

City University of Hong Kong

**Information on a Course
offered by the School of Creative Media
with effect from Semester A in 2007 / 2008**

This form is for completion by the *Course Co-ordinator*. The information provided on this form will be deemed to be the official record of the details of the course. It has multipurpose use: for the University's database, and for publishing in various University publications including the Blackboard, and documents for students and others as necessary.

Please refer to the *Explanatory Notes* attached to this Form on the various items of information required.

Part I

Course Title: Procedural Animation

Course Code: SM4123

Course Duration: One semester (13 weeks)

No. of Credit Units: 3 units

Level: A2/B3

Medium of Instruction: English

Prerequisites: (Course Code and Title) N.A.

Precursors: (Course Code and Title) N.A.

Equivalent Courses: (Course Code and Title) N.A.

Exclusive Courses: (Course Code and Title) N.A.

Part II

1. Course Aims:

This course aims to introduce the idea of procedural animation. Procedural Animation focuses on simulation methods of animating. Natural phenomena like clouds, waves, crowd behavior, trees blowing in the wind, and the physics of moving masses in space are nearly impossible to animate unless you use computing power in a bottom up procedural approach. Students will practice the theory by using some selected programming tools or software package.

2. Course Intended Learning Outcomes (CILOs)

(state what the student is expected to be able to do at the end of the course according to a given standard of performance)

Upon successful completion of this course, students should be able to:

No.	CILOs	Weighting (if applicable)
1.	Analyze existing procedural animations, and identify the mathematics and theory behind those works	40%
2.	Identify the potentials and limitations of procedural animation	20%
3.	Create different procedural animation effects through selected software tools	40%

3. Teaching and Learning Activities (TLAs)

(designed to facilitate students' achievement of the CILOs)

Indicative of likely activities and tasks students will undertake to learn in this course. Final details will be provided to students in their first week of attendance in this course.

ILO No	TLAs	Hours/weeks (if applicable)
CILO 1	Lectures: the theory, and some mathematics behind procedural animation, will be covered during the lectures. In-class discussions will be conducted to allow students to have hands-on practice in analyzing.	5 weeks
CILO 2	Tutorials: on some selected weeks, tutorials will be given to show the students the potentials and limitations of procedural animation. Case-studies approach will mainly be employed. Students will have hands-on practice in selected procedural animation software.	3 weeks
CILO 3	Workshops: workshops will be given every week to help the students to create procedural animation using selected tools.	5 weeks

4. Assessment Tasks/Activities

(designed to assess how well the students achieve the CILOs)

Indicative of likely activities and tasks students will undertake to learn in this course. Final details will be provided to students in their first week of attendance in this course.

ILO No	Type of assessment tasks/activities	Weighting (if applicable)	Remarks
CILO 1	Short assignments: short assignments will be given to test the students' ability in analyzing and identifying the theory of procedural animation.	40%	
CILO 2	In-class discussion: during the tutorials, students are required to present their understanding on the potentials and limitations of procedural animation.	20%	
CILO 3	Assignments: students are required to work on several individual assignments, which can demonstrate their ability to create procedural animation using selected tools.	40%	

5. Grading of Student Achievement: Refer to Grading of Courses in the Academic Regulations and to the Explanatory Notes.

100% coursework and in-class participation
Grading pattern: Standard (A+AA-...F)

Grading is based on performance in assessment tasks / activities.

Part III

Keyword Syllabus:

Key-framed animation and procedural animation, randomness, recursive and iteration, audio-driven animation, fractals images and geometry, noise, L-system, particles, rigid body dynamics, cellular automata, wave and oceans, behavioral animation, flocking and virtual crowds

Recommended Reading:
Text(s):

Online Resources:

Returned by:

Name: Wong Kam Wah Department: School of Creative Media

Tel: 27887204 Date: August, 2007