

# Oregon Institute of Technology Dental Hygiene Degree Completion Outreach 2013-2014 Assessment Report

## I. Introduction

The Oregon Tech Dental Hygiene program began in 1970 as an Associate of Applied Science (AAS) program. Beginning in 1985, students had the option to complete a Bachelor of Science (BS) degree and in 2003 the program began awarding the BS degree only. In 1996 a Bachelor of Science Degree Completion program was introduced. The degree completion program offers dental hygienists, who have earned an associate's degree, the opportunity to complete a Bachelor of Science Degree in Dental Hygiene.

All dental hygienists with an associate degree have at least three years of college because one year of college prerequisites are required before acceptance into a dental hygiene program. The degree completion program offers licensed dental hygienists throughout the United States to complete their fourth year in order to earn a bachelor's degree.

The degree is offered fully on-line with most courses offered three to four times a year. Students may begin any term, take one or several courses at a time, and take time off and re-enter the program as needed. Students are exposed to a variety of future career opportunities, including education, public health, and business.

Enrollment in the program has steadily increased. The program enrollment for the past five years is presented in the table (Table 1) below.

<b>TABLE 1: Enrollment BDHO</b>					
2008	2009	2010	2011	2012	2013
59	63	69	80	73	72

## II. Purpose, Objectives, and Student Learning Outcomes

The dental hygiene faculty reviewed the program purpose, objectives, and learning outcomes on September 18, 2013. The faculty affirmed the purpose, objective, and student learning outcomes of the program.

### Dental Hygiene Degree Completion Outreach

The purpose of the Bachelor's Degree Completion Outreach Program in Dental Hygiene program is to prepare the graduate for career opportunities outside clinical dental hygiene such as education, public health, and business management.

### Program Educational Objective

The program prepares the student to achieve professional growth and development.

### Program Student Learning Outcomes

- 1.1 Read and critique professional literature
- 1.2 Use evidence-based decision making to evaluate and incorporate emerging treatment modalities into dental hygiene practice.

- 1.3 Participate in the various aspects of dental practice management including marketing, technology, and office production
- 1.4 Identify current and emerging issues in the profession of dental hygiene
- 1.5 Assess the need for, develop, implement and evaluate oral health care programs in their communities
- 1.6 Design and deliver instruction for undergraduate dental hygiene students.

### III. Assessment Cycle

One September 18, 2013 the faculty reviewed the assessment cycle. As no assessment was conducted in 2012-2013, the assessment cycle was revised. The following table (Table 2) is the revised assessment cycle

	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
1.1 Read and critique professional literature			X			X
1.2 Use evidence-based decision making to evaluate and incorporate emerging treatment modalities into dental hygiene practice			X			X
1.3 Participate in various aspects of dental practice management including marketing, technology, and office production				X		
1.4 Identify current and emerging issues in the profession of dental hygiene				X		
1.5 Assess the need for, develop, implement and evaluate oral health care programs in their communities	X				X	
1.6 Design and deliver instruction for undergraduate dental hygiene students					X	

### IV. Summary of 2013-2014 Assessment Activities

During the 2013-2014 dental hygiene faculty assessed two program student learning outcomes, 1.1 and 1.2. The program also discussed reassessing PSLO 1.5 based on weaknesses identified in the 2011-2012 assessment cycle. The following table (Table 3) provides an overview of 2013-2014 assessment activities.

<i>Student Learning Outcome</i>	<i>Criteria</i>	<i>Assessment Method</i>
PSLO 1.1 Read & critique professional literature	<ul style="list-style-type: none"> <li>▪ Determine the validity of a study</li> <li>▪ State the results of a study</li> <li>▪ Determine if the results will help a local population</li> </ul>	<u>Direct Assessment</u> <ul style="list-style-type: none"> <li>▪ Writing assignment</li> </ul> <u>Indirect Assessment</u> <ul style="list-style-type: none"> <li>▪ Self-assessment paper</li> </ul>

PSLO 1.2 Use evidence-based decision making to evaluate and incorporate emerging treatment modalities into dental hygiene practice	<ul style="list-style-type: none"> <li>• Develop PICO question</li> <li>• Identify a research study comparing a gold standard of treatment to new treatment modality</li> <li>• Determine through use of EBDM process whether to incorporate new treatment modality</li> </ul>	<u>Direct Assessment</u> <ul style="list-style-type: none"> <li>• Written assignment</li> </ul> <u>Indirect Assessment</u> <ul style="list-style-type: none"> <li>• Self-assessment paper</li> </ul>
PSLO 1.5 Assess the need for, develop, implement and evaluate oral health care programs in their communities	(Weakness identified in 2011-12 assessment cycle)	<u>Indirect Assessment</u> <ul style="list-style-type: none"> <li>• BHDO Survey</li> </ul>
Assessment Points: DH 455 Dental Hygiene Research (fall term); Graduate Survey		

