Oregon Tech
Dental Hygiene Bachelor of Science in Klamath Falls
2014-2015 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 of completing a Bachelor of Science (BS) degree, and in 2003 the program began awarding the BS degree only.

All students must complete prerequisite courses to be eligible for application to the program. Acceptance to the program is selective and limited to no more than 27 students at Klamath Falls. Students enter the program each year in fall term.

The five-year retention and graduation rate is presented in the Table 1 below.

TABLE 1: 5-YEAR GRADUATION RATE				
Class 2011	**Class 2012**	**Class 2013**	**Class of 2014**	**Class of 2015**
26/26 (100%)	21/25 (87.5%)	21/27 (77.78%)	22/24 (87.5%)	18/24 (75%)

II. Program Purpose, Objectives, and Student Learning Outcomes

The dental hygiene faculty reviewed the program's purpose, objectives, and learning outcomes during a department meeting on September 17, 2014. The faculty affirmed the statements below:

Dental Hygiene Program Purpose
The purpose of the Bachelor of Science in Dental Hygiene program is to prepare students for entry into the dental hygiene profession and additional careers such as public health, administration, education**,** research, and marketing. The graduate will be prepared to enter master degree programs in dental hygiene and related programs.

Program Educational Objectives

1. Provide the dental hygiene student the opportunity to gain the necessary knowledge, skills, and values to enter the registered practice of dental hygiene
2. Prepare the student to sit for the National Board Dental Hygiene Examination
3. Prepare the student to take the WREB examination in dental hygiene, anesthesia, and restorative.

Program Student Learning Outcomes

PROFESSIONALISM, ETHICAL PRACTICE: The dental hygiene graduate will be competent in applying ethical, legal, and regulatory concepts in the provision and/or support of oral health care services

CRITICAL THINKING AND PROBLEM SOLVING: The dental hygiene graduate will be competent in critical thinking and problem solving related to comprehensive care and management of patients

LIFELONG LEARNING: The dental hygiene graduate will demonstrate competent knowledge and self-assessment skills necessary for life-long learning

CULTURAL AWARENESS: The dental hygiene graduate will be competent in interpersonal and communication skills to effectively interact with diverse population groups

COMMUNITY HEALTH: The dental hygiene graduate will be competent in assessing, planning, implementing and evaluating community based oral health programs including health promotion and disease prevention activities

PATIENT CARE COMPETENCY: The dental hygiene graduate will be competent in providing oral health care to all stages of life and for all periodontal classifications.

The program also offers students experiential learning opportunities including:

- Membership in the Student American Dental Hygienists' Association (SADHA) and representation at state and national levels
- Professional meetings: Oregon Dental Conference, Oregon Dental Hygienists' House of Delegates Meeting, and American Dental Hygienists' Association Annual Meeting.
- Assessment, planning, implementation, and evaluation of community health projects
- International trips to provide dental hygiene care to persons living in third world countries
- Off campus experience: school-based screenings and presentations, health fairs, and dental clinics/offices.

III. Six-Year Cycle for Assessment and Student Learning Outcomes

The assessment schedule for Oregon Tech institutional student learning outcomes (ISLO) and dental hygiene program student learning outcomes (PSLO) are summarized in Table 2 below. ISLOs are assessed every six years and PSLOs are assessed every three years.

TABLE 2: Learning Outcomes Cycle of Assessment

SLO	Description	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
ISLO	Communication (oral, written, visual)	X						X
ISLO	Team, group work			X				
ISLO PSLO	Professionalism, ethical practice			X•			•	
ISLO PSLO	Critical thinking, problem solving				X•			•
ISLO PSLO	Lifelong, independent, learning	X•			•			X•
ISLO	Mathematical knowledge, skills		X					
ISLO	Scientific knowledge, reasoning					X		
ISLO PSLO	Cultural awareness						X•	
PSLO	Community health		•			•		
PSLO	Patient care competency				•			•

Table 2B: Assessment cycle, ISLO (X) PSLO (•)

IV. Summary of 2014-2015 Assessment Activities

During the 2014-15 academic year, the dental hygiene faculty conducted formal assessment of Community Health. The program also addressed closing the loop, Patient Care Competency. The following table (Table 3) provides an overview of 2014-2015 assessment activities.

