BCIT

Course Outline

BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

Operating Unit: Health Sciences
Program: Nursing
Option:

NURS 3020
Clinical Techniques 3 — Laboratory

Start Date: January, 2000 **End Date:** May, 2000

Course Credits: 2 **Term/Level:** 4

Total Hours: 34
Total Weeks: 17

Hours/Week: 2 **Lecture:** 1 **Lab:** 1 **Shop:** **Seminar:** **Other:**

Prerequisites

Course No.	Course Name
NURS 2020	Clinical Techniques 2

Corequisite

Course No.	Course Name
NURS 4030	Nursing Practicum 4

NURS 3020 is a Prerequisite for:

Course No.	Course Name
NURS 4530	Nursing Practicum 5
or	
NURS 7030	Nursing Practicum in a Specialty Unit
and	
NURS 7070	Nursing Practicum in the Community

Course Calendar Description

This laboratory course presents nursing skills related to intermittent infusion devices, complex wound care, nasogastric tube insertion and care, central venous catheter assessment, enteral and parenteral nutrition, medication administration by IV push, ureteral catheterization, blood glucose monitoring, administration of blood products, chest drainage systems, tracheostomy care and neurological assessment. Emphasis is placed on: student understanding regarding the purpose of the skill, focused assessment related to the skill and safe and confident demonstration of the skill. The communication and research aspects of the skills are also included. Independent and laboratory practice, demonstrations and examinations are part of the course.

Course Goals

This course facilitates student learning of particular hands-on nursing skills used in professional nursing practice.

Instructor(s)

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Learning Resources

Recommended Textbooks:

One of the following Nursing Fundamental Textbooks:

Craven, R. F. & Hirnle, C. J. (1996). *Fundamentals of nursing: Human health and function* (2nd ed.). Philadelphia: Lippincott Co.

Dugas, B. W. & Knor, E. R. (1995). *Nursing foundations: A Canadian perspective*. Scarborough, Ontario: Appleton & Lange, Canada.

Kerr, J.R. & Sirotnik, M. (Eds.) (1997). *Potter & Perry Canadian fundamentals of nursing*. St. Louis: Mosby.

*A clinical skills textbook is **required**. The following is recommended:*

Ellis, J.R., Nowlis, E.A., & Bentz, P.M. (1996). *Modules for basic nursing skills, Volume II* (6th ed.). Philadelphia: Lippincott Co.

Elkin, M. K., Perry A. G. & Potter, P. A. (1996). *Nursing interventions and clinical skills*. Toronto: Mosby.

One of the following Medical-Surgical Textbooks:

Black, J.M. & Metassarin-Jabos, E. (1997). *Medical-surgical nursing: Clinical management for continuity of care* (5th ed.). Philadelphia, PA: Saunders.

LeMone, P. & Burke, L.M. (1996). *Medical-surgical nursing: Critical thinking in client care*. Menlo Park, CA: Addison Wesley.

Phipps, W.J., Sands, J.K. & Marck, J.F. (1999). *Medical-surgical nursing: Concepts and clinical practice* (6th ed.). St. Louis, MO: Mosby.

Smeltzer, S.C. & Bare, B.C. (1996) *Brunner & Suddarth's textbook of medical-surgical nursing* (8th ed.). Philadelphia: Lippincott.

BCIT Policy Information for Students

1. Course delivery and evaluation methods will be discussed during the first week of the class.
2. Clinical techniques will be practiced during laboratory periods and open lab practice times. Selected techniques will be tested at specific times noted on the class schedule.
3. Unforeseeable circumstances may necessitate the alteration of course content, sequencing, timing or evaluation. As much as possible, students will be given adequate notice of such changes.

Participation/Attendance

1. Regular attendance in class and practice labs is expected. (Refer to BCIT Policy related to Attendance.) Students may be recommended for a failing grade if absent more than 10% of the time.

2. Students are responsible for content of a missed class.

Assignment Details

1. **Midterm Multiple Choice exam** *Midterm exam is worth 20% of total final grade.*

   The multiple choice exam will be based on the clinical techniques covered in weeks 1–8.

