

HEOC-90: INTRAVENOUS THERAPY

Effective Term

Fall 2026

CC Approval

11/07/2025

AS Approval

11/13/2025

BOT Approval

11/20/2025

COCI Approval

03/03/2026

SECTION A - Course Data Elements

CB04 Credit Status

Credit - Degree Applicable

Discipline

Minimum Qualifications	And/Or
Health Care Ancillaries (Any Degree and Professional Experience)	

Subject Code

HEOC - Health Occupations

Course Number

90

Department

Health Occupations

Division

Health Occupations (HEOC)

Full Course Title

Intravenous Therapy

Short Title

Intravenous Therapy

CB03 TOP Code

1260.00 - *Health Professions, Transfer Core Curriculum

CIP Code

51.0000

CB08 Basic Skills Status

NBS - Not Basic Skills

CB09 SAM Code

C - Clearly Occupational

Rationale

Fix dangling hours and update to recognize the discontinuation of the Vocational Nursing Program.

SECTION B - Course Description

Catalog Course Description

This course is designed to prepare students to administer intravenous fluids using the fundamental principles and competencies required to begin, maintain, and discontinue intravenous therapy.

SECTION C - Conditions on Enrollment

Open Entry/Open Exit

No

Repeatability

Not Repeatable

Grading Options

Letter Grade Only

Allow Audit

Yes

Requisites

Corequisite(s)

Concurrent enrollment in NURS-153 and NURS-154 or current California LVN or RN license.

Requisite Justification

Requisite Description

Course Not in a Sequence

Subject

NURS

Course

153

Level of Scrutiny

Content Review

Upon entering this course, students should be able to:

- Anatomy and Physiology of the Cardiovascular and Peripheral Vascular Body Systems
- Normal Fluid Volumes and Homeostasis
- General/purpose of parenteral therapy

Requisite Description

Course Not in a Sequence

Subject

NURS

Course

154

Level of Scrutiny

Content Review

Upon entering this course, students should be able to:

- Anatomy and Physiology of the Cardiovascular and Peripheral Vascular Body Systems
 - Normal Fluid Volumes and Homeostasis
 - General/purpose of parenteral therapy
-

Requisite Description

Non-course Requisite

Level of Scrutiny

Content Review

Upon entering this course, students should be able to:

- Anatomy and Physiology of the Cardiovascular and Peripheral Vascular Body Systems
- Normal Fluid Volumes and Homeostasis
- General/purpose of parenteral therapy

SECTION D - Course Standards**Is this course variable unit?**

No

Units

1.50

Lecture Hours

18

Lab Hours

0

Activity Hours

18

Outside of Class Hours

45

Total Contact Hours

36

Total Student Hours

81

Distance Education Approval**Is this course offered through Distance Education?**

Yes

Online Delivery Methods

DE Modalities	Permanent or Emergency Only?
Hybrid	Permanent

SECTION E - Course Content**Student Learning Outcomes****Upon satisfactory completion of the course, students will be able to:**

1. Demonstrate understanding of fundamental principles of safely starting, maintaining, and discontinuing intravenous therapy.

Course Objectives**Upon satisfactory completion of the course, students will be able to:**

1. Demonstrate understanding and knowledge of the venipuncture procedure and intravenous therapy as evidenced by the successful completion of the written objectives for each session.

2. Demonstrate competency in starting, maintaining, and discontinuing IV therapy as evidenced by three individually supervised successful IV starts on live subjects with demonstrated ability to maintain and discontinue IV therapy utilizing appropriate aseptic technique.

