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BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

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Course Outline Part A

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Hours/Week:	2	Total Hours:	34	Term/Level:	3 or 4
School of Health Program: Nursing Option:					NURS 1060 Pharmacology

17

Credits:

Total Weeks:

Prerequisites		NURS 1060 is a Prerequisite for:	
Course No.	Course Name	Course No.	<b>Course Name</b>
NURS 2010 BHSC 2203	Nursing and Health Issues 2 Physiology and Pathophysiology 2	NURS 4530	Nursing Practicum 5

# Course Goals

Lecture:

Lab: Other:

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.

# **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.

100%

# **Evaluation**

Midterm Exam/Multiple Choice Questions &	40 %
Problem Based Exercise	
Final Exam/ Multiple Choice Questions	40 %
Legal/Ethical Assignment	20 %

Comments:

To successfully complete this course, the student must:

1. Achieve a final mark of 50 %.

2. Complete all assignments.

TOTAL

# Course Outcomes

5)

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.

# **Course Record**

Instructor Name and Department (signature)	Date:	June 5, 1997
-	Date:	
Instructor Name and Department (signature)		1
M Demadet   Salsay	Start Date:	august 1947
Associate Dean / Program Head (signature)		V
	Instructor Name and Department (signature) Moundat (Salsay	Instructor Name and Department (signature)  Instructor Name and Department (signature)  Moderate Start Date:

\* 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.

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BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

School of Health Program: Nursing Option: Course Outline Part B

NURS 1060 Pharmacology

# Effective Date

# August 1997

### Instructor

Diane Belyk

Office No.: SE12 418 Office Hrs.: Posted Phone: 432-8910 E-mail: dbelyk@bcit.bc.ca

# 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. (Current edition). Code of ethics for nurses. Ottawa: Author.
- 3. Registered Nurses Association of British Columbia. (1992). *Standards for nursing practice in British Columbia.* Vancouver: Author.
- 4. A pharmacology handbook is required.
- 5. A medical-surgical text is required.
- 6. A diagnostic tests handbook is required.

# **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 lecture, multi-media, and discussion.

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.

# **Examination Details**

#### **MIDTERM EXAM**

MULTIPLE CHOICE QUESTIONS AND PROBLEM BASED EXERCISE:

#### 40% of Final Mark

The Midterm Exam is an 110 minute exam which includes multiple choice questions and a problem based exercise. The exam is worth 85 marks and will include all content from Week 1 through Week 7.

MULTIPLE CHOICE EXAM: 60 questions = 60 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 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 issues and/or concerns.

Marks will be distributed as follows:

- / 5 Initial list of issues and/or concerns
- / 5 Validation data
- / 5 Second list of issues and/or concerns
- <u>/10</u> Actions/interventions
- Total = 25 marks

### FINAL EXAM

**MULTIPLE CHOICE 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 Monday, October 20, 1997 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, discuss the situation with other health care professionals and select a legal/ethical framework to discuss and respond to the situation. The response is to be in the form of a **3 to 5 page essay** which describes the action they would take and how their action is supported by their knowledge of the patient, the pharmaceutical agent(s), and their legal/ethical framework for action. Their discussions with other health professionals should provide a broader perspective of the situation and a greater understanding of the context from which they are responding. You may select any framework from your NURS 1040 course or request other resources from your instructor. The five patient situations and a resource list 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 five pages is designed to foster the development of critical thinking in decision-making. As noted in the marking scheme below, your response to the situation is the focus of the paper and the knowledge of the drug and legal/ethical framework should 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 mail box 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 in relation to the specific patient/nursing situation
- /3 understanding of the selected legal/ethical framework
- /2 perspective on the situation broad view versus narrow view
- /5 action(s) supported by knowledge
- /5 action(s) supported by legal/ethical framework
- <u>/2</u> format including reference list (APA guidelines for reference citing and reference list)

Total = 20 marks



# BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

School of Health Program: Nursing Option:

Week of/Number	Outcome/Material Covered	Reference/Reading	Assignment	Due Date
Week 1 August 18, 1997	<ol> <li>Introduction to course</li> <li>Drug Classifications         <ul> <li>historical perspectives</li> <li>selected categories</li> </ul> </li> <li>Pharmacokinetics</li> <li>Pharmacodynamics</li> <li>Client teaching</li> </ol>	<i>Kee and Hayes</i> , Chapter 1: Drug action: Pharmaceutic, pharmacokinetic and pharmacodynamic phases, 3-13. <i>Kee and Hayes</i> , Chapter 6: Drug interaction and drug abuse, 138-144. <i>Kee and Hayes</i> , Chapter 2: Nursing process and client teaching, 14-21.		
<b>Week 2</b> August 25, 1997	<ol> <li>Assessment and Monitoring         <ul> <li>efficacy</li> <li>toxicity</li> <li>adverse effects</li> <li>geriatric and pediatric considerations</li> </ul> </li> <li>Autonomic Drugs         <ul> <li>Adrenergics and Adrenergic Blockers</li> <li>Cholinergics and Anticholinergics</li> <li>Skeletal Muscle Relaxants</li> </ul> </li> <li>Patient application</li> </ol>	Kee and Hayes, Appendix H: Therapeutic drug monitoring, 791-794. Kee and Hayes, Chapter 7: Drug therapy considerations throughout the life span, 147-156. Kee and Hayes, Chapter 17: Autonomic nervous system, 274-275. Kee and Hayes, Chapter 18: Adrenergics and adrenergic blockers, 279-291. Kee and Hayes, Chapter 19: Cholinergics and anticholinergics, 292-304. Kee and Hayes, Chapter 20: Drugs for neuromuscular disorders, 316-321.		~
Week 3 September 1, 1997	LABOUR DAY Diuretics - INDEPENDENT STUDY	<i>Kee and Hayes</i> , Chapter 33: Diuretics, 489-501.		

