



MAR 31 1999

BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

Course Outline **Part A**

School of Health  
Program: Nursing  
Option:

**NURS 1060**  
**Pharmacology**

**PLEASE NOTE:** The course outline is a statement of educational intent and direction. It is not to be construed as a contract to deliver instruction or guarantee learning. BCIT reserves the right to amend this outline in cases when unforeseen circumstances may necessitate the alteration of course content, sequencing, timing or evaluation. In such cases, students will be given as much notice as is possible.

The following BCIT Policies apply to this course:

Policy #5013 Course Outline  
Policy #5410 Evaluation of Students  
Policy #5250 Cheating and Plagiarism  
Policy #5201 Attendance

<b>Hours/Week:</b>	<b>2</b>	<b>Total Hours:</b>	<b>34</b>	<b>Term/Level:</b>	<b>3</b>
<b>On-line:</b>	<b>2</b>	<b>Total Weeks:</b>	<b>17</b>	<b>Credits:</b>	<b>2</b>
<b>Independent:</b>	<b>2</b>				

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**Prerequisites****NURS 1060 is a Prerequisite for:**

NURS 2000	Nursing and Health Issues 2	NURS 4530	Nursing Practicum 5
BHSC 2203	Physiology and Pathophysiology 2		

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**Course Goals**

Nursing 1060 facilitates the development of a pharmacology knowledge base and an understanding of the legal and ethical responsibilities related to the administration of medications. The course emphasizes the need to continually update pharmacology knowledge in order to practice safely.

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**Course Description**

This course will present important concepts and principles related to pharmacology. The course will assist students to relate drug action(s) to patient physiology and/or pathophysiology and to anticipate effects based on this understanding. Nursing interventions related to monitoring patient response to drugs will be emphasized. Nursing's role in health promotion and patient teaching will be discussed. Drug classifications will be presented to assist the learner to appreciate the scope of pharmacological treatment and to sort, categorize and retrieve information about selected drugs.

This course also introduces students to on-line learning and assists students to gain computer literacy skills required for clinical practice.

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## Evaluation

Midterm Exam/ <i>Multiple Choice Questions &amp; Problem Based Exercise</i>	35 %
Final Exam/ <i>Multiple Choice Questions</i>	35 %
Group Participation	20 %
Legal/Ethical Assignment	5%
Herbal Assignment	5%
TOTAL	<hr/> 100%

### Comments:

To successfully complete this course, the student must:

1. Participate in weekly on-line case discussions.
2. Summarize group work as assigned.
3. Complete all assignments.
4. Achieve a combined average of 50 % in exams.
5. Achieve a final mark of 50%.

Students who do not meet the participation requirement (Attendance policy) or who do not comply with other BCIT Policies will receive an Unsatisfactory standing and will therefore not pass this course.

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## Course Outcomes

The student will:

1. Apply knowledge of pharmacokinetics and pharmacodynamics to selected drug categories.
  2. Use a drug classification system as an information source for selected drugs.
  3. Relate specific drug action(s) to human physiology and/or pathophysiology to predict therapeutic and adverse effects.
  4. Explain assessments required when administering medications and monitoring patients for therapeutic drug effects, adverse effects, toxicity and drug interactions.
  5. Discuss nursing responsibilities related to health promotion and patient teaching.
  6. Discuss a variety of legal and ethical nursing issues related to pharmacology.
  7. Apply selected pharmacological concepts and principles to patient situations.
  8. Demonstrate on-line learning skills including accessing course materials and resources, communicating via e-mail and bulletin board discussion groups, and taking exams.
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## Course Record

Developed by: \_\_\_\_\_

Instructor Name\* and Department (signature)

Date: \_\_\_\_\_

Revised by: \_\_\_\_\_

Instructor Name and Department (signature)

Date: \_\_\_\_\_

Approved by: \_\_\_\_\_

Coordinator/Program Head\* (signature)

Start Date: \_\_\_\_\_

Course consultant: Frances Chow, Pharmacy Department, Royal Columbian Hospital



BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

Course Outline **Part B**

School of Health  
Program: Nursing  
Option:

**NURS 1060**  
**Pharmacology**

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**Effective Date**

**January 1999**

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**Instructor**

**Diane Belyk**

Office No.: SE12 418  
Office Hrs.: by appointment

Phone: 432-8910  
E-mail: Course e-mail or  
dbelyk@bcit.bc.ca

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**Text(s) and Equipment**

Required:

1. Kee, J. and Hayes, E. (1997). ***Pharmacology: A nursing process approach*** (2nd ed.). Toronto: W. B. Saunders.
  2. Canadian Nurses Association. (1997). ***Code of ethics for registered nurses***. Ottawa: Author. (Available on-line)
  3. Registered Nurses Association of British Columbia. (1998). ***Standards for nursing practice in British Columbia***. Vancouver: Author. (Available on-line)
  4. **A pharmacology handbook is required.** Deglin, J. and Vallerand, A. (1997). ***Davis's drug guide for nurses***. Philadelphia: F. A. Davis is highly recommended.
  5. **A medical-surgical text is required.**
  6. **A diagnostic tests handbook is required.**
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**Course Notes (Policies and Procedures)**

A variety of teaching and learning strategies will be used to assist the learner to develop their knowledge of pharmacology and related legal and ethical issues. Concepts and principles of pharmacology will be explored using patient case discussions, multi-media presentations and lecture.

Students will participate in on-going evaluation of the course. An On-line Learning survey will be completed during the first session and students are welcome to provide evaluative comments throughout the course. A Course Evaluation Survey will be completed at the end of the term.

The course will commence with a two-week orientation to on-line learning. The student will be expected to demonstrate on-line learning skills including accessing resources and communicating via e-mail and bulletin board discussions prior to starting Module 2: Patient Case Learning.

## **Examination Details**

### **MIDTERM EXAM**

MULTIPLE-CHOICE QUESTIONS AND PROBLEM BASED EXERCISE:

**35% of Final Mark**

The Midterm Exam is a 110 minute open-book exam that includes multiple-choice questions and a problem based exercise. The exam is worth 70 marks and will include course content from Module 1 to 7. The midterm exam is taken on-line during scheduled time in the BCIT computer lab.

MULTIPLE CHOICE EXAM: 45 marks

PROBLEM BASED EXERCISE: 25 marks

In the problem-based exercise, the student will be presented with a patient scenario. The student must list at least five **pharmacological** issues and/or concerns related to this scenario and provide an **explanation** of how these issues or concerns relate to the scenario. The student will then state **appropriate nursing action(s)/intervention(s)** for a minimum of three **pharmacological** issues and/or concerns. The patient scenario includes **key issues and concerns** that must be identified to receive full marks.

Marks will be distributed as follows:

#### **Marks**

5	list of pharmacological issues and/or concerns
5	explanation of relationship of issues/concerns to patient scenario
<u>15</u>	nursing actions/interventions
<b>25</b>	<b>Total</b>

### **FINAL EXAM**

MULTIPLE CHOICE QUESTIONS (85 QUESTIONS)

**35% of Final Mark**

The Final Exam is an 110 minute multiple-choice open-book exam which will focus on course content in Modules 8 to 15. The exam will be scheduled during exam week and will be taken on-line during the scheduled time in a BCIT computer lab.

**Students must achieve a combined average of 50% on these exams.**

## Assignment Details

**LEGAL/ETHICAL ASSIGNMENT: Due date - see on-line Course Calendar**

### 5% of Final Mark

This is a group assignment designed to assist students to apply their knowledge of pharmacology and legal-ethical decision-making to a specific nursing dilemma. The student group will select one legal/ethical situation from the five situations provided. The group will decide how to approach the situation and assign responsibilities to individual group members. The group will provide an on-line report of their resolution to the selected dilemma. The following must be included in the group report:

- review of information related to the situation including diagnosis and pharmacological treatment
- discussion of how the selected legal-ethical decision making process relates to the situation
- discussion of the situation with other health care professionals
- action(s) taken to resolve the dilemma
- references used to support action(s)

The group will review resources to assist their understanding of the situation. These resources should provide an in-depth understanding of the drugs in the situation and any alternative measures. Discussion with other health professionals is supported in the literature on ethical-decision making and should provide the group with a broader perspective of the situation. The group will select a legal/ethical decision-making process, and use principles, standards and/or codes as a framework to guide your resolution to the selected situation. The resolution is to be in the form of a **3 to 5 page report** in which the group will describe the action(s) they would take and how their action(s) is supported by their knowledge of the patient, the pharmaceutical agent(s), and the legal/ethical framework.