**PSLO 1.1: BDHO graduates will be able to read and critique professional literature.**

Direct Assessment: Rubric-scored assignment

BDHO students’ ability to read and critique professional literature was assessed in DH 455 during fall term. Students use a CLASP questionnaire to answer questions about the research study. Points are given for degree of thoroughness of answers. Four students were assessed by the course instructor. The following table (Table 4) summarizes the results of the assessment.

TABLE 4: Read and critique professional literature				
Performance Criteria	Assessment Method	Measurement Scale	Minimum Acceptable Performance	Overall Results
Students determine the validity of a study	Rubric-scored assignment	1-4 proficiency scale according to rubric	80% achieve proficiency of 2 or higher	100% achieve proficiency of 4
Students state the results of a study	Rubric-scored assignment	1-4 proficiency scale according to rubric	80% achieve proficiency of 2 or higher	100% achieve proficiency of 3 or higher
Students determine if the results will help a local population	Rubric-scored assignment	1-4 proficiency scale according to rubric	80% achieve proficiency of 2 or higher	100% achieve proficiency of 2 or higher

Table 4 Assessment Results for PSLO 1.1 in DH 455, Fall 2013

*Strengths:* CASP questionnaire guides students through evaluation process. PICO research method guides students to compare gold standard to new interventions. All students achieved proficiency of 2 or higher.

*Weaknesses:* None

*Plan for Improvement:* Continue successful teaching and learning strategies.

Indirect Assessment: Self-assessment

BDHO students' ability to read and critique professional literature was also assessed in DH 455 by students writing a self-assessment. Four students were assessed fall term. The following table (Table 5) summarizes the results of the assessment.

TABLE 5: Read and critique professional literature				
Performance Criteria	Assessment Method	Measurement Scale	Minimum Acceptable Performance	Overall Results
Students determine the validity of a study	Self-assessment within rubric-scored assignment	1-10 proficiency scale according to rubric	80% achieve proficiency of 8 or higher	100% achieve proficiency of 8 or higher
Students state the results of a study	Self-assessment within rubric-scored assignment	1-10 proficiency scale according to rubric	80% achieve proficiency of 8 or higher	100% achieve proficiency of 8 or higher
Students determine if the results will help a local population	Self-assessment within rubric-scored assignment	1-10 proficiency scale according to rubric	80% achieve proficiency of 8 or higher	100% achieve proficiency of 8 or higher

Table 5 Assessment Results for PSLO 1.1 in DH 455, Fall 2013

*Strengths:* Students critique a classmate's evaluation before they write their reflection of their own ability to evaluate a research study. This seems to enhance their confidence and improve learning outcomes. All students achieved proficiency of 8 or higher.

*Weaknesses:* None

*Plan for Improvement:* Continue successful teaching and learning strategies.

**PSLO 1.2: Use evidence-based decision making to evaluate and incorporate emerging treatment modalities into dental hygiene practice**

Direct Assessment: Rubric-scored assignment

BDHO students' ability use evidence-based decision making to evaluate and incorporate emerging treatment modalities into dental hygiene practice was assessed in DH 455 during fall term. Four students were assessed by the course instructor. The following table (Table 6) summarizes the results of the assessment.

TABLE 6: Evidence Based Decision Making				
Performance Criteria	Assessment Method	Measurement Scale	Minimum Acceptable Performance	Overall Results
Students are able to correctly identify a scientific research study comparing gold standard of treatment to new modality and determines if it is valid enough to incorporate into current practice.	Rubric-scored assignment	1-4 proficiency scale according to rubric	80% achieve proficiency of 2 or higher	100% achieved proficiency of 4

Table 6 Assessment Results for PSLO 1.2 in DH 455, Fall 2013

*Strengths:* All four students achieved 100% on this assignment. An online tutorial aided students with this assignment.

*Weaknesses:* None

*Plan for Improvement:* Continue successful teaching and learning strategies.

