

COURSE OUTLINE

**Art 246
Digital Sculpture II**

I. Catalog Statement

Art 246 provides students with advanced instruction in digital character sculpture, building on skills acquired in Art 245. At the end of the course, students will sculpt and texture a highly realistic digital character. The course is project-based and runs as a traditional art studio course, with the instructor guiding students through the stages of character creation.

Units – 3.0

Lecture Hours – 2.0

Total Studio Hours – 4.0

(Faculty Studio Hours 2.0 + Student Studio Hours 2.0 = Total Studio Hours 4.0)

Prerequisite: Art 245 or equivalent.

*Note: Current industry standard digital animation software (ZBrush or Mudbox) will be used. This course may be taken 2 times; a maximum of 6 units may be earned.

II. Course Entry Expectations

Skill Level Ranges: Reading 5; Writing 5; Listening-speaking 5; Math 3

Prior to enrolling in this course, the student will be able to:

1. import a polygonal mesh from another 3D program into digital sculpture software;
2. operate the digital sculpture software user interface;
3. use 3D editing tools to add sculptural and textural detail to polygonal mesh;
4. create a displacement map;
5. apply a displacement map to a low-resolution polygonal character.

III. Course Exit Standards

Upon successful completion of the required course work, the student will be able to:

1. create a photo-real character using digital sculpture software;

2. use the digital sculpture software toolset;
3. manage integration of ZBrush content into Maya.

IV. Course Content

A. Project Strategy	8 hours
1. Topological analysis of character	
a. Massing	
b. Edge loops	
c. Motion	
2. Macroscopy before microscopy	
3. Masking	
B. Sculpture of Character	16 hours
1. Torso	
a. Masking other body parts	
b. Chest	
c. Shoulders	
d. Back	
e. Abdomen	
2. Arms	
a. Unmasking arms and masking others	
b. Shoulder	
c. Upper and lower arm	
d. Wrist and hand	
3. Lower body	
a. Unmasking lower body and masking others	
b. Midsection	
c. Upper and lower leg	
d. Foot	
4. Head	
a. Unmasking head and masking others	
b. Head and neck	
c. Face	
d. Ears	
C. Integration of Digital Sculpture Content into Maya	8 hours
1. UV mapping	
2. Exporting content	
a. Displacement maps	
b. Textures	
c. UV maps	
3. Re-evaluating and Exporting Topology	
a. Re-drawing topology in Zbrush	
b. Low-resolution topology	
c. Topology in terms of character set-up	
D. Projects Emphasizing Technical and Aesthetic Development	32 hours

V. Methods of Presentation

The following instructional methodologies may be used in the course:

1. lectures and demonstrations;
2. instructor critique of student work;
3. peer critique of student work;
4. individual instruction of students in a computer lab.

VI. Assignments and Methods of Evaluation

1. Projects.
2. Peer and instructor review.
3. Review of final projects.
4. Final examination.

VI. Textbook

Handouts