COURSE INFORMATION FORM

DISCIPLINE

ART

COURSE TITLE

3D Computer Animation I

CR.HR  3     LECT HR  1     LAB HR  5     CLIN/INTERN HR.  _____    CLOCK HR.  _____

CATALOG DESCRIPTION
This course is an introduction to the fundamental concepts and techniques of the art of 3D computer animation. Using advanced 3D animation, modeling, editing, and graphics software students will learn to model and animate objects, characters, and environments.

PREREQUISITES
ART 102 or CSIS 110 or CSIS 115

EXPECTED STUDENT OUTCOMES IN THE COURSE
Upon completion of this course, the student will be able to:
1. Define the basic terminology and jargon relative to the medium
2. Summarize the history of animation
3. Describe the basic process of creating computer generated 3D animations from concept to completion
4. Demonstrate an ability to use hardware associated with digital animation
5. Demonstrate proficiency with advanced 3D modeling, animation, editing, and graphics software used to produce digital animation
6. Create and develop an animation project
7. Critique the creative and technical merits of animations
CLASS-LEVEL ASSESSMENT MEASURES

Student accomplishment of expected student outcomes will be assessed using the following measures. (Identify which measures are used to assess which outcomes.)

1. Quizzes and Examinations 1,2,3,4,5
2. Class Participation 1,2,3,4,5,6,7
3. Class Projects 1,2,3,4,5,6,7
4. Portfolio Review 1,2,3,4,5,6,7

PROGRAM-LEVEL OUTCOMES ADDRESSED

General Education Outcomes
Specify which general education outcomes, if any, are substantially addressed by the course by completing the “Course/Program Assessment Matrix” to show the relationship between course and program outcomes and assessment measures.

Occupational Program Outcomes
Specify which occupational program outcomes, if any, are substantially addressed by the course by completing the “Course/Program Assessment Matrix” to show the relationship between course and program outcomes to assessment measures.
Individual instructors may order this outline as fits the needs of their individual courses. In addition, they may place more emphasis on some areas than on others. What is assured is that this particular list is covered in the course. Other topics may be added to a course as the instructor sees fit, and as time and interest allow. An *asterisk can be used to mark an item as optional.

I. Animation Uses
   A. Storytelling
   B. Presentation
   C. Visualization
   D. Gaming
   E. Education
   F. Advertising

II. History of Animation
   A. Traditional
   B. Computer Generated

III. Terminology

IV. Software Applications
   A. Graphics Applications
   B. 3D Modeling and Animation Applications
   C. Non-Linear Editing Applications
   D. Compositing Applications
   E. DVD Authoring Applications

V. Digital Animation Hardware
   A. CPU
   B. Hard-drive
   C. Monitor
   D. Drawing, Tablets, Mouse
   E. CD/DVD-R-RW, Recording, Capture Devices

VI. Developing an Animation Project
   A. Concept
   B. Constraints
   C. Audience/Customer
   D. Storyboard

VII. 3D Modeling
   A. Modeling
      1. Primitive Geometric Forms
2. Mechanical

3. Organic
   B. Materials and Textures
   C. Lighting
   D. Rendering
   E. Environment
   F. Hair, Fur *
   G. Atmosphere *
   H. Decals*

VIII. Animating
   A. Rigging, Skeleton, Bones, Joints, Muscles
   B. Constraints *
   C. Poses *
   D. Actions
   E. Paths *
   F. Keyframing
   G. Effects *
       1. Dynamics*
       2. Cloth*
       3. Particles*
       4. Gravity*
   H. Camerawork
   I. Rendering

IX. Compositing, Non-linear Editing
   A. Timeline
   B. Frames
   C. Sound *
   D. Titles *
   E. Effects *