Quarter
Winter 2009

Course Title
DHYG 112 Dental Imaging II

Course Credits
2 quarter credit hours (lecture and lab/clinic)

Pre-requisite
Enrollment in Pierce College Dental Hygiene Program
Successful completion of DHYG 102 Dental Imaging I

Course Description
Emphasis is placed on extraoral radiographs, extraoral and intraoral photography, and radiographic interpretation with clinical applications.

Room Locations
Lecture/Discussion Sessions:
- Lakewood Students (FS) Pierce College C-125
- Port Angeles Students (PA) Peninsula College L-19

Lab/Imaging Clinic Sessions:
- FS Pierce College C-129
- PA Olympia Community Action Program Oral Health Center (OlyCAP)

Day and Times
Lecture/Discussion Sessions:
- Mondays 8:00 am - 8:50 am

Lab/Imaging Clinic Sessions:
- FS Mondays 1:00 pm - 5:00 pm by assignment or appointment
- PA Fridays 9:00 am - 11:00 am by assignment or appointment

Instructors
Course Instructor: Carolyn D. Roberton, RDH, BSDH
Lab Instructors:  Mary J. Galagan, RDH, MHA  
Lucy A. Nordwell, RDH, BSDH(c)

Course Instructor Office Location & Office Hours
Location:  Pierce College Fort Steilacoom - Cascade Building Room 132
Hours:  Mondays  11:00 am - 12:00 pm  
Tuesdays  8:00 am - 10:00 am  
Thursdays  8:00 am - 10:00 am  
or by appointment

Course Instructor Contact Information
Email:  croberto@pierce.ctc.edu (preferred method)  
Phone:  253.964.7334

Required Textbook
Dental Radiography: Principles and Techniques, 3rd Edition  
Haring JI, Howerton LJ  
2006, Saunders  
ISBN: 9780721615752  
with companion CD-ROM and online Student Resources

Required Instruments & Clothing
CompactFlash® Memory Card - minimum capacity of 2.0GB  
Recordable Compact Disc (CD-R)  
DENTSPLY Rinn XCP & Bitewing Film Holder Kit (with companion Instrument Manual)  
DENTSPLY Rinn Snap-A-Ray Film Holder  
Pierce College Dental Hygiene Program Student Lab Coat and Clinic Uniform

Course Goal
The dental hygiene student, upon successful completion of the course, will be able to:
1. Expose and process extraoral and intraoral radiographs and photographs.  
2. Interpret extraoral and intraoral radiographs and photographs for diseases and/or pathological conditions, structures which deviate from normal, and error in exposure, processing or technique.

Course Content and Student Outcomes
1.0 Fundamentals of Radiographic Interpretation
1.1 Explain the difference between interpretation and diagnosis and the roles of dental personnel in each.  
1.2 Discuss and demonstrate how radiographic interpretation can be used to educate the patient.

2.0 Interpretation of Dental Caries, Periodontal Disease, Trauma, Pulpal and Periapical Lesions
2.1 Discuss and demonstrate interpretation tips for evaluating radiographs.
2.2 Describe and identify radiographic structures which deviate from normal structures.
2.3 Describe and identify radiographic appearance of the classifications of caries.
2.4 Describe and identify radiographic appearance of the classifications of periodontal disease.
2.5 Describe and identify the radiographic changes due to trauma and resorption.
2.6 Describe and identify the radiographic features of pulpal and periapical lesions.

3.0 Radiography of Patients with Special Needs
3.1 Describe the gag reflex and demonstrate patient management.
3.2 Describe common physical and developmental disabilities and necessary modifications in technique.

4.0 Extraoral and Intraoral Radiography
4.1 Demonstrate use of alternative intraoral exposure techniques and film holders.
4.2 Expose, process, mount, evaluate, and interpret extraoral and intraoral radiographic films.

