



See Curriculum Action Request (CAR) form for the college-wide general education and/or program SLOS this course supports.

- This course outline is standardized and/or the result of a community college or system-wide agreement.  
Responsible committee:

5. Student Learning Outcomes (SLOs): List one to four inclusive SLOs.

*For assessment, link these to #7. Recommended Course Content, and #9. Recommended Course Requirements & Evaluation. Use roman numerals (I., II. III.) to designate SLOs*

On successful completion of this course, students will be able to:

- I. Obtain full-mouth, panoramic, cephalometric, bitewing, and occlusal surveys with diagnostically usable film.
- II. Transcribe and maintain clinical records that record pertinent data and information required for procedures, film evaluation, and mailing.
- III. Describe legal and safety requirements related to operation of radiographic equipment.
- IV. Prepare for successful completion of the radiology portion of the Dental Assisting National Board Certification Exam (DANB).

6. Competencies/Concepts/Issues/Skills

*For assessment, link these to #7. Recommended Course Content, and #9. Recommended Course Requirements & Evaluation. Use lower case letters (a., b., c...n.) to designate competencies/skills/issues*

On successful completion of this course, students will be able to:

- a. Identify on clinical radiographs all diagnostically unusable films, indicate the specific fault or limitation, recognize and describe the improper procedure involved, and suggest the procedural correction needed to improve the quality of the radiograph.
- b. Analyze and use modified techniques to compensate for or overcome such challenges as: narrow arch, shallow floor of the mouth, overlapping and linguoversion, crossbite occlusions or severe malocclusion, gagging, macroglossia, and excessive salivation.
- c. Differentiate normal and abnormal densities radiographically evident in: alveolar bone, cortical and cancellous bone, enamel, dentin, cementum, interdental septa, sutures, cone processes, foramina, healing sockets, cysts, tumors, and abscesses, supernumerary teeth, and other developmental conditions.
- d. Describe or perform the specialized procedures for the pedodontic patient.
- e. Describe or perform on mounted skull the specialized procedures for the endodontic patient, including pulp or root canal measurements and radiographic examination for special closure.
- f. Describe or perform the specialized techniques for the edentulous patient including occlusal or periapical pathologic survey.
- g. Describe implant radiology and review various imaging modalities, from intraoral radiographs to computed tomography imaging to best understand and evaluate various implant sites.
- h. Describe cephalometric and panoramic radiographic techniques and list the uses, advantages, and disadvantages of each.
- i. Identify the major anatomic landmarks, soft tissue shadows, and artifacts on a panoramic survey.
- j. Identify the five major measurement points from a cephalometric survey; take and record several designated measurements.
- k. Demonstrate the exposure of digital periapical and panoramic films; and understand the principles of digital radiography.

- l. Describe the legal requirements for: operation of radiographic equipment, performing a radiographic service for a patient, use and ownership of radiographs, and record-keeping relative to radiographic procedures.
- m. Summarize the role of the dental assistant in properly observing radiation safety techniques for the patient as well as the occupational worker.
- n. Describe the role of quality radiographs in the diagnosis of dental disease such as caries, periodontal disease, and pathology.

#### 7. Suggested Course Content and Approximate Time Spent on Each Topic

*Linked to #5. Student Learning Outcomes and # 6 Competencies/Skills/Issues*

- 1 week Principles of cephalometric and panoramic radiography including introduction to the equipment and demonstration of the technique (I, III, IV, a, c, g, h, i, j, k, l, m, n)
- 1 week Radiographic comparison of normal and abnormal tissues (I, II, IV, c, f, g, i, n)
- 9 weeks Clinical experience in long cone technique: bitewing, periapical full-mouth, and occlusal surveys; panoramic and cephalometric surveys (I, II, III, IV, a, b, c, d, e, f, g, h, i, j, k, l, m, n)
- 2 weeks Evaluation of films for recognition of processing errors, improper film placement, improper angulation, and improper exposure; adjustment in technique for unusual problems (I, III, IV, a, b, c, i, j, n)
- 1 week Special radiographic surveys and techniques for the pedodontic patient, endodontic patient, and edentulous patient (I, III, IV, b, d, e, f, n)
- 1 week Legal aspects of radiographic procedures (I, II, III, IV, l, m, n)

