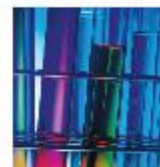


M E R C E R C O U N T Y



C O M M U N I T Y C O L L E G E

Math, Science and Health Professions

Nursing Program
LPN to RN Advanced Placement
Information Packet



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LPN - RN Advanced Placement

The LPN-RN advanced placement option offers licensed practical nurses (LPNs) the opportunity to gain experiential credit for their LPN license. LPN licensure gives the licensed LPN credit for Concepts of Nursing Practice I (NRS112).

Applicants must:

- possess a high school diploma (or equivalent).
- have graduated from an accredited LPN school.
- possess a valid New Jersey LPN license.
- complete all the prerequisite course and admission requirements for the nursing program.

Admission to the professional phase of the program, as an LPN, also requires:

- cumulative GPA (transfer or MCCC) of 2.5 or higher. **GPA's are not rounded.**
- a passing score (80% or higher) in the English Language Composite and 80% or higher on the Math portion of the HESI Admission Assessment Exam in three (3) attempts or less. **Scores are not rounded.**
- successful completion of the Clinical Reasoning in Nursing Practice course (NRS111) with a C+ or higher.
- completion of the HESI Fundamentals of Nursing Exam. Students who achieve below an 800 on this exam will be required to complete an academic success plan with their advisor.
- passing a comprehensive Skills Assessment exam in two attempts or less.
- passing a Dosage Calculation Exam with 90% or higher in two attempts or less.

Six academic credits are given for Concepts of Nursing Practice I (NRS112). The student is then able to apply for acceptance into the second semester nursing courses, Concepts of Nursing Practice II (NRS125). Students must earn a minimum grade of "C+" in BIO103, BIO104, BIO201 and all nursing courses to graduate.

Please note that admission to either of the LPN-RN Advanced Placement program options are on a space available basis only. Students are ranked utilizing the admission rubric outlined in this packet.

For students to apply for this option they must submit a letter, requesting admission to the second semester of nursing as an LPN. This letter must be submitted by the petition deadlines outlined in this packet. The daytime program option for these students begins in spring and the evening/weekend option begins in fall. The letter must be submitted along with your HESI Admission Assessment and Fundamentals of Nursing exam score reports, Dosage Calculation exam report, and Skills Assessment score report. Please contact the nursing office to arrange for skills assessment, dosage calculation and HESI exams.

Students who complete the college's Nursing program earn the Associate in Science (A.S.) degree and are eligible to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN).

Nursing Program Curriculum

Code	Course (lecture/lab hours)	Credits
Semester 1	(Pre Professional) [these are the only courses now required for admission consideration]	
BIO103	Anatomy & Physiology I (3/3)	4
CHE 107	General & Physiological Chemistry (2/1/2)	4
MAT125	Elementary Statistics I (3/0) ¹	3
ENG101	English Composition I (3/0)	3
Semester 2	Professional Phase	
BIO104	Anatomy & Physiology II (3/3)	4
ENG102	English Composition II (3/0) ²	3
NRS 111	Clinical Reasoning in Nursing Practice (1/0)	1
NRS112	Concepts of Nursing Practice I (3/3/)	6
	(NRS111 & NRS112 are co-requisites)	
Semester 3		
BIO 201	Microbiology (3/3)	4
PSY 101	Introduction to Psychology (3/0)	3
NRS 125	Concepts of Nursing Practice II (3/3/12)	8
	(NRS125 pre-requisites: BIO104, NRS111, NRS112)	
Semester 4		
PSY207	Developmental Psychology: Across the Lifespan (3/0) ³	3
NRS 225	Concepts of Nursing Practice III (3/3/12)	8
	(NRS225 pre-requisites: BIO201, NRS125)	
Semester 5		
NRS235	Concepts of Nursing Practice IV (3/3/12)	8
	(NRS235 pre-requisites: NRS225)	
	Humanities general education elective ⁴	
	Total Credits	65-66

NOTE:

- ¹ MAT 135, 140 (4 credits) or MAT 200 (3 credits) are acceptable alternatives.
- ² ENG112 is an acceptable alternative.
- ³ SOC 101 is an acceptable alternative (general education elective)
- ⁴ PHI 102 or PHI 205 are recommended

In addition to the academic requirements for admission to the Nursing Program, to receive Advanced Placement credit for NRS 112, the following patient care skills must be successfully completed.

1. Hand washing
2. Donning and doffing of isolation equipment
3. Head to toe assessment
4. Manual blood pressure, apical heart rate, respiratory rate and temperature measurement
5. Bathing of an adult patient
6. Changing of an occupied bed
7. Assessment and staging of a pressure ulcer
8. Application of an oxygen device
9. Assisting a patient with a bedpan
10. Drawing medications from an ampule and a vial
11. Medication injection via intramuscular and subcutaneous routes
12. Administration of a medication via a PEG tube

LPN's must successfully demonstrate these skills within two attempts. The checklists are included.

Suggested reference guide is:

North Carolina Custom Edition, (2015). *Nursing Skills for a Concept-Based Approach to Learning*. New York: Pearson Learning Solutions. (ISBN 13:978-0-558-35687-3)

You will also be required to take a 10 question dosage calculation test. Sample questions, similar to those on the test, are attached. You must achieve 90% within two attempts.

