surveys provide academic staff with evidence of the effectiveness of their teaching and identify areas for improvement. Individual Monquest reports are confidential, however, you can see the summary results of Monquest evaluations for 2006 at http://www.adm.monash.edu.au/cheq/evaluations/monquest/profiles/index.html

Improvements to this unit

The middleware teaching has been expanded by introducing Virtools at an earlier stage of the course.

Unit staff - contact details

Unit leader

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Lecturer(s) :

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Additional communication information

Course Coordinator:

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Teaching and learning method

Lectures in this subject will cover a range of theory related to games, interactivity and implementation of 3D environments. Students are expected to integrate this theory into their assignment tasks.

Laboratory classes will provide instruction of technical skills necessary to complete assessment tasks, as well as an opportunity to get feedback on assessment progress.

Tutorial allocation

Students should register for laboratories using Allocate+.

Communication, participation and feedback

Monash aims to provide a learning environment in which students receive a range of ongoing feedback throughout their studies. You will receive feedback on your work and progress in this unit. This may take the form of group feedback, individual feedback, peer feedback, self-comparison, verbal and written feedback, discussions (on line and in class) as well as more formal feedback related to assignment marks and grades. You are encouraged to draw on a variety of feedback to enhance your learning.

It is essential that you take action immediately if you realise that you have a problem that is affecting your study. Semesters are short, so we can help you best if you let us know as soon as problems arise. Regardless of whether the problem is related directly to your progress in the unit, if it is likely to interfere with your progress you should discuss it with your lecturer or a Community Service counsellor as soon as possible.

Unit Schedule

Week	Topic	Study guide	Key dates
1	Introduction		
2	Narrative		
3	Modelling architecture		
4	Composition of a scene		
5	Philosophy of interactivity	Chapter 1	
6	Dimensions of a game	Chapter 2	Assignment 1 due
7	AI interactivity	Chapter 4	
8	Cinema techniques in Games	Chapter 5	
9	Sound and music in an environment	Chapter 8	
10	Particles	Chapter 6, Chapter 9	
11	Optimisation of a 3D environment	Chapter 10	
Mid semester break			
12	Class presentations		Assignment 2 due

Unit Resources

Prescribed text(s) and readings

Virtools Fundamentals
by Daniel Liu & Shaun Le Lacheur Sales
Publisher: Axis 3D Technology Inc
ISBN-10: 9868320801
ISBN-13: 978-9868320802

Text books are available from the Monash University Book Shops. Availability from other suppliers cannot be assured. The Bookshop orders texts in specifically for this unit. You are advised to purchase your text book early.

Recommended text(s) and readings

Gauthier, J, Building Interactive Worlds in 3D, Focal Press, 2005,
ISBN: 0240806220

Bartle, Richard. *Designing Virtual Worlds.* Indianapolis, New Riders, 2003

Required software and/or hardware

Maya 2008, Autodesk

Virtools 4.0

Software will be available in the tutorial labs for student access.

Software may be:

- purchased at academic price at good software retailers

Equipment and consumables required or provided

Students may use the facilities available in the computing labs. Information about computer use for students is available from the ITS Student Resource Guide in the Monash University Handbook. You will need to allocate up to **8** hours per week for use of a computer, including time for newsgroups/discussion groups.

Study resources

Study resources we will provide for your study are:

The FIT3023 web site on MUSO, where lecture slides, weekly tutorials, assignment specifications and supplementary material will be available.

Library access

The Monash University Library site contains details about borrowing rights and catalogue searching. To learn more about the library and the various resources available, please go to http://www.lib.monash.edu.au. Be sure to obtain a copy of the Library Guide, and if necessary, the instructions for remote access from the library website.

Monash University Studies Online (MUSO)

All unit and lecture materials are available through MUSO (Monash University Studies Online). Blackboard is the primary application used to deliver your unit resources. Some units will be piloted in Moodle. If your unit is piloted in Moodle, you will see a link from your Blackboard unit to Moodle (http://moodle.monash.edu.au) and can bookmark this link to access directly. In Moodle, from the Faculty of Information Technology category, click on the link for your unit.

