

# **Portland Community College Dental Laboratory Technology Program**



**Program Review  
January 21, 2011**

## Introduction:

The Portland Community College Dental Laboratory Technology (DLT) Program, which began in 1967, is proud to be the only program of its kind in the State of Oregon and one of only 20 accredited programs in the nation. Additionally, the PCC DLT program is unique in that it is offered within a dental sciences department that includes Dental Assisting and Dental Hygiene training as well. The opportunity for students to attend one of only six schools nation-wide where training in all three allied dental careers occurs is truly a unique experience. Integration of the full realm of dental care training provides students with a complete understanding of all aspects of dentistry and what it means to work together as a member of the dental team. A more well-rounded employee who can adapt and converse within the field results and PCC graduates are preferred as employees.

Each year highly competent dental laboratory technologists graduate from the program earning either a 2-Yr. Certificate or an Associate of Applied Science Degree in Dental Laboratory Technology. The program is accredited by the Commission on Dental Accreditation (CODA), *approval without reporting requirements*, and underwent its most recent self-study review and site visit in February 2010. The primary purpose of the self-study was to assess the effectiveness of the educational program in meeting 1) the program's stated goals and objectives and 2) the Commission's Accreditation Standards for Dental Laboratory Technology Education Programs.

The knowledge gained from assessing the program during the CODA accreditation review process has been instrumental in development of this program review document. Through critical assessment of the program, we are able to demonstrate what we are doing well, enhance areas where improvement is needed and determine emerging information and skills for future program development and inclusion.

During the program review process the PCC Document *Program/Discipline Review Guidelines* was utilized to evaluate the effectiveness of the program's curriculum and the competency of its graduates. It became evident during the review process that meeting the program requirements of the college and also the standards of CODA meant evaluating the Degree Outcomes required by the College, *and* the Program Goals and Skill Competencies required by CODA. For this reason to effectively demonstrate evidence that the program is graduating competent dental lab technologists, the following will be examined and discussed in this report:

Program Goals: The goals set by the faculty members, director and staff to ensure students' educational needs are being met.

Student Skill Competencies: As required by CODA, these competencies represent the skills that students will learn and demonstrate competency in during their 2 year educational program. These are evaluated at the beginning, developmental and competent levels throughout the training program. Once achieved, they demonstrate that the program Degree Outcomes as required by the college, have been met.

DLT Program Certificate Outcomes: These outcomes describe what the graduate will be able to do with the degree they have earned, as a result of the program meeting the goals for which it was responsible for, and the student meeting the skill competencies required prior to graduation.

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## Program /Discipline Goals

### **A. What are the educational goals/objectives of this program/discipline? Have they changed since the last review, or are they expected to change in the next five years?**

The program goals are reviewed in the winter of each year by the Subject Area Committee (SAC), as part of the Curriculum and Program Management Plan. This committee consists of the full and part-time faculty and program director. The current goals listed below were revised during SAC Meetings held Fall of 2008.

#### Dental Laboratory Technology Program Goals:

##### **Goal 1 Access -**

We will provide access to quality dental laboratory technology education through the use of scientific evidence based instruction and technology that meets current industry standards. This training is reinforced by the years of experience of the instructors.

##### **Goal 2 Student Success –**

We will promote success for all dental laboratory technology students through outstanding teaching by faculty who act as mentors and professional role models and who provide instructional methodology that prepares the student to successfully complete the National Recognized Graduate exam, if desired. We also assist eligible students/graduates wanting to take the National Certified Dental Technician Exam.

##### **Goal 3 Diversity –**

We will enrich the dental laboratory technology student's educational experience by providing and promoting cultural awareness that acknowledges each individual's worth and uniqueness and enhances effective interactions, communications and/or provision of care with all individuals or groups.

#### **Goal 4 Continuous Improvement –**

We will develop faculty and students who continuously seek to enhance knowledge as life-long learners by seeking peer support in professional associations, fulfilling evidence based continuing education and applying self-assessment and reflection skills.

#### **Goal 5 Cultivating Partnerships –**

We will create partnerships that effectively link students with practicing dental lab technicians and other oral health care professionals who will provide advising, mentoring and enrichment experiences in preparation for employment upon graduation.

#### **Goal 6 Community –**

We will serve as a key resource to the community by comprehensively preparing competent students who will function as dental laboratory technicians upon graduation.

#### **Goal 7 Ethics and Responsibility –**

We will prepare the student to practice ethically and responsibly as a Dental Laboratory Technician.

The goals of the program will continue to be assessed and revised yearly through the Curriculum and Program Management Plan in order to assure they are meeting CODA Standards, Institutional Goals, and Student Success. The plan has been in place for several years and was designed to measure each of the program goals' ability to provide a quality educational program that maximizes the academic success of the enrolled students. The plan is updated and revised as the program goals are updated. Review of the program goals will take place within the next year as the college proceeds with making revisions to its mission, vision, values and goals as developed for its accreditation.

The program assessment plan includes the following components:

- Goals
- Evaluation Mechanism
- How often the evaluation is conducted/ finished by
- Results Expected

- Results achieved
- Assessment of results
- Person Responsible
- Program improvement as a result of data analysis
- Next date of completion

*Please See Exhibit 1 Assessment Plan for DLT Program Goal Review*

**B. Place the Program/Discipline within the context of the institution. Describe how the college's Mission, Values and Goals are addressed.**

The Dental Laboratory Technology Program is one of three Dental Sciences Programs located at the Sylvania Campus of Portland Community College. The Dental Sciences Programs are professional career technical education programs which are part of the Health, Early Child Education, Foods and Physical Education Division under Dean John Saito. The Director of the Dental Sciences Programs is Josette Beach.

The Portland Community College (PCC) Dental Laboratory Technology Program has developed a philosophy that is appropriate to DLT education and is consistent with the mission, values and goals of Portland Community College.

Portland Community College Mission:

Portland Community College provides access to an affordable, quality education in an atmosphere that encourages the full realization of each individual's potential. The college offers opportunities for academic, professional, and personal growth to students of all ages, races, cultures, economic levels, and previous educational experiences.

Portland Community College DLT Program Mission:

The Portland Community College Dental Laboratory Program offers high quality education and training in the field of Dental Laboratory Technology. Each course is patterned to standard acceptable

procedures in the industry, along with newer emerging techniques. The faculty challenges students to reach their perceived potential and then strive for even higher goals. This program is open to all qualified applicants and welcomes the diversity of the attending students. Continual assessments both within the school and out in the field, insures the highest quality course offerings available.

Curriculum: reflect on the learning outcomes and assessment, teaching methodologies, and content in order to improve the quality of teaching learning and student success.

**A. Evaluate the curriculum using national and/or professional program/discipline guidelines where available.**

To meet CODA Accreditation Standards the DLT program must “demonstrate its effectiveness using a formal and ongoing planning and assessment process that is systematically documented and includes:

- A plan with program goals
- An implementation plan
- An assessment process with methods of assessment and data collection, including measures of student achievement
- Use of results for program improvement”

*(CODA Standard 1-1)*

The DLT program utilizes the CODA suggested format to systematically assess the program’s success in reaching these goals.

*Please See Exhibit 1 Assessment Plan for DLT Program Goal Review*

In Winter of 2008 the program assessed and revised the certificate and degree outcomes that are expected of the PCC Dental Laboratory Technology Graduate. This process enabled the faculty and program director to align the program’s outcomes with that of the college. The resulting outcomes reflect and align with the outcomes of the institution while also meeting the educational standards required by CODA.

## PCC Dental Laboratory Technology Certificate Outcomes 2007/2008

- Demonstrate basic dental laboratory techniques in the design and fabrication of complete dentures, crowns and bridges, ceramic, and basic orthodontic appliances
- Demonstrate advanced skills in more complex complete denture and fixed metal to porcelain prostheses
- Apply basic knowledge of the physics and chemistry of dental materials to insure the proper materials are used in the correct proportions for specific dental laboratory procedures and that correct safety and disposal procedures are followed
- Engage correct verbal, non-verbal and written communications in the dental laboratory and dental profession as both a technician and team leader
- Function in a non-biased manner as a member of a diverse dental team or community
- Design a Dental Laboratory Business Plan, invoicing system, ledger and the correct tax forms utilizing available computer software/skills
- Be prepared to continue dental, community and world awareness through conventions, lecture attendance and active participation in professional/non-professional organizations
- Apply legal and ethical principles to the dental environment

**In addition to the above, the following Two Year Degree – Associate of Applied Science in Dental Laboratory Technology Outcomes apply:**

- Be prepared to transfer to a college or university for upper level studies in the Health fields.
- Demonstrate a deeper knowledge of business procedures pertinent to owning or managing a dental laboratory

During Winter and Spring 08, the faculty reviewed and revised the student skill competencies that were used during the 2003 Accreditation and Self-Study Report. The CODA Self-Study document was utilized as a guideline to develop competencies that measure the student's ability to function competently in their role as a dental lab technician. Once achieved, these competencies demonstrate that the degree outcomes have been met.

PCC DLT Basic Academic Competencies:

Prior to graduation the student will be able to:

1. Apply general laboratory techniques to prepare and evaluate impressions and casts, use articulators, develop functional occlusion on articulated casts and fabricate custom impression trays.
2. Demonstrate the ability to fabricate complete denture prostheses to advanced competency standards.
3. Demonstrate the ability to fabricate, evaluate and repair removable partial denture prostheses.
4. Fabricate fixed prostheses, including inlays, onlays, full crowns, and bridgework.
5. Demonstrate the ability to fabricate fixed porcelain –to- metal prostheses to advanced competency standards.
6. Fabricate a variety of orthodontic appliances.
7. Use work practices and safety protocols that promote a safe environment.
8. Demonstrate business practices and procedures appropriate to managing or owning a dental laboratory business.
9. Use Oral and written communication skills for effective professional interactions.
10. Apply legal and ethical principles to the dental laboratory workplace.

To ensure that program goals and student competencies are being met (which in turn validates the graduate has met the degree outcomes), The Dental Laboratory Technology Program SAC has developed a Curriculum Management Plan to continuously assess whether the program courses are meeting CODA Standards; keeping up with industry standards and inclusion of current information; avoiding unnecessary duplication of material; utilizing instructors' expertise and most importantly, meeting the students needs for reaching competency. The SAC Chair facilitates the management of the plan with the support from the Program Director.

The following describes the program's annual curriculum management plan:

### ***Dental Laboratory Technology Program and Curriculum Management Plan***

| When        | Activity   | Who is Responsible  |
|-------------|--|---|
| Fall Term   | <p>Program Management:</p> <ul style="list-style-type: none"> <li>*Review Block schedules/rooms for Winter term</li> <li>*Review College wide decisions affecting the program</li> <li>*Implement changes from program review</li> <li>*Plan/Attend Advisory meeting</li> </ul> <p>Curriculum Management:</p> <ul style="list-style-type: none"> <li>*Plan/Attend SAC meeting</li> <li>*Review Outcomes Assessment results</li> <li>*Review Advisory Committee suggestions</li> <li>*Review Course Syllabi/content for Winter Term</li> <li>* Begin the process required to make minor/major course Changes from previous year</li> <li>*Submit proposed changes to administration/EAC</li> <li>*Review student and faculty course assessments from Spring</li> </ul>            | <p>Faculty<br/>Faculty/Director<br/>Faculty<br/>Faculty/Director</p><br><p>Faculty<br/>Faculty/Director<br/>Faculty<br/>Faculty<br/>Faculty<br/>Faculty/Director</p>  |
| Winter term | <p>Program Management:</p> <ul style="list-style-type: none"> <li>*Review Library holding and submit requests</li> <li>*Review Block schedules/rooms for Spring term</li> <li>*Review and revise brochure, catalog and web site information</li> <li>* Plan/Attend Advisory meeting</li> </ul> <p>Curriculum Management:</p> <ul style="list-style-type: none"> <li>*Review student and faculty course assessments from Fall</li> <li>*Review Course Syllabi content for Spring term</li> <li>*Review NBC exam results</li> <li>*Review Competencies/Outcomes assessment plan</li> <li>*Update/distribute assessments as necessary</li> <li>*Identify courses that address certificate/degree outcomes and basic academic competencies</li> <li>*Review Program Goals</li> </ul> | <p>Faculty<br/>Faculty<br/>Faculty<br/>Faculty/Director</p><br><p>Faculty/Director<br/>Faculty<br/>Faculty/Director</p><br><p>Faculty/Director<br/>Faculty/Director</p><br><p>Faculty/Director<br/>Faculty/Director</p> |
| Spring Term | <p>Program Management:</p> <ul style="list-style-type: none"> <li>*Review applicants for Fall term</li> <li>*Review equipment supplies and needs</li> </ul>  | <p>Faculty/Director</p>   |

|  |  |  |
|--|--|--|
|  | <ul style="list-style-type: none"> <li>*Develop proposals for equipment acquisition and maintenance</li> <li>*Recommend changes in procedures and policies</li> <li>* Plan/Attend Advisory meeting</li> </ul> <p>Curriculum Management:</p> <ul style="list-style-type: none"> <li>*Review student and faculty course assessments from Winter</li> <li>*Review Course Syllabi content for Fall term</li> <li>*Review methods of instruction for effectiveness</li> </ul> | <p>Faculty/Director<br/>Faculty/Director<br/>Faculty<br/>Faculty/Director</p> <p>Faculty/Director<br/>Faculty<br/>Faculty/Director</p> |
|--|--|--|

*Please See*

*Exhibit 2: Alignment of PCC DLT Degrees Outcomes with PCC College Core Outcomes*

*Exhibit 3: DLT Program Course Alignment with Program Certificate and PCC Outcome Goals*

*Exhibit 4: Basic Academic Skill Competencies Alignment with Certificate and PCC Core Outcome*

**B. Identify and explain changes that have been made to course content and/or course outcomes since the last review.**

In 2008 a process for review of the curriculum that would be taught in the upcoming term was instituted for all courses in the three dental sciences programs. Prior to each term, the DLT SAC utilize a *Course Syllabi Review* form as a means of ensuring that the course content and outcome guide/syllabus distributed to students meets the approved guidelines determined by the college and the standards of the CODA accrediting body.

At the completion of each term, faculty members complete an *End of the Term Course Assessment* which is then given to the Director of the Program. This assessment verifies the student competencies and level of attainment met by the course as well as documents the instructor’s reflections about the course during the term. Instructors are able to summarize the effectiveness of the course as well as envision future changes to the course to improve the overall program as a whole.

The SAC members meet weekly to plan and assess program needs and work continually to revise course curricula as necessary. The following changes have occurred since the previous program review:

| <b>Change</b>   | <b>Year Change Made</b> | <b>Purpose</b>  |
|---|-------------------------|---|
| <b>Instructor Qualifications Updated</b>  | <b>20010/2011</b>       | <b>Update College Posted Information.</b>   |
| <b>Addition of Elective (students choose from suggested list to broaden learning in business ownership)</b> | <b>2009/2010</b>        | <b>College policy about Math 20 had been changed. 4 more credit hours needed to be added in order to maintain credit #'s.</b> |
| <b>Related Instruction Assessed and Approved by Curriculum Committee</b>                                    | <b>2010 and 05/2007</b> | <b>Report developed as needed for compliance with CTE Certificate, Institution and Accrediting Requirements.</b>              |

*Please See Exhibit 5: Course Syllabi Review Form and End of the Term Review Form*

## C. Assessment of Course Outcomes:

### i. Are assessments that address the course outcomes described in the Course Content and Outcome Guides (CCOGs)?

All Dental Laboratory Technology Program Course Outcomes Guides (CCOGs) have received PCC Curriculum Committee approval. Each CCOG includes authentic assessment that is based on real context and situations. Students demonstrate progress until all pre-determined standards are achieved. Assessment takes place in both formative and summative forms.

In addition, all course content guides/syllabi have met standards set forth by CODA Standard 2-4: *“Written documentation of each course in the curriculum must be provided and include the course description, course content outline including topics to be presented, specific instructional objectives, learning experiences including time allocated for each experience and evaluation procedures”.*

As previously discussed, all instructors complete a *Curriculum Review Form* to ensure that each course content guide/syllabus distributed to students contains all necessary information as approved by the PCC Curriculum Committee and CODA Standards. This form is submitted to the director who reviews the information and advises as necessary.

During the most recent site-visit curriculum documents including all CCOG's, activities, quizzes, and tests for each course were compiled and reviewed by site-visitors. Interviews between the CODA Curriculum Consultant and course instructors allowed for dialogue and clarification to determine each course met the CODA standard. The site-visitors verified that all courses met accreditation standards.

### ii. Describe evidence that students are meeting course outcomes.

Students meet program degree outcomes through demonstration of the DLT Basic Academic Skill Competencies. Evaluation methods used are: Assignments/projects, Group Activities, Research, Written Papers, Oral Presentations, Lab Skill Evaluations, Quizzes, Midterms and Final Exams. Scoring of each course assignment and lab/clinical activity is done through a rubric designed for each project. Students must pass each lecture course with a minimum of 59.1% and maintain a minimum of 69.1% in labs. A total 2.0 GPA is necessary in order to progress to the next term. Students are notified weekly of their grade standings in each course. Instructors advise and present letters to students when successful completion of a course appears to be in jeopardy. Included in each notification is the reason of concern and suggested steps for the student to take in order to successfully complete the course.

When success is jeopardized due to lab activities and/or hands on test results, additional one-on-one mentoring is available to the student. Brady Hess, part time lab assistant was awarded a PCC Foundation Mini-grant last year to tutor students who are at risk of completion. Another mini-grant has been applied for the upcoming year. This additional learning opportunity has increased retention for students who needed additional practice time or one on one coaching to complete lab activities.

Tracking of student pass rates is also followed on the *End of the Term Course Report* conducted by each Instructor. This summary report is then submitted to and reviewed by the program director. The report allows the instructor to evaluate the effectiveness of the course and reflect on future revisions necessary. A break-down of student grades for the course is also given.

*Please See Exhibit 5: End of the Term Course Review Conducted by Instructors*

*Exhibit 6: Course Pass Rates*

**iii. Identify/give examples of assessment-driven changes made towards improving attainment of course-level outcomes.**

- Increased one on one mentoring of students needing additional laboratory practice time.
- Video taping of laboratory demonstrations to allow for repeated viewing.
- Closed caption of demonstrations to allow for hearing impaired students to obtain information in the presentation.
- Guest presenters utilized to allow for a variety of “real world” experiences to be shared.
- Incorporation of CAD CAM activities through donated software and off-site enrichment activity at an area dental laboratory.
- Practice Registered Graduate (RG) tests available to students for preparation prior to taking the exam.
- Scheduling of classes to allow students to be able to work outside of class (many second year students work in the dental laboratory field during their second year).
- Arranging for Sp 100 to be offered at a time that is more conducive to the overall first year DLT schedule.
- Instructors received professional development funds to use toward conferences.

- Increased advisory committee involvement with program and students.
- Improved employer and alumni surveys to illicit higher response rate.
- Increased student access to state OADL offerings.
- Group visitation to surrounding commercial dental labs to discuss job application process and meet administration.

## **D. Assessment of College Core Outcomes**

### **i. Describe how courses in the program/discipline address the College Core Outcomes.**

The courses in the DLT program are designed and sequenced to build on preceding knowledge from previous courses. The first year focuses on the fabrication of dentures while the second year of the program focuses on the four specialty areas which are: partial dentures, crown and bridge, ceramics and orthodontics. Throughout the two year program courses address both the college core outcomes and program degree outcomes through the attainment of the DLT Basic Academic Competencies. These competencies are introduced and met by students in specific courses either at the introductory, developmental or competent levels. Extensive time and effort have been taken to ensure that all basic skill competencies align with the program outcomes and the college core outcomes. Each course has been reviewed to determine which basic skill competencies, certificate/degree outcomes and college core outcomes are met upon completion.

*Please See Exhibit 4: DLT Course and Skill Competency Alignment with Program Certificate and PCC Core Outcomes.*

### **ii. Please revisit the Core Outcomes Mapping Matrix for your SAC and update as appropriate.**

The *End of the Term Course Review* conducted by the instructor allows the tracking of each course with the basic skill competency and performance level met in the course. Instructors record their summary assessment of curriculum offered in the course, revisions and inclusion of emerging information for the future are noted and adjustments made as necessary to align the DLT Course Competencies with Program Certificate/Degree Outcomes and PCC Core Outcomes.

