



Western Technical College

10526191 Radiographic Procedures 2

Course Outcome Summary

Course Information

Description	Prepares radiography students to perform routine radiographic procedures of the skull, facial bones, sinus, spine, bony thorax, gastrointestinal, urological, and special studies. Course includes considerations for contrast, mobile, surgical and trauma procedures. Students apply knowledge of human anatomy to position the patient correctly to achieve and evaluate optimal diagnostic quality images which includes identifying radiographically significant anatomy.
Career Cluster	Health Science
Instructional Level	A.A.S. - Associate in Applied Science
Total Credits	5

Pre/Corequisites

Prerequisite	10526149 Radiographic Procedures 1
Prerequisite	10806177 Gen Anatomy & Physiology

Textbooks

Bontrager's Textbook of Radiographic Positioning and Related Anatomy. 10th Edition. Copyright 2020. Bontrager, Kenneth L, John Lampignano and Leslie E. Kendrick. Publisher: Elsevier Science. **ISBN-13**: 978-0-323-65367-1. Required. (Part of Western Bundle Package **ISBN-13**: 978-0-323-86245-5)

Bontrager's Handbook of Radiographic Positioning and Techniques. 10th Edition. Copyright 2020. Bontrager, Kenneth L, John Lampignano and Leslie E. Kendrick. Publisher: Elsevier Science. **ISBN-13**: 978-0-323-69422-3. Required. (Part of Western Bundle Package **ISBN-13**: 978-0-323-86245-5)

Radiographic Positioning and Related Anatomy Workbook. 10th Edition. Copyright 2020. Lampignano, John. Publisher: Elsevier Science. **ISBN-13**: 978-0-323-69423-0. Required. (Part of Western Bundle Package **ISBN-**

Radiographic Procedures 2 Manual. Scriver, Kathryn. Western. Publisher: Western. **ISBN-13:** 979-8-822-78013-2. Required.

Learner Supplies

Budget Life-Size Skull Anatomy Model – Classic Human Skull. **Vendor:** eCampus
<https://westerntc.ecampus.com>. Required.

Success Abilities

1. Refine Professionalism: Participate Collaboratively
2. Refine Professionalism: Practice Effective Communication

Program Outcomes

1. Apply critical thinking and problem-solving skills in the practice of diagnostic radiography

Course Competencies

1. Perform radiologic procedures of the skull, facial bones, and sinuses

Assessment Strategies

- 1.1. Oral, written, graphic and/or skill assessment

Criteria

- 1.1. you select the correct field of view and/or image receptor
- 1.2. you demonstrate pre-procedure requirements
- 1.3. you perform all procedural steps in a logical order
- 1.4. you position the patient correctly
- 1.5. you employ appropriate exposure parameters
- 1.6. you follow safety procedures
- 1.7. your explanation presents sound reasoning as you describe the decisions you make throughout the process
- 1.8. you adapt to non-routine situations
- 1.9. you adapt procedure to pediatric, geriatric, cultural factors, and condition of patient
- 1.10. you explain post-procedure requirements

Learning Objectives

- 1.a. Perform trauma projections
- 1.b. Select appropriate equipment and supplies for procedure
- 1.c. Demonstrate positioning for assigned procedure
- 1.d. Evaluate image for appropriate anatomical demonstration
- 1.e. Evaluate positioning of phantom and/or model
- 1.f. Evaluate proper radiographic demonstration of anatomy
- 1.g. Identify anatomical structures on radiographic images
- 1.h. Demonstrate proper use of positioning aids
- 1.i. Explain pre and post procedure requirements
- 1.j. Apply anatomical nomenclature

2. Identify radiographically significant anatomy of the skull, facial bones, and sinuses

Assessment Strategies

- 2.1. Oral, written, graphic and/or skill assessment

Criteria

- 2.1. you locate and identify pertinent anatomy
- 2.2. you explain relationship and orientation to other anatomical structures
- 2.3. you identify normal and abnormal presentation

Learning Objectives

- 2.a. Identify all related bony structures of the skull, facial bones, and sinus on basic and special projections of the skull, facial bones, and sinus
- 2.b. Explain the type/category of joints in the skull and facial bones
- 2.c. Locate related bony landmarks of the skull

3. Evaluate radiographic skull, facial bones, and sinus image quality**Assessment Strategies**

- 3.1. Oral, written, graphic and/or skill assessment

Criteria

- 3.1. you determine if image shows accurate positioning
- 3.2. you determine if image reflects overall diagnostic quality
- 3.3. you determine if image includes pertinent anatomy

Learning Objectives

- 3.a. Describe factors that will indicate proper positioning for all basic and special projections of the skull, facial bones, and sinus
- 3.b. Recognize petrous ridge position on all basic and special projections of the skull, facial bones, and sinus
- 3.c. Describe the corrective measures required for all suboptimal radiographic images of the skull, facial bones, and sinus
- 3.d. Explain and apply the evaluation criteria used when viewing a radiographic image for acceptability for all required projections/positions.