2. **Skill Demonstration** *Skill Testing is worth 30% of total final grade*

   Skill demonstration weeks are noted on the course schedule. Students will be evaluated on their ability to demonstrate safe and competent catheterization in a simulated laboratory situation. Demonstration of the technique will be graded according to the criteria stated on a checklist that students will receive prior to the catheterization practice laboratory. A score out of 30 will be assigned to the student by the evaluator.

3. **Final Multiple Choice Exam** *Final Exam is worth 50% of total final grade*

   A multiple choice exam will be given during examination week. The questions will be based on ***all*** the skills covered in NURS 3020 — Clinical Techniques 3.

Summarization of Evaluation:

1.	Midterm exam	20%
2.	Skill Demonstration	30%
3.	Multiple Choice Exam	50%
Total		100%

Week of/ Number	Clinical Technique	Preparation/Learning Activity	Assignments
1	A. Introduction to NURS 3020 • Review of course outline • Discussion of evaluation methods B. Blood Glucose Monitoring • Independent study	Preparation for this activity is required. **Required Readings** Supplemental reading material attached. Certification by Practicum instructor. Articles: (library reserve) Fleming, D. (1999). Challenging traditional insulin injection practices. AJN, 99(2), 72–74.	
2	**IV Therapy Part I** A. Intermittent Infusion Devices (Saline Locks) An intermittent infusion device or saline lock is used when a client is to receive solutions or medications intermittently. An intermittent infusion device may be connected to the IV cannula when the IV is initiated or a continuous IV line may be converted to an intermittent infusion device. Focus your reading on the following: • purposes and uses of intermittent infusion devices • equipment required for conversion of IV to intermittent infusion device • procedure for conversion • safety and comfort measures • documentation • patient teaching • assessment before, during and after procedure	**Required Readings** Use your recommended Nursing Fundamentals and Nursing Skills texts. **In Class** Video — Converting an infusing IV to intermittent infusion device (BCIT 1999) Practice Activity — in lab practice converting a continuous IV line to an intermittent infusion device, and reverse. Practice administering an IV medication using a minibag, an auxiliary unit, and an intermittent infusion device.	

Week of/ Number	Clinical Technique	Preparation/Learning Activity	Assignments
2 (cont'd)	**IV Therapy Part I** B. Medication Administration Through an Intermittent Infusion Device Using an Auxiliary IV Unit An intermittent infusion device may be used to administer medications by minibag. Focus on the following: • review medication administration via minibag (Clinical Techniques 2) • procedure for initiating, maintaining and disconnecting the auxiliary flush system and the intermittent infusion device • maintaining the patency of the intermittent infusion device • assessment before, during and after the procedure		

Week of/ Number	Clinical Technique	Preparation/Learning Activity	Assignments
3	**IV Therapy Part II** Central Venous Catheters Increasingly, in acute care settings, patients are receiving intravenous therapies and nutritional solutions through central venous catheters (CVCs) inserted into large central veins. Focus on the following key points to guide your research and preparation prior to class: • purposes of CVCs • types of CVCs • assisting with insertion of a CVC* • care and maintenance of a CVC – infusions – medication administration – exit site dressing change* – establishing and maintaining a heparin loc on a CVC* • potential complications (septicemia, air embolism, occlusion, hemorrhage, pneumothorax, venous thrombosis, injury to brachial plexus) • prevention of complications • roles and responsibilities of students caring for a patient with CVC * optional and not examinable reading.	**Required Readings** Use your recommended Nursing Fundamentals and Nursing Skills texts to prepare. **Articles**: (library reserve) Masoorli, Sue (1999) Air Embolism. *RN*. Vol. 62, No. 11, pp 32–34. Viall, C. D. (1990). Your complete guide to central venous catheters. *Nursing 90*, February, 34–42. Note related policies, procedures and documentation protocols. ***Review "Student Guidelines, Policies and Procedures in the Nursing Program."** **In Class** Video — CVCs (BCIT 1994) Practice Activity — a scenario for assessment and discussion will be set up. **In Practicum** Explore the types of CVCs that are used in your clinical area.	