During SAC meetings the committee members refer to the Program's Curriculum Management plan to ensure all areas of the curriculum are addressed throughout the year. Reviewing the competencies/outcomes assessment plan and identifying courses that address certificate/degree outcomes and basic academic competencies takes place during Winter Term SAC meetings.

*Please See Pages 12-13 of this document for Curriculum Management Plan*

**iii. What strategies are used to determine how well students are meeting the College Core Outcomes.**

The Dental Laboratory Technology program has mapped the college core outcomes with the program certificate/degree outcomes and basic skill competencies.

Students meet program certificate outcomes through demonstration of the DLT Basic Academic Skill Competencies. Evaluation methods used are: Assignments/projects, Group Activities, Research, Written Papers, Oral Presentations, Lab Skill Evaluations, Quizzes, Midterms and Final Exams. Scoring of each course assignment, lab and clinical activity is done through a rubric designed for each project.

**iv. Describe evidence that students are meeting the Core outcomes**

*Please See Exhibit 4: DLT Course and Skill Competency Alignment with Program Certificate/Degree and PCC Core Outcomes.*

**v. Describe Changes made towards improving attainment of the Core Outcomes.**

The DLT Program participated in the Learning Assessment of Core Outcomes: Suggested Focus 2009-2010: Critical Thinking and Problem Solving and has also completed the 2010 CTE learning assessment assignment.

Information learned from these activities, has helped to develop grading evaluation rubrics for use during lab evaluations. With the system now in place a truer grade earned by the student each day will be reflected in the assessment. On days where projects are not due, students are evaluated on attendance and participation.

**E. To what degree are courses offered in a Distance modality? Have any significant revelations, concerns or questions arisen in the area of DL delivery?**

Currently courses in the dental laboratory technology program are not taught online. Use of face to face instruction is the preferred method of instruction of the course instructors.

While online course delivery is not currently used, students have access to demonstrations as often as necessary through viewing of video tapes produced by the instructors. In addition, students may access online materials and practice tests prior to RG examination through use of software available from the instructors.

Future course development in the online format may occur and adding the use of a Department WIKI Spaces page is also being arranged.

**F. Has the SAC made any curricular changes as a result of exploring/adopting educational initiatives (e.g. Service Learning, Internationalization of the Curriculum, Inquiry-Based Learning?) If so, please describe.**

Second year Dental Laboratory students participated in the Mission of Mercy service learning project in November of 2010 at the Portland Convention Center. This dental public health project was the first of its kind on the west coast. Working side by side with other dental lab professionals, dentists, hygienists and assistants, the second year dental laboratory students volunteered to help over 1,500 patients who had no other access to dental care. These students assisted the dental laboratory technicians who made removable front teeth (also known as flippers) for those who were missing teeth due to various reasons. One female patient shared her story of losing her front teeth due to domestic violence years ago and since then has had low self esteem and seldom smiled. Having her front teeth replaced was to her a "miracle" and would greatly raise her self-esteem. Her care and the care of many others, was directly related to the effort of the dental laboratory students. Students reported their excitement at being included in this type of service learning activity and many volunteered above and beyond what was requested of them. This activity will be offered in future years and the PCC Dental Laboratory students will once again be included.

Extramural laboratory observations also take place and fabrication of a case using CAD Cam occurs at an off-site laboratory.

**Needs of Students and the Community: are they changing?**

**A. What is the effect of student demographics on instruction, and have there been any notable changes since the last review?**

Ideal candidates for this career possess excellent eye-hand coordination, good color perception, dexterity with small instruments and interest in material sciences, and the patience to attend to minute details. Dental technology also is a good field for people who dream of owning their own business. The career attracts both males and females, as well as a highly diverse ethnic population.

([www.explorehealthcareers.org/en/career.4.aspx](http://www.explorehealthcareers.org/en/career.4.aspx)). Nationally, enrollment statistics based on gender have been fairly evenly split between males and females, as revealed in the chart below. PCC's program statistics show a slightly higher percentage of female students enrolled for the years 2006/07 to 2009/10. The current 2010/11 year has seen a reversal in the trend with male enrollees making up 53% of the current class, compared to 47% of female students. This change may be attributed to the current economic downturn and the need for unemployed workers to return to school for re-training in order to return to the workforce. Due to the limited amount of prerequisites needed to enroll in the program, students show a high interest in gaining acceptance to the program. The program allows for easy access to all interested students regardless of demographic backgrounds.

**Gender – Nation-wide Data**

| Year    | %Males | %Males  | %Females | %Females |
|---------|--------|---------|----------|----------|
|         | PCC    | Nation  | PCC      | Nation   |
| 2010/11 | 53%    | Unknown | 47%      | Unknown  |
| 2009/10 | 41%    | Unknown | 59%      | Unknown  |
| 2008/09 | 41%    | 46%     | 59%      | 54%      |
| 2007/08 | 40%    | 49%     | 60%      | 51%      |
| 2006/07 | 47%    | 51%     | 53%      | 49%      |

*Nation Wide Data obtained from ADA Surveys of Allied Dental Health  
PCC Program Data obtained from Student Demographic Surveys*

## Gender – PCC Distribution Comparison

### Dental Lab

| COLLEGEWIDE<br>TABLES<br>(Excl Campus 6):<br>Gender Distribution |           | Female |      | Male |
|--|-----------|--------|------|------|
|  |           | N      | %    | %    |
| Collegewide,<br>Excl<br>Campus 6                                 | 2007-2008 | 46     | 63.0 | 37.0 |
|  | 2008-2009 | 37     | 67.6 | 32.4 |
|  | 2009-2010 | 37     | 54.1 | 45.9 |

Source: Banner End-of-Term Extracts, Excluding Campus 6

Comparisons of age and ethnicity for PCC DT students and the national average are listed below for the years 2006-2010.

| Year  | Age 23<br>PCC | Age 23<br>Nation | Age 24-29<br>PCC | Age 24-29<br>Nation | Age 30-34<br>PCC | Age 30-34<br>Nation | Age 35-39<br>PCC | Age 35-39<br>Nation | Age 40+<br>PCC | Age 40+<br>Nation |
|-------|---------------|------------------|------------------|---------------------|------------------|---------------------|------------------|---------------------|----------------|-------------------|
| 10/11 | 16%           | unknown          | 21%              | unknown             | 14%              | unknown             | 16%              | unknown             | 33%            | unknown           |
| 09/10 | 19%           | unknown          | 41%              | unknown             | 9%               | unknown             | 19%              | unknown             | 12%            | unknown           |
| 08/09 | 19%           | 40.4             | 34%              | 28.7                | 25%              | 9.6                 | 3%               | 7.7                 | 19%            | 12.5              |
| 07/08 | 12%           | 47.8%            | 45%              | 27.2%               | 14%              | 9.5%                | 12%              | 6.0%                | 17%            | 9.3%              |
| 06/07 | 27%           | 47.4             | 39%              | 23.9                | 14%              | 10.0                | 9%               | 6.6                 | 11%            | 11.0              |

## PCC All Credit Seeking Students: Age Distribution

| YR    | Age 14-17 | Age 18-20 | Age 21-25 | Age 26-30 | Age 31-40 | Age 41-50 | Age 51-60 | Age 60+ |
|-------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------|
| 09/10 | 1.9       | 18.0      | 27.2      | 18.9      | 19.0      | 9.2       | 4.6       | 1.2     |

Data Obtained from PCC Institutional Effectiveness Updated 2009/10

### Ethnicity DLT Program Compared with DLT Programs Nationally

| Year  | White PCC | White Nation | Black PCC | Black Nation | Hispanic PCC | Hispanic Nation | American Indian PCC | Am. Ind. Nation | Asian Pac Island. PCC | Asian/Pac Island. Nation |
|-------|-----------|--------------|-----------|--------------|--------------|-----------------|---------------------|-----------------|-----------------------|--------------------------|
| 10/11 | 54%       | Unknown      | 0%        | Unknown      | 4%           | Unknown         | 7%                  | Unknown         | 35%                   | Unknown                  |
| 09/10 | 50%       | Unknown      | 0%        | Unknown      | 0%           | Unknown         | 6%                  | Unknown         | 41                    | Unknown                  |
| 08/09 | 60%       | 47%          | 0%        | 16%          | 9%           | 10%             | 0%                  | 0%              | 31%                   | 16%                      |
| 07/08 | 52%       | 44%          | 0%        | 14%          | 0%           | 11%             | 5%                  | 3%              | 43%                   | 18%                      |
| 06/07 | 40%       | 44%          | 0%        | 13%          | 7%           | 14%             | 5%                  | 4%              | 49%                   | 18%                      |

Nation Wide Data obtained from ADA Surveys of Allied Dental Health  
PCC Program Data obtained from Student Demographic Surveys

### PCC All Credit Seeking Students: Race/Ethnicity Distribution

| YR    | White, Non Hispanic | Afr. American | Hispanic | American Indian | Asian/Pac. Is. |
|-------|---------------------|---------------|----------|-----------------|----------------|
| 09/10 | 72.9%               | 6.6%          | 8.2%     | 1.6%            | 10.7%          |

Data Obtained from PCC Institutional Effectiveness Updated 2009/10

The dental laboratory field is an attractive field to pursue for people from all ethnicities. It is especially appealing to persons who are of Asian/Pacific Islander backgrounds. Students who come into the program with English as a second

language often have difficulty in comprehending instructions. Some students require more time to understand concepts in lecture courses and to take exams. Laboratory demonstration videos produced by Ray Ridgley and Gary Smith have given these students the ability to review information and procedures as many times as necessary to be able to understand and retain the information and subsequently demonstrate the skill. The instructors have been highly successful in retaining students in the program who have English as their second language. In addition, videos have had close captioned capabilities added for students who are deaf or who have hearing impairments.

**Has feedback from students, community groups, transfer institutions, business and industry or government been used to make curriculum or instructional changes? If so, describe.**

Professionals in the community such as dental technicians, dental laboratory owners and dentists in the community are utilized as resources in the following ways:

Formal Mechanism:

**Dental Sciences Advisory Committee:**

The Dental Sciences Advisory Committee is a joint committee for the three allied dental programs. Its membership is comprised of dentists, dental hygienists, dental assistants, dental laboratory technologists, community members, an area high school representative and student class representatives. The combined joint committee meets once yearly each Fall. In addition, each program has a sub group within the larger group whose task is to focus on the needs and enhancement of the particular program. The dental laboratory technology program advisory committee sub group consists of 10 members. The DLT advisory group meets, in addition to the Fall combined meeting, during Winter and Spring Terms. These committees are excellent resources for providing input into program improvement and the incorporation of the most updated trends and emerging information in the area of dental laboratory technology practice.

Informal Mechanism:

**Faculty:**

Faculty members and DLT Assistant Lab Instructors are involved in their professional association and meeting attendance. Collaboration with other association members allows for guest speaker presentations to students as well as utilization of the classroom/lab for association presentations.

**Guest Lecturers:**

Dental and health care specialists are invited to give lectures on related course topics. They provide instruction on a variety of topics throughout the curriculum such as dental specialties, small business operations and latest advanced technologies. Others support instruction in additional ways such as provision of sites for observation and job shadowing and computerized crown fabrication.

Other means of obtaining feedback about curriculum include student exit surveys prior to graduation, alumni surveys distributed one year following graduation and employer surveys that are sent to dentists throughout the Portland Metropolitan area every three years. The American Dental Education Association (ADEA) Annual Surveys of Allied Dental Education are also utilized to recognize trends in the field throughout the nation that are occurring. In addition, the program director attends the annual ADEA conference to meet with educators in the other dental technology programs. The networking and attendance at courses helps keep the curriculum current and up to date with national trends.

The program director gathers and summarizes the information reported in all of the assessment tools. The information is then shared with the Subject Area Committee (SAC) where it is discussed and decisions are made where deemed appropriate to policies, procedures and curriculum. Examples of revisions made directly related to assessment data/curricula were presented on page 16-17 of this report.

See Exhibit #7 Exit survey, Alumni Survey, Employer Survey

**Describe current and projected demand and enrollment pattern. Include discussion of any impact this will have on the program or discipline.**

The number of applicants for the dental technology program had declined in 2008, but saw an increase in 2009 and 2010. A sufficient applicant pool exists each year for filling the 24 enrollment spots in the program. Refer to the chart below for historical record of applicant numbers over the last five years:

|                 | 06/07 | 07/08 | 08/09 | 09/10 | 10/11 |
|-----------------|-------|-------|-------|-------|-------|
| # of Applicants | 55    | 65    | 41    | 48    | 50    |

The economic climate has contributed to the steady numbers in applicants wanting to either gain new employment after becoming unemployed or to begin work after absences from the workforce. Either way, a career in dental technology can be acquired in a two year period with relatively few prerequisites prior to enrollment. The impact on the program is additional time spent by the director and administrative assistant in processing and following up with applicants about the application process and results. Applicants are able to submit applications anytime throughout the year (up until August 1<sup>st</sup>) for entry into the September cohort of students. Final acceptance of students is based on placement test scores for Math and Reading as well as scores received on a wax carving test. Scores received on the wax carving test have been an excellent predictor of applicant success while training in the program. When the # of qualified applicants exceeds 24, additional applicants are admitted up to a final class number of 28. This number can be accommodated by use of work benches in a room that is connected to the main laboratory. Alternate candidates are also invited to the first day of classes and accepted into the program in the event a student who was accepted decides to not enroll. These steps ensure a full class at the start of the year and assist in achieving as close to maximum graduating class of 24 as possible.

A survey of Fall 2010 students revealed why students chose the field of dental laboratory technology as their study and career choice. The results are presented below:

| Change in career, re-enter workforce/unemployed | Work with hands, use artistic skills, create something | Career Fit with their personal needs or disabilities | Desire to work independently and not with public | Help others to have a better life | Chose this field as their first career | Did not get into program they wanted/2 <sup>nd</sup> choice |
|---|--|--|--|-----------------------------------|--|---|
| 5   | 12   | 2  | 2  | 3                                 | 3                                      | 1   |

The US Bureau of Labor Statistics (September 29, 2010) reports that:

*“Employment of dental laboratory technicians is expected to grow 14 percent from 2008-2018, which is faster than the average for all occupations. During the last few years, increased demand has arisen from an aging public that is growing increasingly interested in cosmetic prostheses...the growing and aging population will require more dental products fabricated by dental technicians, such as bridges and crowns, since more people are retaining their original teeth..... Job prospects for dental laboratory technicians should be favorable....Few people seek these jobs, reflecting the relatively limited public awareness and low starting wages. Those with formal training ...will have the best job prospects. In addition to openings from job growth, many job*

*openings also will arise from the need to replace technicians who transfer to other occupations or who leave the labor force.”*

<http://data.bls.gov/cgi-bin/print.pl/oco/ocos238.htm> Occupational Outlook Handbook, 2010-11 Edition.

## **What strategies are used within the program/discipline to facilitate access and diversity?**

Applicants who meet minimum program requirements are invited to participate in the wax carving test, which is the final acceptance criteria for selection into the class. This process facilitates equal opportunity for all of the qualified applicants. Alternates are also invited to attend the orientation session on the first day of classes and invited to enroll in the program as space is available. The dental laboratory technology program has historically had a diverse group in regards to age, ethnicity, socioeconomic income and GPA. Please refer to pgs 22 of this document for diversity statistics.

A large number of students who have English as their second language are admitted yearly. Advising and guidance is given as necessary to these students who would benefit from additional experience in English comprehension. Individual advising sessions are scheduled between each student and a health admission advisor to develop a plan for graduation and ensure their comprehension of what is necessary to graduate on time from the program.

## **Identify operational challenges faced by the SAC that impact student learning.**

As part of the Dental Sciences Department, the Dental Technology program “Co-exists” with the Dental Hygiene Program and Dental Assisting Program. The programs in the department share the director and administrative assistant. Office space for full time faculty members is also shared in HT 306 with the Medical Imaging department.

Creative scheduling of laboratory and lecture sessions for the DT programs took place several years ago in order to facilitate the students’ desire to work a portion of the day and all day Friday. This schedule also enables concentrated lab time for students to have enough time to make progress on lab projects with minimal interruptions in their work.

As one of three programs in the department, communication is key to dissemination of information and updating faculty on the work of each group. The department holds a combined program meeting at each in-service day to inform and discuss topics relative to all programs.

Currently, the most challenging aspect faced by the dental technology program is the condition of the current lab bench work spaces (which are original to the campus). The cabinetry and work stations have been “shored up” and pieced together so many times that facilities reports it is impossible to keep repairing them in this manner. In addition, the ability to keep up with the newer technology that many labs now utilize has been difficult for the program due to budget constraints. It is hoped that attention can be paid to the dental lab tech program’s facility and technology needs as the bond projects move forward.

|  |
|--|
| <b>Faculty: Reflect on the composition, qualifications and development of the faculty.</b> |
|--|

**A. Provide Information on:**

**i. Rationale for the size, distribution and composition of the faculty in the subject area.**

The rationale for size, distribution and composition of the faculty are determined by the CODA standards for accredited dental technology programs, the hiring policies and procedures of the institution and the interests and experience of the instructors. Currently the department employs 2 FT dental technology instructors, 1 PT business management instructor, 2 classified dental lab technologists who work as lab assistants to each instructor, 1 director and 1 administrative assistant.

**ii. Quantity and quality of the faculty needed to meet the needs of the program/discipline.**

As discussed above, staff in the program consists of 2 FT dental technology instructors, 1 PT business management instructor, 2 classified dental lab technologists who work as lab assistants to each instructor. The program director, administrative assistant and clinic receptionist are shared positions with the other two dental programs.

The quality of the dental technology faculty is excellent in meeting the needs of the program/discipline. Each faculty member’s qualifications underwent scrutiny during the February 2010 Program Site Visit by CODA. No recommendations or suggestions were made based on faculty qualifications. The following accreditation standards were met by the faculty:

*CODA Standard 3-7: Dental laboratory technology faculty must have background in and current knowledge of dental laboratory technology and the specific subjects they are teaching.*

*CODA Standard 3-8: Faculty providing instruction must have completed instruction in educational theory and practice, e.g., curriculum development, educational psychology, test construction, measurement and evaluation, or be actively working toward that objective. Faculty providing instruction via distance education technology must have instruction in distance education techniques and delivery.*

*CODA Standard 3-9: Faculty providing didactic instruction must hold a degree at least one level higher than the degree to be granted to their students or be actively working on attaining such a degree.*

*CODA Standard 3-11: The number of faculty positions must be sufficient to implement the programs goals and objectives.*

The above standards were all met satisfactorily through the 2010 Accreditation Self-study documents and Site Visit.

### **iii. Extent of faculty turnover and changes anticipated for the future.**

Faculty turn-over in the dental technology program is extremely rare. The most recent changes were replacement of a dental lab assistant in the second year laboratory sessions (hired in 2009) and hiring of a new business management PT instructor in 2006. It is anticipated that there will be 2 FT instructor and 1 PT lab assistant positions to hire for in the next 2-3 years.

### **Extent of the reliance upon adjunct faculty and how they compare with full-time faculty in terms of educational and experiential backgrounds.**

Reliance upon adjunct faculty is minimal. Greg Charles teaches part time in both the dental and business departments at PCC. He is responsible for teaching both business courses in dental lab management (DT 275 and 276). Jay Camarillo and Brady Hess are private practice experienced dental technologists who work as classified lab assistants in the dental laboratory courses. Each of the lab sessions meet CODA instructor ratio standards.

#### **iv. How the faculty composition reflects the diversity and cultural competency goals of the institution.**

The Dental Technology instructors are extremely dedicated to the program and have been employed with the college for many years. Evidence of the longevity of the faculty is presented by the data below:

|                |                                       |
|----------------|---------------------------------------|
| Gary Smith     | Initial Appointment 1979              |
| Ray Ridgley    | Initial Appointment 1981              |
| Jay Camarillo  | Initial Appointment 2001              |
| Greg Charles   | Initial Appointment 2006              |
| Brady Hess     | Initial Appointment 2009              |
| Homayoun Louie | Replaced Gary Smith F'10 for one term |

The current faculty reflects ethnic diversity background which reflects some of the diversity of the students enrolled in the program. Gender diversity exists with the director and administrative assistant, but not currently with any of the instructors.

Future hiring will take into consideration of increasing diversity while maintaining competent instruction.