Schedule

### Course Jutline NURS 1060 Pharmacology

Week of/Number	Outcome/Material Covered	Reference/Reading	Assignment	Due Date
Week 4 September 8, 1997	<ol> <li>Cardiovascular Drugs         <ul> <li>Cardiac Drugs</li> <li>Cardiac Drugs</li> <li>Hypotensive Agents</li> <li>Vasodilating Agents</li> </ul> </li> <li>Patient Application - Cardiovascular Drugs and Diuretics</li> </ol>	<i>Kee and Hayes</i> , Chapter 32: Drugs for cardiac disorders, 473-488. <i>Kee and Hayes</i> , Chapter 34: Antihypertensive drugs, 502-517. <i>Kee and Hayes</i> , Chapter 35: Drugs for circulatory disorders ( <i>Peripheral</i> <i>vasodilators</i> ), 533-536.	n na hand da da ya shika na ka a shika na ka shika na ka shika na shika na shika na shika na shika na shika na	
Week 5 September 15, 1997	<ol> <li>Anti-infectives         <ul> <li>Antibacterials</li> <li>Aminoglycosides</li> <li>Cephalosporins</li> <li>Pencillins</li> <li>Fluoroquinolones</li> <li>Sulfonamides</li> <li>Miscellaneous Anti- infectives                 <ul> <li>Vancomycin</li> <li>Antifungals</li> <li>Antivirals</li> </ul> </li> </ul> </li> </ol>	<i>Kee and Hayes</i> , Chapter 22: Antibacterials: Penicillins and cephalosporins, 341-354. <i>Kee and Hayes</i> , Chapter 23: Antibacterials: Macrolides, tetracyclines, aminoglycosides, fluoroquinolones, 355-369. <i>Kee and Hayes</i> , Chapter 24: Antibacterials: Sulfonamides, 370-375. <i>Kee and Hayes</i> , Chapter 25: Antitubercular drugs, antifungal drugs, peptides, ( <i>Antifungal drugs</i> ), 380-383. <i>Kee and Hayes</i> , Chapter 26: Antiviral, antimalarial, and anthelmintic drugs, ( <i>Antiviral drugs</i> ), 386-390.		
Week 6 September 22, 1997	<ol> <li>Central Nervous System Agents         <ul> <li>Antiinflammatory drugs, Analgesics, and Antipyretics</li> <li>NSAIDS</li> <li>Nonnarcotic and narcotic analgesics</li> </ul> </li> <li>Local Anaesthetics</li> <li>Narcotic Control Act and Regulations</li> <li>Food and Drug Act and Regulations</li> </ol>	Kee and Hayes, Chapter 21: Antiinflammatory drugs, 326-334. Kee and Hayes, Chapter 14: Nonnarcotic and narcotic analgesics, 228-241. Kee and Hayes, Chapter 13: Central nervous system depressants, (Anesthetics), 223-227. Kee and Hayes, Chapter 5: The drug approval process (US and Canadian), 134-136.		

### Course Outline NURS 1060 Pharmacology

Schedule (cont'd.)

Week of/Number	Outcome/Material Covered	Reference/Reading	Assignment	Due Date
Week 7 September 29, 1997	<ol> <li>Issues in Pain Management         <ul> <li>efficacy</li> <li>legal and ethical issues</li> </ul> </li> <li>Central Nervous System Agents         <ul> <li>Anticonvulsants</li> <li>Patient application</li> </ul> </li> </ol>	<i>Kee and Hayes</i> , Chapter 15: Anticonvulsants, 242-250. <i>Review previous materials on pain if required.</i>		
Week 8 October 6, 1997	<ol> <li>MIDTERM EXAM - 110 Minutes         <ul> <li>Multiple choice questions</li> <li>Problem based exercise</li> </ul> </li> </ol>	Exam covers all content from Weeks 1 to 7.		
Week 9 October 13, 1997	THANKSGIVING Gastrointestinal Drugs INDEPENDENT STUDY Antiemetics Antidiarrheal drugs Laxatives Antiulcer drugs anticholinergics antacids Histamine H <sub>2</sub> blockers Gastric acid secretion inhibitors Pepsin inhibitor Prostaglandin analog GI stimulant	<i>Kee and Hayes</i> , Chapter 36: Gastrointestinal tract disorders, 541-562. <i>Kee and Hayes</i> , Chapter 37: Antiulcer drugs, 563-575.		