The report is to be word-processed, double-spaced and submitted as an e-mail attachment. Please note that the group's response to the situation is the focus of the paper. The group report is to be submitted by **one** the member of the group. **Each group member** is to submit an e-mail attachment of the references they used for this assignment.

**Marks will be assigned based on the following criteria:**

5	accurate knowledge of the drug(s) in relation to the specific patient/nursing situation
5	understanding of the selected legal/ethical decision-making process
3	perspective on the situation - broad view versus narrow view
5	action(s) supported by resources
2	reference lists (submitted by all members)
20	Total

Late reports will have 5 marks deducted for the first day late. Two marks per day will be deducted thereafter. Reports must be submitted to pass the course. Reports can be submitted as an e-mail attachment in Word or WordPerfect format. Please review orientation materials for instructions on e-mailing attachments. For more assistance, please contact the instructor.

# COURSE SCHEDULE

Week of	Outcome/Material Covered	Reference/Reading	Assignment & Due Date
<b>Jan. 4/99 MODULE #1</b>	Introduction to On-line learning <ul style="list-style-type: none"> <li>● Login to BCIT computer labs</li> <li>● What is on-line learning?</li> <li>● Accessing NURS 1060</li> <li>● Course Outline</li> <li>● On-line learning skills</li> <li>● Navigating the course</li> <li>● E-mail</li> <li>● Bulletins</li> </ul>	<b>NURS 1060 - Orientation Manual</b>	Practice on-line skills <ul style="list-style-type: none"> <li>● Access course</li> <li>● Read course outline</li> <li>● Read e-mail</li> <li>● Read Bulletins</li> </ul>
<b>Jan. 11/99 MODULE #2</b>	On-line learning skills demonstration <ul style="list-style-type: none"> <li>● Access course</li> <li>● Calendar</li> <li>● Group Reporting</li> <li>● E-mail</li> <li>● References</li> <li>● Bulletins</li> <li>● My Notes</li> <li>● Self-test</li> </ul>	Kee and Hayes, Chapter 1: Drug action: Pharmaceutic, pharmacokinetic and pharmacodynamic phases, 3-13.  Kee and Hayes, Chapter 6: Drug interaction and drug abuse, 138-144.	Demonstrate on-line skills <ul style="list-style-type: none"> <li>● Access course</li> <li>● Check calendar for group reporting dates</li> <li>● E-mail instructor</li> <li>● E-mail group</li> <li>● Access references</li> <li>● Post message in group forum</li> <li>● Post message in class forum</li> <li>● Edit My Notes</li> <li>● Complete self-test</li> </ul>
<b>Jan. 18/99 MODULE #3</b>	Introduction to Patient Case Learning <ul style="list-style-type: none"> <li>● Pharmacokinetics and pharmacodynamics</li> <li>● Assessment and monitoring</li> <li>● Geriatric and pediatric considerations</li> <li>● Client teaching</li> </ul>	Review above readings as necessary  Kee and Hayes, Chapter 2: Nursing process and client teaching, 14-21  Kee and Hayes, Chapter 7: Drug therapy considerations throughout the life span, 147-156.	Group Forum Questions  Group Reporting as assigned