#### **B. Report changes the SAC has made to instructor qualifications and the reason for the changes.**

The most current instructor qualifications for the dental technology program are:

**For All DT coursee except DT276 and DT 276:**

AAAS Degree in Dental Laboratory Technology from a CODA Accredited Dental Laboratory Program, plus 5 years recent, full-time, non-teaching work experience in the field.

**Related Instruction:** All courses listed above

AAS Degree in Dental Laboratory Technology from a CODA Accredited Dental Laboratory Program, plus 5 years recent, full-time, non-teaching work experience in the field and evidence of continuing education in the areas of team building and/or dental laboratory management skills, dental materials manipulation and removable and fixed appliance fabrication.

**For DT 275 and DT 276:**

Bachelors Degree in Business with 5 years experience using small business computer software.

**Related Instruction (in DT 275,276)**

Bachelors Degree in Business with 5 years experience using small business computer software and professional or continuing education course work in team building or small business practice management and small business finance skills.

Approved: June 2010

Qualifications were revised in June of 2010 to reflect CODA standards and also address the computation, communication and human relations related instruction approved by the PCC curriculum and Degrees and Certificates Committee.

**C. How has professional development activities of the faculty contributed to the strength of the improvements? If such activities have resulted in instructional or curricular changes please describe.**

The field of dentistry is continually changing through research of oral health and development of new materials and practice techniques. In addition, educators are challenged to keep abreast of emerging teaching methodology and the incorporation of advancements into the lectures that they teach. For these reasons, professional development opportunities have been critical for the DT instructors to attain the continuous learning required to stay current and to stay active in their professional association. The following chart displays the ways in which faculty have utilized professional development resources:

| <b>Resource</b>        | <b>Process to Access</b>  | <b>Examples of Utilization</b>   |
|------------------------|---|--|
| Tuition Reimbursement  | Attend Course, Submit receipt of payment with request for funds form.   | Current DLT faculty members are not currently enrolled in higher education courses, but have utilized tuition reimbursement in the past. |
| Internal Grant Funding | Faculty members may request funds every two years to attend a conference. Staff Development, Innovative Pilot Projects and Organizational Development Grants may also be applied for. | Internal grant funding was provided W'09 for the administration of a phone survey to the past five year graduates of the DLT programs.   |

|  |  |   |
|--|--|---|
| Division Professional Development Allocations                  | Division Dean deposits money into program budget. Faculty members access money through conference, Bachelor level course, or professional committee activity participation | FT and classified staff are able to offset DLT conference CE course costs.<br>The department director obtained funds to attend ADEA Leadership Institute Fellowship series.   |
| Instructional Technology Courses                               | As courses are scheduled and advertised through email announcements, faculty reserve a seat in the course.   | Faculty have access to enrolling in any of the courses offered in this format.  |
| Over the Shoulder Training (OST)                               | Call IT department and request.  | DLT instructors have worked extensively with the IT department to accomplish closed captioning on demonstration videos shown to students.   |
| Teaching Learning Center (TLC)                                 | Weekly emails advertise the daily opportunities offered in the TLC.  | Faculty attend according to topic interest and schedule availability.   |
| Tuition Waivers  | Online submission of tuition waiver for enrolled classes   | DLT faculty and classified staff have used tuition waivers for lower division credit hours offered at PCC.  |
| Bloodborne Pathogens, Hazardous Materials, and Safety Training | Notice of Course Offerings, Schedule of department training  | All faculty attend yearly BBP Haz Materials and Safety Training.  |
| Online Course Training   | Application for Course Development of an Online or Hybrid Course   | DLT faculty have not utilized this training at this point.  |
| Inservice Meetings   | Fall Term: 3 days of inservice. Spring Term: 1 day of inservice offerings.   | All classes cancelled during inservice days. Faculty attend training in topics such as:<br>Diversity Training, Utilization of the Library, International Students, Dealing with difficult situations, Safety in the |

|                     |                        |   |
|---------------------|------------------------|---|
|                     |                        | Classroom, Outcomes Development, Assessment in the Classroom, FERPA   |
| Leadership Training | Offerings for Managers | Dental Sciences Director has attended the following management series offered to managers for “Dealing with Conflict”, Leadership Development, School Law, and the Institution Leadership Development Cohort. |

## Facilities and Support

### A. If classroom space, computers/technology and library media, laboratory space and equipment impact success, please describe.

The laboratory capacity is adequate for the number of students for which it is designed. There are 24 stations that are individually equipped and well designed. A special work area that can accommodate several students is available for use in an adjacent work room. The design is efficient, practical and enhances instructor supervision. There are no scheduling difficulties because the program has sole use of the laboratory. The cabinetry that is in place is original to the campus and is in much need of replacement. Facilities personnel have repaired the cabinetry many times over the year and recommend replacement and update as soon as it can occur.

The program does not have a designated classroom, but uses classroom space where it is assigned to them on campus. Usually the didactic courses are scheduled conveniently in the HT building. Classrooms are adequate. The Dental Lab

Business course is offered in a computer laboratory with a computer for each student's access.

The lab equipment meets all standards for safety. It is grouped and located according to specific function. This arrangement prevents congestion in the work areas, cluttering and misplacing equipment. The instructors have been invaluable over the years in repairing equipment as needed and procuring donations as much as possible. While the equipment is adequate, it is outdated and we have not been able to keep up with the technology of the field. Equipment is expensive and unfortunately there is no way to tell when a piece of equipment is going to break down. Experiences observing in private labs and guest presenters bringing current technology in during presentations offers brief familiarity for the students, but does not allow for hands on experience leading to competency. Yearly Exit and Alumni surveys reveal that more experience is needed with current technology prior to graduation. Students understand the need to learn the basics of traditional methods, but acknowledge the labs they are finding jobs in use more updated methods and equipment for fabrication.

Storage of equipment is a continual problem for the program. During the second year of training, students learn to fabricate dental prosthetics in four different specialty areas (crown, bridge, ceramics, removable partials, and orthodontics). Each of these requires its own unique supplies and equipment that is brought out for training during certain times of the year. Due to the crowded nature of the lab and adjacent storage/student station room, there is not adequate space in the HT 201 lab location for storage. The dental lab instructors have been able to utilize space in the basement HT storage area. Many years ago the dental department was given the length of one whole wall in the basement area for use in storage. About ten years ago the dental storage area was reduced to one small corner of the room. It now consists of four rows of shelving that is shared by the three dental programs, and often times other outside programs' items as well. The DT program has recently been asked to further reduce the amount of storage space in current use. While it might look to the general public that items stored are old and not needed, the truth is, *they are old and very much needed* during certain times of the year when the topics are being addressed in lecture and lab. During those times, the supplies and equipment are transported up to the lab and materials and equipment that students have finished working with are returned to the storage room. Equipment is expensive and unfortunately there is no way to tell when a piece of equipment is going to break down. Some equipment items have been kept for replacement parts. This has saved the college a great amount of money over the years not only in replacement of equipment, but also in service in maintenance fees. Storage is essential to this program, whether it remain in the same venue in the basement, or by enlarging the lab facilities during bond renovation.

Dental related library media are reviewed each year by the dental laboratory SAC. New books, journals and DVD's are ordered as necessary to maintain current material. The collection of material in the library was found adequate for student

research by the CODA site visitors with one suggestion for having more national DT journals available. The suggestion was immediately implemented by the librarian who works with the dental programs. Librarians are extremely helpful when students are conducting research for course work by helping them navigate through the online library system.

## **B. Describe how students are using the library or other outside-the-classroom information resources.**

The dental technology SAC works closely with library personnel to review and expand the current dental related library holdings each year. Outdated material is removed and new texts, videos and journals are ordered as they become available. The current collection of material is extensive and was determined adequate during the CODA site-visit.

### **Describe how students use the library (Activities etc.)**

DT students are required to utilize the library for conducting research in order to complete written reports on ceramics and orthodontic appliances. In addition, students use the library computers when reviewing the Air Force Manual CD in preparation for the Registered Graduate Exam.

### **Provide information on clerical, technical, administrative and/or tutoring support.**

The dental assisting program is fortunate to have excellent secretarial and clerical support. Two full time classified employees are assigned to the Dental Sciences Department.

Ms Arleen Shannon is the administrative assistant to the program director. She is responsible for assisting the director with budget monitoring, purchasing, admissions, student registration, department correspondence, and other administrative functions for all three dental programs.

Ms. Fabiola Romero is assigned to support dental clinic operations. Her primary responsibilities are patient scheduling, managing patient records, maintaining the recare system, answering the phones and collecting fees. While the dental laboratory technology program does not utilize patients or the clinic, Fabiola is available to support the DT students by answering questions and suggesting college resources when necessary.

The director position is a shared position for all three dental programs and is filled by Josette Beach.

A centralized campus print center exists for duplication of materials utilized for instructional or program needs. Faculty access the services through an online request submission or hard document submission form. Audio visual needs are also centralized and requests submitted online or through telephone requests. Facility needs are attended to through the centralized Service Request Center and accessed by the instructors through requests given to Ms Shannon.

Tutoring opportunities have been increased for students during the last couple of years through funding from the PCC Foundation Mini-Grants. Lab assistant Brady Hess has been able to work with students on an individualized basis as needed. This has allowed students who require additional demonstrations the time to enhance their skills during extended lab times. This type of study program was extremely beneficial to students who were at risk in their classes.

Students are also referred to the writing center for help when writing papers for class assignments.

### **C. Provide information on how Advising, the office for students with disabilities and other student services impact students.**

The dental department has excellent support from all of the resources available at the college. Students are referred frequently to the Advising Department and Women's Resource Center when identified as needing advising or support for personal challenges. Faculty work closely with the Office for Students with Disabilities when students self identify or it becomes apparent that the student might benefit from their services. Many students over the years have been able to reasonably be accommodated in the dental laboratory to successfully complete the dental technology program. The Career Center provides resume and job interviewing strategies for the students, as well as informs the students when job opportunities arise. Audio Visual personnel are extremely helpful in bringing computer carts to areas where lectures are to be presented and have helped the department build a computer cart that can be kept in the department for immediate use. They have also assisted the instructors in videotaping their demonstrations and having closed caption abilities applied to all of the videos. These videos have benefited students greatly because they can be watched as many times as the student needs to grasp the information. Members from the ESOL department have been consulted about strategies to use with students who have English as their second language.

**D. Describe current patterns of scheduling (such as class size, duration, times, location, or other) address the pedagogy of the discipline and the needs of the students.**

The Portland Community College Dental Technology Program is designed to maximize the educational experience of students by utilizing college resources to their fullest; efficiently scheduling curriculum so that didactic material precedes lab/clinic demonstration and practice; and providing basic skill assessment at the introductory level which then progresses to the development and competent levels as students progress through their training.

Instructors recognize the rich life experiences that adult learners bring to the learning experience and encourage students to utilize time management and critical thinking skills developed through their previous life experiences. Enhancement of these skills to incorporate leadership and team building in the dental laboratory setting occurs throughout the curriculum. Whenever possible collaboration with the two other dental programs occurs to reinforce the dental team concept. Basic skill competencies address the skills the students will learn and be assessed on during their training, while the certificate and degree outcomes relay what the graduate will be able to do upon completion of the program.

Class size is determined by facility accommodations, faculty to student ratios and Commission on Dental Accreditation Standards. The schedule is designed to maximize the students' experiences in the lab settings while also allowing the student the ability to work at an outside job half days Monday – Thursday and all day Friday if necessary.

Pedagogy used in each course is carefully planned by the instructors to offer consistent methods of instruction and assessment while also allowing for demonstration and hands-on practice in the lab setting following instruction. Instructors and dental lab assistants bring “real world” experiences into the classroom from their many years of practicing in the field and ownership of dental labs. The business management courses prepare the students who are interested to open their own laboratory business. Community laboratory technicians offer classroom presentations and community involvement which is also reinforced further when students attend professional organization and PCC advisory meetings.

**CTE Programs: to ensure that the curriculum keeps pace with changing employer needs and continues to successfully prepare students to enter a career field.**

**A. Evaluate the impact of the Advisory Committee on curriculum and instructional content, methods and/or outcomes.**

Please refer to page 23/24 of this document for the description of how professionals in the community are utilized as resources. Recent liaison activities with the community are described below:

Winter 2010: Advisory committee members met with CODA site visitors to answer questions about the purpose of the committee and its usefulness to the program. Members were extremely supportive in attending and providing information during this meeting.

Fall 2009: Combined meeting with the DH and DA Advisory groups. Accreditation information was discussed: questions and feedback dialogue occurred regarding upcoming site-visit. New members welcomed.

Spring 2009- PCC program was given CAD/CAM software for student familiarization and possible future fabrication activities. Committee members worked towards developing a video that would highlight the DLT profession. The PCC DLT program students and facilities would be filmed in an effort to promote interest in the field.

Winter 2009 – Mission Statement approved. Dr. Duane Star elected DLT Advisory Committee Chairperson. Employer Survey Reviewed and Revised. Possibility of DVD produced marketing the dental lab technology career.

Fall 2008- Combined Meeting. Kick-off BBQ for students, staff and advisory committee members sponsored by Burkhart Dental. Individual break out meetings for question and answers between advisory members and newly enrolled students.

Spring 2008 – Advisory members presented continuing education to students. Oregon Lab Association provided Scholarship to student.

Fall 2007 – Combined Meeting, Welcoming of new members, Presentation of Demographics from each program. Discussion

of work to be done for Accreditation visit in 2010. Discussion of proposed bond and benefits to the dental programs. Breakout session – suggestions from committee on newly proposed program goals and certificate outcomes.

Spring 2007 – Handpieces donated by association and Scholarship provided to 2<sup>nd</sup> year student.

Winter 2007 – Selection of committee chairperson; designed DLT advisory committee mission statement.

Fall 2006 – Combined Meeting. Newly formed advisory committee groups for all three programs. Advisory committee guidelines of the college and roles and responsibilities were handed out and discussed. Each member chose length of term desired. Program Groups were decided on and broke away for planning of the rest of the year's activities and meetings.

See Exhibit 8: Minutes of DT Advisory Committee Meetings

## **B. Degree and Certificate Outcomes:**

- i. Identify and explain any changes that have been made to degree and certificate learning outcomes since the last program review.**

The dental technology SAC attended an inservice workshop with Ruth Stiehl on October 23, 2007. The purpose was to review current Certificate and Degree Outcomes for the program and develop outcomes that focused specifically on what the student would be able to do upon graduation, as a direct result of what they learned during their training at PCC.

It was determined that the previous outcomes developed resembled program goals rather than certificate/degree outcomes. During the next six months the SAC met to re-develop outcomes that related directly with what graduates would do in their career as a result of their education. The new certificate outcomes are posted online at <http://www.pcc.edu/resources/academic/degree-outcome/>. They are also listed below:

## PCC Dental Laboratory Technology Certificate Outcomes 2007/2008

- Demonstrate basic dental laboratory techniques in the design and fabrication of complete dentures, crowns and bridges, ceramic, and basic orthodontic appliances
- Demonstrate advanced skills in more complex complete denture and fixed metal to porcelain prostheses
- Apply basic knowledge of the physics and chemistry of dental materials to insure the proper materials are used in the correct proportions for specific dental laboratory procedures and that correct safety and disposal procedures are followed
- Engage correct verbal, non-verbal and written communications in the dental laboratory and dental profession as both a technician and team leader
- Function in a non-biased manner as a member of a diverse dental team or community
- Design a Dental Laboratory Business Plan, invoicing system, ledger and the correct tax forms utilizing available computer software/skills
- Be prepared to continue dental, community and world awareness through conventions, lecture attendance and active participation in professional/non-professional organizations
- Apply legal and ethical principles to the dental environment

### **In addition to the above, the following Two Year Degree – Associate of Applied Science in Dental Laboratory Technology Outcomes apply:**

- Be prepared to transfer to a college or university for upper level studies in the Health fields.
- Demonstrate a deeper knowledge of business procedures pertinent to owning or managing a dental laboratory

**ii. What strategies are in place to assess degree and certificate outcomes?**

The Certificate Outcomes are assessed yearly by faculty as part of the Program and Curriculum Management Plan. Relevance to the college core outcomes, industry standards and emerging information in the field determine when the outcomes should be revised.

To accomplish assessment of the program's effectiveness in reaching the program goals, basic skill competencies and certificate outcomes the following assessment tools are utilized:

- Course Syllabi Review Prior to Course being taught
- End of Term Review of Course by Instructor
- Outcomes Assessment Results which include Exit, Alumni, Employer and Patient Satisfaction Surveys.

Discussion and review of all curriculum and program management topics occurs during weekly informal faculty meetings, through email and each term during SAC meetings.

See Exhibit 5: Course Syllabi Review, End of Term Review  
See Exhibit 9: Examples of Faculty Meeting Minutes

See Exhibit #7: for the most recent Exit, Alumni, Employer and Patient Satisfaction Survey Reports.

The effectiveness of the program goals is reported in the *Assessment Plan for DT Program Goal Review*.

Please See Exhibit 1: Assessment Plan for DT Program Goal Review

Assessing students' success in meeting certificate/degree outcomes occurs through a variety of assessment strategies. Knowledge based exams and lab skills performance occur in both formative and summative methods. Examples include quizzes, midterm and final exams, written papers, classroom presentations and lab activities.

**iii. Give Evidence that students are meeting these outcomes.**

Evidence that students are meeting Certificate/Degree Outcomes is reported in the document *“DT Program Course and Skill Competency Alignment with Program Certificate and PCC Core Outcomes.”*

Please See Exhibit 4: DT Program Course and Skill Competency Alignment with Program Certificate/Degree and PCC Core Outcomes”

**iv. Describe any changes made towards improving attainment of the degree and/or certificate outcomes.**

As stated previously, changes have been implemented over the past two years to map certificate outcomes with the college core outcomes. In addition, End of Term of Term Course Reviews by the instructor is utilized to assess the basic skill competencies taught and assessed in each course. Each basic skill competency has been further linked to the college and certificate outcomes. The student has met the certificate outcome at successful completion of each course where the skill competency (and correlating certificate outcome) are assessed at the competent level.

A variety of assessment methods have been developed to provide evidence of competency and objective rubrics for assessing skills have been implemented in all didactic, and lab courses. These tools are reviewed at the end of each quarter and revisions made for future course offerings in order to ensure outcomes are assessed in as objective and accurate way as possible. All assessment strategies used for evaluation of the basic skill competencies (which in turn validate that outcomes are met) were approved and met standards of the Commission on Dental Accreditation in February 2010.

**C. Review Job Placement data for students over the last five years, including salary information where available.**

Alumni surveys are utilized to determine job placement data for students. Graduates from the previous year are mailed surveys to respond to.

Unfortunately, many surveys are returned as undeliverable and respondent numbers are low. In an attempt to obtain increased alumni data, a phone survey was conducted during the Winter of 2009 by a part time dental lab assistant. Additionally, surveys were distributed at the Oregon Association of Dental Laboratory Technicians Annual meeting and also to employers visited by instructor Gary Smith.

Please review the chart below for results from the last five years of responses:

| <b>Year</b>      | <b># of Responses</b> | <b># employed in general practice</b> | <b># of employed in dental specialty</b> | <b>Very Satisfied with career</b> | <b>Somewhat Satisfied with career</b> | <b>Wage range</b>                   |
|------------------|-----------------------|---------------------------------------|--|-----------------------------------|---------------------------------------|-------------------------------------|
| <b>2008-2004</b> | 19                    | 2                                     | 5  | 10                                | 3                                     | 12.95/hr-25.00/hr<br><br>5= unknown |

Even though department alumni surveys are returned at a low response rate, the program instructors are able to verify by visiting area laboratories, phone conversations with graduates, advisory committee meetings and attendance at professional conferences that PCC DT Graduates are employed. In the future the SAC will determine whether surveys might be sent through email or other online means such as *Facebook* or *Survey Monkey* in order to receive a higher return rate.

