



**COWLEY COLLEGE  
& Area Vocational Technical School**

**COURSE PROCEDURE FOR**

**IV THERAPY  
ALH5218 3 Credit Hours**

**Student Level:**

This course is open to students on the college level with a current LPN or RN license.

**Catalog Description:**

**ALH5218 - IV THERAPY (3 hrs)**

This course prepares the licensed nurse to gain the knowledge and ability to demonstrate proper and safe activities concerning venipuncture's, peripheral IV insertion, maintenance and care, as well as IV medication use and administration.

**Prerequisites:**

The student must have their current nursing license and current negative mantoux two-step (TB) skin test: *one-step* for the current annual student recipient and *two-step* for the first time, noncurrent student recipient.

At the start of the course, each student will be required to have a background check completed.

**Controlling Purpose:**

This course is designed to help the student increase his or her knowledge concerning IV insertion, maintenance and care, as well as IV medication use and administration. The student will be able to demonstrate basic venipuncture skills and peripheral IV insertions and the understanding of significant risks and side effects of giving IV fluids and medications.

**Learner Outcomes:**

Upon completion of this course the student will be able to understand the role of the IV certified nurse, and have the knowledge and skills necessary to care for patients/residents with needs for IVs.

**Units Outcomes and Criterion Based Evaluation Key for Core Content:**

The following defines the minimum core content not including the final examination period. Instructors may add other content as time allows.

Evaluation Key:

- A = All major and minor goals have been achieved and the achievement level is considerably above the minimum required for doing more advanced work in the same field.
- B = All major goals have been achieved, but the student has failed to achieve some of the less important goals. However, the student has progressed to the point where the

- goals of work at the next level can be easily achieved.
- C = All major goals have been achieved, but many of the minor goals have not been achieved. In this grade range, the minimum level of proficiency represents a person who has achieved the major goals to the minimum amount of preparation necessary for taking more advanced work in the same field, but without any major handicap of inadequacy in his background.
- D = A few of the major goals have been achieved, but the student's achievement is so limited that he is not well prepared to work at a more advanced level in the same field.
- F = Failing, will be computed in GPA and hours attempted.
- N = No instruction or training in this area.

<b>UNIT I: Basic Orientation for IV administration</b>						
Outcomes: Student will know the role of the LPN IV within the Kansas State Board of Nursing's guidelines:						
A	B	C	D	F	N	Specific Competencies
						Relate the Kansas Nursing Practice Act to the role of the licensed practical nurse in performing limited fluid treatment.
						Function according to the policies and procedures of the employing institution and within the rules and regulations set forth by the Kansas State Board of Nursing, recognizing his/her responsibility to the patient, institution, and the nursing profession in the provision of intravenous therapy.
						Understand the legal ramifications involved in error, as well as the negative effects upon the patient if done incorrectly.
						Practice proper safety and aseptic technique in preparing and in the administration of IV therapy.

<b>UNIT II: Pre-insertion of Intravenous therapy.</b>						
Outcomes: Student will demonstrate knowledge of indications for IV therapy and its relationship to the vessels of the human body.						
A	B	C	D	F	N	Specific Competencies
						Identify indications for performing intravenous therapy.
						Describe the anatomical structures and functions of veins utilized as venipuncture sites.
						Differentiate various venipuncture sites and use selectivity in the choice of sites, based on ordered intravenous therapy.
						Relate the circulatory system and skin with intravenous therapy.
						Understand the basics in hematology.

**UNIT III: Basic review of body fluids versus infusion fluid types, with key infection control therapy.**

**Outcomes: Student will demonstrate knowledge of IV fluids and their affect on the human body while demonstrating Universal Precautions in the health care system.**

A	B	C	D	F	N	Specific Competencies
						State the relationship between intravenous fluid administration and body's homeostatic and regulatory functions.
						Correlate fluid and electrolyte imbalances with the associated clinical manifestations.
						Describe the different parenteral fluid types.
						Recognize and prevent intravenous therapy related complications, such as systemic and local infections.
						Have broad and specific understanding of infection control, in relationship to intravenous therapy.

