Course Syllabus

1. **Program of Study**   Bachelor of Arts (Animation Production)
   Faculty/Institute/College   Mahidol University International College

2. **Course Code** ICAM 303   **Course Title** 3D Animation II

3. **Number of Credits**   4 (Lecture/Lab) (0-8)

4. **Prerequisite**(*s*)   ICAM 302

5. **Type of Course**   Required for Animation Production

6. **Trimester / Academic Year**   Second Trimester/ Year III

7. **Course Description**
   Expansion of 3D computer animation; developing a working knowledge of the advanced process of 3D animation; complex polygonal modeling techniques, NURBS, procedural and raster image mapping, lighting, camera, shader and rendering methods, hierarchical linking, keyframe animation, and dynamic simulation.

8. **Course Objective**(*s*)
   After completing this course, students will be able to:
   1. demonstrate advanced skills in modeling, animating, lighting, and rendering;
   2. use dynamic simulations to create special effects;
   3. use 3D techniques to create an experimental or narrative animation.

9. Course Outline

Week	Topic		Instructor
	Lab	Hour	
1	Advanced 3D modeling	8	
2	Character setup: rigging	8	
3	Character setup: painting weight	8	
4	Advanced "keyframe animation"	8	
5	Dynamic simulation: Maya particle	8	
6	Dynamic simulation: Maya fluid	8	
7	Dynamic simulation: real flow	8	
8	Advanced shading lighting and rendering: Global Illumination, Mental Ray	8	
9	Final assignment: modeling	8	

10	Final assignment: animating	8	
11	Final assignment: rendering	8	
12	Final presentation and evaluation	8	
	Total	96	

1. **Teaching Method**(s)
    Hands-on practice and discussion

11. **Teaching Media**
    Computers and handouts

12. **Measurement and evaluation of student achievement**
    Assessment is made from the criteria of A, B+, B, C+, C, D+ and D

13. **Course evaluation**
    Weekly assignments   60%
    Final assignment   40%

14. **Reference**(s)
    Choi, J. (2004). *Maya Character Animation*. Sybex Inc; Book&Dvdrm.

    Demers, O. (2001). *Digital Texturing and Painting*. New Riders Press; Bk&CD-Rom.

    Brin, J. (2000). *Digital Lighting and Renderin.*, New Riders Pre

15. **Instructor**(s)
    TBA

16. **Course Coordinator**
    Prof. Charles Harpole