Additional Employment information was obtained through research completed by Laura Massey in the PCC Institutional Effectiveness Department. The following is based on the cohort of 2006-07 completers with valid social security numbers and their employment status during the calendar year 2008:

**Employment Outcomes of PCC Degree-Attainers with Career/Technical Majors**

| Career/Tech Major              | (1)<br>Degree Cohort:<br>2006-07 Deg/Cert<br>Completers with<br>valid SSNs | (2)<br>Outcome:<br>Continued as a<br>Student 2008 CY | Non-Students Only                                   |                     |                    |                                       |                     |  |
|--------------------------------|--|--|---|---------------------|--------------------|---------------------------------------|---------------------|--|
|                                |  |  | Outcome: Employed for any<br>period of time 2008 CY |                     | Employed Full-Time |                                       |                     | Employed<br>Part-Time<br>Median Hrly<br>Wage |
|                                |  |  | Employee<br>Count                                   | Median Hrly<br>Wage | Entire<br>2008 CY  | at least one<br>quarter of<br>2008 CY | Median Hrly<br>Wage |  |
| Accounting                     | 48   | 10   | 38  | \$14.29             | 55.3%              | 86.8%                                 | \$15.92             | \$12.66                                      |
| Admin Assist - Office Mngmt    | 8  | 3  | 5   | \$12.67             | 20.0%              | 80.0%                                 | \$13.95             | \$10.69                                      |
| Administrative Assistant       | 9  | 3  | 6   | \$12.99             | Low N              | Low N                                 | Low N               | Low N  |
| Auto Collision Repair Tech     | 10   | 1  | 9   | \$11.53             | 33.3%              | 88.9%                                 | \$15.30             | Low N  |
| Automotive Service Tech        | 24   | 2  | 22  | \$16.82             | 68.2%              | 81.8%                                 | \$18.99             | \$14.66                                      |
| Aviation Maintenance Tech      | 18   | 1  | 17  | \$17.00             | 58.8%              | 88.2%                                 | \$18.88             | \$15.12                                      |
| Building Construction Tech     | 21   | 3  | 18  | \$16.94             | 50.0%              | 77.8%                                 | \$17.84             | \$15.75                                      |
| Business Administration        | 29   | 13   | 16  | \$16.13             | 75.0%              | 87.5%                                 | \$17.59             | \$14.67                                      |
| Computer Appl/Office Systems   | 14   | 6  | 8   | \$12.40             | 62.5%              | 100.0%                                | \$14.21             | \$10.60                                      |
| Computer Information Systems   | 53   | 21   | 32  | \$15.55             | 56.3%              | 81.3%                                 | \$16.89             | \$14.20                                      |
| Computer Software Engrng Tech  | 15   | 4  | 11  | \$15.19             | 63.6%              | 72.7%                                 | \$16.71             | \$13.67                                      |
| Criminal Justice               | 22   | 6  | 16  | \$17.75             | 43.8%              | 81.3%                                 | \$20.03             | \$15.46                                      |
| Dental Assisting               | 41   | 6  | 34  | \$16.20             | 40.0%              | 85.7%                                 | \$17.51             | \$14.88                                      |
| Dental Hygiene                 | 27   | 5  | 22  | \$34.89             | 36.4%              | 81.8%                                 | \$38.31             | \$31.46                                      |
| Dental Laboratory Technology   | 12   | 0  | 12  | \$14.88             | 25.0%              | 91.7%                                 | \$15.44             | \$14.32                                      |
| Diesel Service Technology      | 13   | 1  | 12  | \$15.69             | 83.3%              | 100.0%                                | \$16.71             | \$14.68                                      |
| Drafting Technology & Design   | 9  | 1  | 8   | \$17.81             | 87.5%              | 87.5%                                 | \$18.85             | \$16.77                                      |
| Early Childhood Education      | 33   | 13   | 19  | \$11.24             | 25.0%              | 80.0%                                 | \$12.10             | \$10.37                                      |
| Education-Library/Media Assist | 7  | 0  | 7   | \$11.05             | Low N              | Low N                                 | Low N               | Low N  |
| Electronic Engineering Tech    | 6  | 1  | 5   | \$11.59             | 40.0%              | 100.0%                                | \$12.52             | \$10.66                                      |
| Facilities Maintenance Tech    | 14   | 2  | 12  | \$19.36             | 83.3%              | 100.0%                                | \$21.34             | \$17.37                                      |
| Fire Protection Technology     | 10   | 3  | 7   | \$24.46             | 85.7%              | 100.0%                                | \$26.19             | \$22.72                                      |
| Graphic Design                 | 16   | 3  | 13  | \$10.98             | 30.8%              | 84.6%                                 | \$11.82             | \$10.14                                      |
| Health Information Management  | 24   | 7  | 17  | \$14.31             | 64.7%              | 94.1%                                 | \$16.82             | \$11.80                                      |
| Instructional Asst. Special Ed | 12   | 2  | 10  | \$13.23             | 20.0%              | 80.0%                                 | \$15.27             | \$11.19                                      |
| Interior Design                | 9  | 2  | 7   | \$20.90             | 42.9%              | 85.7%                                 | \$24.36             | \$17.45                                      |
| Landscape Technology           | 9  | 3  | 6   | \$14.63             | Low N              | Low N                                 | Low N               | Low N  |

Source: PCC Banner Data; State of Oregon Employment Dept; Clearinghouse Database.

Employer surveys are also distributed randomly to dental laboratories throughout the Portland Metropolitan area once every three years. The most recent employer survey was distributed in 2008/9 with the help of the PCC Institutional Effectiveness Department. Summary of employment results are below:

| # of Respondents | Type of practice setting                | Zipcode Representation                     | Currently Employ PCC Grad      | How Long have you employed a PCC graduate | Would you consider hiring a PCC DA Graduate |
|------------------|---|--|--------------------------------|---|---|
| 13               | General Lab = 6<br>Crown and Bridge = 7 | 97035, 015, 420, 215, 214, 838 (5 unknown) | Yes = 5<br>No = 3<br>Unknown=5 | 9yrs, 2+yrs, 1yr, <1yr.<br>(5 unknown)    | Yes = 6<br><br>(unknown=5)                  |

**See Exhibit #7:** for the Complete Employer Survey Report Results

## D. Forecast future employment opportunities for students.

The outlook for dental technology is good. Information on Oregon Labor Market Information System (OLMIS) is listed below:

### Occupational Summary for Dental Laboratory Technicians (51-9081) Oregon Statewide

[View Full Report](#)

**Description:** Construct and repair full or partial dentures or dental appliances. Exclude "Dental Assistants" (31-9091).

| Employment Projections |            |       |                           |             |       |
|------------------------|------------|-------|---------------------------|-------------|-------|
| Region                 | Employment |       | Projected Annual Openings |             |       |
|                        | 2008       | 2018  | Growth                    | Replacement | Total |
| Oregon Statewide       | 938        | 1,005 | 7                         | 19          | 26    |

| Current Job Openings                           |            |              |                                    |
|--|------------|--------------|------------------------------------|
| Job Title                                      | Location   | Order Number | Wage Offered                       |
| <a href="#">Ceramics Dental Lab Technician</a> | Portland   | 742825       | \$14.86/hr to \$31.85/hr DOE, Neg. |
| <a href="#">Dental Lab Tech</a>                | Hood River | 739047       | DOE                                |
| <a href="#">Dental Lab Technician</a>          | Portland   | 737765       | \$12.00/hr DOE, Neg.               |

| Wages            |                        |            |                 |
|------------------|------------------------|------------|-----------------|
| Region           | ----- 2010 Wages ----- |            |                 |
|                  | Median Hourly          | Avg Annual | Middle Range    |
| Oregon Statewide | \$18.35                | \$39,438   | \$15.36 - 22.06 |

| Industries of Employment private sector only |                 |
|--|-----------------|
| Industry                                     | 2008 Employment |
| Total, All Industries                        | 938             |
| Manufacturing                                | 664             |
| Health Care and Social Assistance            | 264             |

| Occupations with Similar Skills               |                     |
|---|---------------------|
| Occupation                                    | Skill Overlap       |
| <a href="#">Medical Appliance Technicians</a> | <a href="#">31%</a> |

#### Statewide Employment Analysis

2008 employment is estimated to be at about the regional average. This occupation is expected to grow at a somewhat slower rate than the regional average. Total job openings are projected to be at about the regional average.

Reasonable employment opportunities exist largely due to the need to fill replacement job openings.

#### Educational Requirements

Workers must have long-term on-the-job training to gain the necessary skills for this occupation. However, those with postsecondary training have a competitive advantage in this labor market.

## Wages for Dental Laboratory Technicians



| Region                                  | ----- 2010 Wages -----     |         |                |         |         |                    |            |
|---|----------------------------|---------|----------------|---------|---------|--------------------|------------|
|   | Percentiles (hourly wages) |         |                |         |         | Avg Hourly (\$/hr) | Avg Annual |
|   | 10th                       | 25th    | 50th (median)  | 75th    | 90th    |                    |            |
| Oregon Statewide                        | \$13.17                    | \$15.36 | <b>\$18.35</b> | \$22.06 | \$25.46 | \$18.96            | \$39,438   |
| <a href="#">Multnomah / Washington</a>  | 13.16                      | 15.05   | <b>18.08</b>   | 22.01   | 25.04   | 18.65              | 38,779     |
| <a href="#">Marion / Polk / Yamhill</a> | 13.10                      | 14.42   | <b>18.25</b>   | 21.44   | 23.80   | 18.09              | 37,625     |
| <a href="#">Benton / Lincoln / Linn</a> | 13.18                      | 15.18   | <b>20.50</b>   | 24.60   | 30.92   | 20.67              | 42,994     |
| <a href="#">Lane</a>                    | 13.46                      | 16.32   | <b>18.44</b>   | 22.64   | 27.86   | 19.44              | 40,420     |
| <a href="#">Douglas</a>                 | 9.72                       | 12.79   | <b>15.18</b>   | 24.70   | 28.63   | 17.73              | 36,874     |
| <a href="#">Jackson / Josephine</a>     | 11.82                      | 14.03   | <b>17.48</b>   | 21.09   | 30.51   | 18.71              | 38,915     |

[Data Sources and Limitations](#)

## Regional Employment Projections for Dental Laboratory Technicians



| Region   | Employment |       | Change | % Change | Projected Annual Openings |             |       |
|--|------------|-------|--------|----------|---------------------------|-------------|-------|
|  | 2008       | 2018  |        |          | Growth                    | Replacement | Total |
| Oregon Statewide   | 938        | 1,005 | 67     | 7.1%     | 7                         | 19          | 26    |
| <a href="#">Multnomah / Washington</a>                           | 567        | 678   | 111    | 19.6%    | 11                        | 12          | 23    |
| <a href="#">Marion / Polk / Yamhill</a>                          | 68         | 77    | 9      | 13.2%    | 1                         | 1           | 2     |
| <a href="#">Clackamas</a>  | 65         | 72    | 7      | 10.8%    | 1                         | 1           | 2     |
| <a href="#">Lane</a>   | 65         | 69    | 4      | 6.2%     | 0                         | 1           | 2     |
| <a href="#">Jackson / Josephine</a>                              | 56         | 57    | 1      | 1.8%     | 0                         | 1           | 1     |
| <a href="#">Crook / Deschutes / Jefferson</a>                    | 45         | 54    | 9      | 20.0%    | 1                         | 1           | 2     |
| <a href="#">Benton / Lincoln / Linn</a>                          | 34         | 33    | -1     | -2.9%    | 0                         | 1           | 1     |
| <a href="#">Douglas</a>  | 32         | 33    | 1      | 3.1%     | 0                         | 1           | 1     |
| <a href="#">Coos / Curry</a>                                     | 12         | 13    | 1      | 8.3%     | 0                         | 0           | 0     |
| <a href="#">Baker / Union / Wallowa</a>                          | 9          | 10    | 1      | 11.1%    | 0                         | 0           | 0     |
| <a href="#">Gilliam / Hood River / Sherman / Wheeler / Wasco</a> | 8          | 10    | 2      | 25.0%    | 0                         | 0           | 0     |
| <a href="#">Clatsop / Columbia / Tillamook</a>                   | 8          | 10    | 2      | 25.0%    | 0                         | 0           | 0     |
| <a href="#">Morrow / Umatilla</a>                                | 6          | 7     | 1      | 16.7%    | 0                         | 0           | 0     |
| <a href="#">Klamath / Lake</a>                                   | 6          | 6     | 0      | 0.0%     | 0                         | 0           | 0     |
| <a href="#">Grant / Harney / Malheur</a>                         | 4          | 5     | 1      | 25.0%    | 0                         | 0           | 0     |

Source: Oregon Labor Market Information System (OLMIS)

<http://www.qualityinfo.org/olmisj/OIC?areacode=01000000&rpttype=full&action=report&occ=519081>

While the OLMIS system predicts a slower than average growth for dental technicians, the US Bureau of Labor Statistics Report (published September 29, 2010) predicts a faster than average employment growth for dental laboratory technicians nation- wide. (*Occupational Outlook Handbook, 2010-11 Edition*).

Many PCC dental laboratory technology students work in a dental lab during their second year of training, which not only gives them excellent “real world” experience but also positions them for continued employment upon graduation.

**E. Analyze any barriers to degree or certificate completion that your student face and consider the reason students may leave before completion.**

Students who do not complete the Dental Technology Program are most often experiencing the following:

- Financial Difficulties
- Change in career plans
- Personal or family reasons
- Desire to be employed in a lab to fabricate dentures. Completion of the first year of training provides them with the necessary skills to do this.

The following table represents enrollment and graduation statistics from 2004 to current date:

|              | F03<br>/S05 | F04<br>/S06 | F05<br>/S07 | F06<br>/S08 | F07<br>/S09 | F08<br>/S10 | F09<br>/S11 | F10<br>/S12 |
|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| # applicants | 50          | 52          | 51          | 55          | 65          | 41          | 48          | 50          |
| # accepted   | 22          | 25          | 24          | 27          | 23          | 18          | 28          | 24          |
| # graduated  | 12          | 14          | 10          | 18          | 15          | 14          |             |             |

Attempts to maintain the dental technology program at full capacity have consisted of accepting numbers above the desired 24 students into a cohort. While not an ideal class size, labs can accommodate the number and student learning is not hindered. To date, graduating a class at full capacity of 24 has not occurred due to the reasons stated previously. The attrition in the program may be due to choosing a career hastily in an attempt to be accepted into any

program. As other opportunities present themselves, students may choose to not enroll or leave the program for employment into other careers they find more desirable. Others choose to leave after completion of the first year to seek employment in laboratories where they can utilize the skills they learned during the first year of training to fabricate dentures.

Inability to obtain financial aid also plays an important factor in a student enrolling and completing the program. For the F10/11 school year accepted students were informed earlier and were presented with information about applying for Financial Aid, PCC Foundation or other scholarships prior to application deadlines. Even with this advice 1 student found it necessary to drop from the program after the start of the Fall '10 term.

Students who are achieving low academic scores are notified by the instructors frequently throughout the term about deficiencies. Suggestions for improvement to increase their success are also given. Faculty/Advising conferences occur with the student past the midterm point when deficiencies are still noted and a final conference is held with the student and program director, should dismissal be necessary.

## Recommendations for Improvement

### A. Assess the strengths in your program/discipline.

The following program strengths have been identified by the SAC:

Program Uniqueness: PCC is the only accredited training program of its kind in Oregon, and one of only twenty in the nation. As an accredited program, students are assured of receiving an education that meets the highest of standards for the profession. Furthermore, as one of only six colleges offering all three allied dental programs, PCC students gain an enhanced educational experience that allows them to integrate understanding of all aspects of the provision of dental care into their work as an employee upon graduation.

Instructors: Students learn from instructors who have vast experiences in the field and who are committed to providing quality education. They strive to incorporate the newest evidence based findings and “best practices” into the program curriculum and are all involved in their profession.

Reputation in the Community: The dental community is a small, close knit group of professionals. The PCC program has earned a highly respected reputation within the community and historically has been supported greatly through advisory committee membership and provision of “real life experience” presentations to students by community lab technicians. PCC graduates are preferred for hire. In addition, local laboratories and dental supply companies generously donate equipment and supplies annually to the program.

Program Quality: It is well known both locally and nationally that the program focuses on quality education and skill attainment. Accreditation personnel have themselves commented on the orientation toward high quality outcomes possessed by the program.

### B. Identify the areas in need of improvement

Size and Condition of Laboratory: Current cabinetry and lab counters are in need of replacement. The 1970's facility has held up extremely well considering the number of students utilizing the space over the last forty years. Replacement is requested as soon as possible to avoid further deterioration of the cabinetry (which can no longer be repaired according to facilities personnel). It is hoped that this can be done prior to the HT building bond renovation, but if that is not a possibility then consideration should be given to this during bond construction design.

Replacement of outdated/inoperative equipment: The field of dental laboratory technology is heavily dependent on use of equipment for fabrication of dental prosthetics. The instructors have saved the college greatly by seeking donations and repairing equipment through the years. Replacement and upgrading of equipment is now necessary to continue to offer a quality program that utilizes current technology.

Improvement of Instructor Station: At this time a single station vacuum system for the instructor's desk is necessary to allow instructors to perform demonstrations as students bring projects forward for review.

Storage: The current facility does not allow space for storage of supplies that are much more economical to purchase in bulk supply, as well as the specialty equipment needed for use at differing times during the school year. At present, the program currently shares a corner of the HT basement storage area with the dental assisting and dental hygiene programs. While it is recognized that storage space is at a premium on campus and will be even more coveted as bond construction gets underway, the program is requesting that the current storage space remain allocated for their use. It is near the elevator that is necessary for transport of the large, heavy supplies and equipment for use by the instructors. Given the unlikelihood that additional laboratory space will be given to the program during bond renovation, convenient storage will need to continue in a location somewhere else in the HT building. Particular attention will also need to be paid to elevator accessibility.

Future Instructor Hire: The dental lab tech program has been extremely fortunate to employ extremely experienced and dedicated faculty members and lab assistants. Their contributions to the program, college and dental community have been outstanding and cannot go unnoticed. Because of their guidance the workforce has welcomed competent graduates for the past thirty years. Unfortunately, it is anticipated that in the next 2-3 years the college will be challenged with replacing faculty and lab assistants as retirements occur.

### **Given the above analysis and other findings of the SAC,**

- i. Prepare a set of recommendations relevant to areas such as curriculum and professional development, access and success for students, obtaining needed resources, and being responsive to community needs.**

The department would like to bring the following recommendations to the attention of the administration:

1. Improve instructor station by adding a single station vacuum system.
2. Replace cabinetry and bench counters and improve storage
3. Replace outdated/inoperative equipment

- ii. **For recommendations that require additional funding, please identify those that are of greatest importance to the SAC.**

Equipment Replacement List:

1. Automatic Ceramic Pressing Oven: \$3,555.00
2. Programmable Burn/Out Oven: \$1,550.00
3. Time/Buzzer Notification Burn/Out Ovens: \$825.00
4. RPD Sand Blaster, Self Contained Compact: #2,175.00
5. RPD Electropolish Vent: \$3,400.00
6. Update Lab AV System to in wall jacks with 2 monitors, movable console and VHS/DVD Movie Cam Jack: \$2,000
7. Improvement of instructor station and cabinetry pending bond planning

**Conclusion:**

The Portland Community College Dental Laboratory Technology Program is extremely successful in graduating dental technicians who are competent and highly sought after for hire in the dental community. Much of the success is due to the dedication of the extremely experienced faculty. The resources provided by the college support the program in offering a high quality learning environment. Concerns and issues faced by the program are always listened to and given consideration by the administration. It is hoped that future bond renovation will hold exciting upgrades, allowing delivery of training with equipment and technology that graduates will encounter at the completion of the program. Graduates from the program are welcomed into the dental community and many go on to manage dental labs or become owners of their own laboratory. We, in the Dental Sciences Department are proud of this program and hope the Administration is too.