<b>Jan. 25/99</b> <b>MODULE #4</b>	<p>Anti-infectives</p> <ul style="list-style-type: none"> <li>● Aminoglycosides</li> <li>● Cephalosporins</li> <li>● Penicillins</li> <li>● Fluoroquinolones</li> <li>● Sulfonamides</li> </ul> <p>Patient Cases</p> <ul style="list-style-type: none"> <li>● Geriatric UTI</li> <li>● Child UTI</li> </ul>	<p>Kee and Hayes, Chapter 22: Antibacterials: Penicillins and cephalosporins, 341-354.</p> <p>Kee and Hayes, Chapter 23: Antibacterials: Macrolides, tetracyclines, aminoglycosides, fluoroquinolones, 355-369.</p> <p>Kee and Hayes, Chapter 24: Antibacterials: Sulfonamides, 370-375.</p> <p>Kee and Hayes, Appendix H: Therapeutic drug monitoring, 791-794.</p>	<p>Group Forum Questions</p> <p>Group Reporting as assigned</p>
<b>Feb. 1/99</b> <b>MODULE #5</b>	<p>Autonomic Nervous System Drugs</p> <ul style="list-style-type: none"> <li>● Adrenergics (agonists)</li> <li>● Adrenergic blockers (antagonists)</li> <li>● Cholinergics (agonists)</li> <li>● Anticholinergics (Cholinergic antagonists)</li> </ul> <p>Patient Case</p> <ul style="list-style-type: none"> <li>● "Auto"</li> <li>● Auto's Quiz</li> </ul> <p>Drug Overdoses</p> <ul style="list-style-type: none"> <li>● ASA OD on-line tutorial</li> </ul>	<p>Kee and Hayes, Chapter 17: Autonomic nervous system, 274-275.</p> <p>Kee and Hayes, Chapter 18: Adrenergics and adrenergic blockers, 279-291.</p> <p>Kee and Hayes, Chapter 19: Cholinergics and anticholinergics, 292-304.</p> <p>Kee and Hayes, Chapter 47: Adult and pediatric emergency drugs; Emergency drugs for poisoning, 759-761.</p>	<p>No Group Forum Questions or Group Reporting this week.</p> <p>Please review your on-line skills and request instructor help as needed. Also, check your e-mail for instructor feedback on your on-line skills.</p> <p>Access "Auto's" Quiz under the Quiz icon on Home page</p>
<b>Feb. 8/99</b> <b>MODULE #6</b>	<p>Cardiovascular Drugs</p> <ul style="list-style-type: none"> <li>● Cardiac Drugs</li> <li>● Diuretics</li> <li>● Hypotensive Agents</li> </ul> <p>Patient Cases</p> <ul style="list-style-type: none"> <li>● Hypertension</li> <li>● Heart Failure</li> </ul>	<p>Kee and Hayes, Chapter 32: Drugs for cardiac disorders, 473-488.</p> <p>Kee and Hayes, Chapter 33: Diuretics, 489-501.</p> <p>Kee and Hayes, Chapter 34: Antihypertensive drugs, 502-517.</p>	<p>Group Forum Questions</p> <p>Group Reporting as assigned</p>

