

MAR 12 1998



BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

Course Outline **Part A**

School of Health  
 Program: Nursing  
 Option:

**NURS 1060**  
**Pharmacology**

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Hours/Week:	2	Total Hours:	34	Term/Level:	3 or 4
Lecture:	2	Total Weeks:	17	Credits:	2
Lab:					
Other:					

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

Course No.	Course Name	Course No.	Course Name
NURS 2010	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.

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**Evaluation**

Midterm Exam/Multiple Choice Questions & Problem Based Exercise	40 %
Final Exam/ Multiple Choice Questions	40 %
Legal/Ethical Assignment	20 %
<b>TOTAL</b>	<b>100%</b>

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**Comments:**

To successfully complete this course, the student must:

1. Achieve a final mark of 50 %.
2. Complete all assignments.

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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.
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## Course Record

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

Instructor Name and Department (signature)

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

June 5, 1997

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

Instructor Name and Department (signature)

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

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

Associate Dean / Program Head (signature)

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

August 1997

\* Course consultants:

Frances Chow, Pharmacy Department, Royal Columbian Hospital  
Dr. Kathleen MacLeod, Chair, Division of Pharmacology and Toxicology, Pharmaceutical Sciences, UBC  
Sid Gray, Coordinator, Pharmaceutical Technology, Seneca College of Applied Arts and Technology, Ontario  
Dr. Barbara L. Paterson, Assistant Professor, Nursing, UBC  
Lynn Gray, Practice Consultant, R.N.A.B.C.



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 1998**

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**Instructor**

**Diane Belyk**

Office No.: SE12 418  
Office Hrs.: Posted

Phone: 432-8910  
E-mail: 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.
  3. Registered Nurses Association of British Columbia. (1992). **Standards for nursing practice in British Columbia**. Vancouver: Author. (Revised standards will be available in early 1998).
  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.

During the first class, student and course evaluation methods will be discussed. Students will participate in a verbal and/or written review of the course at midterm and at the end of the term. This review will include a discussion of the teaching strategies and resources. The midterm review will be used to facilitate the learning needs of the students currently enrolled. End of term and midterm course review information will be used for course revisions.

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## Examination Details

### MIDTERM EXAM

MULTIPLE CHOICE QUESTIONS AND PROBLEM BASED EXERCISE:

#### 40% of Final Mark

The Midterm Exam is a 110 minute exam that includes multiple choice questions and a problem based exercise. The exam is worth 75 marks and will include all content from Week 1 through Week 7.

MULTIPLE CHOICE EXAM: 50 questions = 50 marks.

PROBLEM BASED EXERCISE: 25 marks.

In the problem-based exercise, the student will be presented with a patient situation statement. He/she is to identify any **pharmacological issues and/or concerns** related to this statement. Using NCR paper, the student will list their identified issues and/or concerns. This **initial list** will be submitted to the instructor and the student will then receive more information about the patient. From this new information, the student will a) identify **data that validates** their original list of issues and/or concerns and b) **identify any additional pharmacological issues and/or concerns** that need to be addressed. The student will then state **appropriate nursing action(s)/intervention(s)** for a minimum of three pharmacological issues and/or concerns. The patient situation includes key issues and concerns that must be identified to receive full marks for Parts A and B.

Marks will be distributed as follows:

- / 5 initial list of pharmacological issues and/or concerns
- / 5 validation data found in Part B
- / 5 second list of pharmacological issues and/or concerns
- / 10 nursing actions/interventions

Total = 25 marks

### FINAL EXAM

MULTIPLE CHOICE QUESTIONS (85 QUESTIONS)

#### 40% of Final Mark

The Final Exam is an 110 minute multiple choice exam which will focus on course content presented from Week 8 through Week 16.

