

**Course Assessment Report
Washtenaw Community College**

Discipline	Course Number	Title
Animation	250	ANI 250 08/07/2019- Organic Modeling and Rigging
Division	Department	Faculty Preparer
Business and Computer Technologies	Digital Media Arts (new)	Randy Van Wagnen
Date of Last Filed Assessment Report		

I. Review previous assessment reports submitted for this course and provide the following information.

1. Was this course previously assessed and if so, when?

No

2. Briefly describe the results of previous assessment report(s).

3.

4. Briefly describe the Action Plan/Intended Changes from the previous report(s), when and how changes were implemented.

5.

II. Assessment Results per Student Learning Outcome

Outcome 1: Create rigid body animations using a dynamics engine.

- Assessment Plan
 - Assessment Tool: Portfolio evaluation using departmental rubric.
 - Assessment Date: Winter 2017
 - Course section(s)/other population: All
 - Number students to be assessed: All
 - How the assessment will be scored: Department faculty
 - Standard of success to be used for this assessment: 70% of students will score an average of 70% or better

- Who will score and analyze the data: Department faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2018	2019, 2018	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
39	34

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Several students had dropped the course by this point, and several did not submit the project.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

Both online and daytime sections were assessed, which is what we run for this course.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Five-part embedded rubric, scored by instructors.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

The learning outcome was met, with 95% of students scoring Proficient (80+%).

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Students were most successful in confining their simulations to an appropriate duration, successfully playblasting an un-baked simulation, and (somewhat surprisingly) in producing finished rendered frames.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Students did comparatively poorly on the appearance portion of the rubric. This includes things like lighting, texturing, and camera work. It is somewhat unsurprising that the last part of the process receives the least attention from the students. This portion of the class has been compressed temporally as the complexity of the other outcomes has grown, and this seems like a possible outcome of this process.

Outcome 2: Create advanced NURBS organic models.

- Assessment Plan
 - Assessment Tool: Portfolio evaluation using departmental rubric.
 - Assessment Date: Winter 2017
 - 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

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2018	2019, 2018	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
39	18

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Withdrawals and many non-submitters (see discussion below).

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

Both online and day sections were assessed, which is what we offer.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Embedded rubric.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

The overall average score for this outcome was 97%, and 100% of completers averaged a proficient or above on the rubric, but there are numerous problems with this (see discussion below).

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

This outcome is difficult to assess accurately, owing to the unusual number of students who did not submit the assignment that we are assessing. The NURBS project is currently wedged into the last few weeks of the course, and given its historically relatively low weighting for the final grade, many students were not attempting it. This trend was noticed as soon as we compressed this project into a much smaller time space beginning in about 2018. To improve this in the prior semester, the weighting of the project towards the final grade was increased, and note that the submission rate rose accordingly. In Winter semester 2019, for instance, only two students who completed the course did not also complete the NURBS project, while in the WS 2018 the number was closer to half.

The rubric for this assessment needs to be reworked. Currently, there are two chief problems. 1) While there are four separate rows/criteria on the rubric, there are only two columns/"Bands" for assessment, Novice and Proficient. This needs to be expanded. 2). Currently "Proficient" is set to be "60+%", which makes no sense at any level of analysis. Therefore, in this outcome we dove into the raw scores to perform meaningful assessment (see attached).

Students who submitted the project did very well at the initial portions of the project, setting up their references and creating the NURBS curves.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Students did relatively poorly at the final portion of the project, where the actual bi-railing came into play. A deeper review of the actual projects revealed that students are chopping and aligning/snapping their curves well, and performing the bi-railing with proficiency. Where they are coming up short is in the rebuilding of the NURBS surfaces and aligning (and for those who convert to polys the attachment as well). It is unclear whether this is due to time constraints or poor instruction, so we will move to beef up our materials on this process and see what happens.

Outcome 3: Model, rig, texture, and bind a character.

- Assessment Plan
 - Assessment Tool: Portfolio review using departmentally developed rubric
 - Assessment Date: Winter 2017
 - 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

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2018	2019, 2018	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
39	30

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Withdrawal, did not submit final characters.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

Both day and online sections were assessed, which is what we offer.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Embedded rubric.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

90% of students scored "Proficient" or better. There are some problems with this, as indicated in the following detailed analysis, which indicate that the rubric needs to be fixed.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

The rubric for this assessment needs to be reworked. Currently, there are two chief problems. 1) While there are four separate rows/criteria on the rubric, there are only two columns/"Bands" for assessment, Novice and Proficient. This needs to be expanded. 2) Currently "Proficient" is set to be "60+%", which makes no sense at any level of analysis. Therefore, in this outcome we dove into the raw scores to perform meaningful assessment (see attached).

The area of the project/rubric achieving the highest average score was the rig (skeleton/bones/control objects). With the move to HumanIK solutions in the last few semesters this is not terribly surprising. It would be interesting to look back at semesters where far more custom hand-rigging was required and see if the new workflows have improved these outcomes. As we move in this direction, some discussion should be had as to the amount of custom rigging that we want to do. While the HumanIK solutions are great for the students interested in real-time development, there is some worry that the de-emphasis on custom rigs will disadvantage those students who are interested in becoming rigging artists in a pre-rendered environment.

The exam brought to light some interesting strengths. Students seemed to grasp the nature of joint deformers and the interactive skin binding tool very well (averaging 87% and 88% success rates respectively on those questions).

