

**Oregon Institute of Technology
Bachelor of Science – Dental Hygiene**

2008-2009 Assessment Report, June 2009

I Introduction

The OIT 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. 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 per year.

The five year retention and graduation rate is presented in the table below.

5-YEAR GRADUATION RATE				
Class 2005	Class 2006	Class 2007	Class 2008	Class 2009
21 (100%)	27 (100%)	26 /27(96%)	23/27 (85%)	24/25 (96%)

According to the 2006 Graduate Survey, graduates are earning between \$38,400 and \$76,000 per year with the mean being \$58,783 per year.

II Purpose, Objectives, and Student Learning Outcomes

The department met on September 18, 2008 to review the purpose, objectives, and student learning outcomes determined in 2007. **The department revised student learning outcomes to more closely align with the Committee on Dental Accreditation (CODA) American Dental Association (ADA) Standards for Dental Hygiene programs.**

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.

Expected Student Learning Outcomes

1. **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.**
2. **The dental hygiene graduate will be competent in critical thinking and self-assessment.**
3. **The dental hygiene graduate will be competent in interpersonal and communication skills to effectively interact with diverse population groups.**
4. **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.**

5. **The dental hygiene graduate will be competent in providing oral health care to individuals at all stages of life and for all periodontal classifications.**
6. **The dental hygiene graduate will continue professional growth and development after graduation.**

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 and Oregon Dental Hygienists' House of Delegates Meeting
- Assessment, implementation, and evaluation of community health projects
- International trips to provide dental hygiene care to persons in third world countries
- Off campus experience: school-based screenings and presentations, health fairs, and dental clinics/offices.

III Assessment Cycle

Student learning outcomes will be assessed every three years. **On September 18, 2008 the program adjusted the assessment cycle to reflect the revision of student learning outcomes.** The 3-year assessment cycle follows in Table 1 below.

Outcome	07-08	08-09	09-10	10-11	11-12	12-13
1. 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			X			
2. The dental hygiene graduate will be competent in critical thinking and self-assessment		X			X	
3. The dental hygiene graduate will be competent in interpersonal and communication skills to effectively interact with diverse population groups				X		
4. 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		X			X	
5. The dental hygiene graduate will be competent in providing oral health care to individuals at all stages of life and for all periodontal classifications	X			X		
6. The dental hygiene graduate will continue professional growth and development after graduation.			X			X

IV. Summary of 2008-2009 Assessment Activities.

The dental hygiene program conducted formal assessment of two student learning outcomes during 2008-2009. Table 2 below summarizes the 2009-2009 assessment activities.

Table 2: 2008-2009 Assessment Activities.		
Student Learning Outcome	Criteria	Assessment Method*
SLO #2: The dental hygiene graduate will be competent in critical thinking and self-assessment	<ul style="list-style-type: none"> • Appropriately self-assess knowledge, skills, and values and set goals to increase competency (2-23) • Access current and reliable information • Critically evaluate scientific literature (2-24) • Utilize effective problem solving strategies related to comprehensive patient care and management (2-25) 	<u>Direct Assessment</u> <ol style="list-style-type: none"> 1. Self reflection 2. Project: Comprehensive care of periodontally involved patient 3. Assignment: Analysis of scientific literature <u>Indirect Assessment</u> <ol style="list-style-type: none"> 1. Graduate survey 2. Alumni survey
Assessment Points: DH321, DH 422, DH 475		
SLO #4: 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 (2-20)	<ul style="list-style-type: none"> • Provide oral health services in a variety of settings • Take responsibility for coordinating an oral health program • Function as an effective team member 	<u>Direct Assessment</u> <ol style="list-style-type: none"> 1. Community health portfolio 2. Community health table clinic, presentation 3. Advisor and peer evaluation 4. Community-health table clinic, presentation <u>Indirect Assessment</u> <ol style="list-style-type: none"> 1. Graduate survey 2. Alumni survey
Assessment Points: DH 381- 383		

Detailed records are maintained in the office of the Assessment Coordinator, Jan Cope, SE 233.

V. Summary of Student Learning

Student Learning Outcome #2: The dental hygiene graduate will be competent in critical thinking and self-assessment.