# Exhibit 1

## Assessment Plan and Results for DLT Program Goal Review

2008/2009

| <b>Goal #1</b>   |   |                                    |  |  |  |   |   |   |
|--|---|------------------------------------|--|--|--|---|---|---|
| <u>ACCESS:</u> Provide access to quality dental laboratory technology education through the use of scientific evidence based instruction and technology that meets current industry standards. |   |                                    |  |  |  |   |   |   |
| <b>Objective</b>   | <b>Evaluation Mechanism</b>   | <b>How Often Conducted</b>         | <b>Date to be Conducted/ Finished</b>            | <b>Results Expected</b>  | <b>Results Achieved</b>  | <b>Assessment of Results</b>  | <b>Person Responsible</b>                               | <b>Program Improvements as result of analysis</b>   |
| Faculty retain current Certification and Cont. Ed.   | Employee Records  | Yearly                             | Fall   | 100% have current Certificate,   | 100% FT Faculty have certificate. One Instruct.Asst . does not have Cert. 100% for CE achieved | All faculty notify director yearly in update of professional dev. plan                            | Faculty/ Program Director                               | Director to maintain and update records.<br><br>PT Instructional Asst. encouraged to obtain NADL Certification.         |
| FT Faculty attend all college inservice mtgs.  | Attendance Records  | Yearly                             | Fall<br>Winter<br>Spring                         | 100% Attendance  | 100% Attendance  | All Faculty Complying   | Faculty/ Program Director                               | Instituted program FERPA procedures; Revised Program and Curriculum Assessment Plan; Updated Competencies               |
| Faculty have current and advanced knowledge in subjects taught   | Attendance at PCC offered CE courses.<br><br>Outside CE Attendance<br><br>Outside | Yearly<br><br>Yearly<br><br>Yearly | As Offered each term<br><br>Spring<br><br>Spring | Attend at least 1 per year.<br><br>As required for NBC and/or accreditatio | All attend Inservice and Continuing education in areas taught. Professional                    | Continued emerging info updates. Individual<br><br>Responsibility Met<br><br>All Faculty Involved | Program Director<br><br>Program Director<br><br>Program | All Part Time and full time employees notified of teaching methodology courses available.<br><br><br>Newest techniques, |

|  |                                    |   |                          |  |   |  |               |   |
|--|------------------------------------|---|--------------------------|--|---|--|---------------|---|
|  | employment or Profess. Involvement |   |                          | n<br>Participate in at least one activity yearly | organization membership   |  | Director      | association initiatives shared with other faculty and students. |
| New Equipment upgrades yearly as budget allows | Yearly Budget Allocations          | 5 yr strategic plan for procuring equipment | Fall<br>Winter<br>Spring | Purchase or mainten. To equipment yearly         | 2008 CAD/CAM Software.<br>Fall 2007 New Handpieces and Denture System | Ray and Gary to implement instruction into their curriculum with lab experiences | Division Dean | Curriculum update to incorporate material.                      |

### Goal #2

**STUDENT SUCCESS:** Promote success for all dental laboratory technology students through outstanding teaching by faculty who act as mentors and professional role models and who provide instructional methodology that prepares the student to successfully complete national Recognized Graduate examinations if desired.

| Objective   | Evaluation Mechanism                   | How Often Conducted                                      | Date to be Conducted/ Finished            | Results Expected   | Results Achieved   | Assessment of Results  | Person Responsible  | Program Improvements as result of analysis   |
|---|--|--|---|--|--|--|---|--|
| Faculty act in advisory role to students          | Scheduled advising each term.          | Weekly or more often as nec.                             | Share concerns at staff mtgs.             | Improved communication/ learning and retention of Students                           | Students need extra remediation.<br># students attrition<br>Fall '08: 6<br>Fall '09: 4 | Efforts need to be made to increase enrollment and retain students                             | Dean, Director, Faculty. Grant written for phone survey of past 5 yr. graduates. Advisory committee video | Winter'09 Survey completed:<br><br>Spring '09 Video developed<br><br>Fall 09' Alumni and Employer Survey.  |
| Faculty Assessment occurs as required by contract | Records of Faculty Assessment Schedule | Formal FT Continuous Appt. & PT assessments every 3 yrs. | GC Smith, R.Ridgley, J.Camarillo, B. Hess | Overall 90% Strongly Agree/Agree ratings on survey regarding instr. teaching ability | All Instructors met 90% desired outcome  | All Instructors informed of survey findings and discussed areas where improvement is indicated | Program Director distributes student evals. Instructors develop professional growth/deve. plan            | Dialogue occurs as to implementing student comments that would enhance the level of teaching for students. |
| Students will pass                                | NBC Exam Results                       | Students receive   | Prior to application                      | 90% of students will   | 3 students tested and  | PCC had 74.79% Avg. much higher  | Gary and Ray  | Continue to reinforce students   |

|   |                                  |  |                             |  |                |   |  |   |
|---|----------------------------------|--|-----------------------------|--|----------------|---|--|---|
| certification exams   |                                  | testing orientation yearly. NBC sends results biann. to director | deadlines<br>January?       | pass exams   | passed in 2008 | than 69.70% which was the national avg. Areas lower than ntl avg. were CD, CB, DPLA           |  | use of practice tests available at PCC in the DLT lab.  |
| Faculty belong to professional organizations.<br><br>Director | OADL Membership, National Assoc? | Yearly renewal of membership                                     | As required by organization | All FT are members of OADL and participate in professional organizations |                | All Instructors involved in professional association and professional growth and development. | Instructors develop professional growth and development plan every 3 years and update director yearly.<br><br>Director does the same and updates Dean yearly | FT Faculty Members and PT Instructional Assistants provided with funds for continuing education. Inservice courses offered in educational methodology and BBP and Hazardous Waste Mgmt. |

**Goal #3**

**DIVERSITY:** Enrich the dental laboratory technology student's educational experience by providing and promoting cultural awareness that acknowledges each individual's worth and uniqueness and enhances effective interactions, communications and/or provision of care with all individuals or groups.

| <b>Objective</b>  | <b>Evaluation Mechanism</b>    | <b>How Often Conducted</b>                        | <b>Date to be Conducted/ Finished</b>   | <b>Results Expected</b>              | <b>Results Achieved</b>                              | <b>Assessment of Results</b>   | <b>Person Responsible</b> | <b>Program Improvements as result of analysis</b>  |
|---|--------------------------------|---|---|--------------------------------------|--|--|---------------------------|--|
| Faculty attend Cultural Awareness and Diversity Training offered by College | Human Resource Records         | As offered by PCC Reinforced and Enhanced Yearly  | As Required<br><br>Yearly update of material in classes.<br>Yearly discussions with ESOL Department | 100% Attendance Rosters              | 100% Attendance and Yearly enhancement of curriculum | Students who have English as their second language are at risk for completion of clinic due to lack of comprehension when communicating. | Faculty/Program Director  | 2007 Met with International Advisors to discuss enhanced advising for the international students enrolling in the program. |
| Inclusion of Cultural Awareness in Curriculum                               | Courses DT 142/143, DT 270/272 | Winter/Spring first yr and Fall/Winter second yr. | End of Spring Term 2 <sup>nd</sup> yr.  | Student Course Assignments 100% pass | 100% Pass  | Met Outcome Goal   | Ray Ridgley/Gary Smith    | Continue Activities and topics that promote cultural awareness.  |

**Goal #4**

CONTINUOUS IMPROVEMENT: Develop faculty and students who continuously seek to enhance knowledge as life-long learners by seeking peer support in professional associations, fulfilling evidence based continuing education and applying self-assessment and reflection skills.

| <b>Objective</b>  | <b>Evaluation Mechanism</b>  | <b>How Often Conducted</b>                           | <b>Date to be Conducted/ Finished</b>                        | <b>Results Expected</b>                                       | <b>Results Achieved</b>   | <b>Assessment of Results</b>   | <b>Person Responsible</b>   | <b>Program Improvements as result of analysis</b>                         |
|---|--|--|--|---|---|--|---|---|
| Students participate in advisory mtgs, attend professional presentations and conferences. | Student Association Membership Applications  | Yearly   | Continuous   | 100% Student Membership                                       | All students attended Fall '08 advisory mtg. Other mtgs. Had class reps. All students attend presentations. | Continue to involve the students with DLT professionals. OADL Conf. offered at PCC Fall 2009 | Gary/Ray.   | Students interest in profession and participation in profession increased |
| Faculty belong to professional Organizations  | 100% OADL Member, NADL? Other?   | FT Yearly update to Prof Dev. Goals PT every 3 years | FT Spring<br><br>PT during 3 yr. assessments                 | 100% Faculty membership for FT. One PT Asst. not member       | Met outcome goal  | Met outcome goal.  | Instructors inform Director yearly in Prof. Plan and supply copy of cert. | Instructors continue to act as role models of the profession.             |
| Professional Development offered to staff   | Department monies. Staff Development grants CE offerings from Professional Representatives | Monitored throughout the year.                       | Yearly<br><br>As Necessary<br><br>Yearly<br><br>As available | 100% Budget usage<br><br>Yearly Grant applications and awards | Met Outcome   | 2007-2009 All instructors and Assts. Attend CE and Inservice CE for Ed. Methodology          | Faculty/Program Director  | Encourage Instr. Asst. to join membership. Continue to pay for CE.        |

**Goal #5**

**CULTIVATING PARTNERSHIPS:** Create partnerships that effectively link students with practicing dental lab technicians and other oral health care professionals who will provide advising, mentoring and enrichment experiences in preparation for employment upon graduation.

| <b>Objective</b>                                       | <b>Evaluation Mechanism</b> | <b>How Often Conducted</b>                                  | <b>Date to be Conducted/ Finished</b>                                     | <b>Results Expected</b>   | <b>Results Achieved</b>   | <b>Assessment of Results</b>   | <b>Person Responsible</b>      | <b>Program Improvements as result of analysis</b>  |
|--|-----------------------------|---|---|---|---|--|--------------------------------|--|
| Hold Advisory Committee Meetings 2-3 x/yr.             | Minutes of Meetings         | Fall (combined mtg with all 3 programs)<br>Winter or Spring | By end of each term. Minutes distributed to members and program director. | A minimum of 5 advisory members will be present at each DA program mtg. Appropriate agenda topics for program improvement | All meetings had minimum of five committee members present.<br><br>Mission statement developed. Employer Survey Revised. Video produced about DLT | Advisory members actively involved by attending mtgs. Developing mission, promoting the profession through video and survey completion. Involved students in OADL meetings, volunteer time as presenters and observation opportunities in labs. Donation of equipment. | Josette                        | Clear understanding of mission of committee.   |
| Professional Education provided to students and staff. | Course Content and Syllabi  | Fall, Winter and Spring Terms in appropriate courses        | End of each term  | DLT students to gain enhance knowledge  | Students and staff attended CE with DLT's and in Class  | Professional development monies available for staff for CE. Opportunities for students offered throughout year. Employer showcase event.   | Individual course instructors. | Instructors informed of emerging information and inclusion of new denture technique system and CAD/CAM into curriculum. Students instruction more up to date. Network events provide additional interest in field and promote opportunities. |

**Goal #6**

COMMUNITY: Serve as a key resource to the community by comprehensively preparing competent students who will function as a dental laboratory technician upon graduation

| <b>Objective</b>                                      | <b>Evaluation Mechanism</b> | <b>How Often Conducted</b> | <b>Date to be Conducted/ Finished</b> | <b>Results Expected</b>   | <b>Results Achieved</b>                  | <b>Assessment of Results</b>                                | <b>Person Responsible</b> | <b>Program Improvements as result of analysis</b>  |
|---|-----------------------------|----------------------------|---------------------------------------|---|--|---|---------------------------|--|
| Employers Satisfied with PCC DA Graduates they employ | Employer Survey             | Once every 3 yrs.          | Spring of year of assessment.         | Results indicate ratings of "Excellent or Good" 95% of the time | Satisfactory results received on Surveys | Out of all respondents, only one marked "fair" on a rating. | Gary Smith, Jbeach        | 2 <sup>nd</sup> survey distributed Fall 2009 to obtain higher return rate. No areas of concern. Instructors will continue to distribute to area labs in person or at OADL Conf., rather than mailing, since mailing return rate is low |






**Goal #7**

ETHICS and RESPONSIBILITIES: Prepare the student to practice ethically and responsibly as a Dental Laboratory Technician.







| <b>Objective</b>  | <b>Evaluation Mechanism</b>               | <b>How Often Conducted</b>                           | <b>Date to be Conducted/ Finished</b>                             | <b>Results Expected</b>                      | <b>Results Achieved</b> | <b>Assessment of Results</b>  | <b>Person Responsible</b>        | <b>Program Improvements as result of analysis</b>  |
|---|---|--|---|--|-------------------------|---|----------------------------------|--|
| Students pass all skill evaluations                     | Informal interpersonal communication      | Continuously throughout program in courses and labs. | At completion of program graduates act ethically and responsible. | 100%   | 100%                    | Students act ethically and responsibly  | All Staff, Faculty and Students. | Continue to integrate ethics into all experiences as appropriate.  |
| Students successfully pass Ethics/ Jurisprudence course | Course Assignments, tests and final grade | Spring Term  | Final   | 100% attend all presentations and pass final | 100%                    | DLT Presenters present students with ethics and responsibilities of the profession. | Gary Smith                       | Continue to schedule presenters who are role models and present information to enhance student's knowledge of the profession prior to graduation.l |

## Exhibit #2

### *Alignment of PCC DLT Certificate Outcomes with PCC College Core Outcomes*

| DLT Certificate Outcomes   | PCC CORE OUTCOMES   |  |   |                    |   |                 |
|--|---|--|---|--------------------|---|-----------------|
|  | Communication   | Community & Environmental Responsibility   | Critical Thinking & Problem Solving   | Cultural Awareness | Professional Competence   | Self-Reflection |
| Demonstrate basic dental laboratory techniques in the design and fabrication of complete dentures, crowns and bridges, ceramic, and basic orthodontic appliances   |   |  |   |                    |  |                 |
| Demonstrate advanced skills in more complex complete denture and fixed metal to porcelain prostheses   |   |  |   |                    |  |                 |
| Apply basic knowledge of the physics and chemistry of dental materials to insure the proper materials are used in the correct proportions for specific dental laboratory procedures and that correct safety and disposal procedures are followed |   |  |  |                    |   |                 |
| Engage Correct verbal, non-verbal and written communications in the dental laboratory and dental profession as both  |  |  |   |                    |   |                 |

Dental Laboratory Technology

|   |   |   |                                     |   |   |  |
|---|---|---|-------------------------------------|---|---|--|
| a technician and team leader  |   |   |                                     |   |   |  |
| <b>DLT<br/>Certificate<br/>Outcomes</b>   | Communication   | Community & Environmental Responsibility  | Critical Thinking & Problem Solving | Cultural Awareness  | Professional Competence   | Self-Reflection  |
| Function in a Non-biased manner as a member of a diverse dental team or community.  |   |   |                                     |  |   |  |
| Design a Dental Laboratory Business Plan, invoicing system, ledger and the correct tax forms utilizing available computer software/skills                                     |   |  |                                     |   |   |  |
| Be prepared to continue dental, community and world awareness through conventions, lecture attendance and active participation in professional/non-professional organizations |   |   |                                     |   |    |  |
| Apply legal and ethical principles to the dental environment.   |   |   |                                     |   |   |  |
| Be prepared to transfer to a college or university for upper level studies in the health fields.  |  |   |                                     |   |   |  |
| Demonstrate a deeper knowledge of business procedures pertinent to owning or managing a dental laboratory.  |   |   |                                     |   |  |  |

# Exhibit 3

## DLT Program Course Alignment with Program Certificate and PCC Outcome Goals

DT Program Course Alignment with Program Certificate and PCC Outcome Goals

L= Course Addresses at a Low Level M= Course Addresses at a Moderate Level H = Course Addresses at a High Level

| DT Degree Outcomes<br>.....<br>PCC Core Outcome  | Dental Laboratory Technology Curriculum |        |        |               |               |        |               |        |               |        |        |        |               |        |               |        |        |
|--|---|--------|--------|---------------|---------------|--------|---------------|--------|---------------|--------|--------|--------|---------------|--------|---------------|--------|--------|
|  | DT 101<br>141                           | DT 120 | DT 141 | DT 102<br>142 | DT 151<br>152 | HE 125 | DT 103<br>143 | SP 100 | DT 204<br>270 | DT 253 | DT 275 | DT 276 | DT 205<br>272 | DT 254 | DT 206<br>271 | DT 284 | DT 285 |
| Demonstrate basic dental laboratory techniques in the design and fabrication of complete dentures, crowns and bridges, ceramic, and basic orthodontic appliances<br><br>PCC CO: Professional Competence  | H                                       |        |        | H             |               |        | H             |        | H             | M      | L      | L      | H             | M      | H             | H      | M      |
| Demonstrate advanced skills in more complex complete denture and fixed metal to porcelain prostheses<br><br>PCC CO: Professional Competence  |   |        |        | H             |               |        | H             |        |               |        |        |        |               |        |               |        | L      |
| Apply basic knowledge of the physics and chemistry of dental materials to insure the proper materials are used in the correct proportions for specific dental laboratory procedures and that correct safety and disposal procedures are followed.<br><br>PCC CO: Community & Environmental Responsibility and Critical Thinking and Problem Solving. | M                                       |        |        | H             | H             | M      | H             |        | H             | H      | L      | L      | H             | H      | H             | M      | M      |
| Engage correct verbal, non-verbal and written communications in the dental laboratory and dental profession as both a technician and team leader.<br><br>PCC CO: Communication   | H                                       | H      | H      | H             | H             |        | H             | H      | H             | H      | H      | H      | H             | H      | H             | H      | H      |
| Function in a Non-biased manner as a member of a diverse dental team or community.<br><br>PCC CO: Cultural Awareness   | H                                       | H      | H      | H             | H             |        |               |        | H             | H      | H      | H      | H             | H      | H             | H      | H      |

| <b>DT Degree Outcomes</b><br>.....<br><b>PCC Core Outcome</b>   | <b>DT<br/>101<br/>141</b> | <b>DT<br/>120</b> | <b>DT<br/>141</b> | <b>DT<br/>102<br/>142</b> | <b>DT<br/>151<br/>152</b> | <b>HE<br/>125</b> | <b>DT<br/>103<br/>143</b> | <b>SP<br/>100</b> | <b>DT<br/>204<br/>270</b> | <b>DT<br/>253</b> | <b>DT<br/>275</b> | <b>DT<br/>276</b> | <b>DT<br/>205<br/>272</b> | <b>DT<br/>254</b> | <b>DT<br/>206<br/>271</b> | <b>DT<br/>284</b> | <b>DT<br/>285</b> |
|---|---------------------------|-------------------|-------------------|---------------------------|---------------------------|-------------------|---------------------------|-------------------|---------------------------|-------------------|-------------------|-------------------|---------------------------|-------------------|---------------------------|-------------------|-------------------|
| Design a dental laboratory business plan, invoicing system, ledger and the correct tax forms utilizing available computer software/skills<br><br>PCC CO: Community Environmental Responsibility                       |                           |                   |                   |                           |                           |                   |                           |                   | L                         | M                 | H                 | H                 | L                         | M                 | L                         |                   | L                 |
| Be prepared to continue dental, community and world awareness through conventions, lecture attendance and active participation in professional/non-professional organizations.<br><br>PCC CO: Professional Competence |                           |                   |                   |                           |                           |                   | M                         | L                 | L                         | L                 | L                 | L                 | L                         | L                 | L                         | H                 | H                 |
| Apply legal and ethical principles to the dental environment.<br><br>PCC CO: Self-Reflection  | H                         |                   | H                 | H                         | H                         | L                 | H                         |                   | M                         | M                 | L                 | L                 | M                         | M                 | H                         | M                 | H                 |
| Be prepared to transfer to a college or university for upper level studies in the health fields.<br><br>PCC CO: Communication   | L                         |                   | L                 | L                         | L                         |                   | M                         | M                 |                           |                   |                   |                   |                           |                   |                           | M                 | M                 |
| Demonstrate a deeper knowledge of business procedures pertinent to owning or managing a dental laboratory.<br><br>PCC CO: Professional Competence   |                           |                   |                   |                           |                           |                   |                           |                   | L                         | L                 | H                 | H                 | L                         | L                 | L                         | M                 | M                 |

## **Exhibit 4**

### ***Basic Competency Assessments and Accompanying Table of Alignment with Outcomes***

Prior to graduation the student will be able to:

1. Apply general laboratory techniques to prepare and evaluate impressions and casts, use articulators, develop functional occlusion on articulated casts and fabricate custom impression trays.
2. Demonstrate the ability to fabricate complete denture prostheses to advanced competency standards.
3. Demonstrate the ability to fabricate, evaluate and repair removable partial denture prostheses.
4. Fabricate fixed prostheses, including inlays, onlays, full crowns, and bridgework.
5. Demonstrate the ability to fabricate fixed porcelain –to- metal prostheses to advanced competency standards.
6. Fabricate a variety of orthodontic appliances.
7. Use work practices and safety protocols that promote a safe environment.
8. Demonstrate business practices and procedures appropriate to managing or owning a dental laboratory business.
9. Use Oral and written communication skills for effective professional interactions.
10. Apply legal and ethical principles to the dental laboratory workplace.