5.0 Dental Photography and Dental Imaging Software
5.1 Expose, evaluate, and interpret extraoral and intraoral digital photographs.
5.2 Describe and demonstrate the use of dental imaging computer software.

Learning Module Outcomes
Student Outcomes, specific to each Learning Module, will be posted on Blackboard™.

References
Clinical Practice of the Dental Hygienist, 10th Edition
Wilkins EM
2009, Lippincott Williams & Wilkins
ISBN: 9780871763226
with companion CD-ROM and online Student Resources

Patient Assessment Tutorials: A Step-by-Step Guide for the Dental Hygienist
Nield-Gehrig JS
2006, Lippincott Williams & Wilkins
ISBN: 9780781775168

Method and Materials of Instruction
Web-Enhanced and ITV
This course is web-enhanced through utilization of the Blackboard Learning System™. In addition, lecture/discussion sessions incorporate use of live, interactive connections originating at the Fort Steilacoom Campus.

Collaborative Learning
Instruction occurs by collaborative learning through lectures, MSPowerPoint® presentations, group discussions, instructor demonstrations, manikins, human subjects, radiographs, photographs, team lab exercises, individual assignments, self evaluation, self-study quizzes, and written and competency examinations.
Pierce College Core Abilities
Where appropriate, course content introduces, develops, or measures the five Pierce College Core Abilities: Critical Thinking and Problem Solving, Effective Communication, Information Competency, Multiculturalism, and Responsibility.

Student Conduct Policy
Please refer to the Student Rights and Responsibilities/Code of Conduct, located in the Pierce College Catalog, as well as Pierce College Department of Dental Hygiene Student Program Policy for the general guidelines of conduct within and related to this class.

Course Requirements & Evaluation
Basic Performance
Evaluation of the student's Attendance & Promptness, Preparation & Participation, Approach to Learning, and Professional Conduct & Attire. Students are expected to complete the pre-reading assignments prior to each lecture/discussion session. Pre-reading assignments are listed on the Course Schedule and/or posted on Blackboard™. Students should be prepared to take their own lecture/discussion notes and not rely on classmates or the instructor for this integral part of their learning process. Due dates for the post-session assignments are listed on the Course Schedule.

Lab Exercises
Individual and group exercises enhance the student’s knowledge and understanding of material covered in the learning modules. Specific instructions for lab exercises will be discussed in class and posted on Blackboard™. All lab exercises and required documentation must be turned in to the instructor at the completion of the assigned lab session.

Manikin Radiographs
One manikin radiographic survey allows the student to practice the basic radiographic techniques, evaluation, and interpretation introduced in the course. The manikin radiographic survey and required documentation must be turned in to the instructor within one week of manikin appointment.

Patient Radiographs
Two radiographic surveys provide an opportunity for the student to practice the basic radiographic techniques, evaluation, and interpretation introduced in the course. These radiographs will be exposed on human subjects (patients/clients) the student is responsible for providing. Patients must meet the Guidelines for Prescribing Dental Radiographs published by the U.S. Department of Health and Human Services. Specific criteria regarding these surveys will be discussed in class and posted on Blackboard™. All patient radiographic surveys and required documentation must be turned in to the instructor within one week of patient appointment.

Patient Photographs
One photographic survey provides an opportunity for the student to practice basic dental photographic techniques and evaluation introduced in this course. These photographs will be taken on human subjects (patients/clients) the student is responsible for providing.
Specific criteria regarding this survey will be discussed in class and posted on Blackboard™. The patient photographic survey and required documentation must be turned in to the instructor within one week of patient appointment.

**Midterm Examination**

The 30-minute examination, comprised of questions utilizing a variety of formats delivered via Blackboard™, assesses the student’s knowledge and understanding of material covered in Learning Modules One through Four.

