

City University of Hong Kong

**Information on a Course
offered by School of Creative Media
with effect from Semester B in 2008 / 2009**

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: Principles of Computer Graphics

Course Code: SM5305

Course Duration: One Semester (13 weeks)

Credit Units: 3

Level: P5

Medium of Instruction: English

Prerequisites: *(Course Code and Title)* Nil

Precursors: *(Course Code and Title)* Nil

Equivalent Courses: *(Course Code and Title)* Nil

Exclusive Courses: *(Course Code and Title)* Nil

Part II

Course Aims

To provide students with a basic technical background in image processing and computer graphics and enable students to apply computer graphics software to process, design graphics and create simply animation._

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.	Master techniques in computer graphics and image processing.	
2.	Analyze 3D models, lighting, texture and composition.	
3.	Develop simple computer graphics.	
4.	Apply the CG principles to producing animation using software tools.	

Teaching and Learning Activities (TLAs)

(Indicative of likely activities and tasks designed to facilitate students' achievement of the CILOs. Final details will be provided to students in their first week of attendance in this course)

CILO No.	TLAs	Hours/week (if applicable)
CILO 1	Image processing and script programming Critique and discussions	
CILO 2	Computer graphic design and modelling Critique and discussions	
CILO 3	Discuss and analyse designs	
CILO 4	Producing animation, critiques and analysis	

Assessment Tasks/Activities

(Indicative of likely activities and tasks designed to assess how well the students achieve the CILOs. Final details will be provided to students in their first week of attendance in this course)

CILO No.	Type of Assessment Tasks/Activities	Weighting (if applicable)	Remarks
CILO 1	Project 1	30%	
CILO 2	Project 2	30%	
CILO 3	Participation: critiques, discussions and debates	10%	
CILO 4	Project 3: an animation	20%	

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

Examination duration: n/a

Percentage of coursework, examination, etc.: 100% coursework

Grading pattern: Standard (A+AA-...F)

Grading is based on performance in assessment tasks / activities

Part III

Keyword Syllabus

Computer graphic hardware, Raster scanning, Colours, Lines, Textures, Circles, Surfaces, Drawing curves, Script programming, Image processing, 3D

modelling, Lighting, Projection, Rendering, Morphing, Moving images,
Sampling, Compression.

**Recommended Reading
Text(s)**

1. Essential Reading

Computer Graphics – Principles and Practice, by James. D. Foley, Andries van
Dam, Steven K. Feiner, and John F. Hughes. Addison-Wesley Publishing Company,
2005.

Computer Graphics for Java Programmers, by Leen Ammerai. John Wiley & Sons
Ltd. 2002.

2. Supplementary Reading

Physically based Rendering, by Matt Pharr and Greg Humphreys. Morgan
Kaufmann, 2004.

High Dynamic Range Imaging, by Erik Reinhard, Grag Ward, Sumanta Pattanik and
Paul Debevec. Morgan Kaufmann, 2006.

Computer Graphics using OpenGL, by F.S. Hill, Jr.. Prentice-Hall Inc., 2001.

Returned by

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