Direct Assessment #1: Self Reflection

The faculty assessed this outcome fall term in DH 321 using the *Lasater Modified Clinical Judgment Model*. The faculty rated the proficiency of twenty-five students using the performance criteria summarized in the table (Table 3) below. A score of 5 or 4 met acceptable standards.

		5	4	3	2	Standard
Assessment	Focused observation	18	6	1	0	96%
	Recognizing deviation from expected patterns	10	14	1	0	96%
	Information seeking	19	6	0	0	100%
Analysis	Prioritizing data	24	1	0	0	100%
Treatment plan	Making sense of data	8	17	0	0	100%
Communication	Calm, confident manner	9	15	1	0	96%
	Clear communication	22	3	0	0	100%
Implementation & Planning	Well planned intervention	24	1	0	0	100%
	Being skillful	1	23	1	0	96%
Education & Self Assessment	Evaluation/self analysis	8	14	3	0	88%
	Commitment to improvement	11	12	2	0	92%
Average Student Total						38.8
Average Student Percentage						88.2%

Analysis #1, Self Reflection

STRENGTHS: Assessment, information seeking; Analysis; Treatment Plan; Communication, clear communication; Implementation & Planning, well planned intervention

WEAKNESSES: None

Generally, students met expectations in all criteria, especially since the assessment was conducted on first year students and this was their first exposure to the *Lasater Modified Clinical Judgment Model*. The same students will be reassessed during their third year with the same activity.

Direct Assessment #2: Comprehensive Care of the Periodontally Involved Patient

The faculty assessed critical thinking and self assessment skills winter term in DH 423 using a written report. Twenty-three students submitted a comprehensive report of a project, Comprehensive Care of the Periodontally Involved Patient, implemented over three terms. A rubric was used to assess five criteria of patient care, self-assessment and writing skills. The five criteria of patient care were assessment, analysis, treatment planning, implementation, and evaluation. The rubric utilized point scoring 5, 3, 1, and 0. All students scored either 3 or 5 in all criteria except writing. The results are summarized in table 4 below:

Table 4: Comprehensive Care of the Periodontally Involved Patient				
Criteria	P	C	B	N
	5	3	1	0
Assessment				
Identified an appropriate client	20	1	2	0
Wrote a concise client profile	16	7	0	0
Submitted diagnostic radiographs	23	0	0	0
Submitted diagnostic study models	12	11	0	0
Submitted clear pre- and post photographs	23	0	0	0
Submitted rational for, evidence of, and results of all other assessment tools utilized	23	0	0	0
Effectively described and provided accurate interpretation of all assessment tools	22	1	0	0
Analysis				
Demonstrates an ability to synthesize subjective and objective data to formalize an accurate dental hygiene diagnosis	23	0	0	0
Recognizes contributing factors	23	0	0	0
Identifies appropriate treatment outcomes	23	0	0	0
Discusses constrains and relates them to the prognosis of treatment	23	0	0	0
Treatment Planning				
Planned treatment based on needs, risk factors, and client goals	22	1	0	0
Selected appropriate home care aids for oral condition	21	2	0	0
Provided oral hygiene instructions and related information in an effective sequence	22	1	0	0
Documented plaque, bleeding points, tissue response, and client progress with oral hygiene skills throughout treatment	23	0	0	0
Assessed and revised treatment plan as necessary	23	0	0	0
Implementation				
Clearly and logically discusses implementation of the treatment plan in terms of process, modifications, success, difficulties, etc.	20	3	0	0
Evaluation				
Compares pre- and post-treatment findings	23	0	0	0
Identifies and discusses factors that may have influenced treatment outcomes including the student/client relationship	22	1	0	0
Compares and contrasts client's oral hygiene skills and behavior at the end of therapy with the same skills and behaviors at the beginning of therapy	22	1	0	0
Self Assessment				
Wrote clear description of knowledge, skills, and values achieved	19	4	0	0
Identified person strengths and weaknesses; an strategies to improve	21	2	0	0
Writing Mechanics				
Full variety of sentence structures used correctly	11	1	10	2
Accurate and precise diction and phrasing written for the professional reader	8	3	11	2
No grammatical, punctuation, or sentence mechanic errors	5	4	6	9

Analysis #2, Comprehensive Periodontal Patient

STRENGTHS: Analysis
WEAKNESS: Writing mechanics

In this project, students generally demonstrated proficiency or competency in all areas of the dental hygiene process of care. However, values in writing mechanics ranged from proficient to novice. After discussion, the faculty decided students need more formal practice in writing. Since all writing courses are required in the freshman prerequisite year, the chair sent a proposal to the Curriculum Planning Commission (CPC) to move WRI 227 from the freshman year to the junior year.

