

**Course Assessment Report
Washtenaw Community College**

Discipline	Course Number	Title
Dental Assisting	106	DEN 106 04/09/2021- Biomedical Science for Dental Assistants
College	Division	Department
Inactive Divisions	Health Sciences	Allied Health
Faculty Preparer		Kristina Sprague
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?

Yes

This course was previously assessed in May 2016.

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

The assessment showed that simple identification of the concepts did not always indicate comprehension. Continued improvement from the students year to year was noted and signaled a trend that should continue.

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

The outcome language was changed to include both knowledge and comprehension levels of cognitive domain.

II. Assessment Results per Student Learning Outcome

Outcome 1: Identify and discuss concepts and principles related to the formation and eruption of teeth and craniofacial development.

- Assessment Plan
 - Assessment Tool: Course Project
 - Assessment Date: Winter 2018
 - 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: 90% of the students will score 79% 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)
2020, 2019, 2018		

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

# of students enrolled	# of students assessed
23	22

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.

All enrolled students were assessed.

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.

All students were assessed.

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

A course project was scored using a departmentally-developed 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
 Overall, 90% of students (20 of 22) scored 79% or higher, thus meeting the standard of success. The actual results show that 20 of 22 students scored 100% on the project. Students did very well on this project and demonstrated their understanding of this outcome.

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

There is great understanding of the outcomes from 2018-2020 and comprehension of the outcome continued to improve.

- 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.

Analysis shows that increased review of embryonic development of oral-facial development could improve achievement of the outcome.

Outcome 1: Identify and discuss concepts and principles related to the formation and eruption of teeth and craniofacial development.

- Assessment Plan
 - Assessment Tool: departmental exam
 - Assessment Date: Winter 2018
 - Course section(s)/other population: All
 - Number students to be assessed: All
 - How the assessment will be scored: Answer key and scoring rubric
 - Standard of success to be used for this assessment: At least 80% of students will answer each item correctly and receive at least 80% overall.
 - Who will score and analyze the data: Department Faculty

- 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)
2020, 2019, 2018		

- Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
23	22

- 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.

All students who completed the departmental exam were assessed.

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.

All students who completed the departmental exam were assessed.

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

The exam questions were scored using a departmentally-created 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

Twenty-one of 22 students (95%) scored 80% or higher on the outcome-related essay questions. The average score on the two essay questions was 90% or higher. With the one exception, students were able to discuss concepts and principles related to the formation and eruption of teeth and craniofacial development.

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

There is great understanding of the outcomes from 2018-2020 and comprehension of the outcome continued to improve.

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.

Analysis shows that increased review of embryonic development of oral-facial development could improve achievement of the outcome.

Outcome 2: Identify and discuss concepts and principles related to systems of the body.

- Assessment Plan
 - Assessment Tool: departmental exam
 - Assessment Date: Winter 2018
 - Course section(s)/other population: All

- Number students to be assessed: All
- How the assessment will be scored: Answer key and rubric
- Standard of success to be used for this assessment: At least 80% of students will answer each item correctly and receive at least 80% overall.
- 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)
2020, 2019, 2018		

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

# of students enrolled	# of students assessed
23	22

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.

All students that completed the departmental exam were assessed.

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.

All students that completed the departmental exam were assessed.

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

The essay question was scored using a departmentally-created rubric. The rubric for the essay question was based on a score of 1 - 10. Students who scored 8 of 10 (80%) or higher met the standard of success.

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
 Twenty of 22 students (90%) scored 80% or higher on the essay. This meets the standard of success. Most students were able to clearly discuss concepts and principles related to systems of the body.

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

There is great understanding of the outcomes from 2018-2020 and comprehension of the outcome continued to improve.

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.

Further investigation shows that the department exam could include more coverage of this outcome to increase the ability to assess student achievement of this outcome.

Outcome 3: Identify and discuss concepts and principles related to local and general anesthesia.

