COURSE INFORMATION FORM

DISCIPLINE: Humanities/Art
COURSE TITLE: 3D Computer Animation II
CR.HR: 3  LECT HR: 1  LAB HR: 5  CLIN/INTERN HR: 0  CLOCK HR: 0

CATALOG DESCRIPTION

Students will explore advanced concepts of the art of 3D computer animation in this course. They will further develop their understanding of animation as they explore in greater detail the processes of character development, storyboard development, modeling, materials, lighting, effects, actions, lip-syncing, keyframing, camerawork, rendering, and compositing.

PREREQUISITES

ART 104

EXPECTED STUDENT OUTCOMES IN THE COURSE

Upon completion of this course, the student will be able to:
1. Define the vocabulary and language of animation
2. Describe the process of 3D computer generated animations from conception to conclusion
3. Demonstrate a capacity to use hardware associated with computer generated animation
4. Demonstrate an advanced ability to apply special features of sophisticated 3D modeling, animation, editing, and graphics software
5. Demonstrate an ability to develop and create an advanced character model and animate it
6. Generate an original short animation
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
2. Class Participation 1,2,3,4,5,6,7,8
3. Class Projects 1,2,3,4,5,6,7,8
4. Portfolio Review 1,2,3,4,5,6,7,8

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. Developing an Animation Project
   A. Storytelling
   B. Concept
   C. Audience/Customer
   D. Constraints
   E. Storyboard Development
   F. Character Development

II. Terminology

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

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

V. 3D Modeling
   A. Modeling
      1. Advanced Character
      2. Lip-sync
      3. Advanced Mechanical
   B. Materials, Decals and Textures
   C. Hair, Fur
   D. Environment
   E. Atmosphere
   F. Lighting
   G. Rendering
VI. Animating
   A. Rigging, Skeleton, Bones, Joints, Muscles
   B. Lip-sync
   C. Constraints
      1. Kinematics
      2. Inverse Kinematics
   D. Poses
   E. Actions
   F. Paths
   G. Keyframing
   H. Effects
      1. Dynamics*
      2. Cloth*
      3. Particles*
      4. Gravity
   I. Camerawork
   J. Rendering

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