Suggested reference guide is:

Pickar, G.D., Abernethy, A.P. (2013) *Dosage Calculations*. (9 th ed.) Clifton Park: Thompson Delmar Learning (ISBN10: 1-4390-5847-4; Ebook: ISBN13: 978-1-4390-5847-3)

Appointments for these requirements can be made by contacting Stephanie Horner at horners@mccc.edu.

Patient Care Skills

Vital Signs

Assessing an Apical Pulse	Performed	
	Yes	No
Gathered stethoscope.		
Introduced self and verified client's identity. Provided client privacy and a quiet environment.		
Performed hand hygiene.		
Provided comfort and safety for client. Placed client in a supine or in a sitting position. Exposed the area of the chest over the apex of the heart.		
Located the apical impulse by palpating the angle of Louis just below the suprasternal notch, sliding the index finger to the third intercostal space, and moving laterally toward the midclavicular line.		
Warmed the stethoscope in the palm of your hand for 5–10 seconds.		
Counted client's heartbeats for 30 seconds and multiplied by 2 for regular rhythm or 60 seconds for irregular rhythm.		
Performed hand hygiene and cleaned stethoscope.		
Documented apical pulse rate and regularity in client's record.		

Assessing a Blood Pressure	Performed	
	Yes	No
Gathered stethoscope and appropriate size cuff.		
Introduced self and verified client's identity. Provided client privacy and a quiet environment.		
Performed hand hygiene.		
Provided comfort and safety for client. Positioned client in a sitting position with upper arm exposed, palm of the hand facing up, and forearm supported.		
Wrapped deflated cuff evenly around the upper part of arm (lower border of		

Assessing a Blood Pressure	Performed	
	Yes	No
cuff 1 inch above antecubital space) with center of cuff bladder over the artery.		
Located and palpated brachial artery with fingertips.		
Closed valve on sphygmomanometer pump. Positioned stethoscope ear pieces in ears and ensured stethoscope hung freely from ears to its diaphragm.		
Placed bell (or diaphragm) of stethoscope directly on skin over the brachial pulse site and inflated cuff rapidly.		
Read pressure on manometer at eye level.		
Released the valve on the cuff and deflated it at a rate of 2-3 points mm Hg/second. Did not leave cuff inflated for a prolonged period.		
Noted point at which Korotkoff's sounds began (phase I).		
Deflated cuff completely and removed cuff from client's arm.		
Performed hand hygiene.		
Recorded blood pressure readings using two phases: 120/80 where 120 is the systolic (phase I) and 80 is the diastolic (phase V) pressure.		

Note: Blood pressure reading may vary up to 10 mmHg between instructor and student.

Assessing Body Temperature	Performed	
	Yes	No
Gathered appropriate thermometer for client and lubricant, if necessary.		
Introduced self and verified client's identity. Provided client privacy and a quiet environment.		
Performed hand hygiene and donned gloves, if appropriate.		
Provided comfort and safety for client. Positioned client appropriately for device and route.		
Applied protective sheath or cover over thermometer probe. Lubricated rectal thermometer with water soluble lubricant.		
Oral Route		

Assessing Body Temperature	Performed	
	Yes	No
Placed probe under client's tongue at one side. Had client close mouth and either held thermometer in place or monitored while taking temperature.		
Rectal Route Placed client in prone or side-lying position. Inserted thermometer 1/4 to 1/2 inch into rectum for infant—1/2 to 1 inch for child, and held in place.		
Left digital thermometer in place 45–90 seconds or removed electronic thermometer when audible signal occurred.		
Removed thermometer and discarded cover.		
Removed gloves if used. Performed hand hygiene.		
Documented temperature and route.		

Assessing Peripheral Pulses	Performed	
	Yes	No
Introduced self and verified client's identity. Provided client privacy and a quiet environment.		
Performed hand hygiene.		
Provided comfort and safety for client.		
Selected pulse point.		
Palpated and compared the most distal pulses bilaterally on each extremity.		
Performed hand hygiene.		
Documented pulse site, symmetry, strength, and regularity.		

Assessing Respirations	Performed	
	Yes	No
Introduced self and verified client's identity. Provided client privacy.		
Performed hand hygiene.		

Assessing Respirations	Performed	
	Yes	No
Provided comfort and safety for client.		
Observed or palpated chest rise and fall and counted the respiration rate..		
Counted the respiration rate for 30 seconds and multiplied by two if respirations were regular and 60 seconds if they were irregular.		
Noted characteristics of respirations.		
Performed hand hygiene.		
Documented rate, depth, and pattern of respirations.		

Using a Pulse Oximeter	Performed	
	Yes	No
Gathered pulse oximeter. Choose a sensor appropriate for client's weight, size, and desired location.		
Introduced self and verified client's identity.		
Performed hand hygiene.		
Provided comfort and safety for client.		
Applied the sensor and connected it to the pulse oximeter.		
Read oxygen saturation level on digital readout monitor.		
Ensured accuracy of measurement. Minimized artifacts due to motion. Covered sensor if necessary to shield from light. c. Validated oximeter pulse rate is consistent with manually assessed pulse rate.		
Performed hand hygiene.		
Recorded findings.		