You can access MUSO and Blackboard via the portal: http://my.monash.edu.au

Click on the Study and enrolment tab, then Blackboard under the MUSO learning systems.

In order for your Blackboard unit(s) to function correctly, your computer needs to be correctly configured.

For example:

- Blackboard supported browser
- Supported Java runtime environment

For more information, please visit: http://www.monash.edu.au/muso/support/students/downloadables-student.html

You can contact the MUSO Support by: Phone: (+61 3) 9903 1268

For further contact information including operational hours, please visit:
http://www.monash.edu.au/muso/support/students/contact.html

Further information can be obtained from the MUSO support site:
http://www.monash.edu.au/muso/support/index.html

Assessment

Unit assessment policy

The unit is assessed with two assignments. To pass the unit you must:

- achieve no less than 50% in the combined assessment

Assignment tasks

- ### Assignment Task

  Title : Render of 3D environment

  Description :

  Your company has decided to submit a tender for a theme park 3D visualisation project by generating a prototype. For the prototype, you need:

  - A 3D model of a building exterior
  - A A4 sized advertisement of the building, showing renders of the 3D model with a description of the interactivity within

  You need to choose a single building location in the theme park and:

  1. create 1 building in the theme park
  2. using rendered images, create a promotional A4 pamphlet, suitable for inclusion in a magazine, that shows the building and describes the attractions within

  Weighting : 50%

  Criteria for assessment :

  You will be assessed through:

  - Appropriateness and ability in generating a 3D model
  - Your A4 render
  - Adherence to the brief requirements

  Due date : Friday Week 6, 22nd August, 3pm

  Remarks (optional - leave blank for none) :

  Please refer to supplied brief on MUSO for detailed description of this assignment

- ### Assignment Task

  Title : Interactive Environment

  Description :

  Your design company has won a contract to create a 3D model of a theme park. You hae decided to deliver the visualisation using the Virtools engine. For the visualisation you will:

1. Import the 3D model into a communal environment where your entire design team may view your model in the context of the theme park
2. Design an interactive experience, where the user explores the building environment
3. Show the design in a presentation of key concepts to the class

Weighting : 50%

Criteria for assessment :

You will be assessed through:

- Completeness of object in the communal environment
- The design of the type and level of interactivity
- A presentation of the design to a group of peers
- Adherence to the brief

Due date : Friday Week 12, 10th October, 3pm

Remarks (optional - leave blank for none) :

Presentations will occur on the day of the lecture; please refer to your timetable.

Please refer to supplied brief on MUSO for a detailed description of this assignment

Assignment submission

Assignments will be submitted by CD-ROM submission to **the assignment dropboxes** in building 903 level 1, with the appropriate cover sheet correctly filled out and attached. Do not email submissions. The due date is the date by which the submission must be received/the date by which the the submission is to be posted.

Assignment coversheets

Assignment coversheets are available at the student services desk.

University and Faculty policy on assessment

Due dates and extensions

The due dates for the submission of assignments are given in the previous section. Please make every effort to submit work by the due dates. It is your responsibility to structure your study program around assignment deadlines, family, work and other commitments. Factors such as normal work pressures, vacations, etc. are seldom regarded as appropriate reasons for granting extensions. Students are advised to NOT assume that granting of an extension is a matter of course.

Requests for extensions must be made to the unit lecturer **at least two days** before the due date. You may be asked to forward an original medical certificate in cases of illness, and may be asked to provide other forms of documentation where necessary. A copy of the email or other written communication of an extension request must be attached to the assignment submission, and the extension date signed by the lecturer on the submission sheet.

Late assignment

Assignments received after the due date will be subject to a penalty of **10% per day, or part thereof.**

Return dates

Students can expect assignments to be returned within two weeks of the submission date or after receipt, whichever is later.