#### 8. Text and Materials, Reference Materials, and Auxiliary Materials

Appropriate text(s) and materials will be chosen at the time the course is offered from those currently available in the field. Examples include: Howerton, L. and Iannucci, J., *Dental Radiography: Principles and Techniques*, current edition, Elsevier.

Bird, D. and Robinson, D., *Torres and Ehrlich Modern Dental Assisting*, current edition, Elsevier.

Bird, D. and Robinson, D., *Student Workbook to Accompany Torres and Ehrlich Modern Dental Assisting*, current edition, Elsevier.

Appropriate reference materials will be chosen at the time the course is offered from those currently available in the field. Examples include: Johnson, O. and Thomson, E., *Essentials of Dental Radiography for Dental Assistants and Hygienists*, current edition, Prentice Hall.

Massler, M. and Schour, I., *Atlas of the Mouth*, current edition, American Dental Association.

Thomson, E., *Exercises in Oral Radiography Techniques: A Laboratory Manual*, current edition, Prentice Hall.

Durley, C. et al., *The DANB Review*, current edition, Dental Assisting National Board.

Durley, C. et al., *DANB's Glossary of Dental Assisting Terms*, current edition, Dental Assisting National Board.

Mosby et al., *Mosby's Dental Dictionary*, current edition, Elsevier.

Mosby et al., Review Questions and Answers for Dental Assisting, current edition, Elsevier.

Appropriate auxiliary materials will be chosen at the time the course is offered from those currently available in the field. Examples include: State of Hawaii Department of Commerce and Consumer Affairs, Hawaii Administrative Rules Title 16, Chapter 79, Dentists and Dental Hygienists.

State of Hawaii Department of Commerce and Consumer Affairs, Hawaii Revised Statutes Chapter 448, Dentistry.

#### 9. Suggested Course Requirements and Evaluation

*Linked to #5. Student Learning Outcomes (SLOs) and #6 Competencies/Skills/Issues*

Specific course requirements are at the discretion of the instructor at the time the course is being offered. Suggested requirements might include, but are not limited to:

- Prompt attendance is required at all class sessions. (I, II, III, IV, a - n)
- Students will be responsible for completing all assigned reading material in text before each class session. (I, II, III, IV, a - n)
- Complete various learning skills exercises. (II, III, IV, a, c, g, h, i, j, l, m, n)
- Complete various competency exercises. (I, II, III, b, d, e, f, k)
- Complete various laboratory exercises. (I, II, III, IV, a, b, c, f, h, i, j, k, l, m, n)
- Complete all projects. (I, II, III, IV, a - n)

#### EVALUATION AND GRADING

Quizzes	10% (II, II, III, IV, a - n)
Final	20% (II, II, III, IV, a - n)
Radiographic mounting project	15% (II, IV, a, c, n)
Lab practicals	25% (I, II, III, IV, a, b, c, f, h, i, j, k, l, m, n)
Oral report	20% (I, II, III, IV, a - n)
Attendance/ Attitude	10% (I, II, III, IV, a - n)

#### 10. Methods of Instruction

Instructional methods will vary considerably by instructor. Specific methods are at the discretion of the instructor teaching the course and might include, but are not limited to:

- Participation in class lecture/ discussion.
- Reading assigned portions in textbooks, journal articles, and/ or modules.
- Viewing various audiovisual materials.
- Participation in class exercises such as role-plays and simulations.
- Demonstration and simulation.
- Practicing positioning on student partners.
- Practicing exposure on manikins and patients.
- Guest speakers and field trips to specialty offices.
- Discovery learning.

#### 11. Assessment of Intended Student Learning Outcomes Standards Grid attached