Unit Outline 2012
Faculty of Information Sciences & Engineering

Unit Title Virtual Worlds Technology
Unit Number 8698
This Unit Outline must be read in conjunction with:

a) UC Student Guide to Policies, which sets out University-wide policies and procedures, including information on matters such as plagiarism, grade descriptors, moderation, feedback and deferred exams, and is available at (scroll to bottom of page) http://www.canberra.edu.au/student-services

b) UC Guide to Student Services, and is available at (scroll to bottom of page) http://www.canberra.edu.au/student-services

c) Any additional information specified in section 6h.

### 1: General Information

1a Unit title
Virtual Worlds Technology

1b Unit number: 8698

1c Teaching Period and year offered: Winter term 2012

1d Credit point value: 3

1e Unit level: 3

1f Name of Unit Convener and contact details (including telephone and email)
Mr. Robert Cox, 11B45, 6201 5230, robert.cox@canberra.edu.au
Associate Professor Dr Dat Tran, Dat.Tran@canberra.edu.au 11B17

1g Administrative contact details (including name, location, telephone and email)
ISE Faculty Office, 11B14, (02) 6201 2417 ise@canberra.edu.au
2: Academic Content

2a Unit description and learning outcomes

Learning Outcomes
On completion of this unit, students will be able to:
1. identify and classify virtual world types and their advantages and disadvantages;
2. interact in both a social and technical way in a virtual world;
3. construct objects in virtual worlds, such as buildings, works of art and furniture;
4. script objects in a virtual world; and
5. Understand the current and future roles of Virtual worlds and the 3D web to industry.

Syllabus
The unit will cover five main syllabus areas:
- basic Virtual world skills (what is a virtual world, how to use it);
- construction of objects in virtual worlds;
- scripting (computer programming) in virtual worlds;
- landscaping and land management in virtual worlds - and land management including managing lag in virtual scripted landscapes; and
- Practical applications of virtual worlds to industry, including creating a scripted object to use a micro-currency.

This unit is co-taught with unit Virtual Worlds Technology PG.

2b Generic skills

1. Communication
The ability to present knowledge, ideas and opinions effectively and communicate within and across professional and cultural boundaries

2. Analysis and inquiry
The ability to gather information, and to analyse and evaluate information and situations in a systematic, creative and insightful way

3. Problem solving
The ability to apply problem-solving processes in novel situations; to identify and analyse problems then formulate and implement solutions

4. Working independently and with others
The ability to plan their own work, be self-directed, and use interpersonal skills and attitudes to work collaboratively

5. Professionalism and social responsibility
The capacity and intention to use professional knowledge and skills ethically and responsibly, for the benefit of others and the environment

2c Prerequisites and/or co-requisites
Completion of 36 credit points

3:
3a Delivery mode

The delivery of learning material in this unit is in line with the ‘virtual’ nature of the subject, and as a consequence there are many distinctly different types of delivery modes:

- There are a few traditional lectures in a traditional physical lecture theatre at the campus;
- There are tutorials in 11B40, these are supervised and allow students to interact with the teaching staff physically;
- There are tutorials in the virtual world, some written by UC staff and some more widely available; students will be guided to these by a mix of Moodle links and note cards in the virtual world;
- There are ‘excursions’ in the virtual world with a UC staff member as a guide; Times of these excursions will be advertised on the Moodle site;
- There is an exam held in the virtual world;
- Some learning will come from student communications both in the virtual world and also using the moodle forum;
- There may be lectures in the virtual world using voice; and
- There are tutorials on YouTube and other Video sites that will be used, and students will be guided to by a mix of Moodle links and note cards in the virtual world.

3b Timetable of activities, such as lectures/ tutorials/ practicals/ field classes, showing key dates and topics (Information might be provided in the form of a table)

It’s very important that students refer to the web site and forum regularly for things relevant to their learning journey through this subject. The subject has run twice before and NEVER goes exactly as planned.

<table>
<thead>
<tr>
<th>Week</th>
<th>Where / when</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Initial lecture; Lecture Theater 7B10 (critical parts will be repeated in week 2)</td>
<td>Students should attend one of the first two lectures so they understand their learning journey through the unit, and the allowable usage of the lab.</td>
</tr>
<tr>
<td>2</td>
<td>Learning to build using primitives Lecture Theater 7B10</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Basic Scripting lecture</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Particle system lecture</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Advanced scripting lecture</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Advanced Building lecture</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Exam/review lecture</td>
<td></td>
</tr>
<tr>
<td>8/9</td>
<td>Exam in 11B40</td>
<td>Times/days to be advised</td>
</tr>
</tbody>
</table>

At the time of this unit outline being written the lectures are on Tuesday at 18:30 in 2B10 and last 2 hours, the tutorials will be in 11B40, at times yet to be arranged with the students.

