ART245 : 3-D Digital Character Design I

General Information

Author:	• Roger Dickes
Course Code (CB01) :	ART245
Course Title (CB02) :	3-D Digital Character Design I
Department:	ART
Proposal Start:	Winter 2025
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) :	CCC000590045
Curriculum Committee Approval Date:	03/27/2024
Board of Trustees Approval Date:	06/18/2024
Last Cyclical Review Date:	03/27/2024
Course Description and Course Note:	ART 245 provides students with foundation instruction in 3-D digital character design using ZBrush software. Students learn about digital sculpture, texturing, and painting tools, as well as integrating digital character designs into animation and game design software. Note: Current industry standard digital animation software (ZBrush) will be used.
Justification:	Mandatory Revision
Academic Career:	• Credit
Author:	No value

Academic Senate Discipline

Primary Discipline:	• Art
Alternate Discipline:	No value
Alternate Discipline:	No value

Course Development

Basic Skill Status (CB08)

Course is not a basic skills course.

☐ Allow Students to Gain Credit by Exam/Challenge

Course Special Class Status (CB13)

Course is not a special class.

Pre-Collegiate Level (CB21)

Not applicable.

Grading Basis

- Grade with Pass / No-Pass Option

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.

Funding Agency Category (CB23)

Not Applicable.

☐ Cooperative Work Experience Education Status (CB10)

☐ Variable Credit Course

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

No Value

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
Methods of Instruction	Studio
Methods of Instruction	Discussion

Methods of Instruction	Multimedia
Methods of Instruction	Collaborative Learning
Methods of Instruction	Presentations

Out of Class Assignments

- Designing a digital character sculpture
- Painting color and bump detail on a digital character sculpture
- Exporting and importing a digital character sculpture

Methods of Evaluation	Rationale
Project/Portfolio	Projects and assignments
Exam/Quiz/Test	Midterm exam
Exam/Quiz/Test	Final exam
Project/Portfolio	Final project

Textbook Rationale

No Value

Textbooks

Author	Title	Publisher	Date	ISBN
No Value	No Value	No Value	No Value	No Value

Other Instructional Materials (i.e. OER, handouts)

Description	Class handouts
Author	No value
Citation	No value
Online Resource(s)	No value

Materials Fee

No value

Learning Outcomes and Objectives

Course 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.

SLOs

Create the head of a 3-D digital character from imagination using digital character design tools. Expected Outcome Performance: 70.0

ILOs Core ILOs	Analyze and solve problems using critical, logical, and creative thinking; ask questions, pursue a line of inquiry, and derive conclusions; 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 basic sculpture and painting tools in a 3-D character design software application. Expected Outcome Performance: 70.0

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

Course Content

Lecture Content

Polygonal Mesh Creation in ZBrush (6 hours)
- Topology
- Optimization
- Quadrilaterals
- Cleanup and Troubleshooting
- Export

User Interface Lecture Palettes (4 hours)
- Tools
- Docking
- Editing
    - sliders
    - buttons
    - switches
    - curves

3D Editing Lecture (6 hours)
- Mesh Export
- Subdividing Mesh
- Brushes
- Dot
- Inflate
- Layer
- Pinch

- Nudge
- Smooth
- Sizing Brushes

3-D Texture Creation (20 hours)
- UV surface mapping
- Adaptive mapping
- Group mapping
- Colors
- Alphas
- Displacement Maps
- Export
- Polygon Count
- Maya integration

Total hours: 36

Laboratory/Studio Content

Polygonal Mesh Creation in ZBrush (6 hours)
- Topology
- Optimization
- Quadrilaterals
- Cleanup and Troubleshooting
- Export

User Interface Lecture Palettes (4 hours)
- Tools
- Docking
- Editing
    - sliders
    - buttons
    - switches
    - curves

3D Editing Lecture (6 hours)
- Mesh Export
- Subdividing Mesh
- Brushes
- Dot
- Inflate
- Layer
- Pinch
- Nudge
- Smooth
- Sizing Brushes

3-D Texture Creation (20 hours)
- UV surface mapping
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- Group mapping
- Colors
- Alphas
- Displacement Maps
- Export
- Polygon Count
- Maya integration

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 liason?

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