TABLE 3: Overview of 2013-2014 Assessment Activities		
Student Learning Outcome	***Criteria***	***Assessment Method***
PSLO: Community Health	• Writing • Assessment • Needs assessment • Planning • Implementation • Evaluation • Portfolio appearance	Direct Assessment • Portfolio Indirect Assessment • Graduate survey
Assessment Points: DH 383, Junior Year, Spring Term 2015 by Jill Schultz		
Closing-the-loop PSLO: Patient care competency	• Number patient experiences by age • Number patient experiences by disease classification	Direct Assessment • Tracking data Indirect Assessment • Graduate survey
Assessment Points: DH 423, Senior Year, Winter Term 2015 by Elizabeth Gordon		

Table 3: 2014-2015 Assessment Activities

PSLO Community Health: The dental hygiene graduate will be competent in assessing, planning, implementing and evaluating community based oral health programs including health promotion and disease prevention activities

Direct Assessment: Project, Portfolio
Dental hygiene students' ability to assess, plan, implement, and evaluate community-based oral health programs was assessed in DH 383 Community Dental Health IV, spring term 2015. Six projects were evaluated using a rubric (see appendix). Performance was assessed as proficient (4), competent (3), beginner (2), or novice (1). The following table (Table 5) summarizes the results.

TABLE 4: Community Health				
Performance Criteria	Assessment Method	Measurement Scale	Minimum Acceptable Performance	Overall Results
Writing • Free from writing errors • Demonstrates editing to improve quality	Portfolio	1-4 proficiency scale	4 of 6 groups at 3 or 4	5/6
Needs Assessment • Thorough, addresses five major issues • Accurate population profile • Secondary data included and cited	Portfolio	1-4 proficiency scale	4 of 6 groups at 3 or 4	3/6

TABLE 4: Community Health				
Performance Criteria	Assessment Method	Measurement Scale	Minimum Acceptable Performance	Overall Results
Needs analysis • Primary problems • Contributing factors • Population’s self-assessment	Portfolio	1-4 proficiency scale	4 of 6 groups at 3 or 4	5/6
Planning • SMART goals/objectives • Evaluation plan • Funding plan	Portfolio	1-4 proficiency scale	4 of 6 groups at 3 or 4	5/6
Implementation • Documentation	Portfolio	1-4 proficiency scale	4 of 6 groups at 3 or 4	5/6
Evaluation • Formative results • Summative results	Portfolio	1-4 proficiency scale	4 of 6 groups at 3 or 4	5/6

Table 4: Assessment results for Community Health in DH 383 Community Dental Health IV; spring term 2015.

Strengths; Minimum acceptable performance was met in all criteria except one.

Weaknesses: The instructor identified the following weaknesses:

- lack of inclusion of secondary data and documentation of such
- some misunderstanding of formative and summative evaluation
- overall inattention to ongoing documentation of project

Additionally, the portfolio is an evaluation of how well the team documented their project, but not necessarily and evaluation of well it was actually conducted.

Plan for Improvement: To improve teaching and learning, the following are specific strategies will be made:

- Addition of one community health project advisor
- Formal time scheduled for project advising (there times per quarter fall and winter) using the project rubric
- More emphasis in spring sophomore course, DH 380 Community Dental Health I, on collection and documentation of secondary data

Indirect Assessment: Survey
The ability to apply community dental health principles to prevent disease and promote health was also assessed using a survey. During week nine of winter term 2015, a survey was administered to dental hygiene students in their last term of the program. Twenty students rated the following statements using a 4-point Likert scale (strongly agree, agree, disagree, and strongly disagree).

S1: The Oregon Tech dental hygiene program prepared me to be able to utilize critical thinking, scientific theory, and evidence in decision making regarding patient care and the promotion of health and wellness to individuals and communities.

S2: The Oregon Tech dental hygiene program prepared me to be able to provide planned educational services using appropriate interpersonal skills and educational strategies to promote health.

S3: The Oregon Tech dental hygiene program prepared me to be able to communicate effectively with individuals from diverse populations both verbally and in writing.

S4: The Oregon Tech dental hygiene program prepared me to be able to improve access to care by providing community oral health services such as needs assessment, screening, referral, and educational services.

S5: The OIT Dental Hygiene program prepared me to be competent in assessing, planning, implementing, and evaluating community-based oral health programs.

