BCIT

BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

School of Health Sciences
Program: Nursing
Option:

Course Outline **Part A**

NURS 3020
Clinical Techniques 3 — Laboratory

Hours/Week:	2	**Total Hours:**	34	**Term/Level:**	4
Lecture:	1	**Total Weeks:**	17	**Credits:**	2
Lab:	1				
Other:					

Prerequisite

Course No.	Course Name
NURS 2020	Clinical Techniques 2

NURS 3020 is a Prerequisite for:

Course No.	Course Name
NURS 4530	Nursing Practicum 5

Corequisite

Course No.	Course Name
NURS 4030	Nursing Practicum 4

Course Goals

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

Course Description

This laboratory course presents nursing skills related to intermittent infusion devices, complex wound care, nasogastric and gavage tube insertion and care, central intravenous therapy, medication administration by IV push, catheterization, use of blood glucose monitors, administration of blood products, chest drainage, systems, pain management therapies 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.

Evaluation

Written assignment	20%
Skill demonstration	30%
Multiple choice exam	50%
TOTAL	100%

All evaluation components must be completed to pass the course.

Course Outcomes and Sub-Outcomes

The student will:

1. describe the purpose of skill to the patient.
2. describe the safety principles for all nursing skills.
3. prepare a focused assessment of the patient related to the skill.
4. demonstrate selected skills competently and confidently while maintaining patient comfort.
5. demonstrate the communication aspects of nursing skills.
6. demonstrate responsibility for attaining and maintaining a safe level of skill performance.
7. plan patient teaching related to the skill.
8. think and reflect about nursing skills by:
   - 8.1 demonstrating awareness of the research base associated with the skills.
   - 8.2 recognizing the real potential risks associated with the skills.
   - 8.3 making judgements about the skill considering the context.

This course facilitates student growth in relation to these graduate outcomes:

- Professionalism — recognizing necessity to use sound assessment and clinical judgement in relation to skill performance, accountability in carrying out skills safely while considering contextual and individual needs, adherence to the standards for nursing practice in B.C.
- Communication — the use of written, verbal, non-verbal and information technology for communication documentation and patient teaching using relevant vocabulary as relates to skills.
- Systematic Inquiry — increased awareness of relevant research related to skill performance, use of a variety of sources to understand what evidence supports skill protocols, questioning and reflection about clinical techniques.
- Learning — individual responsibility in how skills are learned, practiced and demonstrated.
- Creative Leadership — decision making, risk management, priority setting, collaboration with other health care professionals.
- Technical Skills — competency with the hands-on skills nurses use in their daily practice.

Course Record

Developed by: Catherine Hine — Date: December, 1997
Instructor Name and Department (signature)

Revised by: _____ — Date: _____
Instructor Name and Department (signature)

Approved by: M. Bernadette Ratsoy — Start Date: _____
Associate Dean / Program Head (signature)

Effective Date

January, 1998

Instructor(s)

Cathy Hine | Office No.: SE12 – 418 | Phone: 432–8907
Office Hrs.: By appointment

Text(s) and Equipment

Required:

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.

One of the following Skills Textbooks:

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.

Course Notes (Policies and Procedures)

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. Selected techniques will be tested at specific times noted on the class schedule.

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 and Evaluation Methods

1. **Written Assignment** *Assignment is worth 20% of total final grade*

   This assignment is a 2–3 page, typewritten, double-spaced paper. It is an individual project designed to provide an opportunity for the student to consider the application of nursing research to his/her own practice.

   Select a current article describing a research study that relates to one of the Level IV Clinical Techniques 3 skills. Relate the discussion, findings and implications of the research study to a personal experience in a practicum area. Describe how (or if) the nursing research is being applied in clinical practice. Identify the strengths and limitations of the application of the research in the practice setting. Your personal experience may be based on an actual hands-on situation, a situation you observed or a current agency policy.

The following guidelines apply to this assignment:

A.	Format:	There is an introduction, a body and a conclusion. There is demonstrated use of correct grammar, sentence structure and spelling. Sources of information are documented using APA format. The paper is within the page limit. The paper is typewritten or word processed. A copy of the research article is attached to the paper.
B.	Content:	The introduction clearly defines and delineates the topic. The research study chosen for discussion is briefly (one to two paragraphs) summarized. Paragraphs are internally logical and have a clear relationship to one another. A current research study related to a Level IV clinical technique is chosen. The research findings and implications for nursing practice are applied to a student's personal clinical experience.
C.	Strengths and Limitations	The strengths and limitations of the research as they apply to nursing practice are discussed. The student may also comment on implications for further research in the area.