Week of/ Number	Clinical Technique	Preparation/Learning Activity	Assignments
4	**Complex Wound Management Part I** Simple dressings are used when healing is occurring by primary intention. When factors interfere with normal wound healing, a wound must heal by secondary intention. Complex wound management involves strategies that promote healing by secondary intention. Use your readings to research the following: • phases of wound healing • secondary vs primary intention healing • factors which impact wound healing – systemic – local • wound assessment – location, size, depth – color: red, yellow, black – staging: I, II, III, IV, Eschar (V) – type and amount of exudate – condition of surrounding skin – pain • principles of wound management/topical therapies • types of topical dressing and gel therapies • criteria for selection of appropriate therapy • purpose of normal saline compresses, wet-to-dry dressings • procedure for changing dressing using sterile and non-sterile gloving • procedure for obtaining a wound culture • safety and comfort considerations • patient teaching • documentation	**Required Readings** Nursing Fundamentals and Nursing Skills texts. Articles: (library reserve) Frantz, R.A. & Gardner, S. (September, 1994). Elderly skin care: Principles of chronic wound care. *Journal of Gerontological Nursing*, September 35–45. Motta, G. J. (December, 1993). Dressed for success: How moisture retentive dressings promote healing: *Nursing 93*, December, 26–34. **In Class** Video — Complex Wound Care (BCIT 1999) Practice — normal saline compress dressing change using sterile gloves; instruments without sterile gloves; application of hydrocolloid gel. Topical Therapy Exercise — view 4 examples of complex wounds. Identify the stage and characteristics, and determine the appropriate topical therapy for each.	

Week of/ Number	Clinical Technique	Preparation/Learning Activity	Assignments
5	**Complex Wound Management Part II** Use your readings to research the following: • purpose of wound irrigations • procedures for performing would irrigations • safety and comfort considerations • patient teaching • documentation	**Required Readings** Nursing Fundamentals and Nursing Skills texts **In Class** Video — Wound Irrigations Practice — wound irrigation, application of ribbon tape packing	

Week of/ Number	Clinical Technique	Preparation/Learning Activity	Assignments
6	**IV Therapy Part III** Medication Administration by IV Push Medications delivered by IV push involve the introduction of a concentrated dose of medication directly into the patients' systemic circulation. IV push medications may be administered via an established intravenous infusion line or via an intermittent infusion device. The IV push procedure is clearly described in your texts; however, important observations and safety aspects of this route of administration are provided for you as supplementary reading.	**Required Readings** Nursing Fundamentals and Nursing Skills texts. Supplemental Reading — BCIT (1997) (attached) **Articles**: (library reserve) Konick-McMahan, J. (1996). Full speed ahead — pushing intravenous medications. *Nursing 96*, June, 26–32 ***Review** "Student Guidelines, Policies and Procedures in the Nursing Program" related to administration of IV push medications. **In Class:** Video — IV Push (BCIT 1999) Practice Activities — four different clinical scenarios present opportunities to assess, prepare and administer a variety of IV push medications through: • an existing IV • an intermittent infusion device	

Week of/ Number	Clinical Technique	Preparation/Learning Activity	Assignments
6 (cont'd)	**IV Therapy Part III** Focus your preparation on the following key points: • purposes of medication administration by IV push • assessment before, during and after procedure • equipment required • procedure – IV push through an existing IV line – IV push through an intermittent infusion device • organization of the work environment • essential safety features • patient teaching • policies		
7	**Neuro Vital Signs** (NVS) This is an *assessment* lab. Your goal is to assess and recognize patient responses that indicate a change in level of consciousness. Neuro vital signs (NVS) is a nursing protocol consisting of a specific and abbreviated neurological assessment. The following key points will focus your preparation: • purposes of neuro vital signs • pathophysiology of increased intracranial pressure (IICP) • assessment of a patient with IICP – Glasgow coma scale • safety and comfort considerations • patient teaching • documentation	**Required Readings** Read about neurological assessment in your Medical Surgical text. Supplementary reading to help you to focus on the abbreviated neurological assessment, NVS, is attached (BCIT 1997). **In Class** Video — Neuro Signs — Assessing the Comotose Patient (VC 3998) Practice — two case studies will provide an opportunity for you to practice assessment of neuro vital signs using the Glasgow coma scale.	