Assessment

Head to Toe	Performed	
	Yes	No
Gathered supplies.		
Introduced self and verified client's identity. Provided client privacy.		
Performed hand hygiene and donned gloves.		
Provided comfort and safety for client. Positioned client appropriately and raised bed to working height.		
<i>Skin Assessment</i>		
Inspected skin color and uniformity.		
Assessed edema, if present.		
Inspected, palpated, and described skin lesions.		
Observed and palpated skin moisture and temperature.		
<i>Hair</i>		
Inspected amount of body hair. Noted presence of infections or infestations by parting the hair in several areas, checking behind the ears and along the hairline at the neck.		
<i>Mouth and oropharynx</i>		
Inspected the oral mucous membranes for color, moisture, texture, and the presence of lesions.		
<i>Ears and nose</i>		
Inspected auricles and palpated for areas of tenderness.		
Inspected external ear canals for cerumen, skin lesions, pus, and blood.		
Inspected the external nose for flaring or discharge from the nares.		
Lightly palpated the external nose to determine any areas of tenderness, masses, and displacements of bone and cartilage.		
<i>Eyes</i>		
Inspected the pupils for shape, symmetry and size.		
Assessed each pupil's direct and consensual reaction to the light to determine function of the third cranial nerve.		

Head to Toe	Performed	
	Yes	No
<ul style="list-style-type: none"> a. Partially darkened room. b. Asked client to look straight ahead. c. Used a penlight and approached from side and shined a penlight. d. Observed the response of the illuminated pupil. e. Shined the light on the pupil again, and observed the response of the other pupil. 		
<p>10. Assessed each pupil's reaction to accommodation.</p> <ul style="list-style-type: none"> a. Held an object about 10 cm from the bridge of the client's nose. b. Asked the client to look first at the top of object and then at a distant object behind the penlight. Alternated gaze from the near to the far object. c. Observed pupil response. d. Observed pupils to converge when penlight moved toward client's nose. 		
Neurological		
Determined the client's orientation to time, place, and person by tactful questioning.		
<p>Calculated the Glasgow Coma Scale.</p> <p>I. Motor Response</p> <ul style="list-style-type: none"> 6 – Obeys commands fully 5 – Localizes to noxious stimuli 4 – Withdraws from noxious stimuli 3 – Abnormal flexion, i.e. decorticate posturing 2 – Extensor response, i.e. decerebrate posturing 1 – No response <p>II. Verbal Response</p> <ul style="list-style-type: none"> 5 – Alert and Oriented 4 – Confused, yet coherent, speech 3 – Inappropriate words and jumbled phrases consisting of words 2 – Incomprehensible sounds 1 – No sounds <p>III. Eye Opening</p> <ul style="list-style-type: none"> 4 – Spontaneous eye opening 3 – Eyes open to speech 2 – Eyes open to pain 1 – No eye opening 		
Thorax		
Inspected the thorax for shape, symmetrical expansion, presence of scars		

Head to Toe	Performed	
	Yes	No
and respiratory effort.		
Auscultated the chest using the diaphragm of the stethoscope. <ul style="list-style-type: none"> a. Used the systematic zigzag procedure comparing left to right side. b. Asked the client to take slow, deep breaths through the mouth. Listened at each point to the breath sounds during complete inspiration and expiration. a. complete inspiration and expiration. c. Compared findings at each point with the corresponding point on the opposite side of the thorax. 		
<i>Cardiovascular</i>		
Auscultated the heart in all four anatomic sites: aortic, pulmonic, tricuspid, and apical. <ul style="list-style-type: none"> a. Eliminated sources of room noise. b. Kept the client in a supine position with head elevated 30 to 45 degrees. c. Used both the diaphragm and the bell to listen to all areas and distinguish both S1 and S2 sounds. d. Concentrated on one particular sound at a time in each area: the first heart sound, followed by systole, then the second heart sound, then diastole. 		
Inspected the jugular veins for distention while client was placed in a semi-Fowler's position with the head supported on a small pillow.		
<i>Abdomen</i>		
Inspected the abdomen for size, shape, symmetry, and presence of scars.		
Auscultated the abdomen for bowel sounds..		
Percussed several areas in each of the four quadrants to determine presence of tympany and dullness.		
Palpated all four quadrants of abdomen to detect areas of tenderness.		
<i>Musculoskeletal</i>		
Noted the presence of contractures or tremors.		
Tested muscle strength by having the client push against resistance in both upper and lower extremities bilaterally.		
<i>Peripheral vascular system</i>		

Head to Toe	Performed	
	Yes	No
Palpated the peripheral pulses on both sides of the client's body individually and simultaneously (except the carotid pulse) to determine the symmetry of pulse volume.		
<i>Nails</i>		
Inspected fingernail plate shape to determine its curvature and angle.		
Inspected fingernail and toenail texture and color.		
Performed blanch test of capillary refill. Pressed two or more nails between thumb and index finger; looked for blanching and return of pink color to nail bed. Counted in seconds the time for color to return completely.		
Removed and discarded gloves. Performed hand hygiene.		
Documented assessment data in the client's record.		

Assessment of Pressure Ulcers	Performed	
	Yes	No
1. Introduced self and verified client's identity. Provided client privacy..		
2. Performed hand hygiene.		
3. Provided comfort and safety for client. Raised bed to appropriate height for procedure.		
4. Determined size and characteristics of pressure ulcer, including stage, wound bed appearance and undermining/tunneling.		
5. Returned bed to lowest height. Performed hand hygiene.		
6. Documented pressure ulcer assessment data.		