TABLE 5: Community Health				
	Assessment Method	Measurement Scale	Minimum Acceptable Performance	Results
S1	Survey	1-4	80% at Strongly agree or agree	100%
S2	Survey	1-4	80% at Strongly agree or agree	89%
S3	Survey	1-4	80% at Strongly agree or agree	100%
S4	Survey	1-4	80% at Strongly agree or agree	100%
S5	Survey	1-4	80% at Strongly agree or agree	95%

Table 5: Assessment results for Community Health based on students' self-reporting by survey, winter term 2015.

Strengths: All survey question responses exceeded minimum acceptable performance.

Weaknesses: This assessment revealed no weaknesses.

Plan for Improvement: Continue effective teaching and learning practices.

V. Evidence of Student Learning

During the 2014-2015 academic year, the Oregon Tech Dental Hygiene program at Klamath Falls assessed the following student learning outcome:

- PSLO: Community Health

The dental hygiene faculty met on September 17, 2015 to discuss the results of the assessment. The instructor identified weaknesses and proposed plans for improvement. The instructor will implement the plans during the 2015-16 academic year.

VI. Changes Resulting from Assessment

During the 2013-14 assessment cycle, Patient Care was assessed. The assessment revealed students experiences with some patient ages and periodontal case types may be insufficient. Additionally, there appeared to be over-reporting errors in tracking stages of life. Changes were made in tracking methods, and the PSLO was reassessed. The following tables, Table 6 and Table 7, summarizes tracking data for the class of 2015. Tables 8 and 9 compare year 2014 and 2015 tracking reports.

TABLE 6: Provision of oral health care to individuals at all stages of life						
Student ID	**Child**	**Adolescent**	**Adult**	**Independent Older Adult**	**Dependent/Fail Older Adult**	**Special Needs**
918187109	12	6	60	40	6	2
918194562	38	3	66	32	3	1
918174893	6	4	63	26	3	4
918197720	5	5	47	8	1	1
918193670	4	6	40	43	2	1
918186848	6	8	75	24	2	0
918209543	8	3	79	26	2	1
918178537	5	13	73	24	2	2
918184209	11	5	73	31	1	4
918184204	4	14	77	31	2	1
918192736	3	8	53	28	3	2

918182778	5	2	74	28	6	2
918176922	3	5	51	12	0	0
918199579	4	3	73	58	0	4
918193641	2	9	85	10	8	8
918192371	3	3	48	44	2	6
918180879	4	6	37	29	8	1
918190661	3	3	65	37	4	2
AVERAGE	**7**	**5.89**	**63.28**	**29.06**	**3.06**	**2.34**
MAXIMUM	**38**	**14**	**85**	**58**	**8**	**8**
MINIMUM	**2**	**2**	**37**	**8**	**0**	**0**

Table 6: Cumulative patient tracking data, fall 2012 through winter 2015.

TABLE 7: Provision of oral health care for all periodontal classifications					
Student ID	***Healthy***	***Gingivitis***	***ADA II***	***ADA III***	***ADA IV***
918187109	2	65	23	12	23
918194562	4	73	14	27	13
918174893	7	33	22	19	18
918197720	10	36	22	38	13
918193670	5	47	23	25	6
918186848	10	73	20	10	9
918209543	7	57	11	13	12
918178537	12	71	19	23	18
918184209	2	70	15	22	14
918184204	12	53	22	36	8
918192736	2	56	9	18	19
918182778	4	54	19	25	18
918176922	4	44	16	21	6
918199579	2	26	27	36	30
918193641	1	5	53	39	27
918192371	10	27	17	27	18
918180879	3	32	14	20	19
918190661	12	38	24	20	13
AVERAGE	**6.06**	**47.78**	**20.56**	**23.94**	**15.78**
MAXIMUM	**12**	**73**	**53**	**39**	**30**
MINIMUM	**1**	**5**	**9**	**10**	**6**

Table 7: Cumulative patient tracking data; fall 2012 through winter 2015

TABLE 8: Comparison Patient Ages							
		Child	***Adolescent***	***Adult***	***Independent Older adult***	***Dependent/frail Older adult***	***Special Needs***
AVERAGE	Y14	13	8	70	37	6	10
	Y15	7	6	63	30	3	2
MAXIMUM	Y14	25	28	115	68	17	10
	Y15	38	14	85	58	8	8
MINIMUM	Y14	5	0	34	17	0	3
	Y15	2	2	37	8	0	0