**Final Examination**

The 60-minute examination component, comprised of questions utilizing a variety of formats delivered via Blackboard™, assesses the student’s knowledge and understanding of all material covered in Learning Modules One through Nine. The 30-minute competency examination component assesses the student’s clinical competency in the application of knowledge and understanding of material covered in DHYG 102 and DHYG 112 as it relates to infection control and technique of selected bite-wing and periapical exposures.

**Assessment Tools**

- Class discussion
- Competency exam - skill proficiency
- Instructor observation & evaluation
- Individual and group lab activities
- Patient clinical practice
- Self evaluation
- Written examinations

**Course Grade**

The course grade is based on accumulated points of the following weighted requirements:

- Basic Performance 3%
- Laboratory Exercises 3%
- Manikin V-BWX 2%
- Patient Radiographs
  - Panograph 3%
  - FMX (with V-BWX) 12%
- Patient Photographs 12%
- Mid-term Examination 25%
- Final Examinations
  - Written 35%
  - Skill Competency 5%

**Please Note**

- Unexcused tardiness will result in the loss of 25% and unexcused absence will result in the loss of 100% of the Basic Performance score for the associated lecture/discussion session.
Scores for assignments received after the due date and time may be reduced by up to 10% for each calendar day past the deadline.

As per program policy, a final course grade of 75% must be achieved to successfully pass this course. In addition, students must also earn a minimum score of 75% on the combined midterm and final examinations in order to successfully pass this course. Any student who fails to earn a minimum 75% combined examination score will earn a maximum course grade of 1.9.

At the discretion of the course instructor, course work below a 2.0 may require retake, resubmission, or supplementation, and/or subject the student to academic review.

Unless stated otherwise in this course syllabus, academic standards for this course are outlined in *Pierce College Department of Dental Hygiene Student Program Policy*.

## Course Schedule

<table>
<thead>
<tr>
<th>Week One</th>
<th>Lecture/Discussion Session</th>
<th>FS Lab/Imaging</th>
<th>PA Lab/Imaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon - Jan 5</td>
<td>Learning Module One&lt;br&gt;Introduction to DHYG112 Dental Imaging II&lt;br&gt;Bisecting &amp; Occlusal Techniques&lt;br&gt;Pre-reading: Chapters 18 &amp; 21</td>
<td>Lab One</td>
<td></td>
</tr>
<tr>
<td>Fri - Jan 9</td>
<td></td>
<td></td>
<td>Lab One</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Week Two</th>
<th></th>
<th>Lab Two</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon - Jan 12</td>
<td>Assignment One Due&lt;br&gt;Learning Module Two&lt;br&gt;Extraoral Film &amp; Equipment&lt;br&gt;Panoramic Radiography &amp; Anatomy&lt;br&gt;Pre-reading: Chapters 7, 22 &amp; 28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fri - Jan 16</td>
<td></td>
<td></td>
<td>Lab Two</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Week Three</th>
<th><strong>Martin Luther King, Jr. Day</strong></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon - Jan 19</td>
<td>No Lecture/Discussion</td>
<td></td>
<td>No Lab/Imaging</td>
</tr>
<tr>
<td>Thurs - Jan 22</td>
<td>Assignment Two Due&lt;br&gt;Learning Module Three&lt;br&gt;Dental Photography&lt;br&gt;Pre-reading: Posted on Blackboard™</td>
<td>Imaging Clinic One 1:00 - 5:00 pm</td>
<td></td>
</tr>
<tr>
<td>Fri - Jan 23</td>
<td></td>
<td></td>
<td>Lab Three</td>
</tr>
</tbody>
</table>