| Course Taught     | Skill Competency Assessed | Skill Level | Assessed By  | Achievement Level | Results                 | Degree Outcome Has Been Met | PCC Core Outcome Has Been Met |
|-------------------|---------------------------|-------------|--|-------------------|-------------------------|-----------------------------|-------------------------------|
| DT 101            | 1,7,9,10                  | I           | Assignments, Projects  | 69.1% or better   | 100% pass rate achieved |                             |                               |
| DT 120            | 9,10                      | C           | Assignments, Quizzes, Final Exam, Oral Presentation          | 59.1% or better   |                         |                             |                               |
| DT 141            | 1,7,9,10                  | I           | Quizzes, Final Exam, Oral Presentation                       | 59.1% or better   |                         |                             |                               |
| DT151             | 9,10                      | I           | Final, Quizzes, Oral Presentation                            | 59.1% or better   |                         |                             |                               |
| Math 20 or higher |                           |             |  |                   |                         |                             |                               |
|                   |                           |             |  |                   |                         |                             |                               |
| DT 102            | 1,2,7,9,10                | D           | Assignments, Projects  | 69.1% or better   |                         |                             |                               |
| DT 142            | 1,7,9,10                  | D           | Assignments/Projects, Oral Presentation, Final Exam, Quizzes | 59.1% or better   |                         |                             |                               |
| Dt 152            | 9,10                      | D           | Final, Quizzes, Oral Presentation                            | 59.1% or better   |                         |                             |                               |
| HE 125            |                           |             |  |                   |                         |                             |                               |
|                   |                           |             |  |                   | 100% pass rate          |                             |                               |
| DT 103            | 1,2,7,9,10                | C           | Assignments, Projects, Written Paper                         | 69.1% or better   |                         | ✓ 10                        | ✓ 10                          |
| DT 143            | 1,2,7,9,10                | C           | Quizzes, Final Exam, Oral Presentation                       | 59.1% or better   |                         | ✓ 2                         | ✓ 2                           |
| SP100             |                           |             |  |                   |                         |                             |                               |
|                   |                           |             |  |                   |                         |                             |                               |
| DT 204            | 1,4,7,9                   | C           | Assignments, Projects, Weekly Skill Quizzes                  | 69.1% or better   |                         | ✓                           | ✓                             |
| DT 253            | 4,7,9                     | D           | Written Exams #1-8, Final Exam and Written Paper             | 59.1% or better   |                         |                             |                               |
| DT 270            | 4                         | C           | Written Exams #1-8 and Final Exam                            | 69.1% or better   |                         | ✓                           | ✓                             |
| DT 275            | 8                         | I/D         | Assignment, Project  |                   |                         |                             |                               |
|                   |                           |             |  |                   |                         |                             |                               |
| DT 205            | 1,5,7,9                   | C           | Assignments, Projects, Weekly Skill Quizzes                  | 69.1% or better   |                         | ✓                           | ✓                             |
| DT 254            | 5,7,9                     | D           | Written Exams #1-8 and Final Exam and Written Paper          | 59.1% or better   |                         |                             |                               |
| DT 272            | 5                         | C           | Written Exams #1-8 and Final Exam                            | 69.1% or better   |                         | ✓                           | ✓                             |
| DT 276            | 8                         | C           | In Class Exercises/Demonstrations, Assignments, Projects     |                   |                         | ✓                           | ✓                             |
|                   |                           |             |  |                   |                         |                             |                               |

| <b>Course Taught</b> | <b>Skill Competency Assessed</b> | <b>Skill Level</b> | <b>Assessed By</b>   | <b>Achievement Level</b> | <b>Results</b> | <b>Degree Outcome Has Been Met</b> | <b>PCC Core Outcome Has Been Met</b> |
|----------------------|----------------------------------|--------------------|--|--------------------------|----------------|------------------------------------|--------------------------------------|
| DT 206               | 1,3,6,7,9                        | C                  | Ortho Assignments and Projects, Partial, Assignments, Projects | 69.1% or better          |                | ✓                                  | ✓                                    |
| DT 271               | 3                                | C                  | Written Exams #1-8 and Final Exam                              | 69.1% or better          |                | ✓                                  | ✓                                    |
| DT 284               | 6,9                              | D                  | Written Quizzes and Final Exam, Written Ortho Paper            | 59.1% or better          |                |                                    |                                      |
| DT 285               | 6,7,9                            | D                  | Practical, Timed Skill Tests, Group Activities, Final Exam     | 59.1% or better          |                |                                    |                                      |

# Exhibit 5

*Example of Course Syllabi Review Conducted Each Term (Winter and Spring Courses have Similar Forms)*

| Criteria  | Fall Term DLT 1st Yr. |        |        |        |        |   |        |        | Fall Term DLT 2nd Yr. |        |        |   |        |   |        |   |
|---|-----------------------|--------|--------|--------|--------|---|--------|--------|-----------------------|--------|--------|---|--------|---|--------|---|
|   | DT 101                |        | DT 120 |        | DT 141 |   | DT 151 |        | DT 204                |        | DT 253 |   | DT 270 |   | DT 275 |   |
| Course Desc (CD)  | Y                     | N      | Y      | N      | Y      | N | Y      | N      | Y                     | N      | Y      | N | Y      | N | Y      | N |
| CD match catalog  | Y                     | N      | Y      | N      | Y      | N | Y      | N      | Y                     | N      | Y      | N | Y      | N | Y      | N |
| CD " online COG   | Y                     | N      | Y      | N      | Y      | N | Y      | N      | Y                     | N      | Y      | N | Y      | N | Y      | N |
| Content Outline   | Y                     | N      | Y      | N      | Y      | N | Y      | N      | Y                     | N      | Y      | N | Y      | N | Y      | N |
| CD match content  | Y                     | N      | Y      | N      | Y      | N | Y      | N      | Y                     | N      | Y      | N | Y      | N | Y      | N |
| Topics Schedule   | Y                     | N      | Y      | N      | Y      | N | Y      | N      | Y                     | N      | Y      | N | Y      | N | Y      | N |
| Time allotted each LE   | Y                     | N      | Y      | N      | Y      | N | Y      | N      | Y                     | N      | Y      | N | Y      | N | Y      | N |
| Specif. Instr. Obj.   | Y                     | N      | Y      | N      | Y      | N | Y      | N      | Y                     | N      | Y      | N | Y      | N | Y      | N |
| Activities/Assign   | Y                     | N      | Y      | N      | Y      | N | Y      | N      | Y                     | N      | Y      | N | Y      | N | Y      | N |
| Eval/Grading Proc.  | Y                     | N      | Y      | N      | Y      | N | Y      | N      | Y                     | N      | Y      | N | Y      | N | Y      | N |
| ADA Statement   | Y                     | N      | Y      | N      | Y      | N | Y      | N      | Y                     | N      | Y      | N | Y      | N | Y      | N |
| Attend Policy   | Y                     | N      | Y      | N      | Y      | N | Y      | N      | Y                     | N      | Y      | N | Y      | N | Y      | N |
| Prof. Statement   | Y                     | N      | Y      | N      | Y      | N | Y      | N      | Y                     | N      | Y      | N | Y      | N | Y      | N |
| Retention/Remed   | Y                     | N      | Y      | N      | Y      | N | Y      | N      | Y                     | N      | Y      | N | Y      | N | Y      | N |
| Flex. Statement   | Y                     | N      | Y      | N      | Y      | N | Y      | N      | Y                     | N      | Y      | N | Y      | N | Y      | N |
| Content:  |                       |        |        |        |        |   |        |        |                       |        |        |   |        |   |        |   |
| Reviews Info  | Y                     | N      | Y      | N      | Y      | N | Y      | N      | Y                     | N      | Y      | N | Y      | N | Y      | N |
| Enhances Info   | Y                     | N      | Y      | N      | Y      | N | Y      | N      | Y                     | N      | Y      | N | Y      | N | Y      | N |
| Duplicates Info   | Y                     | N      | Y      | N      | Y      | N | Y      | N      | Y                     | N      | Y      | N | Y      | N | Y      | N |
| of Course #   |                       |        |        |        |        |   |        |        |                       |        |        |   |        |   |        |   |
| Comments to Instructor:   |                       |        |        |        |        |   |        |        |                       |        |        |   |        |   |        |   |
| Reviewer:   |                       |        |        |        |        |   |        |        |                       |        |        |   |        |   |        |   |
| Date Reviewed:  |                       |        |        |        |        |   |        |        |                       |        |        |   |        |   |        |   |
| Course Instructor   | DT 101                | DT 120 | DT 141 | DT 151 |        |   |        | DT 204 | DT 253                | DT 270 | DT 275 |   |        |   |        |   |
| Read Review:  |                       |        |        |        |        |   |        |        |                       |        |        |   |        |   |        |   |
| Accreditation Standard 2-4: Written documentation of each course in the curriculum must be provided and include the course description, course outline topics to be presented, specific instruct. objectives, learning experiences including time needed for LE, and eval proced. |                       |        |        |        |        |   |        |        |                       |        |        |   |        |   |        |   |

## End of Term Course Review Conducted by Instructor End of Term Curriculum Review Form DT Program

Date of Review \_\_\_\_\_ Course Taught \_\_\_\_\_ Instructor \_\_\_\_\_ Term \_\_\_\_\_

1. Check the competencies that are taught in this course and indicate level of proficiency expected of \_\_\_\_\_ student  
(I= Introductory, D= Developing, C= Competent)

- ✓ Level Prior to graduation the student will be able to:
- I D C Apply general laboratory techniques to prepare and evaluate impressions and casts, use articulators, develop functional occlusion on articulated casts and fabricate custom impression trays.
  - I D C Demonstrate the ability to fabricate complete denture prostheses to advanced competency standards.
  - I D C Demonstrate the ability to fabricate, evaluate and repair removable partial denture prostheses.
  - I D C Fabricate fixed prostheses, including inlays, onlays, full crowns, and bridgework.
  - I D C Demonstrate the ability to fabricate fixed porcelain –to- metal prostheses to advanced competency standards.
  - I D C Fabricate a variety of orthodontic appliances.
  - I D C Use work practices and safety protocols that promote a safe environment.
  - I D C Demonstrate business practices and procedures appropriate to managing or owning a dental laboratory business.
  - I D C Use Oral and written communication skills for effective professional interactions.
  - I D C Apply legal and ethical principles to the dental laboratory workplace.

2. Teaching Format \_\_\_\_\_ Lecture \_\_\_\_\_ Online \_\_\_\_\_ Hybrid \_\_\_\_\_ Lab \_\_\_\_\_ Clinic \_\_\_\_\_

3. Evaluation Methods Used:

|                            |                             |                  |
|----------------------------|-----------------------------|------------------|
| Assignments/Projects _____ | Oral Presentation _____     | Quizzes _____    |
| Group Activities _____     | Lab/clinic skill eval _____ | Midterm _____    |
| Research _____             | Self Evaluations _____      | Final Exam _____ |
| Written paper _____        | Table Clinic _____          | Journals _____   |
| Portfolios _____           | Comm. Rotations _____       | Other _____      |

4. List courses in the DA Program that Review/Enhance material presented in this course:

|             |                      |        |         |
|-------------|----------------------|--------|---------|
| Topic _____ | Other Course/s _____ | Review | Enhance |
| Topic _____ | Other Course/s _____ | Review | Enhance |
| Topic _____ | Other Course/s _____ | Review | Enhance |
| Topic _____ | Other Course/s _____ | Review | Enhance |

5. How do you coordinate instruction with the other course instructors?

6. What emerging information/technology/text/evidence or research do you plan on incorporating into this course in the future?

7. Based on your answer to # 6 what resource support will you need to help you?

8. Is there any subject material that is outdated and should be removed?

List:

Why:

9. What changes will you make to the course based on student evaluations, exit/alumni surveys, board results, advisory committee comments, employer surveys or self-assessment?

10. If you were not able to cover everything included in the course content, what provisions have you made to assure students will receive the information?

Topic:

Plan for Info presentation to students:

11. Describe any factors (positive or negative) that had an impact on your ability to achieve your teaching goals for this course:

**Final Grade Distribution**

| <b>Grade</b>      | <b>A</b> | <b>B</b> | <b>C</b> | <b>D</b>                | <b>F</b>                | <b>I</b>           | <b>W</b>         |
|-------------------|----------|----------|----------|-------------------------|-------------------------|--------------------|------------------|
| <b># Students</b> |          |          |          | Remediation Offered Y N | Remediation Offered Y N | Plan Developed Y N | Personal Program |

**Please Return this Course Review to the Program Director by WEEK 2 of the Next Term**

Dental Laboratory Technology

## Exhibit 6

### *Course Pass Rates for the Previous Three Years*

| Course#                        | First Yr Students               | 2009/2010 |    | 2008/2009 |    | 2007/2008 |    |
|--------------------------------|---------------------------------|-----------|----|-----------|----|-----------|----|
|                                |                                 | Pass      | NP | Pass      | NP | Pass      | NP |
| <b>Fall</b>                    |                                 |           |    |           |    |           |    |
| DT 101                         | Dental Tech Lab I               | 24        | 0  | 16        | 0  | 22        | 0  |
| DT 120                         | Dental Anatomy                  | 23        | 1  | 16        | 0  | 21        | 1  |
| DT 141                         | Denture Techniques I            | 22        | 2  | 15        | 1  | 22        | 0  |
| DT 151                         | Science of Dental Materials I   | 21        | 3  | 16        | 0  | 21        | 1  |
| <b>Winter</b>                  |                                 |           |    |           |    |           |    |
| DT 102                         | Dental Tech Lab II              | 24        | 0  | 13        | 0  | 20        | 0  |
| DT 142                         | Denture Techniques II           | 24        | 0  | 13        | 0  | 20        | 0  |
| DT 152                         | Science of Dental Mat. II       | 23        | 1  | 13        | 0  | 20        | 0  |
| HE 125                         | First Aid and Ind. Safety       | 24        | 0  | 12        | 0  | 20        | 0  |
| <b>Spring</b>                  |                                 |           |    |           |    |           |    |
| DT 103                         | Dental Tech Lab III             | 24        | 0  | 13        | 0  | 20        | 0  |
| DT 143                         | Denture Techniques III          | 24        | 0  | 12        | 0  | 20        | 0  |
| <b>Fall Second Yr Students</b> |                                 |           |    |           |    |           |    |
| DT 204                         | Dental Technology Lab IV        | 14        | 0  | 16        | 1  | 21        | 0  |
| DT 253                         | Science of Dent. Mat. III       | 14        | 0  | 17        | 0  | 21        | 0  |
| DT 270                         | Inlay Casting, Crown and Bridge | 14        | 0  | 17        | 0  | 21        | 0  |
| DT 275                         | Dental Lab Mgmt.                | 13        | 1  | 17        | 0  | 21        | 0  |
| <b>Winter</b>                  |                                 |           |    |           |    |           |    |
| DT 205                         | Dental Technology Lab V         | 12        | 1  | 16        | 0  | 17        | 3  |
| DT 254                         | Science of Dent. Materials IV   | 13        | 0  | 16        | 0  | 19        | 1  |
| DT 272                         | Dental Ceramics                 | 13        | 0  | 16        | 0  | 19        | 1  |
| DT 276                         | Dental Lb Mgmt. Lab             | 13        | 0  | 16        | 0  | 19        | 1  |
| <b>Spring</b>                  |                                 |           |    |           |    |           |    |
| DT 206                         | Dental Tech Lab VI              | 12        | 1  | 18        | 0  | 20        | 0  |
| DT 271                         | Partials, Clasp and Bar         | 12        | 1  | 18        | 0  | 20        | 0  |
| DT 284                         | Dental Specialties              | 12        | 1  | 16        | 0  | 20        | 0  |
| DT 285                         | Dental Seminar and Practicum    | 12        | 1  | 16        | 0  | 20        | 0  |

# Exhibit 7

## Student Exit Survey Results

Dental Laboratory Technology

### Portland Community College Student Exit Survey

Please rate your ability to perform the following procedures or skills:  
1 = poor, 2 = below average, 3 = average, 4 = above average

| General Skills   | 1 | 2 | 3  | 4  | Not Answered |
|--|---|---|----|----|--------------|
| Use correct dental terminology   |   | 1 | 6  | 10 |              |
| Relate your knowledge of dental anatomy to dental prosthesis construction              |   | 1 | 6  | 10 |              |
| Apply principles of occlusion to your work   |   |   | 8  | 9  |              |
| Use basic math as necessary  | 1 |   | 7  | 9  |              |
| Maintain and repair lab equipment  |   |   | 8  | 9  |              |
| Apply safety principles and practices in the laboratory setting                        |   |   | 1  | 16 |              |
| Practice within OSHA infection control guidelines                                      |   | 1 | 3  | 12 | 1            |
| <b>Specialty Area I: Complete and Partial Dentures</b>                                 |   |   |    |    |              |
| Construct stabilized base plates   |   |   | 7  | 9  | 1            |
| Design and build occlusal rim  |   | 2 | 4  | 10 | 1            |
| Wax a complete denture in full occlusion   |   |   | 6  | 10 | 1            |
| Reline a denture   |   |   | 7  | 9  | 1            |
| Rebase a denture   |   |   | 7  | 9  | 1            |
| Construct an immediate overdenture   | 1 |   | 4  | 11 | 1            |
| <b>Specialty Area II: Crown and Bridge</b>   |   |   |    |    |              |
| Wax a full crown in occlusion within 45 minutes  |   | 2 | 4  | 10 | 1            |
| Construct crown and bridge frameworks that will function in a variety of malocclusions |   |   | 5  | 11 | 1            |
| Individualize crown and bridge through application of porcelain and other veneers      |   |   | 7  | 9  | 1            |
| Produce various interceptive orthodontic appliances                                    |   | 1 | 8  | 7  | 1            |
| <b>Professionalism Skills</b>  |   |   |    |    |              |
| Speed and efficiency   |   | 1 | 10 | 6  |              |
| Problem Solving  |   | 1 | 7  | 9  |              |
| Following a work order   |   |   | 8  | 9  |              |
| Time management skills   |   |   | 8  | 9  |              |
| Organizational skills  |   |   | 5  | 12 |              |

|  |          |          |          |          |                     |
|--|----------|----------|----------|----------|---------------------|
| Confidence in working as a DLT                                     |          | 2        | 6        | 9        |                     |
| Reliability and dependability                                      |          |          | 7        | 10       |                     |
| Communication with Dentists  |          |          | 4        | 13       |                     |
| <b>1 = poor, 2 = below average, 3 = average, 4 = above average</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>Not Answered</b> |
| Communication with Lab owners                                      |          |          | 4        | 13       |                     |
| Communication with Co-workers                                      |          |          | 1        | 16       |                     |
| Attendance and punctuality   |          |          | 5        | 12       |                     |
| Professional appearance  |          |          | 8        | 9        |                     |
| Business skills  |          | 1        | 6        | 10       |                     |
| Understanding of professional ethics                               |          |          | 6        | 11       |                     |

**Please comment on the following:**

I think the DLT Program could improve in the following areas:

1<sup>st</sup> yr Too much time taken to make occlusal rims.

2<sup>nd</sup> yr secondary instructor is doing nothing. Students sometimes wait hours to get to talk to the instructor. If more organized though, it will be more efficient. Students are wasting time waiting for instructor.

Need more help with assistant. (4) Long wait to consult teacher

More technology on what is going on in lab.

The curriculum is kinda disorganized. Grading system should be fairer...somebody's "B" should not be someone else's "A".

Have examples and pictures to follow the steps of a process. Demos need to be clearer along with the assignment sheet.

The assistant needs to help Gary more. He has years of experience, but hardly does more than take attendance. Gary has to field all questions and problems.

I wish we had learned more about CAD Cam.

Better drain screen because "careless" people get gypsum down the drain.

Be more current with what is actually being done in labs (2). Material is kind of out dated.

Math requirement should make more sense

More focus on becoming a CDT by practicing for the testing process.

More access to information and having questions answered.

Space, more and individual hands on demos. We need mixing water faucets. Need lab schools to the south area of Oregon.

I think the strongest aspects of the DLT program are:

Crown and bridge. Overall everything is good and well organized (except what is written in the point above).

We learn and understand a lot about C&B and denture and how they affect a person who needs teeth.

Dental Laboratory Technology

The teachers! (3) They don't have it easy. We ask a lot of questions. They are experienced and helpful.

