Washtenaw Community College Comprehensive Report

ANI 250 Organic Modeling and Rigging
Effective Term: Winter 2022

Course Cover

College: Business and Computer Technologies
Division: Business and Computer Technologies
Department: Digital Media Arts (new)
Discipline: Animation
Course Number: 250
Org Number: 14500
Full Course Title: Organic Modeling and Rigging
Transcript Title: Organic Modeling and Rigging
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , Time Schedule , Web Page
Reason for Submission: Three Year Review / Assessment Report
Change Information:
    Outcomes/Assessment
    Objectives/Evaluation
Rationale: The first outcome has always been an awkward fit for what is ultimately a modeling class, and we need to pull it. We need to add more in-depth outcomes/objectives dealing with the high-poly sculpting workflow. We are going to expand the Non-Uniform Rational B-Spline (NURBS) section as well owing to an ongoing demand in SE Michigan for those sorts of models. This is based on feedback from our advisory committee.
Proposed Start Semester: Fall 2021
Course Description: In this course, students will use advanced modeling and setup tools to create advanced organic models. Students will rig, texture, bind, and animate characters using a variety of industry-standard techniques. Advanced Non-Uniform Rational B-Spline (NURBS) modeling and dynamic rigid body animation will also be explored.

Course Credit Hours

Variable hours: No
Credits: 4
Lecture Hours: Instructor: 60 **Student:** 60
Lab: Instructor: 0 **Student:** 0
Clinical: Instructor: 0 **Student:** 0
Other: Instructor: 30 **Student:** 30

Total Contact Hours: Instructor: 90 **Student:** 90
Repeatable for Credit: NO
Grading Methods: Letter Grades
Audit
Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

Requisites
Prerequisite
ANI 145 minimum grade "C"
and
Prerequisite
ANI 150 minimum grade "C"
and

General Education
General Education Area 7 - Computer and Information Literacy
Assoc in Arts - Comp Lit
Assoc in Applied Sci - Comp Lit
Assoc in Science - Comp Lit

Request Course Transfer
Proposed For:

Student Learning Outcomes

1. Create advanced NURBS organic models.
   Assessment 1
   Assessment Tool: Portfolio review
   Assessment Date: Winter 2022
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: Departmentally-developed rubric
   Standard of success to be used for this assessment: 70% of students will score an average of 70% or higher
   Who will score and analyze the data: Department faculty

2. Model, rig, and bind a character.
   Assessment 1
   Assessment Tool: Portfolio review
   Assessment Date: Winter 2022
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: Departmentally-developed rubric
   Standard of success to be used for this assessment: 70% of students will score an average of 70% or higher
   Who will score and analyze the data: Department faculty
   Assessment 2
   Assessment Tool: Outcome-related questions on common written final exam
   Assessment Date: Winter 2022
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: Answer key
   Standard of success to be used for this assessment: 70% of students will score an average of 70% or better on the outcome-related exam questions
   Who will score and analyze the data: Department faculty

3. Create textures for a character using a high-poly workflow.

Assessment 1
Assessment Tool: Portfolio review
Assessment Date: Winter 2022
Assessment Cycle: Every Three Years
Course section(s)/other population: All
Number students to be assessed: All
How the assessment will be scored: Departmentally developed rubric
Standard of success to be used for this assessment: 70 % of students will score 70% or higher on the rubric
Who will score and analyze the data: Departmental faculty

Course Objectives

1. UV map a complex organic model using a variety of mapping techniques.
2. Create advanced texture maps for organic objects, including color maps, and specular maps.
3. Produce accurate measured organic models using NURBS patch modeling.
4. Optimize NURBS surfaces for efficient rendering.
5. Create character models with optimized polygon construction.
6. Articulate the decision-making process for polygon topology, reduction, edge flow, and optimization.
7. Apply keyframes to NURBS objects and groups to generate animated motion.
8. Rig using joints, control objects, and scripts where appropriate.
9. Bind skins to skeletons accurately using a variety of tools.
10. Recognize and describe the main structural features of the human body.
11. Create high-poly sculpts using industry-standard software.
12. Use high-poly sculpts to generate usable normal maps.
13. Identify and describe the process of retopologizing a model.

New Resources for Course

Course Textbooks/Resources
Textbooks
Manuals
Periodicals
Software

Equipment/Facilities
Level III classroom

Reviewer	Action	Date
Faculty Preparer:		
Randy Van Wagnen	*Faculty Preparer*	*Jul 29, 2021*
Department Chair/Area Director:		
Jason Withrow	*Recommend Approval*	*Jul 30, 2021*
Dean:		
Eva Samulski	*Recommend Approval*	*Jul 30, 2021*
Curriculum Committee Chair:		
Randy Van Wagnen	*Recommend Approval*	*Nov 12, 2021*
Assessment Committee Chair:		
Shawn Deron	*Recommend Approval*	*Nov 22, 2021*
Vice President for Instruction:		
Kimberly Hurns	*Approve*	*Nov 30, 2021*