Week of/ Number	Clinical Technique	Preparation/Learning Activity	Assignments
8	**Nasogastric Intubation and Maintenance** Nasogastric intubation refers to the placement of a flexible tube, through the nares, nasopharynx and esophagus, into the stomach. The nasogastric tube may be used for decompression, nutrition/medications, lavage or diagnosis. Focus your reading on the following: • purposes of nasogastric intubation • types of nasogastric tubes (Levin, Salem, feeding, sizing, materials) • equipment required • assessment before, during and after the procedure • procedure for inserting a nasogastric tube – methods of checking placement of tube • irrigation of a nasogastric tube – purpose – assessment – equipment – procedure • removal of a nasogastric tube • patient teaching • documentation	**Required Readings** Nursing Fundamentals and Nursing Skills texts. Article: (library reserve) Viall, C.D. (September, 1996). Location, location, location: When your patient has an NG tube, what's the most important thing? *Nursing 96*, September, 43–45. **In Class** Video — NG Intubation (BCIT 1995) Practice — opportunities for you to practice NG intubation, irrigation and removal on lab mannequins.	**Mid-Term Exam** Feb. 28/00 (Monday) Time: TBA This multiple choice exam will test the clinical techniques and required readings covered in Weeks 1–8.

Week of/ Number	Clinical Technique	Preparation/Learning Activity	Assignments
9	**Nutritional Replacements** A. Enteral Nutrition (gavage, tube feeding) B. Total Parenteral Nutrition (TPN) **Enteral nutrition** is the direct delivery of liquid nourishment ***into the gastrointestinal system*** through a tube inserted either nasally into the stomach or surgically into the stomach or upper intestine. **Total parenteral nutrition** (TPN) is the infusion of nutrients directly ***into the bloodstream*** through a central venous catheter. * Be sure you understand the differences between ***Enteral*** and ***Parenteral*** nutrition. The following points will guide your study. A. Enteral Nutrition • define enteral nutrition (NB: How does it differ from parenteral nutrition?) • purposes of enteral nutrition • types of feeding tubes, enteral formulas • potential points of entry into the GI system • methods of administration: continuous (via infusion pump), intermittent (via gravity flow), cyclic (intermittent via an infusion pump). • equipment required to administer a tube feeding • assessment before, during and after administering • procedure for administration • safety and comfort considerations (review checking placement of NG tubes) • use of an enteral feeding pump (Kangaroo pump) • possible complications of the tube feedings • patient teaching • documentation	**Required Readings** Nursing Fundamentals and Nursing Skills texts. Articles: (library reserve) Enteral Nutrition Bockus, S. (1993). When your patient needs tube feeding: Making the right decisions. *Nursing 93*, July, 34–42. Total Parenteral Nutrition Gianino, S., Seltzer, R. & Eisenbert, P. (February, 1996). The ABCs of TPN. *RN*, February, 42–48. **In Class** Video — Enteral Feeding Tubes, Part 2, Concept Media, (VC 6255). Practice — opportunities for you to practice intermittent enteral feeding via nasogastric tube and PEG tube.	

Week of/ Number	Clinical Technique	Preparation/Learning Activity	Assignments
9 (cont'd)	B. Total Parenteral Nutrition (TPN) • define TPN (NB: How does it differ from enteral nutrition?) • purposes of parenteral nutrition (total/partial) • solutions used for TPN • equipment required to administer TPN • assessment before, during and after infusion of TPN • procedure for administering TPN • possible complications of TPN • safety and comfort considerations • patient teaching • documentation	Practice activity — a scenario for assessment and discussion will be available.	
Mar. 13–17	**SPRING BREAK** No Lab		