<b>Feb 15/99</b> <b>MODULE #7</b>	<p>Central Nervous System Agents</p> <p>Antiinflammatory drugs and Analgesics</p> <ul style="list-style-type: none"> <li>● NSAIDS</li> <li>● Nonnarcotic and narcotic analgesics</li> <li>● Narcotic Control Act and Regulations</li> </ul> <p>Patient Case</p> <ul style="list-style-type: none"> <li>● Pre and Post-operative Pain</li> </ul>	<p>Kee and Hayes, Chapter 21: Antiinflammatory drugs, 326-334.</p> <p>Kee and Hayes, Chapter 14: Nonnarcotic and narcotic analgesics, 228-241.</p>	<p>Group Forum Questions</p> <p>Group Reporting as assigned</p> <p><b>Reminder - Practice exams are available on-line</b></p>
<b>Feb. 22/99</b> <b>MODULE #8</b>	<p>Central Nervous System Agents</p> <ul style="list-style-type: none"> <li>● Antipyretics</li> <li>● Anticonvulsants</li> </ul> <p>Patient Cases</p> <ul style="list-style-type: none"> <li>● Pyrexia/Febrile Convulsion</li> <li>● Epilepsy</li> </ul>	<p>Kee and Hayes, Chapter 21: Antiinflammatory drugs, 326-334 (review use of these drugs as antipyretics.)</p> <p>Kee and Hayes, Chapter 15: Anticonvulsants, 242-250.</p> <p>On-line reference - mentalhealth.com has up-to-date material on new anticonvulsants.</p>	<p>Group Forum Questions</p> <p>Group Reporting as assigned</p> <p><b>Reminder - Practice exams are available on-line</b></p>
<b>Mar. 1/99</b> <b>MIDTERM EXAM</b>	<p>Midterm Exam - Open Book</p> <ul style="list-style-type: none"> <li>● 100 Minutes</li> <li>● Multiple choice questions - 50 minutes</li> <li>● Short answer - Problem based exercise - 60 minutes</li> </ul>	<p>Exam covers all content from Modules #1 to #8.</p> <p>See-mail re: testable drugs.</p>	<p>Exams written on-line in assigned BCIT computer lab (Distance Ed. student - proctor required).</p>
<b>Mar. 8/99</b> <b>MODULE #9</b>	<p>Central Nervous System Agents</p> <ul style="list-style-type: none"> <li>● Antipsychotics</li> <li>● Antidepressants</li> </ul> <p>Patient Cases</p> <ul style="list-style-type: none"> <li>● Schizophrenia</li> <li>● Panic Disorder</li> </ul>	<p>Kee and Hayes, Chapter 16: Antipsychotics, anxiolytics and antidepressants, 251-274.</p> <p>You will need to consult the on-line reference - mentalhealth.com - for current information on the newer antidepressants and antipsychotics.</p>	<p>Group Forum Questions</p> <p>Group Reporting as assigned</p>



<b>Mar. 15 - 19 /99</b>	<b>SPRING BREAK</b>	<p><b>Midterm Exam review</b> available on-line - click hot number to the right of the exam listed in the Quiz section.</p> <p>Check your class standing by clicking on My Record on Home page.</p>	
<b>Mar. 22/99</b>  <b>MODULE #10</b>	<p><b>Respiratory drugs</b></p> <ul style="list-style-type: none"> <li>● Sympathomimetics</li> <li>● Anticholinergics</li> <li>● Corticosteroids</li> <li>● Xanthine derivatives</li> </ul> <p><b>Patient Case</b></p> <ul style="list-style-type: none"> <li>● Asthma</li> </ul>	<p>Kee and Hayes, Chapter 31: Drugs for acute and chronic lower respiratory disorders, 455-467. See also pages 31-33 (Spacer devices).</p> <p>Kee and Hayes, Chapter 40: Endocrine pharmacology: Adrenals, 621-627.</p>	<p><b>Group Forum Questions</b></p> <p>Group Reporting as assigned</p>
<b>Mar. 29/99</b> <b>MODULE #11 (or MODULE #12)</b>	<b>LEGAL /ETHICAL Group assignment</b>	Groups are given one week to devote to the legal-ethical assignment & one week to devote to Module #12 - due date is April 12/99 (Tues. class) or April 15/99 (Fri. class) for both modules	
<b>Apr. 5/99</b> <b>MODULE #12</b>	<p><b>Endocrine pharmacology</b></p> <ul style="list-style-type: none"> <li>● Antidiabetic drugs</li> <li>● Hyperglycemic drug</li> </ul> <p><b>Fluid and Electrolytes</b></p> <ul style="list-style-type: none"> <li>● Crystalloids</li> <li>● Sodium</li> <li>● Potassium</li> </ul> <p><b>Patient Cases</b></p> <ul style="list-style-type: none"> <li>● Type 1 Diabetes &amp; DKA</li> <li>● Type 2 Diabetes</li> </ul>	<p>Kee and Hayes, Chapter 41: Antidiabetic drugs, 628-639.</p> <p>Kee and Hayes, Chapter 10: Fluid and electrolyte replacement, 177-193.</p> <p>See on-line reference for DKA Guidelines.</p>	<p><b>Group Forum Questions</b></p> <p>Group Reporting as assigned</p>