The assignment will be graded as follows:

Format	5
Content	10
Strengths and Limitations	5
	20

Due date for the assignment: March 4, 1998

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 specific criteria included in the course outline. A score out of 30 will be assigned to the student by the evaluator.

3. **Multiple Choice Exam** *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:

Written Assignment	20%
Skill Demonstration	30%
Multiple Choice Exam	50%
Total	100%

Week	Clinical Technique	Preparation/Learning Activity	Assignments
1	Introduction to NURS 3020 • Review of course outline • Discussion of evaluation methods Problem Solving Laboratory Activity • Skill review	Preparation for this activity is required. The directions and case study are provided at the end of this package. Bring the **Case Study** with you to class.	
2	**IV Therapy Part I** A. 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 • assessment of a patient with 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, injury to brachial plexus) • prevention of complications • roles and responsibilities of students caring for a patient with CVC	**Readings** Use your recommended Nursing Fundamentals and Nursing Skills texts to prepare. **In Class** Video — CVCs (BCIT 1994) Practice Activity — two scenarios for assessment, practice and discussion will be set up. **In Practicum** Explore what types of CVCs are used in your clinical area. Note related policies, procedures and documentation protocols. *** Review "Student Guidelines, Policies and Procedures in the Nursing Program."**	

Week	Clinical Technique	Preparation/Learning Activity	Assignments
2 (cont'd)	B. 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	**Readings** Use your recommended Nursing Fundamentals and Nursing skills texts to prepare. **In Class** Video 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	Clinical Technique	Preparation/Learning Activity	Assignments
3	**IV Therapy Part II** 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 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 minibags (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	**Readings** Use your recommended Nursing Fundamentals and Nursing Skills texts. **In Class** Video — Converting IV to intermittent infusion device (BCIT 1997) Practice Activity — in lab practice converting a continuous IV line to an intermittent infusion device, and reverse.	

Week	Clinical Technique	Preparation/Learning Activity	Assignments
4	**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. 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	**Readings** Nursing Fundamentals and Nursing Skills texts. Supplemental Reading — BCIT (1997) (attached) **In Class:** Video — IV Push (BCIT 1991) 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	Clinical Technique	Preparation/Learning Activity	Assignments
5	**Pain Management** • Patient Controlled Analgesia (PCA) • Epidural Infusions Pain is classified as either acute or chronic. Since freedom from pain is not always a realistic option, the goal of pain management may need to be pain control rather than pain relief. Read about the following: Acute and Chronic Pain Pain Assessment and Management Pain Management for: Elderly Cognitively Impaired Substance Abusers Non-pharmacological and Pharmacological Interventions for Pain Subcutaneous Butterfly • purpose and rationale for use of subcutaneous butterfly • equipment required • assessment before, during and after • safety and comfort considerations • patient teaching • documentation Patient Controlled Analgesia (PCA) • purpose and rationale for use of PCA • equipment required to administer PCA • assessment before, during and after • safety and comfort considerations • patient teaching • documentation Epidural Infusion • purpose and rationale for use of epidural infusions of analgesia • equipment required • assessment before, during and after	**Readings** Nursing Fundamentals and Nursing Skills texts. Articles: (library reserve) Janowski, M.J. (September, 1995). Managing cancer pain. *RN*, 30–32. Pasero, C. (1996). For patients only. *American Journal of Nursing*, *96*(9), 22–23. Pasero, C. & McCaffrey, M. (1994). Avoiding opioid-induced respiratory depression. *American Journal of Nursing*, *94*(4), 25–30. Pasero, C. & McCaffrey, M. (1996). Managing postoperative pain in the elderly. *American Journal of Nursing*, *96*(10), 38–46. **In Class** Video — Abbott Labs PCA II Infuser System (1995) **In Practicum** Check your BCIT guidelines for students to find out what your responsibilities and limitations are when caring for a patient with either PCA or epidural infusions.	

Week	Clinical Technique	Preparation/Learning Activity	Assignments
6	**Complex Wound Management** 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 therapies (dressings) • criteria for selection of appropriate therapy • procedure for changing dressing using sterile and non-sterile gloving • procedure for obtaining a wound culture • safety and comfort considerations • patient teaching • documentation	**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*, 35–45. Motta, G. J. (December, 1993). Dressed for success: How moisture retentive dressings promote healing: *Nursing 93*, 26–34. **In Class** Video — Complex Wound Care (BCIT 1996) Chronic Wound Care (Sancella 1996) Practice — dressing change with irrigation of wound bed using both sterile and clean gloves. Topical Therapy Exercise — view 4 examples of complex wounds. Identify the stage and characteristics, and determine the appropriate topical therapy for each.	