## Assignment Details

**LEGAL/ETHICAL ASSIGNMENT: Due Friday, March 20<sup>th</sup> at 1600 hrs.**

**20% of Final Mark**

The student will select one legal/ethical situation from the five situations provided. The student will review relevant information about the patient situation including diagnosis and pharmacological treatment and discuss the situation with other health care professionals. These discussions with other health professionals should provide you with a broader perspective of the situation and a greater understanding of the context from which you are responding. You will select a legal/ethical decision-making process, and use principles, standards and/or codes as a framework to guide your response to the selected situation. Your response is to be in the form of a **4 to 6 page essay** in which you will describe the action(s) you would take and how your action(s) is supported by your knowledge of the patient, the pharmaceutical agent(s), and your legal/ethical framework. You may select your framework from the resources in your NURS 1040 course outline or request other resources from the NURS 1060 instructor. The five patient situations and a general resource list, including legal and ethical resources, will be distributed at the beginning of the term.

The essay is to be word-processed, double-spaced and submitted in a cover. The maximum length of six pages is designed to foster the development of critical thinking in your decision-making. As noted in the marking scheme below, your response to the situation is the focus of the paper. Your knowledge of the drug(s) and your selected legal/ethical resources are to be discussed in relation to your action(s). A reference list of all resources must be included.

Please submit your paper to Diane Belyk's mailbox in SE12 418 by the due date. Late papers will have **5 marks** deducted for each school day late.

Marks will be assigned based on the following criteria:

- /3 accurate knowledge of the drug(s) in relation to the specific patient/nursing situation
- /3 understanding of the selected legal/ethical decision-making process
- /2 perspective on the situation - broad view versus narrow view
- /5 action(s) supported by knowledge of the drug(s)/situation
- /5 action(s) supported by legal/ethical framework/resources
- /2 format including reference list (APA guidelines for reference citing and reference list)

Total = 20 marks



BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

Schedule

School of Health  
Program: Nursing  
Option:

Week of/Number	Outcome/Material Covered	Reference/Reading	Assignment	Due Date
<b>Week 1</b> January 5, 1998	<ol style="list-style-type: none"> <li>1. Introduction to course</li> <li>2. Drug Classifications <ul style="list-style-type: none"> <li>• historical perspectives</li> <li>• selected categories</li> </ul> </li> <li>3. Pharmacokinetics</li> <li>4. Pharmacodynamics</li> </ol>	<p><b>Kee and Hayes</b>, Chapter 1: Drug action: Pharmaceutic, pharmacokinetic and pharmacodynamic phases, 3-13.</p> <p><b>Kee and Hayes</b>, Chapter 6: Drug interaction and drug abuse, 138-144.</p>		
<b>Week 2</b> January 12, 1998	<ol style="list-style-type: none"> <li>1. Assessment and Monitoring <ul style="list-style-type: none"> <li>• efficacy</li> <li>• toxicity</li> <li>• adverse effects</li> <li>• geriatric and pediatric considerations</li> </ul> </li> <li>2. Diuretics - Introduction to patient application</li> <li>3. Client teaching</li> </ol>	<p><b>Kee and Hayes</b>, Appendix H: Therapeutic drug monitoring, 791-794.</p> <p><b>Kee and Hayes</b>, Chapter 7: Drug therapy considerations throughout the life span, 147-156.</p> <p><b>Kee and Hayes</b>, Chapter 33: Diuretics, 489-501.</p> <p><b>Kee and Hayes</b>, Chapter 2: Nursing process and client teaching, 14-21.</p>		
<b>Week 3</b> January 19, 1998	<ol style="list-style-type: none"> <li>1. Autonomic Drugs <ul style="list-style-type: none"> <li>• Adrenergics and Adrenergic Blockers</li> <li>• Cholinergics and Anticholinergics</li> </ul> </li> <li>2. Patient application "Otto"</li> </ol>	<p><b>Kee and Hayes</b>, Chapter 17: Autonomic nervous system, 274-275.</p> <p><b>Kee and Hayes</b>, Chapter 18: Adrenergics and adrenergic blockers, 279-291.</p> <p><b>Kee and Hayes</b>, Chapter 19: Cholinergics and anticholinergics, 292-304.</p>		