Caring Interventions

Application of an Oxygen Device	Performed	
	Yes	No
Reviewed provider's order and gathered supplies.		
Introduced self and verified client's identity. Provided client privacy.		
Performed hand hygiene and donned gloves, if needed.		
Provided comfort and safety for client. Positioned client appropriately in a semi-Fowler position.		
Performed respiratory assessment for baseline data.		
Explained safety precautions to client and support people.		
Set up oxygen equipment and humidifier, if used: <ul style="list-style-type: none"> a. Attached flow meter to wall outlet or tank. b. Filled humidifier bottle with tap or distilled water, if needed. c. Attached humidifier bottle to base of flow meter if being used. d. Attached prescribed oxygen tubing and delivery device to flow meter or humidifier, if used. 		
Turned on the oxygen at the prescribed rate, and ensured proper functioning. Checked that oxygen was flowing freely through tubing. Set oxygen at flow rate ordered. If reservoir bag was attached, partially inflated it with oxygen.		
Applied the appropriate oxygen delivery device.		
Documented procedure, assessment data, and client's response.		
Variation: Using a Nasal Cannula		
Put cannula with outlet prongs curved downward, fitting into nares; and elastic band around head or tubing over ears and under chin. Taped cannula at sides of face if it would not stay in place. Padded tubing and band over ears and cheekbones if needed.		
Variation: Using a Non-rebreather Mask		
Checked size of face mask to make sure it fits client. Guided mask towards client's face and applied from nose downward. Fitted mask and metal nose bracket to contours of client's face. Secured elastic band around client's head so that the mask was comfortable but snug. Verified oxygen flow rate at 10–15 L/min providing highest oxygen concentration by mask. Checked to make sure oxygen bag did not totally deflate during inspiration.		

Assisting with a bedpan	Performed	
	Yes	No
Gathered supplies.		
Introduced self and verified client's identity. Provided client privacy.		
Performed hand hygiene and donned gloves.		
Provided comfort and safety for client. Positioned client appropriately and raised bed to working height.		
Placed client in supine position if appropriate for client.		
Placed client on bedpan. <ul style="list-style-type: none"> a. Placed absorbent pad under hips if needed. b. Asked client to flex the knees and push up to raise the buttocks. Assisted client to do this as necessary by placing own hand under the lower back and lifting buttocks. Positioned a bedpan under the buttocks with the buttocks resting on the smooth, rounded rim. c. If client unable to lift buttocks, assisted client to side-lying position, placed the bedpan against the buttocks, and slowly rolled the client onto the bedpan while holding it in place. 		
Elevated head of the bed to a semi-Fowler's position if appropriate for client. Covered client with top bed linen. Placed signal light and toilet tissue within easy reach. Raised the side rail, if lowered, adjusted the bed to lowest height, and asked the client to signal when finished. Ensured client would be safe to leave alone.		
When client had voided, returned, performed hand hygiene and donned clean gloves. Raised the bed to a comfortable height. Removed the bedpan and assisted with wiping front to back as necessary. Did further cleaning of area as needed and verified skin was dry.		
Removed the disposable absorbent pad or replaced drawsheet if soiled.		
Provided opportunity for client to perform hand hygiene.		
Repositioned client for comfort and returned bed to lowest height.		
Measured intake and output if required.		
Emptied bedpan and disposed of soiled linen.		
Removed gloves and performed hand hygiene.		
Documented results and how the client tolerated the procedure in the client's record.		

Bathing a Patient	Performed	
	Yes	No
Gathered supplies, clean linen, personal hygiene articles, clean gloves, and laundry bag.		
Introduced self and verified client's identity. Provided client privacy.		
Performed hand hygiene and donned gloves.		
Provided comfort and safety for client. Positioned client appropriately.		
Offered toileting opportunity to client before beginning procedure.		
Positioned bed at a comfortable working height. Positioned client closer to side of bed working from		
Placed bath blanket over client and over top linen. Loosened top linen at edges and foot of bed. Removed dirty top linen from under bath blanket (top sheet), starting at client's shoulders and rolling linen down toward client's feet. Asked client to grasp and hold top edge of bath blanket to keep it in place while pulling linen to foot of bed. Placed dirty linen in laundry hamper.		
Removed client's hospital gown without disturbing IVs/tubes. Kept client covered with bath blanket. Placed gown in laundry bag.		
Placed towel under client's head.		
Made a mitt with washcloth.		
Bathed client's face. Washed around client's eyes, using clear water. With one edge of facecloth, wiped from the inner canthus toward the outer canthus. Using a different section of the washcloth, repeated procedure on other eye. Washed, rinsed, and dried client's forehead, cheeks, nose, and area around lips. Dried client's face thoroughly Washed, rinsed, and dried area behind and around the client's ears. Washed, rinsed, and dried client's neck.		
Removed towel from under client's head.		
Bathed client's upper extremities. Placed towel under area to be bathed. Washed both arms by elevating client's arm and holding client's wrist. Used long, firm strokes from wrist toward shoulder, including axillary area. Washed, rinsed, and dried client's axillae. Applied deodorant,if		