- Assessment Plan
 - Assessment Tool: departmental exam
 - Assessment Date: Winter 2018
 - Course section(s)/other population: All
 - Number students to be assessed: All
 - How the assessment will be scored: Answer key and rubric
 - Standard of success to be used for this assessment: At least 80% of students will answer each item correctly and receive at least 80% overall.
 - 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)
2020, 2019, 2018		

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

# of students enrolled	# of students assessed
23	22

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.

All students that completed the departmental exam were assessed.

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.

All students that completed the departmental exam were assessed.

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

The exam essay questions were scored using a departmentally-created 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

Twenty-one of 22 students (95%) scored 80% or higher on the outcome-related questions. Students performed best on essay questions #5 with an average of 9.68, with 20 of 22 students scoring a 10 on the essay. They had more difficulty with essay question #2 but still scored an average of 8.45 of 10 points.

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

There is great understanding of the outcomes from 2018-2020 and comprehension of the outcome continued to improve.

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.

Analysis shows that increased exposure to anesthesia principles would help increase student comprehension of the outcome.

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.

Previous department assessment of the multiple-choice exam did not properly convey students' comprehension of outcomes. Switching to essay-based examination has helped increase the ability to assess and increase students' ability to master course outcomes.

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?

Upon examining previous years' results, there was an increase in comprehension of oral development; however, there was a decrease in the students' comprehension of anesthesia principles.

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

Information will be shared at the next departmental meeting.

4. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Assessment Tool	Course assessment tool 1 "course project" does not fit in outcome 1; should be moved to outcome 2.	It is a systems project, and not a developmental based project.	2021
Assessment Tool	Include more items addressing Outcome 2 on the department exam.	To provide more data to assess student achievement of this outcome.	2021
Course Materials (e.g. textbooks, handouts, on-line ancillaries)	Include additional emphasis or review on embryonic development of oral facial development (Outcome 1) and anesthesia principles (Outcome 3).	The assessment data demonstrated that increased coverage of these topics could improve student comprehension.	2021

Other: Standard of success	Update the standard of success for the course project from “90% of students will score 79% or higher” to “90% of students will score 80% or higher.”	The updated standard corresponds to the rubric used to evaluate the course project.	2021
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5. Is there anything that you would like to mention that was not already captured?

Course instructor, Robert Love, DDS, FAGD completed the assessment report while the faculty member Kristina Sprague compiled the data and submitted the reported.

III. Attached Files

[DEN 106 Assessment Data](#)

Faculty/Preparer: Kristina Sprague **Date:** 04/09/2021
Department Chair: Kristina Sprague **Date:** 04/09/2021
Dean: Valerie Greaves **Date:** 04/13/2021
Assessment Committee Chair: Shawn Deron **Date:** 05/13/2021

Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Dental Assisting	106	DEN 106 05/23/2016- Biomedical Science for Dental Assistants
Division	Department	Faculty Preparer
Health Sciences	Allied Health	Kristina Sprague
Date of Last Filed Assessment Report		

I. Assessment Results per Student Learning Outcome

Outcome 1: Identify concepts and principles related to the formation and eruption of teeth.

- Assessment Plan
 - Assessment Tool: multiple-choice test
 - Assessment Date: Fall 2008
 - Course section(s)/other population: all
 - Number students to be assessed: all
 - How the assessment will be scored:
 - Standard of success to be used for this assessment:
 - Who will score and analyze the data:

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)
2015, 2014, 2013		

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

# of students enrolled	# of students assessed
50	50

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.

All students were assessed.

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.

All students were assessed.

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

The final exam was scored in BlackBoard and an item analysis was generated.

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

2013

50% of the questions were answered correctly by 80% or more of the students.

7 questions were targeted for review.

2014

100% of the questions were answered correctly by 80% or more of the students.

2015

100% of the questions were answered correctly by 80% or more of the students.

