

COMPUTER ANIMATION IT 432

I – Basic Course Information

Programme(s) on which the course is given: Bachelors in Information Technology
Major or minor element of programmes: Elective
Department(s) offering the programme(s): Information Technology Department
Department offering the course: Information Technology Department

Academic level: 400 Level
Semester in which course is offered: First (Fall) Semester
Course pre-requisite(s): CS 221

Credit Hours: 3
Contact Hours Through:

- Lecture: 3.0
- Tutorial: 0.0
- Practical: 1.5
- Total: 4.5

Authorization date of course specification:

II – Professional Information

1. Overall Aims of Course

Familiarize the student with the basics as well as the recent advances of computer animation.

2. Intended Learning Outcomes of Course (ILOs)

a. Knowledge and Understanding

On completing the course the student will know and understand

- a1- the underlying principles behind modern computer animation packages
- a2- different modeling techniques
- a3- rendering techniques
- a4- special effects
- a5- camera and light animation

b. Intellectual/Cognitive Skills

On completing the course the student will know how to

- b1- add camera and light animation
- b2- add special effects in an animation
- b3- use effectively advanced computer animation packages
- b4-
- b5-

c. Subject-Specific Practical Skills

On completing the course the student will be capable of

- c1- making design choice between different rendering techniques
- c2-
- c3-
- c4-
- c5-

d. General and Transferable Skills

On completing the course the student will have

- d1- improved presentation skills
- d2- improved team work skills
- d3- better work ethics through valuing individual efforts and strictly prohibiting plagiarism
- d4- learned to follow design requirements through requiring precise understanding of written questions
- d5-

3. Course Contents

	Topic	No. of Hours
1-	Introduction to Computer Animation	3
2-	3D Modelling	3
3-	Rendering Techniques	3
4-	Key Framing	3
5-	Interpolations	3
6-	Hierarchical Animation	3
7-	Camera Animation	3
8-	Light Animation	3
9-	Special Effects	3
10-	Digital Effects	3
11-	Digital Animation Techniques	3
12-	Recording and Production Planning	3

4. Teaching and Learning Methods

Select method by checking in the box in front of the method, and type the ILOs' codes in the field opposite the method.

Teaching/Learning Method	To teach/learn the following ILO's
<input checked="" type="checkbox"/> Lectures & Seminars	a,b,d
<input checked="" type="checkbox"/> Tutorials	a,b
<input checked="" type="checkbox"/> Computer-lab Sessions	c
<input checked="" type="checkbox"/> Practical lab work	c
<input checked="" type="checkbox"/> Reading Materials	b
<input checked="" type="checkbox"/> Web-site Searches	a,b,c,d
<input checked="" type="checkbox"/> Independent Work	a,d
<input checked="" type="checkbox"/> Group Work	a,d
<input type="checkbox"/> Case Studies	
<input checked="" type="checkbox"/> Presentations	d

<input checked="" type="checkbox"/> Simulation Analysis	a,c
<input checked="" type="checkbox"/> Problem-based Learning	a,b
<input type="checkbox"/> Others (Specify):	

5. Assessment Methods

Select method by checking in the box in front of the method, and type the ILOs' codes in the field opposite the method.

Assessment Method	To assess the following ILO's	Assessment Weight
<input checked="" type="checkbox"/> Unseen Exams	a,b,d	60%
<input type="checkbox"/> Open book Exam		
<input type="checkbox"/> Take home Exam		
<input checked="" type="checkbox"/> Quizzes	a	5%
<input checked="" type="checkbox"/> Course Work	a	10%
<input type="checkbox"/> Report Writing		
<input type="checkbox"/> Case Study Analysis		
<input checked="" type="checkbox"/> Oral Presentations	a,d	5%
<input checked="" type="checkbox"/> Practical	a,b,c,d	10%
<input checked="" type="checkbox"/> Group Project	a,b,c,d	10%
<input type="checkbox"/> Individual Project		
<input type="checkbox"/> Others (Specify):		

6. List of References

6.1- Essential books (text books)

The Art of 3-D Computer Animation and Effects, Third Edition (Paperback)
by Isaac Victor Kerlow

6.2- Course notes:

Lecture Slides and Notes

6.3- Recommended books

Computer Animation, Second Edition: Algorithms and Techniques (The Morgan Kaufmann Series in Computer Graphics) (The Morgan Kaufmann Series in Computer Graphics) (Hardcover)
by Rick Parent

Principles of Three Dimensional Computer Animation (Hardcover)
by Michael O'Rourke

6.4- Periodicals, Web sites, etc ...

Various

7- Facilities required for teaching and learning

Computer Animation Software (to be decided)

Course coordinator:

Head of Department: Prof. Dr. Hoda Onsi

Date: December, 2007