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

The lowest average project/rubric scores came in the "Appearance" section. In poring over the grading notes, the bulk of these issues seem to come from normal mapping. This carries over from the general trend in the embedded texturing rough drafts. There are a number of causes that I can tease out from my review. Normal maps, at least in the way that we are teaching (base model in 3D software -> high poly sculpt -> normal map -> back to 3D software) are the result of weeks of sculpting work. For the students who submitted without normal maps at all, there seem to be a couple of culprits. Some simply didn't do their high-poly sculpting, and this is evident in that they didn't even submit at least a Mudbox file along with their work. Others did not successfully navigate the treacherous path from sculpt to normal map to making the map work with the render engine. This group has a normal map in their submission, but it doesn't show in the playblasts. The latter group should be the target of more intensive review and guidance.

Close behind came the binding scores. Binding rigs to create skins is one of the most conceptually difficult and time-consuming processes in the entire animation program. This is one of the last stages in the class project and is not subject to rough draft review before submission, so these scores seem acceptable. We do, however, have to stay on top of the industry developments with binding. In the last decade of running the course, we have expanded our techniques for smooth skinning weight assignment, as the basic 3D software has become increasingly powerful and "user-friendly" (with the addition of tools like Interactive Skin Bind). At this point, we feel that our basics-first approach -- with reliance on the weight-painting tools and the spreadsheet-like Component Editor -- is the best way to hammer home the fundamentals of the process to second-year students. Students who have learned to bind by hand, as the reasoning goes, will be well-prepared to handle the pitfalls (or absence) of more advanced and automated binding tools in the workplace.

The exam identified many areas of weakness. Students did particularly poorly on the question relating to quad topology (averaging 37% correct response rates). In reviewing the course materials for the two online sections, it is obvious that the provided materials do not cover this in sufficient detail.

Outcome 3: Model, rig, texture, and bind a character.

- Assessment Plan
 - Assessment Tool: Related questions on common written final exam

- Assessment Date: Winter 2017
- 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 related exam questions
- Who will score and analyze the data: Department faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

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2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
39	33

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Withdrawals and non-completers.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

Both online and day sections were assessed, which is what we offer.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Ten embedded test questions from the final exam were chosen. Each question was related directly to the outcome.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

The standard of success was met, with an overall average of 73%, but there is plenty of room for improvement.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

The rubric for this assessment needs to be reworked. Currently, there are two chief problems. 1) While there are four separate rows/criteria on the rubric, there are only two columns/"Bands" for assessment, Novice and Proficient. This needs to be expanded. 2) Currently "Proficient" is set to be "60+", which makes no sense at any level of analysis. Therefore, in this outcome we dove into the raw scores to perform meaningful assessment (see attached).

The area of the project/rubric achieving the highest average score was the rig (skeleton/bones/control objects). With the move to HumanIK solutions in the last few semesters this is not terribly surprising. It would be interesting to look back at semesters where far more custom hand-rigging was required and see if the new workflows have improved these outcomes. As we move in this direction, some discussion should be had as to the amount of custom rigging that we want to do. While the HumanIK solutions are great for the students interested in real-time development, there is some worry that the de-emphasis on custom rigs will disadvantage those students who are interested in becoming rigging artists in a pre-rendered environment.

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The exam identified many areas of weakness. Students did particularly poorly on the question relating to quad topology (averaging 37% correct response rates). In reviewing the course materials for the two online sections, it is obvious that the provided materials do not cover this in sufficient detail.

III. Course Summary and Intended Changes Based on Assessment Results

1. Based on the previous report's Intended Change(s) identified in Section I above, please discuss how effective the changes were in improving student learning.

N/A

2. Describe your overall impression of how this course is meeting the needs of students. Did the assessment process bring to light anything about student achievement of learning outcomes that surprised you?

There were several surprises, both positive and negative, as noted in detail above. The low response rate for the NURBS projects needs to be further addressed. The low scores on some of the test answers are concerning. The relatively high success rates with UV layouts and texturing are re-assuring.

Overall, this course is meeting the needs of students and remains a popular course despite its high degree of difficulty.

3. Describe when and how this information, including the action plan, was or will be shared with Departmental Faculty.

Shared with Departmental faculty.

4.

Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Pre-requisite	Removal of ANI 230 as co-requisite	Joy's office discovered that the base certificate requires ANI 230, while the advanced certificates and degree require ANI 250. As the two are co-requisites, this means that the students only seeking the base certificate found themselves in a conundrum. The co-requisite arrangement has always been precarious, with ANI 230 instructors having to coordinate with 250 instructors to delicately cooperate and gather class materials in order to run their projects. It has been decided internally to unhook the courses, as we believe that we have an implementable and practical in-class adjustment for 230 which will allow us to run each independently.	2019

		While there are many other fixable issues with this course, none rise to the syllabus level.	
Course Materials (e.g. textbooks, handouts, on-line ancillaries)	More class time on the appearance portion of the rubric (lighting, texturing and camera work) (Outcome 1).	Students did comparatively poorly on this portion of the rubric and would benefit from additional attention if possible.	2019
Course Materials (e.g. textbooks, handouts, on-line ancillaries)	Additional materials related to the rebuilding of NURBS surfaces and aligning for bi-railing in the final portion of the project.	Students did relatively poorly in this part of the project.	2019
Course Materials (e.g. textbooks, handouts, on-line ancillaries)	Additional materials and review of quad topology (Outcome 3).	Students did particularly poorly in this area of the exam.	2019

5. Is there anything that you would like to mention that was not already captured?

6.

III. Attached Files

[ANI 250 Data](#)

Faculty/Preparer: Randy Van Wagnen **Date:** 08/15/2019
Department Chair: Ingrid Ankerson **Date:** 08/21/2019
Dean: Eva Samulski **Date:** 08/22/2019
Assessment Committee Chair: Shawn Deron **Date:** 11/22/2019