

Course Code: XCT 214

Course Title: Patient Care

Department: Allied Health

Effective Date: Summer 2026

PCS Code: 1.2 - Occupational/Technical Instruction

CIP Code: 51.0907

Repeatability: 0

Credit Hours

Catalog Notation: 3-0-3

Credit Hour Distribution:

Lecture: 3

Lab: 0

Clinical: 0

Total: 3

General Course Information

Catalog Description

Patient care for CT and MRI imaging, pharmacological classification, documentation, and administration of contrast agents and related drug administration.

General Course Objectives

This course will focus on patient care for CT and MRI patients, including contrast administration, classifications, adverse reactions, and radiation safety procedures.

Minimum Placement Levels

English	Reading	Math
Placement out of ENG 099	Placement out of CCS 099	None

Prerequisites

Credit in XCT 212, and XCT 210 or XMR 211

Admission into the Radiologic Technology program

Recommended before enrolling (not required):

ARRT primary certification

Methods of Evaluation

10-11 objective quizzes, 1 objective exam, 10-11 homework assignments, and weekly question box.

Instructional Materials and Additional Supplies

Pharmacology and Drug Administration for Imaging Technologists, Jensen, S. C., & Peppers, M. P. (2020). 2nd Edition. St. Louis: Mosby Elsevier.

Course Content

General Learning Outcomes (GLOs)

- Reasoning and Inquiry: Students will demonstrate the ability to solve problems using deductive reasoning and logic, quantitative reasoning, or the scientific method.
- Technology: Students will demonstrate the ability to evaluate, select, and appropriately use current and emerging tools.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Patient Care	1. Discuss the procedure for informed consent and safety screening in CT and MRI. 2. Identify the appropriate scheduling sequence and screening for CT and MRI exams. 3. List appropriate patient education procedures for CT and MRI patients and their corresponding exams. 4. Assess patient conditions and evaluate patient history for CT and MRI exams. 5. Evaluate lab values for corresponding CT and MRI procedures. 6. Determine if lab values are within acceptable limits for corresponding CT and MRI exams. 7. Distinguish appropriate medication administration for CT and MRI exams. 8. Describe appropriate immobilization techniques for CT and MRI exams.	12	0	0
Venipuncture Procedures	1. Discuss equipment and supplies necessary for venipuncture procedures. 2. Describe the patient preparation necessary for an IV procedure. 3. Determine the appropriate site selection for IV procedure. 4. Differentiate between aseptic and sterile technique. 5. Describe the appropriate procedure for aseptic and sterile technique. 6. Identify the procedure for single-phase and multi-phase contrast media injections. 7. Describe the appropriate procedure for determining IV flow rate.	9	0	0
Contrast Agents	1. Identify different types of contrast agents for CT and MRI exams. 2. Identify and describe the routes of drug administration. 3. Differentiate and document dose calculations for adult and pediatric patients. 4. Calculate dose for patients with special considerations. 5. List five reactions to contrast media. 6. Identify, describe, and document complications associated with intravenous drug therapy and appropriate actions to resolve these complications. 7. Describe the process for scan/prep delay in CT and MRI imaging.	15	0	0

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Radiation Safety	1. Identify the appropriate technical factors utilized in CT to reduce patient dose. 2. Differentiate between CT and MRI regarding patient safety. 3. List appropriate methods for radiation protection. 4. Describe CT dose index and how this impacts the patient dose. 5. Describe multiple scan average dose and how this impacts the patient dose. 6. List effective measures for reducing pediatric dose.	9	0	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
45	0	0