4. Perform radiologic procedures on the spine**Assessment Strategies**

- 4.1. Oral, written, graphic and/or skill assessment

Criteria

- 4.1. you select the correct field of view and/or image receptor
- 4.2. you demonstrate pre-procedure requirements
- 4.3. you perform all procedural steps in a logical order
- 4.4. you position the patient correctly
- 4.5. you employ appropriate exposure parameters
- 4.6. you follow safety procedures
- 4.7. your explanation presents sound reasoning as you describe the decisions you make throughout the process
- 4.8. you adapt to non-routine situations
- 4.9. you adapt procedure to pediatric, geriatric, cultural factors, and condition of patient
- 4.10. you explain post-procedure requirements

Learning Objectives

- 4.a. Perform non-routine trauma procedures
- 4.b. Select appropriate equipment and supplies for procedure
- 4.c. Demonstrate positioning for assigned procedure
- 4.d. Evaluate image for appropriate anatomical demonstration
- 4.e. Evaluate positioning of phantom and/or model
- 4.f. Evaluate proper radiographic demonstration of anatomy
- 4.g. Identify anatomical structures on radiographs
- 4.h. Demonstrate proper use of positioning aids
- 4.i. Explain pre and post procedure requirements
- 4.j. Apply anatomical nomenclature

5. Identify radiographically significant spinal anatomy**Assessment Strategies**

- 5.1. Oral, written, graphic and/or skill assessment

Criteria

- 5.1. you locate and identify pertinent anatomy
- 5.2. you explain relationship and orientation to other anatomical structures
- 5.3. you identify normal and abnormal presentation

Learning Objectives

- 5.a. Identify all related bony structures of the cervical spine, thoracic spine, lumbar spine, sacrum, and coccyx on routine and special projections of the cervical spine, thoracic spine, lumbar spine, sacrum, and coccyx
- 5.b. Explain the type/category of joints in the cervical spine, thoracic spine, lumbar spine, sacrum and coccyx
- 5.c. Locate related bony landmarks of the cervical spine, thoracic spine, lumbar spine, sacrum, and coccyx

6. Evaluate radiographic spinal image quality

Assessment Strategies

- 6.1. Oral, written, graphic and/or skill assessment

Criteria

- 6.1. you determine if image shows accurate positioning
- 6.2. you determine if image reflects overall diagnostic quality
- 6.3. you determine if image includes pertinent anatomy

Learning Objectives

- 6.a. Describe factors that will indicate proper positioning for all routine and special projections of the cervical spine, thoracic spine, lumbar spine, sacrum, and coccyx
- 6.b. Recognize rotation on all routine and special projections of the cervical spine, thoracic spine, lumbar spine, sacrum, and coccyx
- 6.c. Explain adaptations that will need to be utilized, as extenuating circumstances such as trauma or surgery occur
- 6.d. Describe the corrective measures required for all suboptimal radiographic images of the cervical spine, thoracic spine, lumbar spine, sacrum, and coccyx
- 6.e. Explain and apply the evaluation criteria used when viewing a radiographic image for acceptability for all required projections/positions.

7. Perform radiologic procedures of the gastrointestinal system

Assessment Strategies

- 7.1. Oral, written, graphic and/or skill assessment

Criteria

- 7.1. you select the correct field of view and/or image receptor
- 7.2. you demonstrate pre-procedure requirements
- 7.3. you perform all procedural steps in a logical order
- 7.4. you position the patient correctly
- 7.5. you employ appropriate exposure parameters
- 7.6. you follow safety procedures
- 7.7. your explanation presents sound reasoning as you describe the decisions you make throughout the process
- 7.8. you adapt to non-routine situations
- 7.9. you adapt procedure to pediatric, geriatric, cultural factors, and condition of patient
- 7.10. you explain post-procedure requirements
- 7.11. you identify appropriate contrast agents, indications, contraindications, and implications for use.