Direct Assessment #3 Analysis of Scientific Literature

The dental hygiene faculty will implement this assessment summer term in DH 475 using an assignment.

Indirect Assessment #1 Graduate Survey

In June, graduates were asked to complete an online graduate survey at SurveyMonkey.com. Information was collected from thirteen respondents. The following table (Table 5) summarizes the responses to the criteria.

The OIT Dental Hygiene program helped me to be able to:	Strongly Agree	Agree	Disagree	Strongly Disagree	Rating Average	Count
<ul style="list-style-type: none">Utilize critical thinking, scientific theory and evidence in decision making regarding patient care and the promotion of health and wellness to individuals and communities	15.4% (2)	84.6% (11)	0.0% (0)	0.0% (0)	3.15	13
<ul style="list-style-type: none">Continuously perform self-assessment for life-long learning and professional growth	15.4% (2)	76.9% (10)	7.7% (1)	0.0% (0)	3.08	13

The faculty will discuss the results of the survey in September 2009.

Indirect Assessment #2 Alumni Survey

This assessment tool is in development.

Student Learning Outcome #4: 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 #1.a: Community Health Project Portfolio

The dental hygiene faculty assessed this outcome fall term in DH 381 using a portfolio. Five students were responsible for each portfolio and 5 portfolios were evaluated. Evaluation was based on three major categories, (1) appearance and organization, (2) thoroughness, and (3) teamwork and timeliness. The results are summarized in Table 6 below.

	Criteria	Measurement Scale Yes (1) No (0)
Appearance	Neat & professional, use of sheet protectors	5 @ 1
	Title sheet, table of contents, letter of introduction of project	4 @ 1
	Letter of introduction from each team member	5 @ 1
	Team covenant	5 @ 1
	Logical sequence	4 @ 1
Thoroughness	Contact information included	5 @ 1
	Includes all needs assessment forms used	5 @ 1
	All assessment data organized, included and interpreted	5 @ 1
	All assessment issues addressed	5 @ 1
	Clearly written realistic goals and objectives, including strategies, activities, tests, etc.	5 @ 1
	Funding plan	5 @ 1
	Minutes from each meeting	5 @ 1
	Time line for project with adjustments	3 @ 1
	Concise budget with regard to funding	5 @ 1
	Implementation plan completed & documented	N/A
Formative summative evaluations completed	N/A	
Teamwork & Timeliness	Student performed an equitable portion of the work	2 @ 1
	Student was present at all planned meetings	2 @ 1
	Student actively listened & offered quality input	4 @ 1
	Student worked to solve problems in a positive manner	5 @ 1
	Project planning time was well used and all work completed on time.	5 @ 1

Analysis #1a Community Health Project

STRENGTHS: Cannot determine

WEAKNESSES: Cannot determine

The faculty agrees the evaluation method is sufficient as a checklist, but does not adequately evaluate the quality of learning. The instructor will develop a grading rubric to better assess learning. The project is ongoing and the new grading rubrics will be implemented in subsequent terms.

During Spring term 2009, students completed the remaining required sections of the portfolio. The following table (Table 7) summarizes the results:

	Proficient (5)	Competent (4)	Beginner (3)	Novice (1)
Evaluation	3	2		
Summary	5			

The faculty will meet in September 2009 to discuss the results.

Direct Assessment #1.b: Advisor and Peer Evaluation

Students self-assessed their contribution and estimated the contributions of their group members on two required assignments, the Community Health Project portfolio and a lesson plan. Two groups reported equal contribution in both assignments; one group reported equal contribution in the lesson plan, but not the portfolio, two groups reported unequal contribution in both assignments.

The faculty met on January 9, 2009 to discuss the results. The faculty is satisfied with students' self-assessment skills.