4: Unit Resources

4a Lists of required texts/reading

Any required reading/watching will be noted on the web site in the associated assessment or learning item.
4b Materials and equipment

Pen Drives:
Students are advised they need pen drives (i.e. USB Flash memory devices) to take regular backups of textures or other VW content.

Headset:
Since sound is a part of the Virtual Experience Students are advised they need access to a suitable set of headphones (preferably with a microphone for use with Second life or Skype). I have found that low cost devices available from the computer fair for around $15 are entirely adequate.

Software:
The software used in the computer laboratories for working on different assessment tasks in this unit will be the Opensim Client and the Second life client. There are both free from public web sources. Links to the files will be provided on the unit’s Moodle web site.

Note:
Students are permitted to use their own computer equipment for all activities subject to the availability of network ports in the lab. Students should be advised that Second Life and Opensim both consume a lot of internet bandwidth and care must be taken in the case of using mobile 3G internet services that are on a fixed quota each month. It is likely that the subject will actually consume around 20GB of internet bandwidth across the 7 weeks.

4c Unit website
The unit will be administered through the UC online learning environment Moodle (LearnOnline), which can be accessed at http://learnonline.canberra.edu.au/.

I hope the forums will be quite active the lecturer will check them regularly.
5: Assessment

5a Assessment overview

Students will be allocated a mark out of 100 for the unit. This mark will be based on whether the student passes the exam and completes the coursework satisfactorily.

- If the student passes the exam and completes the coursework satisfactorily; The student will be given a combined assignment/exam mark as detailed below;
- if the student fails the exam; The student will be awarded his/her exam mark as the mark for the entire unit;
- if the student does not complete the coursework satisfactorily then the student will be awarded his/her assignment mark as the mark for the entire unit;

Your coursework mark will be considered satisfactory if you have 30 of the possible 60 marks for the coursework elements of this subject.

<table>
<thead>
<tr>
<th>Assessment item (including exams held in the exam period)</th>
<th>Due date of assignments</th>
<th>Weighting (total to equal 100%)</th>
<th>Addresses learning outcome(s)</th>
<th>Related generic skill(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Skills Assessment Demonstration</td>
<td>Week 3 at latest In lab demonstration</td>
<td>5</td>
<td>1,2,5</td>
<td>1,2,3</td>
</tr>
<tr>
<td>Basic Building Assignment</td>
<td>Friday Week 4</td>
<td>5</td>
<td>3</td>
<td>2,3</td>
</tr>
<tr>
<td>Basic Scripting assignment; (or Clothing build assignment)</td>
<td>Friday Week 4 to be submitted to marking avatar</td>
<td>10</td>
<td>3,4</td>
<td>2,3</td>
</tr>
<tr>
<td>Social Mark</td>
<td>Assessed by the tutor on your in world behavior and participation.</td>
<td>5</td>
<td>1,2</td>
<td>1,4,5</td>
</tr>
<tr>
<td>Main Assignment</td>
<td>Friday week 7 Demonstration and submission</td>
<td>35</td>
<td>3,4</td>
<td>2,3</td>
</tr>
<tr>
<td>Exam</td>
<td>Week 8 or 9</td>
<td>40</td>
<td>1,2,3,4,5</td>
<td></td>
</tr>
</tbody>
</table>

5b Details of each assessment item

<table>
<thead>
<tr>
<th>Item</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Skills Assessment Demo</td>
<td>A tutor will assess your basic skills of operating socially and technically in a virtual world. It should be done in week 2, or 3 and is a supervised activity in the lab, your attendance is necessary</td>
</tr>
<tr>
<td>Basic Building Assignment</td>
<td>To be submitted to marking avatar</td>
</tr>
<tr>
<td>Basic Scripting assignment; (or Clothing build assignment)</td>
<td>To be submitted to marking avatar; Has two forms one is for scripters and one for non scripters</td>
</tr>
<tr>
<td>Social Mark</td>
<td>This is assessed late to discourage griefing during the later labs when assignments are being done.</td>
</tr>
<tr>
<td>Main Assignment</td>
<td>Your chance to show of all that you have learned</td>
</tr>
</tbody>
</table>
Main assignments can be a wide variety of things including: Complex Scripted objects, Detailed builds, Sculpted objects; and Machinima Video

| Exam               | Held in the virtual world |

To be awarded a particular grade, students must meet the requirements shown in the table below:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Assignments + Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fail</td>
<td>A mark of less than 50 out of 100</td>
</tr>
<tr>
<td>Pass</td>
<td>A mark of greater than 50 out of 100</td>
</tr>
<tr>
<td>Credit</td>
<td>A mark of greater than 65 out of 100</td>
</tr>
<tr>
<td>Distinction</td>
<td>A mark of greater than 75 out of 100</td>
</tr>
<tr>
<td>High Distinction</td>
<td>A mark of greater than 85 out of 100</td>
</tr>
</tbody>
</table>

5c Special assessment requirements
Attendance at the lab is necessary for some assessment items including the exam.

