

BOSTON REED COLLEGE®
Allied Health Training Programs
Official Course Outline

Intravenous Compounding

Goals and Purpose: Upon successful completion of course, the student will receive a certificate of completion from Boston Reed College. This course is designed to prepare the Pharmacy Technician for an intravenous compounding position in an advanced inpatient Pharmacy setting.

Outcomes and Objectives:

After successful completion of this course the student will be able to:

1. Define medical terms and abbreviations used for inpatient pharmacy orders.
2. Demonstrate proper handwashing and sterile gloving techniques.
3. Describe and utilize Standard Precautions established by the Center for Disease Control.
4. Identify aerobic pathogens and utilize methods for preventing the contamination of sterile products compounded in the pharmacy.
5. Define injectable routes and administration systems for parenteral products.
6. Describe horizontal and vertical laminar airflow hoods (LAH) and a high efficiency particulate air (HEPA) filter.
7. Perform aseptic technique in a horizontal LAH.
8. Differentiate between varying directions for reconstituting a sterile drugs contained in a vial, calculate and prepare an ordered dose in a LAH.
9. Calculate and prepare an ordered dose from a sterile drug contained in an ampoule in the LAH.
10. Describe the risks involved in cytotoxic drug preparation and list the steps in preparing, handling and transporting cytotoxic drugs.
11. Identify the components of a Chemo Spill Kit and a biological safety cabinet.
12. Identify IV maintenance fluids and equipment.
13. Calculate and set up a total parenteral nutrition (TPN) electrolyte pooling field in a LAH.
14. Correctly fill out a TPN mixing report and prepare a TPN.
15. Calibrate and operate an Automix® compounder using specific gravity.
16. Calibrate and operate a Pharm Assist® repeater pump.
17. Correctly apply the following formulas and calculations used in IV preparation and administration:

$$D/H \times Q = X$$

$$V/C \times C = R$$

BSA(m²), (Body Surface area in m²)

Safe Dose (when ordered in BSA)

mL/h

gtt/min

mL/h /drop factor constant = gtt/min

Instructional Units/Hours of Instruction:

<i>Topic.....</i>	<i>Hours</i>
1. Parenteral Dosage of Drugs	3
2. Using Ratio-Proportion to Calculate Dosages	3
3. Pharmacy Infection Control.....	3
4. Parenteral Admixture Services.....	4
5. Aseptic Technique, Sterile Compounding and Intravenous Admixture Programs	4
6. Calculate and set up a pooling field using positive (+) and negative (-) syringe positioning.....	8
7. Intravenous Solutions, Equipment and Calculations	4
8. Advanced Pediatric Calculations	4
9. Calculate and set up a pooling field using positive (+) and negative (-) syringe positioning	9
<i>Total Hours – 42</i>	

Instructional Strategies:

- Lecture
- Individualized Study
- Small Group Discussions
- Large Group Discussions
- Skills Demonstration
- Competency Check-off
- Role Play
- Small Group Projects
- Independent Research
- Workbook Assignments
- Textbook Assignments
- Multimedia

Methods of Evaluation:

- Quizzes
- Workbook Assignments
- Competency Check-off
- Examination

Course Repetition:

If the student does not achieve at least 80 percent in the course he or she should repeat the course until that objective has been achieved.

For Adult Education Centers as appropriate:

A-22 Title: Support Services

A-22 Number: 4.4255

Approvals: Board of Education ___/___/___

CDE ___/___/___