<p><b>Apr. 12/99</b></p> <p><b>MODULE #13</b></p>	<p>Complementary Therapies</p> <ul style="list-style-type: none"> <li>● Herbal Remedies - Group Assignment</li> </ul> <p>Reproductive pharmacology</p> <ul style="list-style-type: none"> <li>● Hormone replacement therapy</li> </ul> <p>Food and Drug Act and Regulations</p> <p>Patient Case</p> <ul style="list-style-type: none"> <li>● Menopause</li> </ul>	<p>Kee and Hayes, Chapter 44: Drugs related to women's health and disorders, 710-717.</p> <p>Kee and Hayes, Chapter 45: Drugs related to reproductive health: Male reproductive disorders, 718-730.</p> <p>Kee and Hayes, Chapter 5: The drug approval process (US and Canadian), 134-136.</p>	<p>Herbal Assignment</p> <p>Group Forum Questions</p> <p>Group Reporting as assigned.</p>
<p><b>Apr. 19/99</b></p> <p><b>MODULE #14</b></p>	<p>Antineoplastic Agents</p> <ul style="list-style-type: none"> <li>● Cycle-Phase Specific drugs</li> <li>● Cycle-Phase Nonspecific drugs</li> </ul> <p>Handling Cytotoxic and Hazardous Drugs</p> <p>Antiemetics</p> <p>Patient Case</p> <ul style="list-style-type: none"> <li>● Breast Cancer</li> </ul>	<p>Kee and Hayes, Chapter 28: Anticancer drugs, 407-423.</p> <p>Kee and Hayes, Chapter 36: Gastrointestinal tract disorders, Antiemetics, 541-551.</p> <p>BC Cancer Agency on-line references <b>must be used</b> for drug information for this case.</p>	<p>Group Forum Questions</p> <p>Group Reporting as assigned.</p>
<p><b>Apr. 26/99</b></p> <p><b>MODULE #15</b></p>	<p>Blood Formation and Coagulation</p> <ul style="list-style-type: none"> <li>● Anticoagulants and anticoagulant antagonists</li> <li>● Thrombolytic Agents</li> <li>● Antianemia Drugs</li> <li>● Hematopoietic drugs</li> </ul> <p>Laxatives</p> <p>Patient Cases</p> <ul style="list-style-type: none"> <li>● Deep Vein Thrombosis</li> <li>● Anemia</li> </ul> <p>Course/Instructor Evaluation</p>	<p>Kee and Hayes, Chapter 35: Drugs for circulatory disorders, 518-533.</p> <p>Kee and Hayes, Chapter 29: Biologic response modifiers, Erythropoietin, 430-435.</p> <p>Kee and Hayes, Chapter 9: Vitamin and mineral replacement, Iron, 173-176.</p> <p>Kee and Hayes, Chapter 36: Gastrointestinal tract disorders, Laxatives, 555-562.</p>	<p>Group Forum Questions</p> <p>Group Reporting as assigned.</p> <p>Please complete Evaluation by clicking on Quiz icon</p>



## **Instructor: Diane Belyk**

**Graduated:**  
St. Paul's Hospital School of Nursing,  
1968

UBC School of  
Nursing, 1976



### **Teaching Experience:**

21 years teaching nursing at BCIT.

Paediatrics, Obstetrics, Med/Surg, ECU

Special Interests: Diabetes Mellitus, Fluid/Electrolyte and Acid-Base Imbalances, Pharmacology

### **Nursing Experience:**

8 years at St. Mary's Hospital, New Westminster

Surgical Nursing and Paediatrics

### **Hobbies & Interests:**

Cats (Chomsky, Cassie and Tawny), Musicals, Sewing, Computers and Portrait Photography (obviously not self-portraits).

### **Office Hours:**

I am available for consultation by course e-mail and office appointment. I will answer e-mail twice weekly so if your request is urgent, please contact me at (604) 432-8910 and I will return your call as soon as possible. Office appointments can be arranged via course e-mail or by phone.

If you are unable to access course e-mail, I can also be reached via BCIT e-mail at the following address:  
dbelyk@bcit.bc.ca