The diversity of the problems studied here and the dexterity with which the instructors worked with us.

Demos were great so I could get the clear understanding.

Learning how to make crowns and control the metals.

Guest speakers and contacts in the field. The best way to get a job is to know people.

Gary is a great instructor (2). He seems very passionate about teaching; has engineer thoughts and knowledge.

The instructors have varied backgrounds with long histories in the lab industry. They encourage connecting science to the art.

Covers the whole field and areas of specialties.

The teachers and contact with current technology. Also, great level of caring from teachers.

Equipment; Instructors; Program.

Are you satisfied with your choice of DLT as a career goal? Yes = 15, Maybe = 1, No = 1

*Comment:* I want to continue on into health administration.

I wish employers would pay #12.00/hour to start since I have had two years of training.

What are your future plans/goals?

Working in a dental lab for a few years, then open my own crown and bridge lab.

Work in a lab right now. (3) My goals are to become very good at what I'm doing and make life better for others.

More School.

Become a

DLT and excel.

Want to get my own lab. (2)

I hope to be the best denture technician as I can be. Maybe more school later on.

Continue to work at my non-DT job FT while seeking PT or volunteer experience in the DT field.

Work and become a master at my trade. (2)

Mentor with a lab owner for six months to one year. Hopefully open my own cosmetic lab.

Become #1 technician in Oregon.

Develop a business plan

Get a denturist license

Do you already have a job in DLT when you graduate? Yes \_\_\_5\_\_\_ No \_11\_\_\_ Not answered = 1

If yes, how many days/hours per week?

5 days; 14 hrs/wk; 20 hrs/wk; 20 hrs/wk; 24 hours/wk

## ***Alumni Survey Results***

### **Winter 2009 DLT Survey of Graduates from 2003-2008**

#### **DLT Phone Survey Questions:**

**1. What year did you graduate?**

Did Not Graduate = 2

2003 = 3

2004 = 3

2005 = 0

2006 = 4

2007 = 1

2008 = 1

**2. Are you currently working as a DLT?**

No = 10

Yes = 3

Has become a Denturist = 1

**3. If Yes,**

**How many days/week?** 5 days/wk = 2      5-6days/wk = 1

**Type of setting?** Crown/Bridge Lab = 1      Lab = 2

**Starting Pay rate?** \$10/hr, \$150/month ('04 grad)

**Current Pay rate?** \$20-25/hr, 12.95/hr, 1,800/month

**Own lab?** Working in Father's lab = 1

**4. If No,**

**Reason:**

Jobs too hard to find (2)

Found a better job

Stay at home mom (3)

Ran out of financial aid (did not graduate)

Took too much time to get good at it.

No Hire.

**Are you planning on returning to DLT work?**

No Answer = 7

No = 2

Yes = 3

**5. Upon graduation from the PCC DLT program, how prepared did you feel for an entry level position as a DLT:**

a. **Very Prepared** = 6

b. **Somewhat Prepared** = 5

c. **Not prepared** = 1

No answer = 2

Comment:

**6. Would you recommend to others to become a DLT? Why or Why Not?**

No answer = 2

No = 7

Yes = 5

**Comments:** Not enough pay, very hard job, the jobs are just not there, pay, economy: too much competition.

**7. Would you recommend to others to obtain their training through the PCC DLT Program?**

No answer = 5

No = 2

Yes = 7

**Comments:** They were not hiring anyone with training, they hired off the street and paid sam low wages. Pay is not equal to training.

Very good program (2), loved the instructors.

**8. What should the program continue doing in preparing students?**

No Answer = 4

Well rounded, Very good instructors 92), Help find jobs, more training. Great interaction with teachers and creative assignments.

**9. What suggestions for improvement to the program do you have?**

No answer = 7

Guarantee jobs, Need more molds, less people, more instructor control.

Increase speed. Make program either Crown and bridge or dentures.

Teacher:student ratio

More porcelain stacking.

Outdated equipment/materials

Add classes to update denturists.

**10. Is there anything else you would like to add?**

No answer: If you are not a pushy person, you don't get your work done. Too much talking while taking tests. Not enough teacher participation.

Market flooded.

**The results of the Alumni survey distributed at the Oregon Association of Dental Labs at the Fall 2009 Conference are reported below:**

Alumni Survey Conducted Fall 2009

Dental Laboratory Technology

**Portland Community College Graduates**

*Please complete the following survey. Make Comments on Back*

1. I graduated from the PCC Dental Program with a  
Certificate \_\_\_1\_\_\_ Associates Degree \_\_\_4\_\_\_ Neither \_\_\_\_\_
2. Overall I feel my training at PCC was Excellent \_\_\_5\_\_\_ Good \_\_\_\_\_ Satisfactory \_\_\_\_\_  
Unsatisfactory \_\_\_\_\_
3. While attending, my Dental Lab assessments were Average \_\_\_\_\_ Above Avg. \_\_\_b\_\_\_
4. To me the most positive asset/s of PCC's Dental Lab Training Program is/are:  
The demos and hands on training.  
Hands on work  
The organization and the facility  
The continual support
5. I would like to suggest/recommend the following change/s to the PCC program:  
None  
Update curriculum to current lab procedures and materials.  
It's been too long ago to make any suggestions
6. I took the Recognized Graduate examination Yes \_\_\_5\_\_\_ No \_\_\_0\_\_\_ (if No, skip to #8)
7. In the RG exam I found the most difficulty with  
Too long ago to remember  
I was really well prepared and did not find a lot of difficulty  
Ortho
8. The dental terminology, knowledge of dental anatomy and occlusion principles assisted me in my  
employment: Strongly Agree \_\_\_5\_\_\_ Agree \_\_\_\_\_ Disagree \_\_\_\_\_
9. The safety principles and OSHA guidelines I learned at PCC were beneficial in my employment:  
Strongly Agree \_\_\_3\_\_\_ Agree \_\_\_2\_\_\_ Disagree \_\_\_\_\_
10. My Training in Complete and partial dentures was: Excellent \_\_\_1\_\_\_ Good \_\_\_4\_\_\_ Satisfactory  
\_\_\_\_\_ Unsatisfactory \_\_\_\_\_

Dental Laboratory Technology

11. My training in Crown and Bridge was: Excellent \_\_\_4\_\_\_ Good \_\_\_1\_\_\_ Satisfactory \_\_\_\_\_  
Unsatisfactory \_\_\_\_\_

12. My training in Orthodontic appliances was: Excellent \_\_\_2\_\_\_ Good \_\_\_3\_\_\_ Satisfactory \_\_\_\_\_  
Unsatisfactory \_\_\_\_\_

13. The skills (technical and professional) I feel are important for success in dental technology include:

Speed \_\_\_3\_\_\_ Efficiency \_\_\_4\_\_\_ Problem Solving \_\_\_5\_\_\_ Following Directions \_\_\_5\_\_\_ Time  
Management \_\_\_4\_\_\_ Organization \_\_\_4\_\_\_ Confidence \_\_\_2\_\_\_ Reliability \_\_\_2\_\_\_ Communication \_\_\_3\_\_\_  
Attendance \_\_\_2\_\_\_ Punctuality \_\_\_\_\_ Personal Appearance \_\_\_1\_\_\_ Business Knowledge \_\_\_\_\_  
Ethics \_\_\_3\_\_\_ Other:

14. Of the skills listed above I feel the most important for success in Dental Lab Technology is:

Time Mgmt, Efficiency Speed, Problem Solving

Following Directions

Following Directions, Problem Solving

15. I began working in a Dental Lab: Before I graduated \_\_\_4\_\_\_ After I graduated \_\_\_1\_\_\_

16. In my first Dental Lab job I made/did/was responsible for:

Waxing and Ceramics

Dentures

Model Work

Everything in Crown and Bridge

Model prep/casting

17. Since that time I have been employed the following Dental Lab areas:

Crown/Bridge (4 responses) , Model work (1), Dentures (1)

18. I have worked in Dental Technology for about \_\_\_13, 6, 8, 27, 14\_\_\_\_\_ Years.

19. My beginning Salary was: None Listed

20. My Salary/income: increased regularly \_\_\_4\_\_\_ Increased irregularly \_\_\_1\_\_\_ Is based on my lab  
ownership and income \_\_\_\_\_

21. I own a lab: Yes \_\_\_1\_\_\_ for # Years\_\_\_\_\_, No, but have future plans to own a lab \_\_\_1\_\_\_, I do not  
have ownership plans \_\_\_\_\_3\_\_\_\_\_.

22. My current income from Dental Lab Technology is about \_\_\_\_\_/ hour or, \_\_\_\_\_/Yr.

23. Overall I feel my current income is : Good \_\_\_\_\_, Satisfactory \_\_\_4\_\_\_, Unsatisfactory \_\_\_1\_\_\_

24. I receive (or, as an employer provide) the following benefits: Health Insurance \_\_\_2\_\_\_ Retirement plan  
\_\_\_3\_\_\_ Paid vacation \_\_\_4\_\_\_ Paid Sick leave \_\_\_2\_\_\_ Other:

25. If I could change anything about Dental Technology, I would like to see/recommend:

Better Benefits, Higher pay/benefits, More Continuing Education, To be able to do high quality work  
with good pay and not be overworked.

## Employer Survey Results

### Portland Community College Dental Lab Tech Program

Employer Survey N=8

Type of Lab Setting:           General Private Practice    4  
   Group/HMO                        0  
   Specialty Practice            2    Type: C&B, Cosmetic  
   Other:                             1                    Full Service Lab

Zip Code of your dental lab practice: 97035, 015 (2), 420, 215, 214, 838

Do you currently employ a graduate of the PCC DLT Program? Yes 5 No 3

If Yes, how many PCC DLT Graduates are you currently employing? 1 = 3 responses, 3, 5

If No, have you every employed a PCC DLT Graduate? Yes \_\_\_\_\_ No 3

Would you consider employing another PCC DLT Graduate if a position were available?  
 Yes 6 No \_\_\_\_\_.

If you *currently* employ a PCC DLT Graduate continue to **Section A**.

If you *do not currently* employ a PCC DLT Graduate, please skip to **Section C**.

### Section A

How long has your PCC DLT Graduate/s been employed in your practice? 9 yrs, 2+ yrs, 1 yr, <1 yr, 9 mos.

What year did he/she graduate? 2008                    Unknown \_\_\_\_\_

In your opinion, how well does the technician *in your employ* perform in the following areas:  
 (Record "NA" if not applicable)

| Knowledge Based Skills                         | Poor | Fair | Good | Excellent |
|--|------|------|------|-----------|
| A1 Speed and efficiency                        |      | 1    | 2    | 2         |
| A2 Problem Solving                             |      | 1    | 3    | 1         |
| A3 Following a work order                      |      |      | 3    | 2         |
| A4 Time management skills                      |      | 1    | 2    | 2         |
| A5 Organizational skills                       |      |      | 4    | 1         |
| A6 Confidence in working as a DLT              |      | 1    | 2    | 2         |
| A7 Reliability and dependability               |      |      | 2    | 3         |
| A8 Communication with:                         |      |      | 2    |           |
| A9                                    Dentists |      |      | 2    |           |
| A10                                 Lab Owners |      |      | 3    |           |
| A11                                 Co-workers |      |      | 3    | 1         |
| A12 Attendance and punctuality                 |      |      | 2    | 3         |
| A13 Professional Appearance                    |      |      | 3    | 2         |

Dental Laboratory Technology

|   |  |   |   |   |
|---|--|---|---|---|
| <b>A14</b> Business skills                      |  | 1 | 3 |   |
| <b>A15</b> Understanding of professional ethics |  |   | 3 | 1 |

**Comments:** \_\_\_\_\_

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## Section B

| <b>Professional Skills and Specialty Areas</b>  | <b>Poor</b> | <b>Fair</b> | <b>Good</b> | <b>Excellent</b> |
|---|-------------|-------------|-------------|------------------|
| <b>B16</b> Uses correct dental terminology.   |             |             | 3           | 2                |
| <b>B17</b> Relates knowledge of dental anatomy to dental prosthesis construction.                   |             |             | 2           | 2                |
| <b>B18</b> Applies principles of occlusion to work.   |             |             | 3           | 2                |
| <b>B19</b> Uses basic math as necessary.  |             |             | 2           | 2                |
| <b>B20</b> Maintains and repairs lab equipment.   |             | 2           | 2           |                  |
| <b>B21</b> Applies safety principles and practices in the laboratory setting.                       |             | 1           | 4           |                  |
| <b>B22</b> Practices within OSHA infection control guidelines.                                      |             |             | 2           | 2                |
| <b>Specialty Area 1: Complete and Partial Dentures</b>  |             |             |             |                  |
| <b>B23</b> Constructs stabilized base plates.   |             | 1           | 1           | 1NA              |
| <b>B24</b> Designs and builds occlusal rim.   |             | 1           | 1           | 1NA              |
| <b>B25</b> Waxes a complete denture in full occlusion.  |             | 1           | 1           | 1NA              |
| <b>B26</b> Relines a denture.   |             | 1           | 1           | 1NA              |
| <b>B27</b> Rebases a denture.   |             | 1           | 1           | 1NA              |
| <b>B28</b> Constructs an immediate overdenture.   |             | 1           | 1           | 1NA              |
| <b>Specialty Area 2: Crown and bridge:</b>  |             |             |             |                  |
| <b>B29</b> Wax a full crown in occlusion within 45 minutes.   |             | 2           | 1           | 1                |
| <b>B30</b> Constructs crown and bridge frameworks that will function in a variety of malocclusions. |             |             |             |                  |
| <b>B31</b> Individualizes crown and bridge through application of porcelain and other veneers.      |             | 2           |             | 2NA              |
| <b>B32</b> Produces various interceptive orthodontic appliances.                                    |             | 1           |             | 2NA              |

**Please continue to Section C. on the back page.**

---

**Section C** Please answer the questions below whether you currently employ a PCC Dental Lab Tech Graduate, or not. The information you provide will help us serve your needs as employers through future curriculum revisions.

**Please list the primary responsibilities of a dental laboratory technologist employed by your lab.**

- Model prep, crown wax up, casting/finishing, basic porcelain building
- Model/die, waxing, metal finishing
- Everything except ceramics
- Model prep, waxing/investing/casting/ pressing, gold finishing, ceramics, implant work.

**What is the starting salary range for a DLT in your lab?** \$15, \$10-12, \$10, \$14, \$10-15, \$8.50-10, \$10, \$9

**Please indicate the type of technology you currently expect your DLT to utilize or in your laboratory:**

\_\_\_\_\_ Computer business programs                      Type/Program: Quick Books, Labnet

\_\_\_\_\_ Other Technology utilized                              Type Procera (2), Radia

\_\_\_\_\_ Other Technology utilized                              Type Ovens, presses, casting  
machine, model room.

\_\_\_\_\_ Other Technology utilized                              Type Cad/Cam, Pressing

**Please indicate the level of competence that you expect of a new graduate in regards to time management, supervision/help needed and finished quality:**

- To understand and be able to speak the language.
- Reliable/show up on time, speed at tasks comes with practice. Do it right first and then quickly. Presentation of models is important too.
- Most are entry level.
- Should improve quickly with experience.
- Complete all model work- basic waxing skills, opaque and buildup
- Complete understanding of processes and terminology. Some ability to produce work unsupervised.
- Book knowledge good, speed needs work.
- Basic skills and an understanding of the whole process. We've tried to hire from PCC but could not get students to work in our area.

**If the college were able to provide continuing education opportunities, would you be interested in attending? Yes = 4 or No. =3 If yes, what topics would be of value to you? Maybe = 1**

- All Phases of Lab Technology.
- This industry is going digital, that needs to be a focus.
- Infection control, Advanced Porcelain skills.
- Implants

**Would you consider being a member of the Oregon Association of Dental Laboratories? If yes, Please call Carol Grace at OADL 503 355-0550**

Already is a member = 4

Yes = 1

Thank you for your feedback on this survey. Please enclose it in the self-addressed envelope and mail it by **April 30th.**

**Please see the results of the additional employer survey distributed at the Fall 2009 OADL Conference:**

Dental Laboratory Technology

**Employer of Portland Community College Graduates**

*Please complete the following survey. Make Comments on Back*

1. I graduated from the PCC Dental Program with a  
Certificate \_\_\_\_3\_\_\_\_ Associates Degree \_\_\_\_2\_\_\_\_ Neither \_\_\_\_\_
2. Overall I feel my training at PCC was Excellent \_\_\_\_2\_\_\_\_ Good \_\_\_\_3\_\_\_\_ Satisfactory \_\_\_\_\_  
Unsatisfactory \_\_\_\_\_
3. Students from the PCC program overall have: Good \_\_2\_\_ Satisfactory \_\_3\_\_ Unsatisfactory \_\_\_\_  
beginning skills.
4. To me the most positive asset/s of PCC's Dental Lab Training Program is/are:  
There is no other source of trained technicians in Oregon and only one other program in the  
Northwest! We need people trained to do this important work.  
It provides a good base level of knowledge.  
They are in Oregon. The passion and expertise given by the instructors  
It provides a good environment to practice skills and learn the anatomy of the mouth.  
They come to us speaking the same language with expected level of skill.
5. I would like to suggest/recommend the following change/s to the PCC program:  
None  
CAD/CAM Training  
CAD/CAM and Ceramics  
The biggest problem with any technician is attention to detail.
6. My credentials in Dental Lab Technology include:  
No answers
7. I have been a lab owner for (years) \_13, 5, 24, 8, 35\_\_\_\_\_
8. Knowledge of dental terminology, anatomy and occlusion principles assisted my employees:  
Strongly Agree \_\_\_\_5\_\_\_\_ Agree \_\_\_\_\_ Disagree \_\_\_\_\_
9. Knowledge of safety principles ;and OSHA guidelines were beneficial for my employees:  
Strongly Agree \_\_\_\_2\_\_\_\_ Agree \_\_\_\_3\_\_\_\_ Disagree \_\_\_\_\_
10. The dental specialties of my lab are:  
Crown/bridge, ceramics, RPD and Dentures  
Crown and Bridge  
Ceramics/Crown and Bridge CAD  
CAD/CAM – Ceramics  
Crown and Bridge, Ceramics, Implants

Dental Laboratory Technology

11. My personal specialty(ies) in Dental Technology is/are:

Ceramics and Cerec  
Ceramics, Crown and Bridge, CAD  
CAD/CAM. Ceramics  
Everything  
Crown/Bridge and Ceramics

12. I believe it is important to be a Certified Dental Technologist: Yes 3 No 2

13. The skills (technical and professional) I feel are important for success in dental technology include:

Speed 3 Efficiency 4 Problem Solving 4 Following Directions 4 Time Management 3  
Organization 3 Confidence 4 Reliability 5 Communication 4 Attendance 3  
Punctuality 2 Personal Appearance 1 Business Knowledge 1 Ethics 4 Other:

14. Of the skills listed above I fee the most important for success in Dental Lab Technology is:

Competence at industry entry level  
An attitude of self-improvement

15. I began working in dental technology in (what year): 1973, 2004, 1972, 1994, 1954

16. In my first Dental Lab job I made/did/was responsible for: Full Service in house tech, Everything,  
Partial finishing,, Model work/wax/metal finishing, Instructor.