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### Course *⇒utline* NURS 1060 Pharmacology

Week of/Number	Outcome/Material Covered	Reference/Reading	Assignment	Due Date
Week 10 October 20, 1997	<ol> <li>Central Nervous System Agents         <ul> <li>Antipsychotics</li> <li>Antidepressants</li> <li>Tricylics</li> <li>Second generation antidepressants</li> <li>Antimanics</li> <li>Anxiolytics</li> <li>Sedative-Hypnotics</li> </ul> </li> <li>Patient application</li> </ol>	<i>Kee and Hayes</i> , Chapter 16: Antipsychotics, anxiolytics and antidepressants, 251-274. <i>Kee and Hayes</i> , Chapter 13: Central nervous system depressants, 214-222.	Legal/Ethical Assignment	October 20, 1997 1600 hrs
<b>Week 11</b> October 27, 1997	<ol> <li>Endocrine pharmacology         <ul> <li>Thyroid hormone replacements</li> <li>Antithyroid drugs</li> <li>Antidiabetic drugs</li> <li>Hyperglycemic drug                 <ul> <li>glucagon</li> </ul> </li> </ul> </li> </ol>	<i>Kee and Hayes</i> , Chapter 40: Endocrine pharmacology: Pituitary, thyroid, parathyroids and adrenals, 615-619. <i>Kee and Hayes</i> , Chapter 41: Antidiabetic drugs, 628-639.		
Week 12 November 3, 1997	<ol> <li>Respiratory drugs         <ul> <li>Sympathomimetics</li> </ul> </li> <li>Fluid and Electrolyte replacement</li> <li>Endocrine pharmacology         <ul> <li>Adrenal hormones</li> </ul> </li> <li>Patient Application</li> </ol>	<i>Kee and Hayes</i> , Chapter 31: Drugs for acute and chronic lower respiratory disorders, 455-467. <i>Kee and Hayes</i> , Chapter 10: Fluid and electrolyte replacement, 177-193. <i>Kee and Hayes</i> , Chapter 40: Endocrine pharmacology: Pituitary, thyroid, parathyroids and adrenals,621-627.		

Schedule (cont'd.)

### Course Outline NURS 1060 Pharmacology

Week of/Number	Outcome/Material Covered	Reference/Reading	Assignment	Due Date
Week 13 November 10, 1997	<ol> <li>Reproductive pharmacology         <ul> <li>Oral contraceptives</li> <li>Hormone replacement therapy</li> <li>female and male</li> </ul> </li> <li>Complementary Therapies         <ul> <li>Herbal Remedies</li> <li>Vitamins</li> <li>Patient Application</li> </ul> </li> </ol>	<i>Kee and Hayes</i> , Chapter 44: Drugs related to women's health and disorders, 697-717. <i>Kee and Hayes</i> , Chapter 45: Drugs related to reproductive health: Male reproductive disorders, 718-730. <i>Kee and Hayes</i> , Chapter 9: Vitamin and mineral replacement, 165-176.		<b>,</b> υυ.,
Week 14 November 17, 1997	<ol> <li>Research in Pharmacology         <ul> <li>Clinical trials</li> <li>Medical Research Team</li> <li>Pharmaceutical representatives</li> <li>Legal/ethical issues</li> </ul> </li> </ol>	<i>Kee and Hayes</i> , Chapter 8: The role of the nurse in drug research, 157-161.		
Week 15 November 24, 1997	<ol> <li>Antineoplastic Agents         <ul> <li>Cycle-Phase Specific drugs</li> <li>Cycle-Phase Nonspecific drugs</li> <li>Biologic response modifiers</li> </ul> </li> <li>Handling Cytotoxic and Hazardous Drugs</li> <li>Patient Application</li> </ol>	<i>Kee and Hayes</i> , Chapter 28: Anticancer drugs, 407-423. <i>Kee and Hayes</i> , Chapter 29: Biologic response modifiers, 424-429; 435-439.		
Week 16 December 1, 1997	<ol> <li>Blood Formation and Coagulation         <ul> <li>Anticoagulants and anticoagulant antagonists</li> <li>Thrombolytic Agents</li> <li>Antianemia Drugs</li> <li>Hematopoietic drugs</li> </ul> </li> <li>Patient Application</li> <li>Course/Instructor Evaluations</li> </ol>	Kee and Hayes, Chapter 35: Drugs for circulatory disorders, 518-533. Kee and Hayes, Chapter 29: Biologic response modifiers, 430-435. Kee and Hayes, Chapter 9: Vitamin and mineral replacement, 173-176.		

Course Outline NURS 1060 Pharmacology

Schedule (wat'd.)

Week of/Number	Outcome/Material Covered	Reference/Reading	Assignment	Due Date
Week 17 Exam Week	FINAL EXAM - 110 minutes Date and time to be posted			ТВА