Bathing a Patient	Performed	
	Yes	No
desired. Washed client's hands by soaking them in the basin or with a washcloth. Cleaned client's nails.		
Bathed client's abdomen and chest. Kept client's chest covered with the towel, washed, rinsed and thoroughly dried client's chest (especially under breasts). Washed, rinsed, and dried abdomen and umbilicus. Replaced bath blanket over client's upper body and abdomen.		
Bathed client's legs and feet. Placed towel under leg to be bathed. Draped other leg, hip, and genital area with the bath blanket. Carefully placed bath basin on the towel near the client's foot, with knee bent. With one arm under the client's leg, grasped the client's foot and bent knee. Placed foot in basin of water. Bathed client's leg using long, smooth, firm strokes, moving toward hip. Rinsed and dried client's leg. Washed client's foot with washcloth. Rinsed and dried foot and area between toes thoroughly. Carefully moved basin to other side of bed, and repeated procedure for client's other leg and foot.		
Changed bath water. Raised side rails when refilling basin.		
During the bath, continuously assessed client's skin.		
Bathed client's back. Helped client turn to a side-lying or prone position. Placed towel under area to be bathed. Covered client with a bath blanket.		
Washed, rinsed, and dried client's back, moving from the shoulders to the buttocks.		
Assisted client to a supine position and determined whether the client could self-wash perineal area. Draped and assisted client as needed to wash the area.		
Removed gloves and placed in receptacle.		
Assisted client to use grooming aids and dress in clean hospital gown.		
Cleaned and stored bath equipment. Disposed of dirty linen.		
Repositioned bed to lowest height and placed upper side rails in UP position before leaving client.		
Performed hand hygiene.		
Documented type of bath, skin assessment data, how the client tolerated the procedure and ability of client to assist.		

Changing an occupied bed	Performed	
	Yes	No
Gathered supplies, clean linen, clean gloves, and laundry bag.		
Introduced self and verified client's identity. Provided client privacy.		
Performed hand hygiene and donned gloves.		
Provided comfort and safety for client. Positioned client appropriately.		
Raised bed to working height. Lowered side rail on near side of the bed; made sure side rail on opposite side was in UP position.		
Loosened top linens.		
Removed spread, sheet, and blanket at the same time the bath blanket (or top sheet) was pulled over client. If they were to be reused, folded them and placed on the chair.		
Placed top sheet in linen hamper (unless being used to cover client).		
Assisted client to side of bed, placed in side-lying position facing away and as near the far side rail as possible.		
Loosened bottom linens on near side of the bed.		
Pushed dirty linen under or as close as possible to client.		
Placed clean bottom sheet on mattress while client lying on opposite side of bed. Placed center fold of sheet on middle of mattress with end of sheet even with end of mattress.		
Unfolded bottom sheet and covered mattress. Made sure clean bottom sheet was underneath any used linen.		
Tucked top of sheet under head of bed, or positioned contour sheet around corner of mattress.		
Tucked remaining bottom sheet well under mattress from head to foot.		
Centered drawsheet on bed, if the client requires a drawsheet, and fanfolded half of sheet under client. Tucked side of sheet under mattress. Smoothed out any wrinkles. <ul style="list-style-type: none"> a. Folded drawsheet in half or quarters if a pull sheet was needed. Positioned sheet in middle of bed. Fanfolded half of pull sheet under client. b. Fanfolded absorbent pad and centered it on bed under client's buttocks, absorbent side up and plastic side down. Placed pad close to client for ease in pulling it through to other side of bed. 		
Helped client roll over to other side of bed.		
Told client why there was a hump of linen in center of bed. Made client		

Changing an occupied bed	Performed	
	Yes	No
comfortable.		
Raised side rail. Moved to other side of bed.		
Gently pulled linens toward other side of bed.		
Lowered side rail, and loosened bottom sheets.		
Pulled dirty linen to side of bed and rolled into a bundle at the foot of bed or placed linen in linen hamper.		
Did not place dirty linen on floor.		
Pulled clean linen across mattress and straightened under client.		
Helped client into a supine position in the center of the bed and adjusted pillow.		
Placed top sheet, blanket, and spread over client.		
Removed bath blanket, and straightened top sheet and blanket.		
Pulled up all layers of linen at client's toes.		
Raised side rail.		
Removed pillow from bed, and changed pillowcase.		
Returned bed to lowest position.		
Disposed of soiled laundry.		
Removed gloves and performed hand hygiene.		

Infection

Hand Hygiene	Performed	
	Yes	No
Stood in front of but away from sink.		
Ensured that paper towel was hanging down from dispenser.		
Turned on water using foot pedal or faucet so that flow was adequate, but not splashing.		
Adjusted temperature to warm.		
Wet hands under running water, keeping hands below elbow level.		
Placed a small amount (one to two teaspoons, 5–10 mL) of liquid soap on hands. Thoroughly distributed over hands. Used soap from a dispenser, not bar soap.		
Rubbed vigorously, using a firm, circular motion, while keeping fingers pointed down, lower than wrists. Started with each finger, then between fingers, then palm and back of hand.		
Washed hands for at least 20 seconds.		
Rinsed hands under running water, keeping fingers pointed downward.		
Dried hands thoroughly with a paper towel, while keeping hands positioned with fingers pointing up.		
Turned off water faucet with dry paper towel, if not using foot pedal.		
Variation: Using Waterless Antiseptic Agents (Foams or Gels)		
Checked dirt on hands and used waterless agent only if hands were clean.		
Applied small amount of alcohol-based rub, foam or gel (3–5 mL), on palm of hand.		
Rubbed hands together vigorously, covering all surfaces, sides of hands and fingers.		
Rubbed hands until dry. Does not dry with paper towel.		

