**Course Inventory Change Request**

**New Course Proposal**

Date Submitted: 01/15/15 2:32 pm

Viewing: **ART 3650: 3-D Animation**

Last edit: 01/16/15 12:16 am

Changes proposed by: dwade

<table>
<thead>
<tr>
<th>Course Prefix:</th>
<th>ART</th>
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<tbody>
<tr>
<td>Course Number:</td>
<td>3650</td>
</tr>
<tr>
<td>Effective Semester:</td>
<td>Fall 2015</td>
</tr>
<tr>
<td>Department:</td>
<td>ART (ART)</td>
</tr>
<tr>
<td>School:</td>
<td>School of Visual &amp; Performing Arts</td>
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<tr>
<td>Course Title:</td>
<td>3-D Animation</td>
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<tr>
<td>Short Course Title:</td>
<td>3-D Animation</td>
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| Credits: | 3 |
| Workload Factors: | 3 |
| Primary Grade Type: | Standard Letter |

Approval Path

1. 01/15/15 6:53 pm
   Shane Christensen (schristensen): Approved for ART Chair

2. 01/16/15 8:52 am
   Jan Maxfield (jmaxfield): Approved for FA Admin

3. 01/16/15 8:54 am
   Jeff Jarvis (jarvis): Approved for FA Dean

4. University Curriculum Committee Chair

5. Banner

https://newcatalog.dixie.edu/courseleaf/courseleaf.cgi?page=/courseadmin/1550/index.html&step=tcadiff
Repeatable for Credit: No

Schedule Type: Hrs/Wk: %contact_hours.eschtml%

Catalog Prerequisites: Yes

Catalog Prerequisites:
DES 3600 or ART 3610 (Grade C- or higher).

Grade Required on Prerequisite(s): C-

Corequisites? No

Course/Lab Fee? Yes

Course/Lab Fee Amount: 25
Fee Deposit: TEC303
Index Code: TEC203

Fee Justification: Use of CIT computer lab

Instruction Index Code: TEC203

GE Status Requested: No

Catalog Description
For students pursuing a degree in Computer and Information Technology, or a degree in ART with an emphasis in Graphic Design or Sculpture. Follow-on course to DES 3600/ART 3610, covers aspects of 3D animation design, story boarding, character development, and animation rendering of 3D models suitable for broadcast or composite video use. Maya 3D software will be used to create multiple short animation projects individually and in teams. Includes rigid/soft body animation solvers, dynamic particles, deformation and effects fields, IK/FK rigging, and multi-frame rendering output, use of key frames, ease in/ease out controls, the timeline, realistic modeling techniques, set lighting, shadows, multi-layer surfacing, photorealistic rendering, and video formats for final output. Dual listed with DES 3650 (students may only take one course for credit). Course fee required.

Course Rotation:
Spring (every)

Justification for course/change:
Cross listing with DES 3650 (existing class) to allow for the class to be taught by either CIT or ART faculty. The class is also being added as an elective for the ART Graphic Design emphasis, and the ART 3D Sculpture/Ceramics Emphasis.

Library Resources Adequate: Yes

Tech Resources Adequate: Yes

Comparable Courses: (use USHE course first)

<table>
<thead>
<tr>
<th>Institution</th>
<th>Prefix/Number</th>
<th>Credit(s)</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>Utah Valley University</td>
<td>DGM 3660</td>
<td>3</td>
<td>Advanced Rigging &amp; Animation</td>
</tr>
</tbody>
</table>

Course Learning
Outcomes:

- Students will be introduced to storyboarding, character development, and animation, including particle effects and rigging. Students will demonstrate proficiency with texturing, proper 3D topology, and materials generation. Students will also demonstrate advanced lighting techniques.

At the completion of the course, students will be expected to know the following technical skills:

- Understand and effectively apply the Disney "12 Concepts of Animation"
- Examine the historical basis of contemporary 3D animation application
- Character development
- Develop a storyboard for a digital animation
- Illustrate volumetric aesthetic principles
- Animate volumetric objects, including transformations in positions, rotations, and scale
- Learn hierarchal structures for building complex mechanical motion
- Learn animation controllers ~ keyframe, pose-to-pose, FK and IK structures, etc.
- Create the skeletal structure for a 3D digital figure animation
- Construct animated motion with kinematics
- Examine the use of lighting and surface qualities to improve the aesthetic nuances of animation
- Explore the impact of camera angle, lens and focus on the 3D digital environment
- Understand workflow, file formats, and conversion to video
- Demonstrate competency in project management and file backup

How do your Course Learning Outcomes align to your Program Learning Outcomes?

- Students will create work in this class that will differentiate them and their portfolios artistically from competing artists. Including motion work. (PLO 1)
3D, kinetics, and time-based media present very challenging "creative problems" for many artists, and students will learn to solve such problems within the framework of this class. (PLO 2)
Students will learn to communicate their ideas using a new and very modern visual medium (PLO 3)
Students will evaluate their work and learn the associated professional terminology during class critique sessions (PLO 4).

Schedule of lesson activities that meet Course Learning Outcomes

Exercise A - Animate a bouncing Ball
Exercise B - Create a simple animation that includes Secondary Action(s)
Exercise C - Create TWO simple animations that include pendulum swings
Exercise D - Create TWO simple animations that demonstrate repeating cycles
Exercise E - Design a multi-part robot and animate it through a looping walk cycle using forward kinematics.
Exercise F - Incorporating the 12th Disney Principle of Animation (appeal), design a character using polygonal mesh to rig and animate.
Exercise G - Rig the character in Exercise F in preparation.
Exercise H - Animate and render your character. Minimum of 30 seconds.

Assessment activities that provide evidence of student learning

There are four (4) animation exercises worth 20 points each and four (4) creative assignments, each worth 50 points. Thus, the maximum possible for all exercises and assignments is 280 points. These are intended to be original work and should reflect techniques learned in the course up to the time of each project.

A mid-term test will be given during week nine (9) of the semester during a scheduled class period. There are 50 points possible.

A final exam will be given during the scheduled time for this class period. There are 100 points possible.

Course Reviewer Comments

lee_s (12/04/14 2:51 pm): Rollback: Schedule type/Hrs per week should read LEC 3 not LEC LEC. Also, take out the prerequisite line from the course description. CIM picks it up in the prerequisite field and adds to the description in catalog.

lee_s (12/08/14 1:54 pm): slee: edited the department to be ART rather than FA. Changed wording in description to reflect the Dual-listing notations to be consistent with other ART/DES courses.

houser (01/15/15 9:37 am): Rollback: Shane Christensen is currently the Chair of the Art
lee_s (01/16/15 12:16 am): slee: added a period after (Grade C or higher). in prereq field.