Course Content

1. Define the terms “intravenous fluids” and “superimpose” as stated under article 8 of the Vocational Nursing Practice Act.
2. Identify two documents that govern the practice of individual LVN’s regarding IV therapy.
3. Understand clearly that LVN’s do not give IV meds under any circumstances.
4. Identify five factors to be considered in selecting appropriate sites for IV catheter placement.
5. Identify why the lower extremities are not routinely used for IV therapy.
6. Define “electrolytes” and give four examples.
7. Identify five signs and symptoms that could indicate fluid/electrolyte imbalance.
8. Identify three clinical situations where you would suspect a patient may be at risk for fluid/electrolyte imbalance.
9. Name four methods of transport across the semi-permeable cell membrane.
10. List five indications for IV therapy.
11. Identify the differences between isotonic, hypotonic and hypertonic solutions and give two examples each.
12. Name three ways to identify veins vs. arteries.
13. Identify three reasons why you might use a butterfly versus an angiocath when starting an IV.
14. Identify three benefits to using the angiocath.
15. Identify two reasons you would use an IV pump.
16. Identify two situations where you would use a microdrip tubing vs. macrodrip. Why?
17. Describe infection control guidelines pertaining to IV therapy/venipuncture.
18. Know your workplace policy regarding IV site care and who may do what with central lines.
19. Describe the potential clinical findings that could be observed when caring for a patient receiving IV therapy.
20. List five nursing responsibilities related to the care of the IV system.
21. Under direct supervision by an instructor, demonstrate appropriate technique for:
 - a. choosing a venipuncture site,
 - b. cleansing the skin,
 - c. choosing an appropriate IV device,
 - d. utilizing a tourniquet,
 - e. inserting the IV device,
 - f. securing the IV device,
 - g. attaching IV tubing/peripheral lock and
 - h. dressing the site.
22. Identify the three most frequently used anatomical sites used for venipuncture in the infant.
23. Describe the preparation and approach to the pediatric client and parent(s) used prior to venipuncture.
24. Describe two considerations to be evaluated prior to starting an IV on the geriatric patient.
25. Identify three patient populations that may be anticoagulated. How might this affect the venipuncture procedure?
26. Identify three important nursing considerations to remember when administering IV solutions that contain KCl.
27. Demonstrate the ability to accurately calculate IV drip rates given a set of hypothetical clinical scenarios.
28. Under direct supervision of an RN instructor, demonstrate on live subjects the correct procedure for:
 - a. venipuncture with an angiocath,
 - b. dressing an IV site,
 - c. flushing a peripheral lock,
 - d. hanging IV fluid as ordered and calculating drip rates,
 - e. discontinuing IV therapy and angiocath.
29. Identify the signs, symptoms and usual treatment of four local complications of venipuncture and IV therapy.
30. Identify the signs, symptoms and usual treatment of four systemic complications of venipuncture and IV therapy.
31. Identify two measures that can be employed to prevent local and/or systemic complications.
32. Discuss the differences between TPN and PPN.
33. Identify three reasons for the use of parenteral nutrition.
34. Explain why parenteral nutrition poses a high risk for infection.
35. Identify four potential symptoms of transfusion reaction.
36. Identify five “rules” to follow for safe blood administration.

Methods of Instruction

Methods of Instruction

Types	Examples of learning activities
Activity	Fundamentals and practical application of venipuncture on simulators
Lecture	Foundations, theories, indications and contraindications of IV administration and therapy.
Other	Methods employed to teach the fundamentals of venipuncture and IV therapy will include lecture, participative discussion, visual aids, written materials and review, as well as clinical laboratory experience using practice, actual equipment/supplies and live subjects.

Online Adaptation

Types	Examples of learning activities
Lecture	Discussion/interaction of the indications/contraindications of directed IV Therapy in specific disease processes.
Directed Study	Foundations of upper arm vascular anatomy and vessel viability for introduction to IV Therapy.
Other	Engage in computer assisted simulation for visualization and introduction of hardware and medication via intravenous delivery.

Instructor-Initiated Online Contact Types

Announcements/Bulletin Boards
E-mail Communication
Telephone Conversations
Video or Teleconferencing

Student-Initiated Online Contact Types

Discussions

Course design is accessible

Yes

Methods of Evaluation

Methods of Evaluation

Types	Examples of classroom assessments
Exams/Tests	Written examination to confirm theory.
Lab Activities	Practical examination via simulator to confirm appropriate mastery of processes.

Assignments

Reading Assignments

Read and understand basic venous and arterial anatomy.

Writing Assignments

Weekly reading and written assignments related to lecture/skills.

SECTION F - Textbooks and Instructional Materials

Material Type

Other required materials/supplies

Description

Instructor generated course outline and course pack specific to intravenous therapy.

SECTION G - Diversity, Equity and Inclusivity

How does your course and/or course outline of record reflect strategies for accommodating and engaging diverse student populations, advancing equitable outcomes, and fostering inclusion for all students?

This course prepares future healthcare workers to provide culturally competent, equitable care. Through understanding diverse health beliefs, social determinants, and disparities, students develop the skills and empathy needed to serve all patients with respect and fairness.

Course Codes (Admin Only)

CB00 State ID

CCC000535807

CB10 Cooperative Work Experience Status

N - Is Not Part of a Cooperative Work Experience Education Program

CB11 Course Classification Status

Y - Credit Course

CB13 Special Class Status

N - The Course is Not an Approved Special Class

CB23 Funding Agency Category

Y - Not Applicable (Funding Not Used)

CB24 Program Course Status

Program Applicable

Allow Pass/No Pass

No

Only Pass/No Pass

No