Isolation Attire	Performed	
	Yes	No
<i>Donning Attire</i>		
1. Performed hand hygiene.		
2. Took gown from isolation cart or cupboard. Put on a new gown each time entering an isolation room.		
3. Held gown so that opening was in back when worn.		
4. Put gown on by placing one arm at a time through sleeves. Pulled gown up and over shoulders.		
5. Fasten in back of neck and waist		
6. Don mask, securing ties or elastic bands at middle of head and neck. Fit flexible band to nose bridge to fit snug to face and below chin. Fit-check respirator, if applicable,		
7. Don goggles or face shield, placing over face and eyes and adjust to fit.		
8. Donned clean gloves and pulled gloves over gown wristlets.		
<i>Removing Attire</i>		
1. Grasp the gown in the front and pull away from your body so that the ties break, touching outside of gown only with gloved hands. While removing the gown, fold or roll the gown inside-out into a bundle.		
2. While removing gown, peel off gloves at the same time, only touching the inside of the gloves and gown with bare hands. Place the gown and gloves into a waste container		
3. Remove goggles or face shield from the back by lifting head band and without touching the front of the goggles or face shield. If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container		
4. Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front. Discard in a waste container		
5. Performed hand hygiene.		
6. Completed hand hygiene.		

Medication Administration

Preparing medications from an ampule	Performed	
	Yes	No
Reviewed provider's order and gathered supplies.		
Performed hand hygiene		
Flicked upper stem of ampule with fingernail to bring all medication into main portion of the ampule.		
Used an ampule opener, or placed unopened alcohol wipe or piece of gauze between thumb and ampule neck and broke off the top of the ampule away from self. Disposed of top in sharps container.		
Placed ampule on a flat surface. Attached the filter needle to the syringe.		
Removed the cap from the needle and inserted the needle into the center of the ampule. Withdrew all the medication.		
Tapped syringe barrel to dislodge air bubbles to hub of syringe. Ejected air with syringe in an upright position. If amount of solution was overdrawn, inverted syringe and removed excess solution to medical waste receptacle.		
Removed filter needle from syringe and placed in sharps container. Replaced filter needle with a regular needle, tightened the cap at the hub of the needle, and push solution into the needle to the prescribed amount.		
Labeled syringe with medication name and dosage in syringe, if medication is not given immediately.		

Drawing up medications from a ampule	Performed	
	Yes	No
Reviewed provider's order and gathered supplies.		
Introduced self and verified client's identity. Provided client privacy.		
Performed hand hygiene and donned gloves, if needed.		
Provided comfort and safety for client. Positioned client appropriately in a semi-Fowler position.		
Performed respiratory assessment for baseline data.		
Explained safety precautions to client and support people.		
Set up oxygen equipment and humidifier, if used: <ul style="list-style-type: none"> a. Attached flow meter to wall outlet or tank. b. Filled humidifier bottle with tap or distilled water, if needed. c. Attached humidifier bottle to base of flow meter if being used. 		

Drawing up medications from a ampule	Performed	
	Yes	No
d. Attached prescribed oxygen tubing and delivery device to flow meter or humidifier, if used.		
Turned on the oxygen at the prescribed rate, and ensured proper functioning. Checked that oxygen was flowing freely through tubing. Set oxygen at flow rate ordered. If reservoir bag was attached, partially inflated it with oxygen.		
Applied the appropriate oxygen delivery device.		
Documented procedure, assessment data, and client's response.		
Variation: Using a Nasal Cannula		
Put cannula with outlet prongs curved downward, fitting into nares; and elastic band around head or tubing over ears and under chin. Taped cannula at sides of face if it would not stay in place. Padded tubing and band over ears and cheekbones if needed.		
Variation: Using a Non-rebreather Mask		
Checked size of face mask to make sure it fits client. Guided mask towards client's face and applied from nose downward. Fitted mask and metal nose bracket to contours of client's face. Secured elastic band around client's head so that the mask was comfortable but snug. Verified oxygen flow rate at 10–15 L/min providing highest oxygen concentration by mask. Checked to make sure oxygen bag did not totally deflate during inspiration.		

Preparing medications from a vial	Performed	
	Yes	No
Reviewed provider's order and gathered supplies.		
Performed hand hygiene		
Mixed medication solution as needed by rotating vial between the palms of the hands. Removed protective cap from vial and cleaned rubber cap vial with antiseptic wipe in circular motion.		
Ensured needle firmly attached to syringe (used a filter needle if needed).		
Removed cap from needle and drew up into the syringe the amount of air equal to the volume of medication to be withdrawn.		

Preparing medications from a vial	Performed	
	Yes	No
Inserted needle into upright vial through the center of the rubber cap, maintaining sterility of the needle.		
Injected air into vial, then withdrew the prescribed amount of medication by holding the vial down or inverting the vial.		
Held syringe and vial at eye level to determine correct dosage of drug was drawn into the syringe.		
Tapped syringe barrel to dislodge air bubbles to hub of syringe. Ejected air with syringe in an upright position. If amount of solution was overdrawn, inverted syringe and removed excess solution to medical waste receptacle. If filter needle used, replaced it with a regular needle and ejected air from new needle.		
Labeled syringe with medication name and dosage in syringe, if medication is not given immediately.		

Administering subcutaneous injections	Performed	
	Yes	No
Reviewed provider's order and gathered supplies.		
Introduced self and verified client's identity. Provided client privacy.		
Performed hand hygiene and donned gloves.		
Provided comfort and safety for client. Positioned client appropriately.		
Prepared correct amount of medication without contaminating it.		
Selected fatty site for injection, alternating sites for each injection. .		
Cleansed area with antimicrobial swab and allowed to dry		
Used thumb and forefinger and gently grasped loose area of fatty tissue on appropriate site.		
Removed needle guard, held syringe like a dart between the thumb and forefinger, and inserted needle at a 45° or 90° angle.		
Injected medication slowly. Waited 10 seconds, then withdrew needle quickly and activated needle safety feature.		
Released tissue and massaged area with swab (if indicated).		
Discarded needle/syringe unit in puncture-proof container.		