17. Since that time I have been employed the following Dental Lab areas: Ceramics, Everything, Crown  
and Bridge/Ceramics, Dentures, RPD's, Ceramics

18. I have worked in Dental Technology for about 36, 5, ,35, 15, 56 Months or Years.

19. My beginning Salary was:8.00/hr, You don't want to know

20. My Salary/income: increased regularly 3 Increased irregularly \_\_\_\_\_ Is based on my lab  
ownership and income 2

21. I plan to continue to own a lab: Yes 3 Sell my lab in the near future: 1 Neither \_\_\_\_\_

22. My current income from Dental Lab Technology is about \_\_\_\_\_/ hour or, 89,000, 175,000,  
100,000, 75,000 /Yr.

23. Overall I feel my current income is : Good 1, Satisfactory 2, Unsatisfactory \_\_\_\_\_

24. I provide the following benefits: Health Insurance 2 Retirement plan 2 Paid vacation  
2 Paid Sick leave 2 Other:

25. If I could change anything about Dental Technology, I would like to see/recommend:

Licensure, The desire to take risks

## Exhibit 8

### *Advisory Committee Meeting Minutes*

#### Dental Laboratory Adv Bd Meeting Minutes

Attendees: Josette Beach (Prog Dir), Gary Smith (Sr. DLT Instr), Ray Ridgley (DLT Instr), Doug Horton (Lab Owner & Past Dir OADL), Tom Gregoire (Lab Owner & Past Dir OADL), Mario Cardoza (Graduate & Lab Owner), John Saito, Division Dean, Kate Chester, PCC Public Relations

Date: Spring Term

Time: Phone Meetings/emails

Location: Sylvania HT201

| <b>Subject</b>  | <b>Discussion</b>  | <b>Decision</b>  | <b>Follow-up</b>                                       |
|---|--|--|--|
| 1. Video Production of DLT Lab  | Art Institute Student and Mario Proposed Video of DLT Program  | Receive college approval for production  | Josette will do  |
| 2. Email sent to Kate Chester to Receive approval for production to start | Josette informed Kate Chester and Dean. Campus President was informed  | Approval received if no cost to college. Need consent To video form.                           | Josette to inform Tom Gregoire                         |
| 3. Phone conversation with Tom Gregoire                                   | Josette informed Tom G. that approval Received and stipulations  | Tom will work with Mario and Art Institute Student on Development of video script              | Tom will inform Josette/Ray/Gary when filming to begin |
| 4. Phone call from Tom Gregoire   | There will be a cost of production. He and Doug Horton will present to the OADL to see if they will fund the cost as this will be promotion of the profession. | Information to be presented to OADL members at upcoming meeting.                               | Tom will let Josette know outcome.                     |
| 5. Phone call from Tom Gregoire   | OADL cannot financially support the Video production at this time.   | Josette will inform DLT instructors and institution administration of cancellation of project. | Josette email to Kate Chester and Dean                 |

6. CAD/CAM Software Received Gary Smith and Doug Horton will develop Students will use soft ware at PCC Gary and Doug to Pla  
 Incorporating into courses and go to Doug's Lab for observ. Plan.

**Dental Laboratory Adv Bd Meeting Minutes**

**Attendees: Josette Beach (Prog Dir), Gary Smith (Sr. DLT Instr), Ray Ridgley (DLT Instr), Doug Horton (Lab Owner & Past Dir OADL), Tom Gregoire (Lab Owner & Past Dir OADL), Gene Brown (Graduate & DLT), Dr. Duane Starr (Dentist), Mario Cardoza (Graduate & Lab Owner), Daniel Beck (Graduate & DLT), Benjamin Hebert (2<sup>nd</sup> Yr Stu), Robin Williams (2<sup>nd</sup> Yr Stu)**

Date: 15 February, 2009  
 Time: 7:00 pm  
 Location: Sylvania HT201

| <b>Subject</b>                     | <b>Discussion</b>  | <b>Decision</b>   | <b>Follow-up</b> |
|------------------------------------|--|---|------------------|
| 1. Fall 08 Meeting                 | Reviewed   | N/A   | N/A              |
| 2. Adv Committee Guidelines        | Reviewed Roles and Responsibilities Of committee/answered questions.   | N/A   | N/A              |
| 3. DLT Adv Bd Chairperson          | Discussed/voted  | Dr. Starr elected   | N/A              |
| 4. Mission Statement               | Discussed/modified   | Adopted   | Josette infrmd   |
| 5. Proposed DLT Employer Survey    | Discussed/to review  | Members will review at home & discuss later   | Next mtg         |
| 6. Additional CEUs                 | Possibility of PCC hosting CEU training  | Continue to discuss later   | Next Mtg         |
| 7. OADL Annual Seminar Date Change | Will eliminate 1 <sup>st</sup> yr students attendance, because it occurs just as school starts. They would not understand, the presentation, even if notified in time. | Disregard 1 <sup>st</sup> yr students attend. Invite 2 <sup>nd</sup> yr students (as usual), and add free attendance to those students who graduated the preceding June |                  |

Prepared by: Ray Ridgley

Dental Laboratory Technology

Portland Community College  
Dental Laboratory Adv. Bd. Mtg. Minutes  
Attendees: Doug Horton, Tom Gregoire, Mario Cardoza, Gary Smith,  
Ray Ridgley, 1<sup>st</sup> & 2<sup>nd</sup> year students, Josette Beach

Date: 24 Sep 08

Time: 5:30 pm

Location: Sylvania HT201

Combined Group Meeting: All 3 Dental Programs, Faculty Staff and Students attended the “Kick-Off” Barbeque hosted by Burkhart Dental. Representatives from Burkhart Dental welcomed all students and wished them well in the upcoming year.

Break out Session with DLT Advisory Group:

| <b>Subject</b>                | <b>Discussion</b>                        | <b>Decision</b> | <b>Follow-up</b>        |
|-------------------------------|--|-----------------|-------------------------|
| 1. Lab Employment Strategies  | Doug & Tom discussed hiring strategies   | N/A             |                         |
| 2. Cad Cam Influence on Field | Doug & Tom discussed cad cam impact      | N/A             |                         |
| 3. Burkhart Dental            | Burkhart Team (dinner spons.) introduced | N/A             |                         |
| 4. Q & A                      | Doug & Tom responded to questions        | N/A             |                         |
| 5. Adv. Bd. Mtg.              | When should the board meet next?         | 08 Jan 09       | Members w/b<br>Notified |

Raymond E. Ridgley, CDT, AAS  
Instructor, Dental Laboratory  
Technology

# Exhibit 9

## SAC Meeting Minutes

SAC Mtg: October 27, 2010 The DLT SAC Did the following work on the CTE Assessment Plan:

### CTE Assessment Plan

AAS or Certificate: **AAS** in Dental Laboratory Technology

Submit to [learningassessment@pcc.edu](mailto:learningassessment@pcc.edu) by November 15, 2010

| 1. Outcome   | 2. Maps to a Core Outcome?                                 | 3. Assessment Setting/Method  | 4. When will assessment take place ?  |
|--|--|---|---|
| - Demonstrate basic dental laboratory techniques in the design and fabrication of complete dentures, crowns and bridges, ceramic, and basic orthodontic appliances | Professional Competence                                    | Assessment Setting: CD,Laboratory; C&B, Laboratory; Cer, Laboratory; Ortho, Laboratory<br><br>Method: <u>CD</u> - Students finish complete denture. Graded by grade sheet.<br><u>C&amp;B</u> -Students cast and finish metal crowns. Graded by grade sheet.<br><u>Cer</u> -Students make ceramic C&B. Graded by grade sheet.<br><u>Ortho</u> -Students make orthodontic appliances. Graded by grade sheets. | <u>CD</u> -Winter DT102<br><br><u>C&amp;B</u> -Fall DT204, Winter DT205<br><br><u>Cer</u> -Winter DT205<br><br><u>Ortho</u> -Spring DT206 |
| - Demonstrate advanced skills in more complex complete denture and fixed metal to porcelain prostheses   | Professional Competence                                    | Assessment Setting: <u>CD</u> , Laboratory; <u>Mtl to Porc appliances</u> , Laboratory<br><br>Method: <u>CD</u> Students complete a Maxillary & mandibular immediate over denture. Graded by grade sheet.<br><u>Mtl to Porc</u> students complete more advanced ceramic bridges. Graded by grade sheet.   | CD-Spring DT103<br>Mtl-Porc DT205   |
| - Apply basic knowledge of the physics and chemistry of dental materials to insure the   | Critical Thinking and Problem Solving<br><br>Community and | Assessment Setting: Lecture & Laboratory<br><br>Method: <u>Laboratory</u> Student projects are graded by grade sheet<br><u>Lecture</u> Understanding is graded by   | All quarters-<br>DT101,102,103,204,205,206,151,152, 253, 254,271, 272, 285  |

Dental Laboratory Technology

|  |   |  |   |
|--|---|--|---|
| <p>proper materials are used in the correct proportions for specific dental laboratory procedures and that correct safety and disposal procedures are followed</p> | <p>Environmental Responsibility</p>               | <p>student exams.</p>  |   |
| <p>- Engage correct verbal, non-verbal and written communications in the dental laboratory and dental profession as both a technician and team leader</p>          | <p>Communication</p>                              | <p>Assessment Setting: Lecture &amp; Laboratory<br/><br/>Method: <u>Lecture</u> students contact the terminology in all lectures. Communications graded by exams.<br/><u>Lab</u> After week two of DT101 all demos and conversations between students and instructors are conducted using proper medical/dental terminology. Additionally students receive dentists work request for the immediate overdenture in DT103. Graded by project grade sheets.</p> | <p>All quarters; all lectures/labs</p>            |
| <p>- Function in a non-biased manner as a member of a diverse dental team or community</p>   | <p>Cultural Awareness</p>                         | <p>Assessment Setting: Laboratory<br/><br/>Method: Students are required to work closely with one another in all laboratory settings. Interactions observed closely by instructors</p>   | <p>All quarters<br/>DT101,102,103,204,205,206</p> |
| <p>- Design a Dental Laboratory Business Plan, invoicing system, ledger and the correct tax forms utilizing available computer software/skills</p>                 | <p>Community and Environmental Responsibility</p> | <p>Assessment Setting: Lecture; Laboratory<br/><br/>Method: <u>Lecture</u> DT275 Students are required to develop a business plan. Project graded by instructor.<br/><u>Laboratory</u> DT276 Students use Intuit software to set up an invoicing, tax, and inventory system for a dental lab. Project graded by instructor.</p>  | <p>Fall DT275, Winter DT276</p>                   |

|  |                                |  |  |
|--|--------------------------------|--|--|
| <p>- Be prepared to continue dental, community and world awareness through conventions, lecture attendance and active participation in professional/non-professional organizations</p> | <p>Professional Competence</p> | <p>Assessment Setting: Lecture &amp; Laboratory</p> <p>Method: <u>Lecture</u> DT141, DT270, DT142, DT284, DT143 students are apprised of the different local, state and national organizations and when their conventions occur. All students are encouraged to attend these functions. Attendance at these organizations meetings are screened.</p> <p><u>Lab</u> As above</p> <p><u>It should be noted</u> attendance cannot be made mandatory for any of our organizations.</p> | <p>Fall DT101, DT141, DT270<br/>Winter DT102, DT142, DT284<br/>Spring DT103, DT143</p> |
| <p>- Apply legal and ethical principles to the dental environment.</p>   | <p>Self-Reflection</p>         | <p>Assessment Setting: Lecture</p> <p>Method: <u>Lecture</u> Students are reminded throughout the lecture courses listed, as to ethical and legal practices. One lecture is specifically designed for ethics and practices. That course is evaluated by grade sheet.</p>   | <p>Fall DT141<br/>Winter DT142, DT275<br/>Spring DT143, DT276</p>                      |
| <p>- Be prepared to transfer to a college or university for upper level studies in the health fields.</p>  | <p>Communication</p>           | <p>Assessment Setting: Lectures &amp; Laboratory</p> <p>Method: Degree students are required to take additional general subject area courses.</p>  | <p>General Subject Area requirements</p>   |
| <p>- Demonstrate a deeper knowledge of business procedures pertinent to owning or managing a dental laboratory.</p>  | <p>Professional Competence</p> | <p>Assessment Setting: Lecture &amp; Lab</p> <p>Method: <u>Lecture</u> Business methods are discussed throughout the Denture Technique, C&amp;B, Ceramics, and Orthodontic courses. These are informational for students only. DT275 and 276 are specifically oriented to</p>  | <p>Fall DT101<br/>Winter DT102, DT275<br/>Spring DT103, DT276, DT285</p>               |

|  |  |  |  |
|--|--|--|--|
|  |  | business, business plans and invoicing construction. Projects are graded in these. Additionally, DT285 is presented using working technicians and lab owners. Many ideas are passed between the guest speakers and the students at these seminars. |  |
|--|--|--|--|

5. For Programs that are beneficiaries of Perkins funding: Identify assessments that will comprise the TSA.

National Association of Dental Laboratories (NADL) Registered Graduate (RG) Test

Portland Community College  
Dental Laboratory Technology SAC Meeting Minutes

**Date: 27Apr10**

Time: 9:00am-3:00pm

Location: Sylvania CC Building, Cedar Room

| <b>Subject</b>                    | <b>Discussion</b>   | <b>Decision</b>   |
|-----------------------------------|---|---|
| 1. Related Instruction (RI) Hours | RI hours need updating. Mth20 hrs deleted Math 20, and some courses were not listed | Re-examined all DLT courses did a re-eval upgrade on some RIs. Changes due to additional tasks (obj. unchanged)that were added to the course since initial eval and some courses that were not even listed on the RI sheet. Hours need to be processed through curriculum procedures before being accepted. Fwd'd to Josette. |
| 2. Critical Thinking Project      | Need to design Part 1 of PCC's Critical Thinking Project                            | Proposed Part 1 written. Will be typed in draft form, ok'd by all involved,   |

Dental Laboratory Technology

then posted. See Attachment 1

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| 3. Dentsply Denture Course            | Are there funds available for Ray and Jay (if he wants) to attend Dentsply Denture Course 04Jun10 in Portland | Gary checked with Josette. Approved   |
|---------------------------------------|---|---|
| 4. On-line Safety Courses             | Which on-line safety courses are we required to take?   | Course Level 3 for FT DLT instructors and 3a for PT Lab Instr.<br>On holding pending further guidance from Department Chair |
| PCC SAC Minutes 27Apr10 (cont'd)      |   |   |
| <b>Subject</b>                        | <b>Discussion</b>   | <b>Decision</b>   |
| 5. "Wish: List 2010 & 2011            | Design list for remainder of 2010 and for 2010-2011   | See Attachment 2  |
| 6. Program/student problems           | Discuss any items that need discussion In this area   | No discussion required  |
| 7. "FYI" Input                        | Contact Ginny, DA for "FYI" brochure input  | Verified she had received info from Doug Horton re: ODA Scholarship recipients.   |
| 8. Proctor DLT Entrance Exam, 07May10 | Decide and notify Arleen who will proctor the exam  | Arleen notified Ray will handle   |

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**ATTACHMENTS:**

- 1 Critical Thinking Project
- 2 Wish list 2010-2011

Present for meeting: Gary Smith, Josette Beach, Ray Ridgley

Dental Laboratory Technology

ATTACHMENT 1

Critical Thinking Project

DLT SAC Mtg Minutes

27Apr01

1. Critical thinking plan of action 2009-2010 academic year -
  - A. Inclusion of present/future operation/technology of dental lab CAD/CAM in the DLT program, year 2
  
2. The student will be required to –
  - A. Analyze dentist supplied electronic impression of patient's dentition
  - B. Select an appropriate design from the computer library and adapt/refine it to appropriately adapt (both aesthetically and functionally)
  - C. Transfer corrected design to the CAM for automatic fabrication of a wax/plastic crown
  - D. After computer fabrication the student will use the unit to make a metal casting of the patient's new crown
  
3. The instructor will –
  - A. Design CAD/CAM project within existing crown and bridge lecture/lab
  - B. Once designed, any necessary changes to the curriculum will be forwarded to the appropriate channels for course correction
  - C. Make grade sheet for grading all steps of the project and include student remarks, if practicable
  - D. Make copy of at least one unit and grade sheet, with all student identification removed, and student permission slip allowing unit to be used

ATTACHMENT 2

Wish List for Spring 2010 and 2010-2011 Academic Year

DLT SAC Mtg Minutes

27Apr01

QEX or similar ceramic pressing oven to replace non-functioning unit. Approximately \$5,000 from Schein Dental Supply

There is a possibility we will have a CAD/CAM system donated to the DLT program. If so, we will need to get some accessories for that unit. Cannot state at this time exactly what those accessories will be.

Portland Community College  
Dental Laboratory SAC Meeting Minutes  
Attendees: John Saito, Josette Beach, Gary Smith,  
Ray Ridgley

**Date: 6-12-09**

Time: 9:30

Location: Sylvania HT206 Conf. Room

| <b>Subject</b>                    | <b>Discussion</b>  | <b>Decision</b>   | <b>Follow-up</b>   |
|-----------------------------------|--|---|--|
| 1. Status of DLT Program          | John discussed the fact that the program Was very close to being eliminated after This yr's first yr students graduate in 2010. Budget cuts/state funding led to the upper Administration considering this action                          | At the final hour, the faculty federation and administration Reached agreements that will allow the program to remain open  | John will keep us apprised of any future action in this area |
| 2. Students Accepted for Fall '09 | Ray discussed that during economic times That we are in, there is usually an increase In applicants for the program. This is Proving to be true as the program has had 50 Applicants thus far and another wax carving Test to occur today. | Class acceptance will occur for a new class to begin Fall '09. Any future changes for the program will ensure that any accepted students will be able to continue their training until completion of the program. | Maximum amount of students will be accepted to begin F09.    |

Dental Laboratory Technology

3. Employment Data

John discussed the alumni phone survey  
 Not delivering the positive data needed  
 To convince the administration of the  
 Employment opportunities and job satisfaction  
 desired by graduates

Gary and Ray discussed the fact that  
 the surveys are revealing info from  
 only a small amount of students and  
 employers who participate in the  
 surveys. The feel going to the labs  
 and giving the surveys to alumni and  
 employers personally would result in  
 more reliable data

Gary and Ray to red  
 re-design surveys.  
 They will take time  
 to go out and distrib  
 to local alums and  
 employers.

Portland Community College  
 Dental Laboratory SAC Meeting Minutes  
 Attendees: Josette Beach, Gary Smith,  
 Ray Ridgley

**Date: 30 Apr 09**  
 Time: 0900-  
 Location: Sylvania HT201

| <b>Subject</b>       | <b>Discussion</b>   | <b>Decision</b>   | <b>Follow-up</b>  |
|----------------------|---|---|---|
| 1. DLT Accreditation | Josette laid out needed from us for the upcoming accreditation requirements | Gary and Ray will comply as soon as possible  | See below   |
| 2. DLT Accreditation | Requirements will be divided between Gary and Ray                           | Individual responsibilities delineated, information gathered on two large packets, discussed and agreed upon. Packets filled in with stats and corrections/updates. | Pkt#1 delivered to Josette 30 Apr 09.<br>Pkt #2 delivered 4 May 09. |

Raymond E. Ridgley AAS, CDT  
 Dental Laboratory Technology

Dental Laboratory Technology  
Chairperson

Portland Community College  
Dental Laboratory SAC Meeting Minutes  
Attendees: Gary Smith, Ray Ridgley

**Date: 29 Oct 08**

Time: 10:00 am

Location: Sylvania HT201

| <b>Subject</b>         | <b>Discussion</b>                | <b>Decision</b>                  | <b>Follow-up</b> |
|------------------------|----------------------------------|----------------------------------|------------------|
| 1. Polling Grant       | Grant proposal draft discussed   | Agree with proposal              | Notified J.B.*   |
| 2. Accreditation Input | Assign due dates for input       | Dates assigned                   | Notified J.B.    |
| 3. Accreditation Input | Research required for input data | Sources discussed and identified | N/A              |

\* Josette Beach, Dental Program Director

Dental Laboratory Technology

## Exhibit 10

### *Results of National Board Certification by PCC Students*

#### *NBC Examination Results*

| <b>Year</b> | <b>#Students Tested</b> | <b>Ntl. Average Score</b> | <b>PCC Average Score</b> | <b>Areas Below Ntl. Avg.</b>  | <b>Revisions/ Improvements Implemented</b>  |
|-------------|-------------------------|---------------------------|--------------------------|---|---|
| <b>2009</b> | 10                      | 72.56                     | 67.69                    | OR<br>CE<br>CD<br>CB<br>ARTI<br>IMP<br>DPLI<br>MATR<br>TJRY<br>EQIP | Encourage students to complete the Study Guides available in the lab for the RG. Encourage students to complete the CDT Review that is on the computer and continue to practice testing until passing scores are achieved.<br>Allow students to have access to these tools in an ongoing basis and with ability to repeat as many times as desired. Students have reported that when they complete these practice tests they are doing well. Until the NBC releases the type of questions students are not doing well on, it is difficult to adjust curriculum. |
| <b>2008</b> | 3                       | 69.70                     | 74.79                    | CD<br>CB<br>DPLI  | Same as above   |
| <b>2007</b> | 7                       | 69.15                     | 67.77                    | PD<br>CB<br>ART<br>H&S<br>DPLI<br>MATR<br>EQUIP                     | Same as above   |
| <b>2006</b> | 2                       | 67.53                     | 78.53                    | DPLI  | Same as above.  |