Week of/Number	Outcome/Material Covered	Reference/Reading	Assignment	Due Date
<b>Week 4</b> January 26, 1998	<ol style="list-style-type: none"> <li><b>Cardiovascular Drugs</b> <ul style="list-style-type: none"> <li>Cardiac Drugs</li> <li>Hypotensive Agents</li> </ul> </li> <li><b>Patient Application - Cardiovascular Drugs and Diuretics</b></li> </ol>	<p><b>Kee and Hayes</b>, Chapter 32: Drugs for cardiac disorders, 473-488.</p> <p><b>Kee and Hayes</b>, Chapter 34: Antihypertensive drugs, 502-517.</p>		
<b>Week 5</b> February 2, 1998	<ol style="list-style-type: none"> <li><b>Anti-infectives</b> <ul style="list-style-type: none"> <li><b>Antibacterials</b> <ul style="list-style-type: none"> <li>Aminoglycosides</li> <li>Cephalosporins</li> <li>Penicillins</li> <li>Fluoroquinolones</li> <li>Sulfonamides</li> </ul> </li> </ul> </li> <li><b>Patient application</b></li> </ol>	<p><b>Kee and Hayes</b>, Chapter 22: Antibacterials: Penicillins and cephalosporins, 341-354.</p> <p><b>Kee and Hayes</b>, Chapter 23: Antibacterials: Macrolides, tetracyclines, aminoglycosides, fluoroquinolones, 355-369.</p> <p><b>Kee and Hayes</b>, Chapter 24: Antibacterials: Sulfonamides, 370-375.</p>		
<b>Week 6</b> February 9, 1998	<ol style="list-style-type: none"> <li><b>Central Nervous System Agents</b> <ul style="list-style-type: none"> <li>Antiinflammatory drugs, Analgesics, and Antipyretics <ul style="list-style-type: none"> <li>NSAIDS</li> <li>Nonnarcotic and narcotic analgesics</li> </ul> </li> </ul> </li> <li><b>Narcotic Control Act and Regulations</b></li> </ol>	<p><b>Kee and Hayes</b>, Chapter 21: Antiinflammatory drugs, 326-334.</p> <p><b>Kee and Hayes</b>, Chapter 14: Nonnarcotic and narcotic analgesics, 228-241.</p>		
<b>Week 7</b> February 16, 1998	<ol style="list-style-type: none"> <li><b>Issues in Pain Management</b> <ul style="list-style-type: none"> <li>efficacy</li> <li>legal and ethical issues</li> </ul> </li> <li><b>Central Nervous System Agents</b> <ul style="list-style-type: none"> <li>Anticonvulsants</li> </ul> </li> <li><b>Patient application</b></li> </ol>	<p><b>Kee and Hayes</b>, Chapter 15: Anticonvulsants, 242-250.</p> <p><i>Review previous materials on pain if required.</i></p>		

Week of/Number	Outcome/Material Covered	Reference/Reading	Assignment	Due Date
<b>Week 8</b> February 23, 1998	<b>1. MIDTERM EXAM - 110 Minutes</b> <ul style="list-style-type: none"> <li>Multiple choice questions</li> <li>Problem based exercise</li> </ul>	<i>Exam covers all content from Weeks 1 to 7.</i>		
<b>Week 9</b> March 2, 1998	<b>1. MIDTERM EXAM REVIEW</b> <b>2. Drug Overdoses</b> <ul style="list-style-type: none"> <li>ASA</li> </ul>	<i>Kee and Hayes, Chapter 47: Adult and pediatric emergency drugs, Emergency drugs for poisoning, 759-761.</i>		
<b>SPRING BREAK</b> March 9 - 13, 1998	<b>SPRING BREAK</b>			
<b>Week 10</b> March 16, 1998	<b>1. Central Nervous System Agents</b> <ul style="list-style-type: none"> <li>Antipsychotics</li> <li>Antidepressants <ul style="list-style-type: none"> <li>Tricyclics</li> <li>Second generation antidepressants</li> <li>Antimanics</li> </ul> </li> </ul> <b>2. Patient application</b>	<i>Kee and Hayes, Chapter 16: Antipsychotics, anxiolytics and antidepressants, 251-274.</i>	<b>Legal/Ethical Assignment</b>	March 20 <sup>th</sup> , 1998 1600 hrs
<b>Week 11</b> March 23, 1998	<b>1. Respiratory drugs</b> <ul style="list-style-type: none"> <li>Sympathomimetics</li> </ul> <b>2. Fluid and Electrolyte replacement</b> <b>3. Endocrine pharmacology</b> <ul style="list-style-type: none"> <li>Adrenal hormones</li> </ul> <b>4. Patient Application</b>	<i>Kee and Hayes, Chapter 31: Drugs for acute and chronic lower respiratory disorders, 455-467.</i> <i>Kee and Hayes, Chapter 10: Fluid and electrolyte replacement, 177-193.</i> <i>Kee and Hayes, Chapter 40: Endocrine pharmacology: Pituitary, thyroid, parathyroids and adrenals, 621-627.</i>		