Administering subcutaneous injections	Performed	
	Yes	No
Discarded gloves and performed hand hygiene.		
Documented medication administration including assessment findings, if indicated.		

Administering intramuscular injections	Performed	
	Yes	No
Reviewed provider's order and gathered supplies.		
Introduced self and verified client's identity. Provided client privacy.		
Performed hand hygiene and donned gloves.		
Provided comfort and safety for client. Positioned client appropriately.		
Prepared correct amount of medication without contaminating it.		
Selected injection site, identifying bony landmarks. Considered client's size, amount and viscosity of medications being injected. Alternated sites each time injections were given.		
Cleansed area with antimicrobial swab and allowed to dry.		
Spread skin taut between thumb and forefinger (grasping muscle is acceptable in pediatric and geriatric clients with less fatty tissue) to ensure needle placement in muscle belly.		
Inserted needle at a 90° angle to the muscle, using a quick, darting motion.		
Injected medication slowly. Waited 10 seconds, then withdrew needle quickly and activated needle safety feature. Massaged area with gauze pad.		
Discarded needle/syringe unit in puncture-proof container.		
Discarded gloves and performed hand hygiene.		
Documented medication administration including assessment findings, if indicated.		

Administering medications by enteral tube	Performed	
	Yes	No
Checked medication orders.		
Removed appropriate medication from medication drawer, shelf, or refrigerator. Used liquids or crushed and dissolved tablets.		
Introduced self and verified client's identity. Provided client privacy.		
Performed hand hygiene and applied gloves.		
Positioned client in a Fowler's or sitting position.		
If client was receiving a continuous feeding tube, press "Hold" button on enteric feeding pump.		
Disconnected tubing that was being used for suction or feeding from gastric tube. Placed cap on end of tubing.		
Assessed tube placement by gastric pH testing, aspiration of gastric contents and patient verbalizations without distress.		
Pinched or folded over gastric tube.		
<p>Administered the medication(s):</p> <ul style="list-style-type: none"> a. Removed the plunger from the syringe and connected the syringe to a pinched or folded over tube. b. Put 30 mL of water to the syringe barrel to flush the tube before administering the first medication. Raised or lowered barrel of syringe to adjust flow as needed. Pinched or clamped tubing before all of water was instilled. c. Poured liquid or dissolved medication into syringe barrel and allowed to flow by gravity into enteral tube. d. After administering the last medication, flushed the tube with 30 mL of tap water. f. Pinched or folded over gastric tube and reconnected to tubing for continuous feeding. g. Removed and discarded gloves. Performed hand hygiene. <p>Discarded disposable supplies.</p>		
Documented medication administration in client's record.		

LPN Advanced Placement

Sample Dosage Calculation Exam

Name _____ Date _____

Show all your work/Round to the nearest 10th when appropriate/Circle your final answer

1. An IV of NS 1,000 mL is to infuse over 10 hours. The drop factor is 15 gtt/mL. Calculate the flow rate in gtt/min using a whole number.

2. Order: gentamycin sulfate (Garamycin) 100 mg IV q8h
Supply: Garamycin 40mg/mL. Calculate the dose to be administered.

3. Order: clonazepam (Klonopin) 500 mcg po
Supply: Klonopin 0.25 mg per tablet. Calculate the dose to be administered.

4. Order: acetaminophen (Tylenol) 15mg/kg po is ordered for a patient who weighs 66 lbs
Supply: Tylenol suspension 300 mg/20 mL. Calculate the dose to be administered.

5. Order: Ampicillin 175 mg IV q8h
The directions on the package state: "Reconstitution of the single-use vial with 5 mL yields 250 mg/6 mL." Calculate the dose to be administered.

6. Order: Penicillin G 300 mg IM q6h
The label reads: Penicillin 1g. Add 2 mL Bacteriostatic Water for injection. Each mL contains 500mg of Penicillin. Calculate the dose to be administered.

7. Ordered: Heparin 3,200 units subcutaneously q8h
Supply: 4,000 units/mL in a multidose vial. Calculate the dose to be administered.

8. Ordered: Heparin 70 units/kg for a patient who weighs 220 lbs
Supply: 10,000 units/mL in a multidose vial. Calculate the dose to be administered.

9. Ordered: Depakene (Valproic acid) 950 mg po
Read the label and calculate the dose to be administered.

Do not accept if band on cap is broken or missing.
Each 5 mL contains equivalent of 250 mg valproic acid as the sodium salt.
See enclosure for prescribing information.
©Abbott
Abbott Laboratories
North Chicago, IL60064, U.S.A.
Exp.
Lot

NDC 0074-5682-16
16 fl oz Syrup

DEPAKENE®

VALPROIC ACID
SYRUP, USP

**250 mg
per 5 mL**

6505-01-094-9241
Dispense in the original container or a glass, USP tight container.
Store below 86°F (30°C).

0074568216

Caution: Federal (U.S.A.) law prohibits dispensing without prescription.