<p>| Week Four      | <strong>WSDHA Legislative Rally Day</strong>                                                           |                |               |
|----------------|-------------------------------------------------------------------------------------------|                |               |
| Mon - Jan 26   | No Lecture/Discussion                                                                     |                |               |
| Mon - Jan 26 or Thurs - Jan 29 |                                                                                | Imaging Clinic Two 1:00 - 5:00 pm |               |</p>
<table>
<thead>
<tr>
<th><strong>Lecture/Discussion Session</strong></th>
<th><strong>FS Lab/Imaging</strong></th>
<th><strong>PA Lab/Imaging</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Week Four (continued)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fri - Jan 30</td>
<td></td>
<td>Imaging Clinic One</td>
</tr>
<tr>
<td><strong>Week Five</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mon - Feb 2</td>
<td>Assignment Three Due</td>
<td>Lab Three</td>
</tr>
<tr>
<td></td>
<td>Lecture/Discussion Four</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vertical Bite-wing Technique</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Radiography of Patients with Special Needs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pre-reading:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chapters 19 &amp; 25</td>
<td></td>
</tr>
<tr>
<td>Fri - Feb 6</td>
<td></td>
<td>Imaging Clinic Two</td>
</tr>
<tr>
<td><strong>Week Six</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mon - Feb 9</td>
<td>Assignment Four Due</td>
<td>Imaging Clinic Three</td>
</tr>
<tr>
<td></td>
<td>Midterm Examination 8:00 - 8:30 am</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FS in O-302 &amp; PA in L-19</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Learning Module Five 9:45 - 10:15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intro to Radiographic Interpretation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Descriptive Terminology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pre-reading:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chapters 29 &amp; 30</td>
<td></td>
</tr>
<tr>
<td>Fri - Feb 13</td>
<td></td>
<td>Imaging Clinic Three</td>
</tr>
<tr>
<td><strong>Week Seven</strong></td>
<td><strong>Presidents’ Day</strong></td>
<td></td>
</tr>
<tr>
<td>Mon - Feb 16</td>
<td>No Lecture/Discussion</td>
<td></td>
</tr>
<tr>
<td>Fri - Feb 20</td>
<td></td>
<td>Imaging Clinic Four</td>
</tr>
<tr>
<td><strong>Week Eight</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mon - Feb 23</td>
<td>Assignment Five Due</td>
<td>Imaging Clinic Four</td>
</tr>
<tr>
<td></td>
<td>Learning Module Six</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Identification of Restorations, Dental Materials, and Foreign Objects</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pre-reading:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chapter 31</td>
<td></td>
</tr>
<tr>
<td>Fri - Feb 27</td>
<td></td>
<td>Imaging Clinic Five</td>
</tr>
<tr>
<td><strong>Week Nine</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mon - Mar 2</td>
<td>Assignment Six Due</td>
<td>Imaging Clinic Five</td>
</tr>
<tr>
<td></td>
<td>Lecture/Discussion Seven</td>
<td></td>
</tr>
<tr>
<td>Fri - March 6</td>
<td></td>
<td>Imaging Clinic Six</td>
</tr>
<tr>
<td><strong>Week Ten</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mon - Mar 9</td>
<td>Assignment Seven Due</td>
<td>Imaging Clinic Six</td>
</tr>
<tr>
<td></td>
<td>Lecture/Discussion Eight</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interpretation of Dental Caries</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pre-reading:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chapter 32</td>
<td></td>
</tr>
</tbody>
</table>
Disclaimer/Disclosure
At times, changes and/or additions to the course schedule, pre-reading, requirements, assignments, activities, grading, assessments and examinations may be necessary in order to facilitate student learning. If this occurs, those changes and/or additions will be announced via postings on Blackboard and/or through email messages to students’ Pierce College email addresses. With the exception of emergency situations, students will be provided with sufficient notice for any changes that require adjustments to the course schedule.

Other
Please refer to the Pierce College Catalog and/or the Peninsula College Catalog and their associated websites (www.pierce.ctc.edu and www.pc.ctc.edu) for available learning resources, campus services and student life opportunities including, but not limited to, access & disability services, bookstore, campus safety, child care, computer labs, emergency campus closings, fitness facilities/recreation, food service, medical & dental insurance, human relations instruction, library, multicultural student services, student activities & government, student rights & responsibilities, student success workshops, tutoring, and women & family services.