5d Supplementary assessment
Except as required by university policy there will be no supplementary tests or exam.

Students who miss the final exam due to illness may be able to sit for a deferred examination. A doctor's certificate stating why the student was not able to sit for the exam should be given to the lecturer in charge as soon as possible - generally within 3 days of the examination. See Studying at the University of Canberra: A Guide to Policies and Procedures https://guard.canberra.edu.au/cocoon/policydb/displayDocument?DocumentId=259 for more details.

5e Academic Integrity
Students have a responsibility to uphold University standards on ethical scholarship. Good scholarship involves building on the work of others and use of others’ work must be acknowledged with proper attribution made. Cheating, plagiarism, and falsification of data are dishonest practices which contravene academic values.

5f Text-matching software
Is not used

6: Student Responsibility

6a Workload
The amount of time you will need to spend on study in this unit will depend on a number of factors including your prior knowledge, learning skill level and learning style. Nevertheless, in planning your time commitments you should note that for a 3cp unit such as this one the total notional workload over the semester or term is assumed to be 150 hours. These hours include time spent in classes, tutorials, in the virtual world and the exam.
6b **Special needs**  
Students who need assistance in undertaking the unit because of disability or other circumstances should inform their Unit Convener or UC AccessAbility (formerly the Disabilities Office) as soon as possible so the necessary arrangements can be made.

6c **Participation requirements**  
Students must:  
- Attend either lecture 1 or lecture 2;  
- Be present to demonstrate their Basic skills;  
- Be present to demonstrate their and main assignment; and  
- Attend the lab for the exam.

Virtual world attendance:  
Students should spend at least 30 hours in the virtual world, on your allocated sandbox land building and learning to build and script. I will have scanners logging student activity on our land, and you can fail the unit if this attendance is not logged, if you have an alternative sandbox in SL then contact the lecturer, to get your hours logged.

6d **Withdrawal**  
If you are planning to withdraw please discuss with your unit convener. Please see this link for further information on deadlines.

6e **Required IT skills**  
Students are expected to be IT literate (which will be the case if you meet the prerequisites).

6f **Costs**  
During previous running of this subject some students spent between 20 and 30 dollars on buying linden dollars (they needed a credit card to do this); this is not needed for the subject, however it may make the subject more fun, since you can then purchase items from shops in Second Life.

Pen Drives:  
Students are advised they need pen drives (i.e. USB Flash memory devices) to take regular backups of textures or other VW content.

Headset:  
Since sound is a part of the Virtual Experience Students are advised they need access to a suitable set of headphones (preferably with a microphone for use with Second life or Skype). I have found that low cost devices available from the computer fair for around $15 are entirely adequate.

6g **Work placements, internships or practicums**  
Not applicable to this unit.

6h **Additional information**  
The class will be split into two streams:

- Those students doing IT/SE degrees who wish to use the subject as a software engineering elective or IT Elective; hereafter called the Programming Stream;  
- Those students that are from other degrees (eg the BBI or Bachelor of Arts) or who wish to count the unit as an open elective, hereafter called the Building Stream.
Importantly – these two cohorts of students will have different final assignments and exams specifically:

- The programming stream must complete a build that uses LSL code that they have written themselves;
- The Building Stream students have a choice, of learning LSL and doing the Programming Stream exam, and assignments or they can opt to learn more advanced building, landscaping and construction techniques, and doing a more advanced building for their final assignment;

7: **Student Feedback**

All students enrolled in this unit will have an opportunity to provide anonymous feedback on the unit at the end of the Semester via the Unit Satisfaction Survey (USS) which you can access by logging into MyUC via the UC homepage: [http://www.canberra.edu.au/home/](http://www.canberra.edu.au/home/). Your lecturer or tutor may also invite you to provide more detailed feedback on their teaching through an anonymous questionnaire.

8: **Authority of this Unit Outline**

Any change to the information contained in Section 2 (Academic content), and Section 5 (Assessment) of this document, will only be made by the Unit Convener if the written agreement of Head of Discipline and a majority of students has been obtained; and if written advice of the change is then provided on the unit site in the learning management system. If this is not possible, written advice of the change must be then forwarded to each student enrolled in the unit at their registered term address. Any individual student who believes him/herself to be disadvantaged by a change is encouraged to discuss the matter with the Unit Convener.