Course Inventory Change Request

New Course Proposal

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

Viewing: ART 3610: 3-D Visualization

Last edit: 01/15/15 2:32 pm

Changes proposed by: dwade

<table>
<thead>
<tr>
<th>Course Prefix:</th>
<th>ART</th>
<th>Course Number:</th>
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<tbody>
<tr>
<td>3610</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective Semester:</td>
<td>Fall 2015</td>
<td></td>
</tr>
<tr>
<td>Department:</td>
<td>Fine Arts (FA)</td>
<td></td>
</tr>
<tr>
<td>School:</td>
<td>School of Visual &amp; Performing Arts</td>
<td></td>
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<tr>
<td>Course Title:</td>
<td>3-D Visualization</td>
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<td>Short Course Title:</td>
<td>3-D Visualization</td>
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<tr>
<td>Credits:</td>
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<td></td>
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<td>Workload Factors:</td>
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<td></td>
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<td>Instructor:</td>
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<tr>
<td>Permission Required:</td>
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In Workflow

1. FA Chair
2. FA Admin
3. FA Dean
4. University Curriculum Committee Chair
5. Banner

Approval Path

1. 01/15/15 6:51 pm Shane Christensen (schristensen): Approved for FA 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

<table>
<thead>
<tr>
<th>Repeatable for Credit:</th>
<th>No</th>
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<tr>
<td>Schedule Type:</td>
<td>Hrs/Wk: [Hrs/Wk] %contact_hours.eschtml%</td>
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<tr>
<td>Catalog Prerequisites?</td>
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**Catalog Prerequisites:**
- DES 2500 (Grade C- or higher); AND DES 2600 (Grade C- or higher).
- Grade Required on Prerequisite(s): C-

Corequisites? No
Course/Lab Fee? Yes

<table>
<thead>
<tr>
<th>Course/Lab Fee Amount:</th>
<th>25</th>
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<tbody>
<tr>
<td>Fee Deposit Index Code:</td>
<td>TEC303</td>
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Fee Justification:
- Use of CIT Computer lab

Instruction Index Code:
- TEC203

GE Status Requested: No

**Catalog Description**
For students pursuing an emphasis in Digital Design, Graphic Design, or Sculpture; also open to other interested students. Introduces three-dimensional modeling and rendering techniques on the computer, including various modeling processes, defining and applying textures, assembling scenes, and rendering images, which are applicable to realistic package and product designs, as well as exciting graphics for desktop or Internet publishing projects. Assignments require access to specific programs on either Macintosh or Windows platforms. Cross Listed with DES 3600.

**Course Rotation:**
- Fall (every)

Justification for course/change:
- Cross listing with DES 3600 (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>
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<tbody>
<tr>
<td>Utah Valley University</td>
<td>ART 3230</td>
<td>3</td>
<td>3-D Computer Modeling</td>
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Course Learning Outcomes:
At the completion of the course, students will be expected to know the following technical skills:
- Gaining an appreciation of the history of three-dimensional modeling and image rendering.
- Understanding the technical and artistic uses of 3-D models.
- Drawing 2-D and 3-D objects using tools from the Tools palette.
- Navigation of 3-D space using 2-D tools and view planes.
- Visualizing spatial relationships within a virtual 3-D environment.
- Constructing 3-D objects using various modelers.
- Grouping and ungrouping objects.
- Linking and unlinking objects.
- Parenting and unparenting objects.
- Transforming objects and groups using various tools and methods.
- Editing the geometry of both 2-D and 3-D objects at the vertex level.
- Creating and applying various texture types, including difficult surface properties like glass, mirror, and metals.
- Mapping image created in external software using various methods and properties.
- Creating textures/shaders that can accurately simulate real world surfaces.
- Adding/inserting and adjusting each type of light source for effective lighting.
- Adding/Inserting and controlling each type of camera.
- Understanding and implementing advanced lighting techniques using raytracing and photo mapping.
- Using hierarchical construction techniques in larger 3-D projects.
- Building and scripting animations using hierarchical structuring.
- Choosing and setting the appropriate quality levels needed for specific image-rendering needs.
- Rendering still images of proscribed size using various rendering methods.
- Understanding the advantages and disadvantages of, and be able to use, various rendering methods.
- Rendering animation sequences into a popular digital video format.
- Using various types of camera objects for both still and animation rendering.
- Establishing rendering frame sizes according to project specifications for both still images and animations.

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 (PLO 1).

3D presents a very challenging "creative problem" 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

ASSIGNMENT #1
Create a humanoid figure, animal shape, or some other easily-recognized inanimate object using primitives ONLY.

ASSIGNMENT #2
Model a 3-D version of an existing or original logo.

ASSIGNMENT #3
Design TWO kitchen appliances of your choice.

ASSIGNMENT #4
Design a world globe with transparent oceans.

ASSIGNMENT #5
Model a soft drink can, with original label.

ASSIGNMENT #6
Design and build a child's room with children's toys.

ASSIGNMENT #7
Students will choose one of the following projects...
A. Animation of a ball bouncing
B. Animation of multiple meshed gears.
C. Animation of a spinning top.

Assessment activities that provide evidence of student learning

Points for course work are earned by turning in assignments and taking tests on time. (See the weekly course and assignments schedule for the due dates.) Allocation of points for the four major components of course work are as follows:

88 ...Attendance (2 pts. each class period)
350 ...seven (7) Creative Projects (50 pts. each)
50 ...Mid-Term Exam
100 ...Final Exam
588 ...Total points possible

Course Reviewer
Comments

lee_s (12/04/14 2:49 pm): Rollback: slee: Need to put in how many hours per week it meets.

houser (01/15/15 9:37 am): Rollback: Shane Christensen is currently the Chair of the Art department.