Direct Assessment 2: Community Health Project Table Clinics

Students presented Community Health Project Table Clinics on June 1 2009 to dental hygiene faculty, Advisory Board Committee members, OIT administrative officers, and other interested individuals. Six dental hygiene instructors independently judged the five table clinics using a rubric. The rating scale was 0-3. The following table (Table 8) summaries the averages of the judging:

Table 8: Community Health Project Table Clinics	
Criteria	Ave
Overview: introduction of presenters, case or problem & background described, agenda described	2.69
Style: effective verbal and nonverbal communication skills	2.38
Vocabulary: appropriate and fluent use of terms and concepts	2.68
Application: appropriate and insightful application of procedures and practices	2.57
Coverage: thorough and balanced in treatment of topic	2.58
Rationale: explains reasoning and provides evidence	2.42
Graphics: attractive and balanced layout, legible font	2.52
Team Roles: team members have equivalent roles	2.46
Discussion: team is prepared to facilitate discussion and is receptive to feedback	2.04
Reflection: team can identify what it would do differently to improve	1.83

The faculty will meet in September 2009 to discuss the results of this assessment.

Indirect Assessment #1 Graduate Survey

In June, graduates were asked to complete an online graduate survey at SurveyMonkey.com. Information was collected from thirteen respondents. The following table (Table 9) summarizes the responses to the criteria.

Table 9: Graduate Survey						
The OIT Dental Hygiene program helped me to be able to:	Strongly Agree	Agree	Disagree	Strongly Disagree	Rating Average	Count
• Improve access to care by providing community oral health services such as needs assessment, screening, referral, and educational services	30.8% (4)	69.2% (9)	0.0% (0)	0.0% (0)	3.31	13
• Facilitate access to oral health services by influencing individuals and/or organizations for the provision of dental hygiene preventive and therapeutic services	30.8% (4)	69.2% (9)	0.0% (0)	0.0% (0)	3.31	13

The faculty will meet in September 2009 to discuss the results.

VI. Changes Resulting From Assessment

During the 2009-2010 academic year, the program implemented the following changes because of 2007-2008 Assessment Activities:

Diverse Patient Experiences

In order to address issues related to diversity of patient experiences, the department implemented two strategies. First, a screening protocol and referral system was implemented winter term 2009. All new patients 18 years and older are scheduled for consultation appointment. At that appointment, physical health is assessed, a visual exam is performed, periodontal risk is assessed, and an initial periodontal case classification is assigned. New patients are scheduled with students according to the following term's emphasis outlined below in Table 10.

Student Level	Quarter	Patient Criteria
Sophomore	Spring	Children
Junior	Fall	Adolescent High Caries Risk
Junior	Winter	Geriatric/Special Needs Recare
Junior	Spring	All ages/stages Periodontal Case Types, I, II Light-to-Moderate Calculus Recare
Senior	Summer	All ages/stages Periodontal Case Types II, III Recare
Senior	Fall	All ages/stages Periodontal Case Types III, IV Limited recare (current cases)
Senior	Winter	All ages/stages All Periodontal Case Types All Caries Risks Limited recare (current cases)

Secondly, patient experiences are more closely monitored using tracking and clinic advising. Students record information regarding patient criteria including physical status classification, age/stage, periodontal risk, and calculus using the Daily Clinic Evaluation form. The lead clinic instructor or building secretary inputs the information on a spreadsheet that is uploaded to a shared drive. During clinic advising, the student and advisor review the student's patient experiences and determine any deficiencies. If any deficiencies are identified, the clinic receptionists are advised. The clinic receptionists appoint appropriate patients to the student when possible.

Critical Decision Making Skills

The program realized assessment of students' critical decision making skills is based of self-reporting. Therefore, the program implemented case study presentations to directly assess critical decision making skills. Case presentations will be evaluated using a rubric. The following table summarizes the case presentation schedule.

Student Level	Term	Topic
Sophomore	Spring	Focus on student learning and interaction
Junior	Spring	Caries management by risk assessment
Senior	Winter	Periodontal case

Evaluation of Therapy Effectiveness

Beginning fall term 2008, clinic instructors have been emphasizing students' performance in therapy evaluation. There is no assessment data at this time, however, anecdotal evidence supports a change in student behavior. Students seem to be more deliberate in evaluating therapy and in documenting their evaluation.

VII. References

None

VIII. Appendix: Student Learning Outcome Course Matrices

Student Learning Outcome #2: The dental hygiene graduate will be competent in critical thinking and self-assessment. Table A.1 demonstrates mapping for assessing SLO#2.

