



Western Technical College

31508310 Dental Radiography - Advanced

Course Outcome Summary

Course Information

Description	Builds on principles and skills developed in Dental Radiography. Dental Assisting students expose full mouth series, extra-oral and specialized images on adult and child patients. Emphasis is placed on protection against x-ray hazards. Students will also process, mount, and evaluate images for diagnostic value. In addition, they will use images to explain dental health and treatment plans to patients.
Career Cluster	Health Science
Instructional Level	Technical Diploma Courses
Total Credits	1
Total Hours	36

Pre/Corequisites

Prerequisite 10508103 Dental Radiography

Textbooks

Dental Radiography: Principles and Techniques - with Access. 6th Edition. Copyright 2022. Iannucci, Joen and Laura Jansen Howerton. Publisher: Elsevier Science. **ISBN-13:** 978-0-323-69550-3. Required.

Success Abilities

1. Cultivate Passion: Enhance Personal Connections
2. Cultivate Passion: Increase Self-Awareness
3. Live Responsibly: Develop Resilience
4. Live Responsibly: Foster Accountability
5. Refine Professionalism: Act Ethically

6. Refine Professionalism: Improve Critical Thinking
7. Refine Professionalism: Participate Collaboratively
8. Refine Professionalism: Practice Effective Communication

Program Outcomes

1. DA-1 year: Manage infection and hazard control
2. DA-1 year: Produce diagnostic intraoral and extraoral radiographs on a variety of patients
3. DA-1 year: Demonstrate professional behaviors, ethics, and appearance

Course Competencies

1. Expose full mouth images on patients to include permanent, primary/mixed, and/or edentulous dentitions.

Assessment Strategies

- 1.1. on patients in a clinical or laboratory setting
- 1.2. using both paralleling and bisecting angle techniques
- 1.3. given the required forms
- 1.4. under the supervision and observation of instructional staff

Criteria

You will know you are successful when

- 1.1. you check the prescription before exposure.
- 1.2. you select the correct armamentarium.
- 1.3. you manage patients effectively.
- 1.4. you position yourself and your patient correctly.
- 1.5. you perform all steps in the correct order.
- 1.6. you record exposure accurately.
- 1.7. you employ safety precautions.
- 1.8. you follow infection control protocol.
- 1.9. you wear personal protective equipment.
- 1.10. images are of diagnostic quality.
- 1.11. images are stored and can be easily retrieved.
- 1.12. patient's records show accurate, up-to-date documentation of treatment and services.

Learning Objectives

- 1.a. Review basic principles of paralleling and bisecting angle techniques.
- 1.b. Review film holding devices for paralleling and bisecting angle techniques.
- 1.c. Discuss placement of film for paralleling and bisecting angle techniques.
- 1.d. Discuss placement of film holders for paralleling and bisecting angle techniques.
- 1.e. Describe placement of PID and angulation of PID for paralleling and bisecting angle techniques.
- 1.f. Describe the advantages and disadvantages of the digital technique of film holding.
- 1.g. Demonstrate correct and incorrect horizontal and vertical angulation.

2. Process images of diagnostic quality.

Assessment Strategies

- 2.1. in a laboratory/clinical setting using processing equipment
- 2.2. by submitting processed and mounted images for evaluation
- 2.3. by explaining a treatment plan or diagnosis to a patient or role play patient

Criteria

You will know you are successful when

- 2.1. you check that equipment is prepared and ready for use.
- 2.2. images meet standards of diagnostic quality.
- 2.3. processing errors are recorded and corrections are listed.

- 2.4. images are mounted correctly.
- 2.5. you follow infection control protocol.
- 2.6. you use images to explain diagnosis and treatment plans developed by a dentist or hygienist.
- 2.7. your explanation is accurate.
- 2.8. you use terminology and language that the patient understands, accurately defining technical terms as necessary.
- 2.9. you check for patient understanding.
- 2.10. you respond truthfully and accurately to patient questions.
- 2.11. images are stored and can be easily retrieved.
- 2.12. patient's records show accurate, up-to-date documentation of treatment and services.

Learning Objectives

- 2.a. Review the composition of the processing solutions.
- 2.b. Review the components of the processing units.
- 2.c. Review the procedural step for automatic and manual processing.
- 2.d. Demonstrate the process of film duplication used in dentistry.
- 2.e. Review the requirements for a darkroom.
- 2.f. Review film processing problems.
- 2.g. Review importance of using anatomy/landmarks in film mounting.
- 2.h. Correctly mount films.

3. Produce extra-oral images.

Assessment Strategies

- 3.1. under the supervision and observation of instructional staff
- 3.2. on patients in a clinical or laboratory setting

Criteria

You will know you are successful when

- 3.1. you check the prescription before exposure.
- 3.2. you manage patients effectively.
- 3.3. you record exposure accurately.
- 3.4. you select the correct armamentarium.
- 3.5. you position yourself and your patient correctly.
- 3.6. you perform all steps in the correct order.
- 3.7. you employ safety precautions.
- 3.8. you follow infection control protocol.
- 3.9. you wear personal protective equipment.
- 3.10. extraoral images are of diagnostic quality.
- 3.11. images are stored and can be easily retrieved.
- 3.12. patient's records show accurate, up-to-date documentation of treatment and services.

Learning Objectives

- 3.a. Describe equipment used for the panelipse.
- 3.b. Describe the purpose and use of extraoral radiographs.
- 3.c. State the correct beam alignment.
- 3.d. State the correct placement of the film.

4. Produce images using specialized films and techniques.

Assessment Strategies

- 4.1. by exposing specialized images on patients or manikins in a laboratory/clinic setting
- 4.2. given the required forms
- 4.3. under the supervision and observation of instructional staff
- 4.4. by submitting processed images

Criteria

You will know you are successful when

- 4.1. you expose bitewing and occlusal images on permanent, primary, and mixed dentitions.
- 4.2. you expose periapicals for endodontic treatment (optional).
- 4.3. you expose images using localization techniques.
- 4.4. you check the prescription before exposure.

- 4.5. you record exposure accurately.
- 4.6. you select the correct armamentarium.
- 4.7. you perform all critical in the correct order.
- 4.8. you position yourself and your patient correctly.
- 4.9. you employ safety precautions.
- 4.10. you follow infection control protocol.
- 4.11. you wear personal protective equipment.
- 4.12. images are of diagnostic quality.
- 4.13. images are stored and can be easily retrieved.
- 4.14. patient's records show accurate, up-to-date documentation of treatment and services.

Learning Objectives

- 4.a. List uses of occlusal radiograph.
- 4.b. Describe vertical angulation for maxillary and mandibular cross-sectional film.
- 4.c. Discuss vertical angulation for maxillary and mandibular topographical film.
- 4.d. State purpose of localization technique.
- 4.e. Describe the buccal rule.
- 4.f. Describe the right angle technique.
- 4.g. Expose films according to chosen localization and uses.