ANI 250: ORGANIC MODELING AND RIGGING

Completed Workflow

1. C&A Office (sabird@wccnet.edu; aabooker@wccnet.edu; cacevans@wccnet.edu; kgwu@wccnet.edu; bjlinford@wccnet.edu)
2. Vice President for Instruction (eloubert@wccnet.edu; brtucker@wccnet.edu)
3. Banner (cacevans@wccnet.edu)

Approval Path

1. 2026-07-09T13:56:14Z
   Sera Bird (sabird): Approved for C&A Office
2. 2026-07-09T14:26:09Z
   Brandon Tucker (brtucker): Approved for Vice President for Instruction
3. 2026-07-09T18:15:50Z
   Carol Evans (cacevans): Approved for Banner

History

1. Jun 1, 2026 by Carol Evans (cacevans)
2. Jun 10, 2026 by Carol Evans (cacevans)
3. Jul 9, 2026 by Sera Bird (sabird)

Viewing: ANI 250 : Organic Modeling and Rigging

Changes proposed by: Sera Bird (sabird)

Effective Term

Winter 2027

Rationale and proposal summary

Updating objectives to reflect changed industry standards for workflow and to prepare for AI changes. We also want to get a few sections of data and assess using the new Outcomes assessment workflow.

Course Cover

Full Course Title

Organic Modeling and Rigging

Transcript Title

Organic Modeling and Rigging

Subject Code

ANI - Animation

Course Number

250

Department

Digital Media Arts Dept (DMAD)

Banner Division

BCT

Division/College

Business/Computer Technologies (BC)

Org Code

14500

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.

Has this course been approved for virtual or blended virtual?

Yes

Has this course been approved for online or online blended?
Yes

Grading method
Standard Letter, Audit, Academic Forgiveness

CIP Code
119999 - Computer and Information Sciences and Support Services, Other.

Occupational Indicator
Yes

ACS Code
120

Credit hours, contact hours, repeatability

Repeatable for additional credit
No

Course credits
4

Lecture contact hours
60

Other Contact hours
30

Are any of these clinical hours?
No

Total Contact Hours
90
Expected Total Contact Hours
90

Prerequisites and prerequisite skill levels

College-Level Math
No Level Required

College-Level Reading and Writing
College-level Reading and Writing

Approved Level I Prerequisite:
Academic Reading and Writing Levels of 6; ANI 145 and ANI 150, minimum grade "C"

Is concurrent enrollment an option for this prerequisite?
No

Course Assessment Plan
Learning Outcome

Outcome
Create advanced NURBS organic models.

Assessment #1

Assessment Tool
Outcome-related portfolio assignment(s)

Anticipated Next Assessment Year
2026

Anticipated Next Assessment Term
Winter

Assessment Cycle
Every Three Years

Anticipated assessment population
All students from all sections

How the assessment will be scored
Departmentally-developed rubric

Who does the scoring?
Departmental faculty

Standard of success
70% of students will score 70% or higher.

Assessment #2

Learning Outcome

Outcome
Model, rig, and bind a character.

Assessment #1

Assessment Tool
Outcome-related portfolio assignment(s)

Anticipated Next Assessment Year
2026

Anticipated Next Assessment Term
Winter

Assessment Cycle
Every Three Years

Anticipated assessment population
All students from all sections

How the assessment will be scored
Departmentally-developed rubric

Who does the scoring?
Departmental faculty

Standard of success
70% of students will score 70% or higher.

Assessment #2

Assessment Tool
Outcome-related exam questions

Anticipated Next Assessment Year
2026

Anticipated Next Assessment Term
Winter

Assessment cycle
Every Three Years

Anticipated assessment population
All students from all sections

How the assessment will be scored
Answer key

Who does the scoring?
Departmental faculty

Standard of Success
70% of students will score 70% or higher.

Assessment #3

Learning Outcome

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

Assessment #1

Assessment Tool
Outcome-related portfolio assignment(s)

Anticipated Next Assessment Year
2026

Anticipated Next Assessment Term
Winter

Assessment Cycle
Every Three Years

Anticipated assessment population
All students from all sections

How the assessment will be scored
Departmentally-developed rubric

Who does the scoring?
Departmental faculty

Standard of success
70% of students will score 70% or higher.

Assessment #2

Course Objectives

	Objective(s)
1.	UV unwrap 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.	Evaluate polygonal deformation.
14.	Explain the purpose and typical steps in a high-poly to low-poly character workflow.
15.	Demonstrate proficiency with industry-standard automated retopology tools.
16.	Assess AI-generated 3D geometry for suitability for production environments.
17.	Construct workflows that combine procedural generation, AI-assisted tools, and manual modeling techniques to create high-quality models.

General Education Area(s)

Area 1: Writing
No

Area 2: 2nd Writing or Communication/Speech
No

Area 3: Mathematics
No

Area 4: Natural Science
No

Area 5: Social and Behavioral Science
No

Area 6: Arts and Humanities
No

MTA General Education
No

Review

Is conditional approval requested?
No

Is this course currently conditionally approved, and you are now submitting it for full approval?
No

Key: 179

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*