In 2013, the students struggled. However, including all students, the standard of success was met.

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

In 2013, although the majority of students were able to identify the concepts and principles, 2014 and 2015 students were able to identify all concepts and principles assessed. The instructor was more able to assess the needs of helping the students to achieve this outcome in 2014 and 2015 because of the experience gained with the 2013 cohort.

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 showed continued growth year to year, however, to better meet the needs of the students in their ability to perform duties associated with the profession, changes will be made to the outcome and assessment tools.

Outcome 2: Identify concepts and principles related to tissue, organ, and nerve development of the head and neck.

- Assessment Plan
 - Assessment Tool: Multiple-choice test
 - Assessment Date: Fall 2008
 - Course section(s)/other population: all
 - Number students to be assessed: all
 - How the assessment will be scored:
 - Standard of success to be used for this assessment:
 - Who will score and analyze the data:

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)
2015, 2014, 2013		

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

# of students enrolled	# of students assessed
50	50

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.

All students were assessed.

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.

All students were assessed.

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

The final exam was scored in BlackBoard and an item analysis was generated.

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

2013

71% of the questions were answered correctly by 80% or more of the students.

10 questions were targeted for review.

2014

100% of the questions were answered correctly by 80% or more of the students.

2015

97% of the questions were answered correctly by 80% or more of the students.

1 question was targeted for review.

While the 2013 students struggled, overall the standard of success was met.

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

There was strength in the students' ability to identify these concepts in all years. There was improvement after the 2013 year as the instructor gained experience in helping the students to understand and achieve this goal.

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 showed continued growth year to year, however, to better meet the needs of the students in their ability to perform duties associated with the profession, changes will be made to the outcome and assessment tools.

Outcome 3: Identify concepts and principles related to local and general anesthesia

- Assessment Plan
 - Assessment Tool: Multiple-choice test
 - Assessment Date: Fall 2008
 - Course section(s)/other population: all
 - Number students to be assessed: all
 - How the assessment will be scored:
 - Standard of success to be used for this assessment:
 - Who will score and analyze the data:

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)
2015, 2014, 2013		

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

# of students enrolled	# of students assessed
50	50

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.

All students were assessed.

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.

All students were assessed.

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

The final exam was scored in BlackBoard and an item analysis was generated.

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: <u>Yes</u>
2013 82% of the questions were answered correctly by 80% or more of the students. 2 questions were targeted for review.
2014 100% of the questions were answered correctly by 80% or more of the students.
2015 100% of the questions were answered correctly by 80% or more of the students. The standard of success was met all 3 years.

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

There was great understanding of the outcomes from 2013-2015 and it continued to improve to complete comprehension of the outcome.

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 showed continued growth year to year, however, to better meet the needs of the students in their ability to perform duties associated with the profession, changes will be made to the outcome and assessment tools.

II. Course Summary and Action Plans Based on Assessment Results

1. 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?

The course has strong outcomes that are necessary for a Dental Assisting Professional to succeed in a dental office. The assessment process did show that simply identifying the concepts does not always show comprehension and can mask incompetence. The improvement of the students from year to year was a pleasant surprise with a trend that should continue.

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

The faculty meet on a regular basis and reviewed the action plan prior to submitting this report.

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Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Outcome Language	The outcome language will include both knowledge and comprehension levels of cognitive domain.	It was determined that more understanding and comprehension was needed by students to be successful in the field. Assessment will be related to understanding and application of outcomes rather than simple identification of material.	2016

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

The course instructor, Robert Love, DDS completed the assessment report while the faculty member Kristina Sprague compiled the data and submitted the report.

III. Attached Files

[Assessment data](#)

Faculty/Preparer: Kristina Sprague **Date:** 05/23/2016
Department Chair: Connie Foster **Date:** 05/24/2016
Dean: Valerie Greaves **Date:** 05/25/2016
Assessment Committee Chair: Michelle Garey **Date:** 08/03/2016