Week of/Number	Outcome/Material Covered	Reference/Reading	Assignment	Due Date
<b>Week 12</b> March 30, 1998	<ol style="list-style-type: none"> <li>1. Endocrine pharmacology <ul style="list-style-type: none"> <li>• Antidiabetic drugs</li> <li>• Hyperglycemic drug <ul style="list-style-type: none"> <li>• glucagon</li> </ul> </li> </ul> </li> <li>2. Patient Application</li> </ol>	<b>Kee and Hayes</b> , Chapter 41: Antidiabetic drugs, 628-639.		
<b>Week 13</b> April 6, 1998	<ol style="list-style-type: none"> <li>1. Reproductive pharmacology <ul style="list-style-type: none"> <li>• Hormone replacement therapy <ul style="list-style-type: none"> <li>• female and male</li> </ul> </li> </ul> </li> <li>2. Complementary Therapies <ul style="list-style-type: none"> <li>• Herbal Remedies</li> </ul> </li> <li>3. Food and Drug Act and Regulations</li> <li>4. Patient Application</li> </ol>	<b>Kee and Hayes</b> , Chapter 44: Drugs related to women's health and disorders, 710-717. <b>Kee and Hayes</b> , Chapter 45: Drugs related to reproductive health: Male reproductive disorders, 718-730. <b>Kee and Hayes</b> , Chapter 5: The drug approval process (US and Canadian), 134-136.		
<b>Week 14</b> April 13, 1998	<b>EASTER MONDAY</b>			
<b>Week 15</b> April 20, 1998	<ol style="list-style-type: none"> <li>1. Antineoplastic Agents <ul style="list-style-type: none"> <li>• Cycle-Phase Specific drugs</li> <li>• Cycle-Phase Nonspecific drugs</li> </ul> </li> <li>2. Handling Cytotoxic and Hazardous Drugs</li> <li>3. Antiemetics</li> <li>4. Patient Application</li> </ol>	<b>Kee and Hayes</b> , Chapter 28: Anticancer drugs, 407-423. <b>Kee and Hayes</b> , Chapter 36: Gastrointestinal tract disorders, Antiemetics, 541-551.		

Week of/Number	Outcome/Material Covered	Reference/Reading	Assignment	Due Date
<b>Week 16</b> April 27, 1998	<b>1. Blood Formation and Coagulation</b> <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> <b>2. Laxatives</b> <b>3. Patient Application</b> <b>4. Course/Instructor Evaluations</b>	<b>Kee and Hayes</b> , Chapter 35: Drugs for circulatory disorders, 518-533. <b>Kee and Hayes</b> , Chapter 29: Biologic response modifiers, Erythropoietin, 430-435. <b>Kee and Hayes</b> , Chapter 9: Vitamin and mineral replacement, Iron, 173-176. <b>Kee and Hayes</b> , Chapter 36: Gastrointestinal tract disorders, Laxatives, 555-562.		
<b>Week 17</b> <b>Exam Week</b>	<b>FINAL EXAM - 110 minutes</b> <i>Date and time to be posted</i>			TBA