Table 8: Years 2014 and 2015 comparison tracking data by patient ages (averages rounded to nearest whole number)

TABLE 9: Comparison Periodontal Disease Classifications						
		Healthy	***Gingivitis***	***ADA II***	***ADA III***	***ADA IV***
AVERAGE	Y14	8	47	28	35	19
	Y15	6	48	21	24	16
MAXIMUM	Y14	24	64	45	72	30
	Y15	25	73	53	39	30
MINIMUM	Y14	1	24	9	3	5
	Y15	1	5	37	10	6

Table 9: Years 2014 and 2015 comparison tracking data by disease classification (averages rounded to nearest whole number)

Discussion: Without more sophisticated statistical analysis, it is difficult to determine effectives of changes. None the less, the faculty is not satisfied with the number of child, adolescent, dependent/frail older adult, and special needs patient experiences. Additionally, it is unacceptable to graduate students with no experiences in any category.

Overall, faculty is committed to increasing students' experiences with all patient ages and periodontal disease classifications. To that end, the following changes will be implemented:

- Case management forms that better track ages, special needs, and periodontal disease classifications
- Minimum patient experience requirements
- Patient recruitment expectations

The faculty is also exploring strategies to recruit more children and adolescent patients, for example "Kiddie Days" on the week-end.

This program student learning outcome will be assessed again in 2016-17.

VII. References

VIII. Appendices

- Curriculum maps
- Rubrics

Oregon Tech Dental Hygiene, Klamath Falls
Curriculum Maps
2014-2015

Community Health

Courses that are bold below indicate that the SLO above is taught in the course, students demonstrate skills or knowledge in the SLO, and/or students receive feedback on their performance on the SLO.

COMMUNITY HEALTH			**Fall**	**Winter**	**Spring**	**Summer**
SOPHOMORE						
DH	221	DH Clin Prac & Seminar I				
DH	225	H&N Anatomy, Histology, Embryology				
DH	240	Prevention I				
CHE	360	Clin Pharm for Health Professions				
SPE	321	Small Group & Team Com				
DH	222	Clin Prac & Seminar II				
DH	241	Prevention II				
DH	244	General & Oral Pathology				
DH	252	Oral Radiology I				
DH	275	Dental Ethics				
DH	366	Dental Anatomy				
DH	223	DH Clin Prac & Seminar III				
DH	242	Prevention III				
DH	253	Oral Radiology II				
DH	254	Introduction to Periodontology				
DH	267	Emergency Procedures				
DH	**380**	**Community Dental Health I**			**I**	
PSY		Psychology Elective				
JUNIOR						
BUS	317	Health Care Management				
DH	321	DH Clin Prac & Seminar IV				
DH	340	Prevention IV				
DH	354	Periodontology				
DH	**381**	**Community Dental Health II**	**E**			
PSY		Psychology Elective				
DH	322	DH Clin Prac & Seminar V				
DH	341	Prevention V				
DH	351	Pain Management I				
DH	**382**	**Community Dental Health III**		**R**		
WRI	227	Technical Report Writing				
		Humanities Elective				
DH	323	DH Clin Prac & Seminar VI				
DH	344	Advanced General & Oral Pathology				
DH	352	Pain Management II				
DH	363	Dental Materials				
DH	370	International Externship (opt)				
DH	383	**Community Dental Health IV**			**E**	
SENIOR						
BUS	331	Personal Finance				
DH	371	International Externship (opt)				
DH	421	DH Clin Prac & Seminar VII				
DH	461	Restorative Dentistry I				
DH	475	DH Research Methods I				
MATH	243	Introductory Statistics				

COMMUNITY HEALTH			**Fall**	**Winter**	**Spring**	**Summer**
AHED	450	Instructional Methods				
DH	372	International Externship (opt)				
DH	422	DH Clin Prac & Seminar VIII				
DH	462	Restorative Dentistry II				
DH	476	DH Research Methods II				
		Communication Elective				
		Humanities Elective				
DH	423	DH Clin Prac & Seminar IX				
DH	454	Dental Practice Management				
DH	463	Restorative Dentistry III				
DH	477	DH Research Methods III				
		Humanities Elective				
		Psychology Elective				