Assessment for the unit as a whole is in accordance with the provisions of the Monash University Education Policy at http://www.policy.monash.edu/policy-bank/academic/education/assessment/

In cases where a time extension have been granted to student/s in a class, all assignments will be returned within two weeks of the last assignment submission.

Plagiarism, cheating and collusion

Plagiarism and cheating are regarded as very serious offences. In cases where cheating has been confirmed, students have been severely penalised, from losing all marks for an assignment, to facing disciplinary action at the Faculty level. While we would wish that all our students adhere to sound ethical conduct and honesty, I will ask you to acquaint yourself with Student Rights and Responsibilities (http://www.infotech.monash.edu.au/about/committees-groups/facboard/policies/studrights.html) and the Faculty regulations that apply to students detected cheating as these will be applied in all detected cases.

In this University, cheating means seeking to obtain an unfair advantage in any examination or any other written or practical work to be submitted or completed by a student for assessment. It includes the use, or attempted use, of any means to gain an unfair advantage for any assessable work in the unit, where the means is contrary to the instructions for such work.

When you submit an individual assessment item, such as a program, a report, an essay, assignment or other piece of work, under your name you are understood to be stating that this is your own work. If a submission is identical with, or similar to, someone else's work, an assumption of cheating may arise. If you are planning on working with another student, it is acceptable to undertake research together, and discuss problems, but it is not acceptable to jointly develop or share solutions unless this is specified by your lecturer.

Intentionally providing students with your solutions to assignments is classified as "assisting to cheat" and students who do this may be subject to disciplinary action. You should take reasonable care that your solution is not

accidentally or deliberately obtained by other students. For example, do not leave copies of your work in progress on the hard drives of shared computers, and do not show your work to other students. If you believe this may have happened, please be sure to contact your lecturer as soon as possible.

Cheating also includes taking into an examination any material contrary to the regulations, including any bilingual dictionary, whether or not with the intention of using it to obtain an advantage.

Plagiarism involves the false representation of another person's ideas, or findings, as your own by either copying material or paraphrasing without citing sources. It is both professional and ethical to reference clearly the ideas and information that you have used from another writer. If the source is not identified, then you have plagiarised work of the other author. Plagiarism is a form of dishonesty that is insulting to the reader and grossly unfair to your student colleagues.

Register of counselling about plagiarism

The university requires faculties to keep a simple and confidential register to record counselling to students about plagiarism (e.g. warnings). The register is accessible to Associate Deans Teaching (or nominees) and, where requested, students concerned have access to their own details in the register. The register is to serve as a record of counselling about the nature of plagiarism, not as a record of allegations; and no provision of appeals in relation to the register is necessary or applicable.

Non-discriminatory language

The Faculty of Information Technology is committed to the use of non-discriminatory language in all forms of communication. Discriminatory language is that which refers in abusive terms to gender, race, age, sexual orientation, citizenship or nationality, ethnic or language background, physical or mental ability, or political or religious views, or which stereotypes groups in an adverse manner. This is not meant to preclude or inhibit legitimate academic debate on any issue; however, the language used in such debate should be non-discriminatory and sensitive to these matters. It is important to avoid the use of discriminatory language in your communications and written work. The most common form of discriminatory language in academic work tends to be in the area of gender inclusiveness. You are, therefore, requested to check for this and to ensure your work and communications are non-discriminatory in all respects.

Students with disabilities

Students with disabilities that may disadvantage them in assessment should seek advice from one of the following before completing assessment tasks and examinations:

- Faculty of Information Technology Student Service staff, and / or
- your Unit Coordinator, or
- Disabilities Liaison Unit

Deferred assessment and special consideration

Deferred assessment (not to be confused with an extension for submission of an assignment) may be granted in cases of extenuating personal circumstances such as serious personal illness or bereavement. Information and forms for Special Consideration and deferred assessment applications are available at http://www.monash.edu.au/exams/special-consideration.html. Contact the Faculty's Student Services staff at your campus for further information and advice.