**UNIT IV: Venipuncture procedure and need to know basics.**

**Outcomes: Student will demonstrate knowledge of IV Therapy-related local and systemic complications.**

A	B	C	D	F	N	Specific Competencies
						Demonstrate appropriate patient approach, and IV supply preparation.
						Select appropriate equipment as indicated by the particular intravenous therapy ordered by the physician and delegated by the registered professional nurse.
						Aseptically prepare a site for venipuncture.
						Demonstrate aseptic techniques in the administration of intravenous medication peripherally with devises not to exceed three inches in length.
						Demonstrate the venipuncture procedure, via return demonstration, including the psychological preparation of the patient, site selection, collection and preparation of equipment, skin preparation, venipuncture, anchor of devises, and concise, legible documentation of entire procedure.
						Demonstrate maintenance techniques for intravenous therapy and perform concise, legible documentation.
						Recognize the signs and symptoms of local and systemic complications of intravenous fluid and drug therapy and discuss the preventative and treatment measures for those complications.
						Perform concise, legible documentation of signs and symptoms of local and systemic complications of intravenous fluid and drug therapy, stating appropriate actions.

**UNIT V: Use of medications, adverse reactions, rate of flow, locks and equipment.**

Outcomes: Student will demonstrate knowledge of IV medications and fluids and their affect on the human body while starting IV therapy.

A	B	C	D	F	N	Specific Competencies
						Relate drug actions, interaction, adverse reaction, methods of administration and assessment to the nursing management of the patient receiving intravenous fluid treatment.
						Accurately calculate the rate of flow in intravenous fluid infusions and demonstrate proper flow rates with IV tubing, both with and without electrical maintenance drip chambers.
						Perform all procedures involved in the maintenance of an intravenous fluid treatment administration system with special emphasis on monitoring rate of infusion, care of site, changing of containers, adding parenteral solutions to existing patent intravenous lines, hanging of tubings, changing of dressings, discontinuing infusions, and appropriate treatment with concise, legible documentation.
						Add designated premixed medications to existing patient intravenous lines via intravenous piggyback, either by continuous or intermittent methods.
						Demonstrate techniques for admixing medications.
						Demonstrate knowledge of drug and solution compatibility and incompatibility.
						State the rationale for special intravenous fluid treatment, such as saline/heparin locks.
						Demonstrate the procedure for insertion and maintenance of saline/heparin locks.
						Perform concise, legible documentation of insertion and maintenance of patency of saline/heparin locks.

**UNIT VI: LPN role in specific infusions and treatment modalities.**

Outcomes: Student will demonstrate knowledge of LPN IV role in transfusions and parenteral nutrition.

A	B	C	D	F	N	Specific Competencies
						Monitor transfusions of blood and blood components.
						Perform accurate, concise, and legible documentation of the patency and maintenance of blood and blood component transfusion.
						Define the role of the LPN in chemotherapy with relation to safety precautions and discuss nursing responsibilities applicable for the patient

<b>UNIT VI: LPN role in specific infusions and treatment modalities.</b>						
Outcomes: Student will demonstrate knowledge of LPN IV role in transfusions and parenteral nutrition.						
A	B	C	D	F	N	Specific Competencies
						receiving cytotoxic drugs.
						Identify indications for TPN and list potential complications and recommendations of practices in TPN therapy.

**Projects Required:**

None

**Textbook:**

Contact Bookstore for current textbook.

**Reference Materials:**

“Venous Access & Intravenous Infusion Treatment Modalities” by V. Darnell Roth. University of Missouri, Columbia.

**Attendance Policy:**

Students should adhere to the attendance policy outlined by the instructor in the course syllabus.

**Grading Policy:**

The grading policy will be outlined by the instructor in the course syllabus.

**Maximum class size:**

Based on classroom occupancy

**Course Time Frame:**

The U.S. Department of Education, Higher Learning Commission and the Kansas Board of Regents define credit hour and have specific regulations that the college must follow when developing, teaching and assessing the educational aspects of the college. A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally-established equivalency that reasonably approximates not less than one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work for approximately fifteen weeks for one semester hour of credit or an equivalent amount of work over a different amount of time. The number of semester hours of credit allowed for each distance education or blended hybrid courses shall be assigned by the college based on the amount of time needed to achieve the same course outcomes in a purely face-to-face format.

**Refer to the following policies:**

[402.00 Academic Code of Conduct](#)

[263.00 Student Appeal of Course Grades](#)

[403.00 Student Code of Conduct](#)

**Disability Services Program:**

Cowley College, in recognition of state and federal laws, will accommodate a student with a documented disability. If a student has a disability which may impact work in this class and which requires accommodations, contact the Disability Services Coordinator.