KEY: I, Introduced; E, emphasized; R, reinforced

Oregon Tech Dental Hygiene, Klamath Falls
Assessment Rubrics
2014-2015

Community Health Program Planning Portfolio Rubric (60 points possible)				
	Novice, 0-6 pts.	***Beginner, 7 points***	***Competent, 8 points***	***Proficient, 9-10 points***
Writing	Several spelling and/or grammatical errors. Writing is inconsistent for the intended audience. The project documentation is confusing to the reader. Portfolio does not follow the organizational guide.	Some minor spelling or grammatical errors. Writing is mostly appropriate for intended audience. There may be some lack of clarity. Portfolio follows the organizational guide.	Some minor spelling or grammatical errors. Writing is appropriate for the intended audience. Writing is mostly clear—there may be minor questions about content. Portfolio follows the organizational guide.	No spelling or grammatical errors. Writing is clear, accurate and appropriate for intended audience (DH professionals). Portfolio follows the organizational guide.
Needs Assessment	Baseline data does not reveal the current status of the population. Population profile not complete. Oral health status not identified	Some baseline data missing due to inappropriate choice of data collection instrument. Oral health status and population profile are included. All secondary data sources are **not** cited.	Baseline data reveals the current status of the population to include community issues of: prevention; access; resources; quality; manpower. Oral health status and population profile are included. All secondary data sources are **not** cited. Samples of data collection instruments are included.	Baseline data reveals the current status of the population to include community issues of: prevention; access; resources; quality; manpower. Oral health status and population profile are included. All secondary data sources are cited. Samples of data collection instruments are included.
Needs Analysis	The needs analysis does not reflect the needs assessment data.	Program strategies, rather than the primary problems of the population are determined. The population's self-assessment is not adequately considered.	Primary problems and contributing factors or constraints are identified and reflect the needs assessment data. The population's self-assessment is not clear	Primary problems and contributing factors or constraints are identified and reflect the needs assessment data. The population's self-assessment of need is included in the analysis.
Program Plan	Goals and objectives are inaccurate in respect to SMART. Strategies and activities do not reflect program goals and are not effective. The funding plan/budget is inaccurate. An	Goals and objectives may be inaccurate in some respect to SMART. Strategies and activities may not entirely reflect goals and objectives. The funding plan/budget is somewhat	Goals and objectives may be inaccurate in some respect to SMART. Effective strategies and activities that include a timeline and reflect program goals and objectives are planned. A	Goals and objectives are (SMART) specific, measurable, attainable, realistic, and timely. Effective strategies and activities that include a timeline and reflect program goals and objectives are planned. A

	outline of formative and summative program evaluation is missing.	confusing. An outline of formative and summative program evaluation is included.	funding plan/budget is included and an outline of formative and summative program evaluation is included.	funding plan/budget is included and an outline of formative and summative program evaluation is included.
Program Implementation	The implementation process is inadequately documented. Someone taking on this project would have many question about project operation. Several aspects of documentation are missing: Contact persons Sample forms and checklists used Written correspondence List of materials, videos, power points, lesson plans used Policies and procedures that were developed	The implementation process is adequately documented. Some documentation is missing. Documentation includes: Contact persons Sample forms and checklists used Written correspondence List of materials, videos, power points, lesson plans used Policies and procedures that were developed	The implementation process is documented. Anyone taking on this project may have some questions about how the project operates. Documentation includes: Contact persons Sample forms and checklists used Written correspondence List of materials, videos, power points, lesson plans used Policies and procedures that were developed	The implementation process is well documented. Anyone taking on this project could easily see how the project operates. Documentation includes: Contact persons Sample forms and checklists used Written correspondence List of materials, videos, power points, lesson plans used Policies and procedures that were developed. Brochures, photos, supplemental material is included.
Program Evaluation	Activities are not assessed. Formative evaluation is not documented. Goals and objectives are not evaluated. Recommendations for future program improvement do not reflect actual evaluation.	Some activities are not adequately assessed or documented. Goals and objectives are evaluated. Recommendations for future program improvement do not reflect actual evaluation.	All activities are assessed and documented. Some formative evaluation from meeting minutes is missing. Goals and objectives are evaluated. Recommendations for future program improvement are stated.	All activities are assessed and formative evaluation is documented from meeting minutes and post activity assessment. Goals and objectives are evaluated. Recommendations for future program improvement are stated