Table A.1 SLO#2 Assessment Map		Fall	Winter	Spring	Summer
SOPHOMORE					
DH221	DH Clin Prac & Seminar I				
DH226	Head & Neck Anatomy				
DH240	Prevention I				
DH275	Dental Ethics				
CHE210	Pharmacology				
SPE321	Small Group & Team Com				
DH222	DH Clin Prac & Seminar II				
DH237	Oral Histology & Embryology				
DH241	Prevention II				
DH244	General & Oral Pathology				
DH252	Oral Radiology I				
PSY311	Human Growth & Development I				
DH223	DH Clin Prac & Seminar III				
DH242	Prevention III				
DH253	Oral Radiology II				
DH254	Introduction to Periodontology				
DH267	Emergency Procedures				
DH380	Community Dental Health I				
PSY312	Human Growth & Development II				
JUNIOR					
DH321	DH Clin Prac & Seminar IV	E			
DH340	Prevention IV				
DH354	Periodontology				
DH381	Community Dental Health II				
PSY301	Counseling Techniques				
DH322	DH Clin Prac & Seminar V				
DH341	Prevention V				
DH351	Pain Management I				
DH366	Dental Anatomy				
DH382	Community Dental Health III				
DH323	DH Clin Prac & Seminar VI				
DH344	Advanced General & Oral Pathology				
DH352	Pain Management II				
DH363	Dental Materials				
DH370	International Externship (opt)				
DH383	Community Dental Health IV				

SENIOR				
BUS331	Personal Finance			
DH371	International Externship (opt)			
DH421	DH Clin Prac & Seminar VII			
DH461	Restorative Dentistry I			
DH475	DH Research Methods I			E
MATH243				
DH372	International Externship (opt)			
DH422	DH Clin Prac & Seminar VIII	E		
DH462	Restorative Dentistry II			
DH476	DH Research Methods II			
Communication elective				
Humanities elective				
DH423	DH Clin Prac & Seminar IX			
DH454	Dental Practice Management			
DH463	Restorative Dentistry III			
DH477	DH Research Methods III			
Humanities elective				

Student Learning Outcome #4: Graduates will be competent in assessing, planning, implementing, and evaluating community-based oral health programs including health promotion and disease prevention activities. Table A.2 demonstrates mapping for assessing SLO#4

Table A.2 SLO#4 Assessment Map					
		Fall	Winter	Spring	Summer
SOPHOMORE					
DH221	DH Clin Prac & Seminar I				
DH226	Head & Neck Anatomy				
DH240	Prevention I				
DH275	Dental Ethics				
CHE210	Pharmacology				
SPE321	Small Group & Team Com				
DH222	DH Clin Prac & Seminar II				
DH237	Oral Histology & Embryology				
DH241	Prevention II				
DH244	General & Oral Pathology				
DH252	Oral Radiology I				
PSY311	Human Growth & Development I				
DH223	DH Clin Prac & Seminar III				
DH242	Prevention III				
DH253	Oral Radiology II				
DH254	Introduction to Periodontology				
DH267	Emergency Procedures				
DH380	Community Dental Health I				
PSY312	Human Growth & Development II				
JUNIOR					
DH321	DH Clin Prac & Seminar IV				
DH340	Prevention IV				
DH354	Periodontology				
DH381	Community Dental Health II	E			
PSY301	Counseling Techniques				
DH322	DH Clin Prac & Seminar V				
DH341	Prevention V				
DH351	Pain Management I				
DH366	Dental Anatomy				
DH382	Community Dental Health III		E		
DH323	DH Clin Prac & Seminar VI				
DH344	Advanced General & Oral Pathology				
DH352	Pain Management II				
DH363	Dental Materials				
DH370	International Externship (opt)				
DH383	Community Dental Health IV			E	

SENIOR				
BUS331	Personal Finance			
DH371	International Externship (opt)			
DH421	DH Clin Prac & Seminar VII			
DH461	Restorative Dentistry I			
DH475	DH Research Methods I			
MATH243				
DH372	International Externship (opt)			
DH422	DH Clin Prac & Seminar VIII			
DH462	Restorative Dentistry II			
DH476	DH Research Methods II			
Communication elective				
Humanities elective				
DH423	DH Clin Prac & Seminar IX			
DH454	Dental Practice Management			
DH463	Restorative Dentistry III			
DH477	DH Research Methods III			
Humanities elective				