**Indirect Assessment:** Self-assessment

BDHO students' ability use evidence-based decision making to evaluate and incorporate emerging treatment modalities into dental hygiene practice was also assessed by students writing a self-assessment. Four students were assessed fall term. The following table (Table 7) summarizes the results of the assessment

TABLE 7: Evidence Based Decision Making				
Performance Criteria	Assessment Method	Measurement Scale	Minimum Acceptable Performance	Overall Results
Students are able to correctly identify a scientific research study comparing gold standard of treatment to new modality and determines if it is valid enough to incorporate into current practice.	Self-assessment within the rubric-scored assignment	1-10 proficiency scale according to rubric	80% achieve proficiency of 8 or higher	80% achieved proficiency of 10 on their final paper

Table 7 Assessment Results for PSLO 1.1 in DH 455, Fall 2013

*Strengths:* Eighty percent of students achieved 100% on the self-assessment criteria within this assignment.

*Weaknesses:* Instructor did not ask students to specifically reflect on this skill although their performance in an earlier assignment addressed this criteria.

*Plan for Improvement:* Incorporate a specific self-assessment component into the student's final assignment/paper. Will address the performance using more specific criteria when PSLO 1.1 is reassessed in 2016-17 academic year.

## V. Evidence of Student Learning

During the 2013-2014 academic year, the BDHO program assessed the following student learning outcomes:

- PSLO 1.1 Read and critique professional literature
- PSLO 1.2 Use evidence-based decision making to evaluate and incorporate emerging treatment modalities into dental hygiene practice

The faculty had email conversations in January 2014 to discuss results of the assessment and to determine plans for improvement. Faculty agreed to have meetings later in spring term to discuss the following agenda items regarding the overall BDHO, as well as future assessment activities:

- Critical thinking was an institutional student learning outcome (ISLO) this year. Discuss adding critical thinking as a PSLO in our BDHO. We could have students write a Systematic Review in DH 455 (Dental Hygiene Research) as a way to assess critical thinking.
- Possible adjustments to DH 453 (Current Issues in Dental Hygiene) and DH 455 to align more closely to our on-campus course sequence DH 475/476/477 (Research Methods I/II/III).

- Discuss business course requirements – are they meeting the goals of our program and needs of our students?
- Should grant writing be a prerequisite course for DH 470/471/480 (Community Health series)?
- Clarifying assignment descriptions/rubrics used for our PSLO assessments
- Plan PSLO assessment cycle in a way that one instructor is not responsible for all assessment activities in an academic year

## VI. Changes Resulting from Assessment

In 2011-2012 PSLO 1.5 was assessed using a survey. While the majority of students self-reported satisfaction with their learning, the results did not meet minimum acceptable performance. To address weaknesses, the program made changes in the curriculum by adding a sequential course in the content area to allow students more time to develop competency. The following table (Table 8) summarizes the results of the assessment:

*Survey Question:* My ability to assess the need for, develop, implement, and evaluate community oral health care programs improved as a result of my enrollment in the degree completion program.

TABLE 8: PSLO 1.5 Assess the need for, develop, implement and evaluate oral health care programs in their communities.						
	Highly agree	Agree	No opinion	Disagree	Highly Disagree	No response
2011-12 n = 38	8 (21%)	13 (34%)	5 (13%)	4 (11%)	2 (5%)	6 (16%)

TABLE 8: PSLO 1.5 assessment from 2011-12

Toward the end of fall term faculty discussed the validity of using the results from this assessment question in the graduate survey next spring. The new sequential course, DH 470 and 471, was being offered for the first time fall and winter terms and had only four students enrolled. The majority of students completing the graduate survey would not have been enrolled in the sequential courses. The decision was made to wait and assess PSLO 1.5 during the 2015-16 assessment cycle, which would result in an increased amount of responses from students who had completed the new sequence.

## VII. Appendices

## APPENDIX A: CURRICULUM MAPS

### *Program Student Learning Outcome 1.1: Read and Critique Professional Literature*

The following table (TABLE A1) indicates the BDHO dental hygiene curriculum. Courses that are bolded indicate that the PSLO above is taught in the course, students demonstrate skills or knowledge in the PSLO, and/or students receive feedback on their performance on the PSLO.