02-7538-2/R12

10. Ordered: Atropine 0.6 mg IM
 Read the label and calculate the dose to be administered.

Store at 59° to 86°F (13° to 30°C)
 Usual Adult Dose—0.75 to 1.5 mL
 injected subcutaneously, intramuscularly,
 or slowly intravenously. See literature.
 Each mL contains Atropine Sulfate,
 0.4 mg with Chlorobutolol (Chloroform
 Derivative) 0.5 percent.
 W.V. 6731 AMX
 Eli Lilly & Co., Indianapolis, IN 46205, U.S.A.
APPROXIMATE EQUIVALENTS
 0.4 mL=0.16 mg
 0.5 mL=0.2 mg
 0.6 mL=0.24 mg
 0.8 mL=0.32 mg
 1 mL=0.4 mg
 1.25 mL=0.5 mg
 1.6 mL=0.65 mg
 2.5 mL=1.0 mg
 3.1 mL=1.25 mg
 Exp. Date/Control No.

NDC 0002-1675-01
20 mL VIAL No. 419

POISON 

**A TROPINE
 SULFATE
 INJECTION, USP**
0.4 mg per mL
 CAUTION—Federal (U.S.A.) law
 prohibits dispensing without
 prescription.



LPN Advanced Placement

Sample Dosage Calculation Exam - Answers

Name _____ Date _____

Show all your work/Round to the nearest 10th when appropriate/Circle your final answer

1. An IV of NS 1,000 mL is to infuse over 10 hours. The drop factor is 15 gtt/mL. Calculate the flow rate in gtt/min using a whole number.

$$1000\text{mL}/(10\text{hr} \times 60 \text{ mins/hr}) = 1.67\text{mL}/\text{min} \times 15 \text{ gtt/mL} = 24.99 \text{ gtt/min} \quad \mathbf{x= 25 \text{ gtt/min}}$$

2. Order: gentamycin sulfate (Garamycin) 100 mg IV q8h
Supply: Garamycin 40mg/mL. Calculate the dose to be administered.

$$\frac{100\text{mg}}{x \text{ mL}} = \frac{40\text{mg}}{1\text{mL}} \quad 40x = 100 \quad \frac{40x = 100}{40} \quad \mathbf{x= 2.5 \text{ mL}}$$

3. Order: clonazepam (Klonopin) 500 mcg po
Supply: Klonopin 0.25 mg per tablet. Calculate the dose to be administered.

$$\frac{0.25\text{mg}}{1} = \frac{500\text{mcg}}{x} \quad 0.25x = 500\text{mcg} \quad \frac{0.25x = 500\text{mcg}}{0.25} \quad \mathbf{x = 2 \text{ tabs}}$$

4. Order: acetaminophen (Tylenol) 15mg/kg po is ordered for a patient who weighs 66 lbs
Supply: Tylenol suspension 300 mg/20 mL. Calculate the dose to be administered.

$$66\text{lbs} = 30\text{kg} \quad \frac{15\text{mg} \times 30\text{kg}}{\text{Kg}} = 450\text{mg} \quad \frac{450\text{mg}}{x} = \frac{300\text{mg}}{20\text{mL}} \quad \frac{300x = 9000\text{mL}}{300} \quad \mathbf{x = 30 \text{ mL}}$$

5. Order: Ampicillin 175 mg IV q8h
The directions on the package state: "Reconstitution of the single-use vial with 5 mL yields 250 mg/6 mL." Calculate the dose to be administered.

$$\frac{175\text{mg}}{x} = \frac{250\text{mg}}{6\text{mL}} \quad 250x = 1050\text{mL} \quad \frac{250x = 1050\text{mL}}{250} \quad \mathbf{x = 4.2 \text{ mL}}$$

6. Order: Penicillin G 300 mg IM q6h
The label reads: Penicillin 1g. Add 2 mL Bacteriostatic Water for injection. Each mL contains 500mg of Penicillin. Calculate the dose to be administered.

$$\frac{300\text{mg}}{x} = \frac{500\text{mg}}{1\text{mL}} \quad \frac{500x = 300\text{mL}}{500} \quad \mathbf{x = 0.6 \text{ mL}}$$

7. Ordered: Heparin 3,200 units subcutaneously q8h
Supply: 4,000 units/mL in a multidose vial. Calculate the dose to be administered.

$$\frac{3200\text{units}}{x} = \frac{4000\text{units}}{1} \quad \frac{4000x = 3200}{4000} \quad \mathbf{x=0.8 \text{ mL}}$$

8. Ordered: Heparin 70 units/kg for a patient who weighs 220 lbs
 Supply: 10,000 units/mL in a multidose vial. Calculate the dose to be administered.

$$220\text{lbs} = 100\text{kg} \quad 100\text{kg} \times 70\text{units/kg} = 7000\text{units} = \frac{7000\text{units}}{X} = \frac{10,000\text{units}}{1\text{mL}}$$

$$\frac{10,000x}{10,000} = \frac{7000\text{units}}{10,000} \quad x = 0.7 \text{ mL}$$

9. Ordered: Depakene (Valproic acid) 950 mg po
 Read the label and calculate the dose to be administered.



$$\frac{250\text{mg}}{5\text{mL}} = \frac{950\text{mg}}{x} \quad 250x = 4750\text{mL} \quad \frac{250x}{250} = \frac{4750\text{mL}}{250} \quad x = 19 \text{ mL}$$

10. Ordered: Atropine 0.6 mg IM
 Read the label and calculate the dose to be administered.



$$\frac{0.6\text{mg}}{x} = \frac{0.4\text{mg}}{1\text{mL}} \quad 0.4x = 0.6\text{mL} \quad \frac{0.4x}{0.4\text{mL}} = \frac{0.6\text{mL}}{0.4\text{mL}} \quad x = 1.5\text{mL}$$