Week	Clinical Technique	Preparation/Learning Activity	Assignments
7	**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	**Readings** Nursing Fundamentals and Nursing Skills texts. **In Class** Video — NG Intubation (BCIT 1995) Practice — opportunities for you to practice NG intubation, irrigation and removal on lab mannequins.	

Week	Clinical Technique	Preparation/Learning Activity	Assignments
8	**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 • proecedure for catheterization – organization of the work environment • patient teaching • documentation	**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*, 43–45. **In Class** Video — Basic Clinical Skills: Urethral 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 14 or 15. Skill demonstration is worth 30% of your final grade for this course. The criteria used for evaluation of your skill demonstration is included at the end of the course outline.	

Week	Clinical Technique	Preparation/Learning Activity	Assignments
9	**Capillary Blood Glucose Monitoring** Capillary blood glucose monitoring, using an electronic reflectance meter, reliably measures blood glucose levels for patients who are at risk for hypoglycemia or hyperglycemia. Preparation for class includes: • a review of hypoglycemia and hyperglycemia • purposes of capillary blood glucose monitoring • methods of testing blood glucose • assessment of a patient requiring blood glucose monitoring • equipment required for testing • procedure for testing blood glucose using an electronic meter • safety and comfort considerations • patient teaching • documentation	**Readings** Nursing Fundamentals and Nursing Skills texts. **In Class:** Video — One Touch Blood Glucose Monitoring System (LifeScan 1992). Practice — one touch blood glucose meters are available for practice.	**Written Assignment Due**
10	**Spring Break**		

Week	Clinical Technique	Preparation/Learning Activity	Assignments
11	**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 • continuous versus intermittent feedings • 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	**Readings** Nursing Fundamentals and Nursing Skills texts. Articles: (library reserve) Enteral Nutrition Bokus, S. (July, 1993). When your patient needs tube feeding: Making the right decisions. *Nursing 93*, 34–42. Total Parenteral Nutrition Gianino, S., Seltzer, R. & Eisenbert, P. (February, 1996). The ABCs of TPN. *RN*, 42–48. **In Class** Video — Kangaroo Pump for Enteral Feeding (BCIT 1994)	**Written Assignment Due**

Week	Clinical Technique	Preparation/Learning Activity	Assignments
11 (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		
12	**Neuro Vital Signs** (NVS) 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	**Readings** Read about neurological assessment in your Nursing Fundamentals and Nursing Skills texts. Supplementary reading to help you to focus on the abbreviated neurological assessment, NVS, is attached (BCIT 1997). **In Class** Video — NVS (BCIT 1991) Practice — two case studies will provide an opportunity for you to practice assessment of neuro vital signs using the Glasgow coma scale.	

Week	Clinical Technique	Preparation/Learning Activity	Assignments
13	**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	**Readings** Nursing Skills text. **In Class** Video — Chest Drainage. Springhouse Corporation (1991) Practice — opportunity to examine equipment, carry out assessments and troubleshoot problems in two simulated practice situations.	

Week	Clinical Technique	Preparation/Learning Activity	Assignments
14	**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	**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).	
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.	
17	**Independent Study**		
18	**EXAM WEEK** Date, time and location of exam — TBA		**Multiple Choice Exam**

SKILL DEMONSTRATION

Criteria for Evaluation of Foley Catheterization

Skill demonstration is worth up to 30% of your final grade in this course. Evaluation of your competency with catheterization is based on course outcomes.

Demonstrates professionalism, communication, systematic inquiry, learning, creative leadership and technical skill by:

1. Applying principles of surgical asepsis when: • preparing sterile field and adding equipment and supplies. • gloving. • cleansing genital area. • inserting catheter. • connecting urinary drainage system. ____ 10	5. Ensuring patient safety by: • checking doctor's orders and patient ID. • raising side rail up when bed elevated and lowering bed when finished. ____ 2
2. Applying principles of medial asepsis when: • hand washing before and after procedure. • disposing of contaminated supplies. ____ 2	6. Attending to patient comfort by: • assessing for pain/discomfort before, during and after procedure. • positioning to provide patient privacy, warmth and comfort. ____ 2
3. Applying principles of body mechanics when: • adjusting the bed. • positioning the patient. ____ 2	7. Communicating appropriately by: • explaining the procedure to the patient • documenting relevant information ____ 2
4. Demonstrating organizational skill by: • gathering supplies and equipment. • arranging the work environment. • performing the skill systematically. • performing procedure timely and competently. • tidying the unit following. ____ 10	Comments: TOTAL: ____ 30