Week of/ Number	Clinical Technique	Preparation/Learning Activity	Assignments
10	**Catheterization** Catheterization of the urinary bladder is the introduction of a catheter tube through the urethra and into the bladder. This provides a means for continuous bladder emptying. Your preparation for this lab should include the following: • purposes for urinary catheterization • types of catheterization – intermittent (in and out) – in-dwelling (foley) • equipment required • assessments before, during and after catheterization • safety and comfort considerations • procedure for catheterization – organization of the work environment • patient teaching • documentation	**Required Readings** Nursing Fundamentals and Nursing Skills texts. Articles: (library reserve) McConnell, E. (1995). Clinical dos and don'ts: Inflating an indwelling urinary catheter balloon. *Nursing 95,* December, 13 McKinney, B. (1995). Cut your patient's risk of nosocomial UTI. *RN*, November, 20–23. **In Class** Two Videos — (1) Basic Clinical Skills: Urethral Catheterization (2) Catheterization (BCIT 1995) Practice — male and female catheterization in simulated lab situations. ***NB:** You will be required to demonstrate your competency with catheterization (male or female) in week 15 or 16. Skill demonstration is worth 30% of your final grade for this course. The "Criteria for Evaluation of Foley Catheterization" will be distributed prior to this practice lab.	

Week of/ Number	Clinical Technique	Preparation/Learning Activity	Assignments
11	**IV Therapy Part IV** Blood Administration The administration of whole blood or blood components, such as plasma, red blood cells or platelets, into the venous circulation is called a blood transfusion. Focus your reading on the following: • purposes of blood transfusions, typing and crossmatching • types of blood products • adverse reactions to blood transfusions • equipment required for administration • assessment of a patient before, during and after a transfusion • procedure for administering a blood transfusion • documentation • patient teaching	**Required Readings** Use your recommended Nursing Fundamentals and Nursing Skills texts to prepare. Articles: (library reserve) Fitzpatrick, L. & Fitzpatrick, T. (1997). Blood transfusion: keeping your patient safe. *Nursing 97*, August, 34–42. **In Class** Video — Blood Administration, (VC 2120). Practice Activity — prepare and administer a blood transfusion: check identification, prime Y-set, regulate rate, discuss potential reactions and patient teaching. **In Practicum** Locate and read a Type and Crossmatch requisition in a patient chart. Note the specific policies and procedures for blood and blood products transfusions in your practicum agency.	

Week of/ Number	Clinical Technique	Preparation/Learning Activity	Assignments
12	**Chest Drainage Systems** Trauma, disease or surgery can interrupt the closed negative pressure system of the lungs, causing lung collapse. A chest tube is inserted and a closed chest drainage system is attached to promote drainage of air and fluid and re-expansion of the lung. The following key points will guide your preparation for this lab: • purposes of chest drainage systems • types of chest tubes and chest drainage containers – one, two and three bottle systems – water seal systems – waterless systems • assessment before, during and after insertion of a chest tube • set up of water seal and waterless systems • procedure for assisting with insertion of a chest tube • procedure for caring for a patient with a chest tube • problems and complications related to chest drainage • safety and comfort considerations • assessment before, during and after removal of a chest tube • procedure for assisting with removal of a chest tube • patient teaching • documentation	**Required Readings** Nursing Skills text. **In Class** Video — Chest Tube Drainage. Concept Media, 1994, (VC 6256) Practice — opportunity to examine equipment, carry out assessments and troubleshoot problems in two simulated practice situations.	

Week of/ Number	Clinical Technique	Preparation/Learning Activity	Assignments
13	**Tracheostomy Care** A tracheostomy is a surgical incision into the trachea to insert a tube through which the patient can breathe more easily and secretions can be removed. Preparation for this lab should include reading about the following: • purposes of a tracheostomy • types of tracheostomy tubes • assessment of a patient with a tracheostomy • equipment required for tracheostomy care • procedure for tracheostomy care – suctioning – removing, cleaning and replacing inner cannula – changing tracheostomy dressing – changing neck ties • safety and comfort considerations • patient teaching • documentation	**Required Readings** Nursing Fundamentals and Nursing Skills texts. **In Class** Video — Tracheostomy Care (BCIT 1988) Practice — in simulated patient situations practice tracheostomy tube suctioning and tracheostomy care (cleaning inner cannula, changing dressing and ties).	
14, 15 & 16	**Skill Demonstration: Catheterization** Students will sign up for skill testing on one of the two weeks. Evaluation of skill performance is based on the following criteria: • medical asepsis • surgical asepsis • organization • safety • comfort • communication	Students are encouraged to review the principles and procedures for catheterization and to utilize free labs practice time to prepare for skill testing.	Skill Demonstration: Catheterization
17	**EXAM WEEK** Date, time and location of exam — TBA		**Multiple Choice Exam**