8. Identify radiographically significant gastrointestinal anatomy

Assessment Strategies

- 8.1. Oral, written, graphic and/or skill assessment

Criteria

- 8.1. you locate and identify pertinent anatomy
- 8.2. you explain relationship and orientation to other anatomical structures
- 8.3. you identify normal and abnormal presentation

9. Evaluate radiographic gastrointestinal image quality

Assessment Strategies

9.1. Oral, written, graphic and/or skill assessment

Criteria

- 9.1. you determine if image shows accurate positioning
- 9.2. you determine if image reflects overall diagnostic quality
- 9.3. you determine if image includes pertinent anatomy

10. Perform radiologic procedures on the urological system

Assessment Strategies

10.1. Oral, written, graphic and/or skill assessment

Criteria

- 10.1. you select the correct field of view and/or image receptor
- 10.2. you demonstrate pre-procedure requirements
- 10.3. you perform all procedural steps in a logical order
- 10.4. you position the patient correctly
- 10.5. you employ appropriate exposure parameters
- 10.6. you follow safety procedures
- 10.7. your explanation presents sound reasoning as you describe the decisions you make throughout the process
- 10.8. you adapt to non-routine situations
- 10.9. you adapt procedure to pediatric, geriatric, cultural factors, and condition of patient
- 10.10. you explain post-procedure requirements
- 10.11. you identify appropriate contrast agents, indications, contraindications, and implications for use.

11. Identify radiographically significant urological anatomy

Assessment Strategies

11.1. Oral, written, graphic and/or skill assessment

Criteria

- 11.1. you locate and identify pertinent anatomy
- 11.2. you explain relationship and orientation to other anatomical structures
- 11.3. you identify normal and abnormal presentation

12. Evaluate radiographic urological image quality

Assessment Strategies

12.1. Oral, written, graphic and/or skill assessment

Criteria

- 12.1. you determine if image shows accurate positioning
- 12.2. you determine if image reflects overall diagnostic quality
- 12.3. you determine if image includes pertinent anatomy

13. Explain various contrast procedures including arthrography, myelography, hysterosalpingography

Assessment Strategies

13.1. Oral, written, graphic and/or skill assessment

Criteria

- 13.1. you select the correct field of view and/or image receptor
- 13.2. you identify supplies needed
- 13.3. you explain how to position the patient correctly
- 13.4. you identify appropriate exposure parameters
- 13.5. you identify safety procedures
- 13.6. you explain the process
- 13.7. your explanation presents sound reasoning as you describe the decisions you make throughout the process
- 13.8. you adapt to non-routine situations

- 13.9. you adapt procedure for age and condition of patient
- 13.10. you explain pre and post procedure requirements

14. Perform radiologic procedures on the bony thorax

Assessment Strategies

- 14.1. Oral, written, graphic and/or skill assessment

Criteria

- 14.1. you select the correct field of view and/or image receptor
- 14.2. you demonstrate pre-procedure requirements
- 14.3. you perform all procedural steps in a logical order
- 14.4. you position the patient correctly
- 14.5. you employ appropriate exposure parameters
- 14.6. you follow safety procedures
- 14.7. your explanation presents sound reasoning as you describe the decisions you make throughout the process
- 14.8. you adapt to non-routine situations
- 14.9. you adapt procedure to pediatric, geriatric, cultural factors, and condition of patient
- 14.10. you explain post-procedure requirements

15. Identify radiographically significant bony thorax anatomy

Assessment Strategies

- 15.1. Oral, written, graphic and/or skill assessment

Criteria

- 15.1. you locate and identify pertinent anatomy
- 15.2. you explain relationship and orientation to other anatomical structures
- 15.3. you identify normal and abnormal presentation

16. Evaluate radiographic bony thorax image quality

Assessment Strategies

- 16.1. Oral, written, graphic and/or skill assessment

Criteria

- 16.1. you determine if image shows accurate positioning
- 16.2. you determine if image reflects overall diagnostic quality
- 16.3. you determine if image includes pertinent anatomy

17. Describe mobile radiographic and fluoroscopic imaging procedures

Assessment Strategies

- 17.1. Oral, written, graphic and/or skill assessment

Criteria

- 17.1. you describe the use of mobile imaging equipment
- 17.2. you describe limitations of mobile imaging
- 17.3. you outline the steps in mobile imaging procedures
- 17.4. you describe safety measures
- 17.5. you describe operative imaging procedures

18. Demonstrate venipuncture

Assessment Strategies

- 18.1. Oral, written, graphic and/or skill assessment

Criteria

- 18.1. you select the correct equipment and supplies
- 18.2. you perform all critical steps in the right order
- 18.3. you wear personal protective equipment
- 18.4. you follow safety procedures
- 18.5. you verbalize the process as you perform it