I = Introduced; R = Reinforced; E=Emphasized

<b>Table A1: PSLO 1.1 Read and Critique Professional Literature</b>		<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
AHED 450	Instructional Methods				
AHED 451	Instructional Experience				
AHED 452	Instructional Practicum				
AHED 460	Fundamentals of Distance Education				
<b>DH 401</b>	<b>Overview of Advanced Dental Hygiene</b>	<b>I</b>	<b>I</b>	<b>I</b>	<b>I</b>
<b>DH 453</b>	<b>Current issues in Dental Hygiene</b>	<b>R</b>	<b>R</b>	<b>R</b>	<b>R</b>
DH 454	Dental Practice Management				
<b>DH 455</b>	<b>Dental Hygiene Research</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>
DH 470	Community Program Planning				
DH 471	Community Program Planning II				
DH 480	Community Health Practicum				
BUS 317	Health Care Management				
BUS 331	Personal Finance				
MATH 243	Introductory Statistics				
SPE 321	Small Group and Team Communication				
	Communications Elective				
	Humanities Elective				
	Humanities Elective				
	Social Science Elective				
	Elective, approved by advisor				

### *Program Student Learning Outcome 1.2: Evidence-based Decision Making*

The following table (TABLE A2) indicates the BDHO dental hygiene curriculum. Courses that are bolded indicate that the PSLO above is taught in the course, students demonstrate skills or knowledge in the PSLO, and/or students receive feedback on their performance on the PSLO.

I = Introduced; R = Reinforced; E=Emphasized

<b>Table A2: PSLO 1.2 Use evidence-based decision making to evaluate and incorporate emerging treatment modalities into dental hygiene practice.</b>					
		<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
AHED 450	Instructional Methods				
AHED 451	Instructional Experience				
AHED 452	Instructional Practicum				
AHED 460	Fundamentals of Distance Education				
<b>DH 401</b>	<b>Overview of Advanced Dental Hygiene</b>	<b>I</b>	<b>I</b>	<b>I</b>	<b>I</b>
<b>DH 453</b>	<b>Current issues in Dental Hygiene</b>	<b>R</b>	<b>R</b>	<b>R</b>	<b>R</b>
DH 454	Dental Practice Management				
<b>DH 455</b>	<b>Dental Hygiene Research</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>

**Table A2: PSLO 1.2** Use evidence-based decision making to evaluate and incorporate emerging treatment modalities into dental hygiene practice.

DH 470	Community Program Planning				
DH 471	Community Program Planning II				
DH 480	Community Health Practicum				
BUS 317	Health Care Management				
BUS 331	Personal Finance				
MATH 243	Introductory Statistics				
SPE 321	Small Group and Team Communication				
	Communications Elective				
	Humanities Elective				
	Humanities Elective				
	Social Science Elective				
	Elective, approved by advisor				

## APPENDIX B: RUBRICS

### “Evaluation of a Research Study” - PSLO 1.1 direct assessment

Criteria	Levels of Achievement			
	Need Improvement	Met Expectations	Proficient	Exceptional
1. Did the study address a clearly focused issue?	1	2	3	4
2. Did the authors use an appropriate method to answer the question?	1	2	3	4
3. Were the cases recruited in an acceptable way?	1	2	3	4
4. Were the controls selected in an acceptable way?	1	2	3	4
5. Was the exposure accurately measured to minimize bias?	1	2	3	4
6. What confounding factors have the authors accounted for? And, Have the authors taken account of the potential confounding factors in the design and/or in their analysis?	1	2	3	4
7. What are the results of this study?	1	2	3	4
8. How precise are the results? And, how precise is the estimate of risk?	1	2	3	4
9. Do you believe the results?	1	2	3	4
10. Can the results be applied to the local population? And do the results of this study fit with other available evidence?	1	2	3	4

**“EBDM to Evaluate and Incorporate Emerging Treatment Modalities” - PSLO 1.2 direct assessment; PSLO 1.1 and 1.2 indirect assessments**

Objective/ Criteria	Performance Indicators			
	Need Improvement	Meet Expectations	Above Average	Exceptional
Quality	(7 points) Writing needs editing. Some answers incorrect. Poor critique of another's work. Little reflection or improvement on study evaluation abilities.	(8 points) Good writing skills with minor errors. Minimum errors in answers. Average ability to critique other's work. Reflects some improved ability to evaluate studies. Somewhat justifies the need to incorporate or not to incorporate EB research into current practice. (Some criteria specific to certain assignments.)	(9 points) Good writing skills with minimum errors. Minimum errors in answers. Reflects an improved ability to critique work. Justifies the need to incorporate or not to incorporate EB research in current practice.	(10 points) No errors. Writing on level of college student. All questions answered accurately. Good ability to critique. Reflects on ability to evaluate at a higher level than before the course. Justifies the need to incorporate or not to incorporate EB research into current practice. (Some criteria specific to certain assignments.)