

ART246 : 3-D Digital Character Design II

General Information

Author:	<ul style="list-style-type: none">Roger Dickes
Course Code (CB01) :	ART246
Course Title (CB02) :	3-D Digital Character Design II
Department:	ART
Proposal Start:	Fall 2024
TOP Code (CB03) :	(0614.40) Animation
CIP Code:	(10.0304) Animation, Interactive Technology, Video Graphics, and Special Effects.
SAM Code (CB09) :	Clearly Occupational
Distance Education Approved:	No
Will this course be taught asynchronously?:	No
Course Control Number (CB00) :	CCC000590046
Curriculum Committee Approval Date:	02/28/2024
Board of Trustees Approval Date:	04/16/2024
Last Cyclical Review Date:	02/28/2024
Course Description and Course Note:	ART 246 provides students with advanced instruction in digital character design using ZBrush, 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. Note: Current industry standard digital animation software (ZBrush) will be used.
Justification:	Mandatory Revision
Academic Career:	<ul style="list-style-type: none">Credit

Academic Senate Discipline

Primary Discipline:	<ul style="list-style-type: none">Art
Alternate Discipline:	No value
Alternate Discipline:	No value

Course Development

Basic Skill Status (CB08) Course is not a basic skills course.	Course Special Class Status (CB13) Course is not a special class.	Grading Basis <ul style="list-style-type: none">Grade with Pass / No-Pass Option
<input type="checkbox"/> Allow Students to Gain Credit by Exam/Challenge	Pre-Collegiate Level (CB21) Not applicable.	Course Support Course Status (CB26) Course is not a support course

Transferability & Gen. Ed. Options

General Education Status (CB25)

Not Applicable

Transferability

Transferable to CSU only

Transferability Status

Approved

Units and Hours

Summary

Minimum Credit Units (CB07)	3
Maximum Credit Units (CB06)	3
Total Course In-Class (Contact) Hours	72
Total Course Out-of-Class Hours	90
Total Student Learning Hours	162

Credit / Non-Credit Options

Course Type (CB04)

Credit - Degree Applicable

Noncredit Course Category (CB22)

Credit Course.

Noncredit Special Characteristics

No Value

Course Classification Code (CB11)

Credit Course.

Variable Credit Course

Funding Agency Category (CB23)

Not Applicable.

Cooperative Work Experience

Education Status (CB10)

Weekly Student Hours

	In Class	Out of Class
Lecture Hours	2	4
Laboratory Hours	0	0
Studio Hours	2	1

Course Student Hours

Course Duration (Weeks)	18
Hours per unit divisor	0
Course In-Class (Contact) Hours	
Lecture	36
Laboratory	0
Studio	36
Total	72
Course Out-of-Class Hours	
Lecture	72
Laboratory	0
Studio	18
Total	90

Time Commitment Notes for Students

No value

Units and Hours - Weekly Specialty Hours

Activity Name	Type	In Class	Out of Class
No Value	No Value	No Value	No Value

Pre-requisites, Co-requisites, Anti-requisites and Advisories

Prerequisite

ART245 - 3-D Digital Character Design I (in-development)

Objectives

- Import a polygonal mesh from another three-dimensional (3-D) program into digital sculpture software.
- Operate the digital sculpture software user interface.
- Use 3-D editing tools to add sculptural and textural detail to polygonal mesh.
- Create a displacement map.
- Apply a displacement map to a low-resolution polygonal character.

Entry Standards

Entry Standards

Course Limitations

Cross Listed or Equivalent Course

Specifications

Methods of Instruction

Methods of Instruction Lecture

Methods of Instruction Laboratory

Methods of Instruction	Demonstrations
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Methods of Instruction	Studio
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Methods of Instruction	Discussion
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Methods of Instruction	Multimedia
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Methods of Instruction	Collaborative Learning
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Methods of Instruction	Presentations
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Out of Class Assignments
Projects (e.g. Unmasking or masking a wrist/hand)

Methods of Evaluation	Rationale
Project/Portfolio	Peer and instructor review
Project/Portfolio	Final project - sculpt and texture a 3D character
Exam/Quiz/Test	Final examination

Textbook Rationale
No Value

Textbooks				
Author	Title	Publisher	Date	ISBN

No Value	No Value	No Value	No Value	No Value
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Other Instructional Materials (i.e. OER, handouts)

Description	Handouts
Author	No value
Citation	No value
Online Resource(s)	No value

Materials Fee
No value

Learning Outcomes and Objectives

Course Objectives

Create a photo-real character using digital sculpture software.

Use the digital sculpture software toolset.

Manage integration of ZBrush content into Maya.

SLOs

Create a cinema-ready or game-ready 3-d character from imagination using digital character design tools. Expected Outcome Performance: 70.0

ILOs Analyze and solve problems using critical, logical, and creative thinking; ask questions, pursue a line of inquiry, and derive conclusions;
Core ILOs cultivate creativity that leads to innovative ideas.

Demonstrate depth of knowledge in a course, discipline, or vocation by applying practical knowledge, skills, abilities, theories, or methodologies to solve unique problems.

Use advanced sculpture and painting tools in a 3-D character design software application.

Expected Outcome Performance: 70.0

ILOs Demonstrate depth of knowledge in a course, discipline, or vocation by applying practical knowledge, skills, abilities, theories, or
Core ILOs methodologies to solve unique problems.

Course Content

Lecture Content

Project Strategy (4 hours)

- Topological analysis of character
- Massing
- Edge loops
- Motion
- Macroscopy before microscopy
- Masking

Sculpture of Character (8 hours)

- Torso
 - Masking other body parts
 - Chest
 - Shoulders
 - Back
 - Abdomen
 - Arms
- Unmasking arms and masking others
 - Shoulder
 - Upper and lower arm
 - Wrist and hand
 - Lower body
- Unmasking lower body and masking others
 - Midsection

- Upper and lower leg
- Foot
- Head
- Unmasking head and masking others
 - Head and neck
 - Face
 - Ears

Integration of Digital Sculpture Content into Maya (4 hours)

- UV mapping
- Exporting content
- Displacement maps
- Textures
- UV maps
- Re-evaluating and Exporting Topology
- Re-drawing topology in Zbrush
- Low-resolution topology
- Topology in terms of character set-up

Projects Emphasizing Technical and Aesthetic Development (20 hours)

Total hours: 36

Laboratory/Studio Content

Project Strategy (4 hours)

- Topological analysis of character
- Massing
- Edge loops
- Motion
- Macroscopy before microscopy
- Masking

Sculpture of Character (8 hours)

- Torso
 - Masking other body parts
 - Chest
 - Shoulders
 - Back
 - Abdomen
 - Arms
- Unmasking arms and masking others
 - Shoulder
 - Upper and lower arm
 - Wrist and hand
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Integration of Digital Sculpture Content into Maya (4 hours)

- UV mapping
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Projects Emphasizing Technical and Aesthetic Development (20 hours)

Total hours: 36

Additional Information

Is this course proposed for GCC Major or General Education Graduation requirement? If yes, indicate which requirement in the two areas provided below.

No

GCC Major Requirements

No Value

GCC General Education Graduation Requirements

No Value

Repeatability

Not Repeatable

Justification (if repeatable was chosen above)

No Value

Resources

Did you contact your departmental library liaison?

No

If yes, who is your departmental library liaison?

No Value

Did you contact the DEIA liaison?

No

Were there any DEIA changes made to this outline?

No Value

If yes, in what areas were these changes made:

No Value

Will any additional resources be needed for this course? (Click all that apply)

- No

If additional resources are needed, add a brief description and cost in the box provided.

No Value