



JAN 29 1999

BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

Course Outline **Part A**School of Health
Program: NursingNURS 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 where 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.

Hours/Week:	2	Total Hours:	34	Term/Level:	3 or 4
On-line:	2	Total Weeks:	17	Credits:	2

Prerequisites

NURS 2010	Nursing and Health Issues 2
BHSC 2203	Physiology and Pathophysiology 2

NURS 1060 is a Prerequisite for:

NURS 4530	Nursing Practicum 5
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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.

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.

Evaluation

Midterm Exam/Multiple Choice Questions & Problem Based Exercise	40 %
Final Exam/ Multiple Choice Questions	35 %
Legal/Ethical Assignment	15 %
Group Participation	10%
TOTAL	100%

Comments:

To successfully complete this course, the student must:

1. Participate in group discussions and reporting.
2. Complete all assignments.
3. Achieve a final mark of 50 %.

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.

Course Record

Developed by: *Kiani Bick* Date: *August 14, 1998*
Instructor Name* and Department (signature)

Revised by: *Kiani Bick* Date: *August 14, 1998*
Instructor Name and Department (signature)

Approved by: *Felix Que* Start Date: *August 17, 1998*
Coordinator/ Program Head** (signature)

* Course consultant:

Frances Chow, Pharmacy Department, Royal Columbian Hospital

** The course outline is current and accurate and complies with BCIT Course Outline Policy # 5013



Effective Date

August 1998

Instructor

Diane Belyk

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

Phone: 432-8910
E-mail: via course e-mail or
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. (1997). **Code of ethics for registered nurses**. Ottawa: Author.
 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. Spratto, G. and Woods, A. (1998) **Delmar's A-Z NDR-98: Nurse's Drug Reference**. Toronto: Delmar Publishers is highly recommended. Free access to their web-site is available on proof of purchase.
 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 on-line 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.

During the first class, students will receive an orientation to on-line learning. Course evaluation methods will also be discussed during the first class. Students will participate in on-going evaluations of the course.

Examination Details

MIDTERM EXAM

MULTIPLE CHOICE QUESTIONS AND PROBLEM BASED EXERCISE:

40% of Final Mark

The Midterm Exam is a two-part exam. The first part will be a 50 minute on-line multiple choice exam held in SE6 102 during the regularly scheduled class. The second part is a 50 minute on-line problem solving exercise which will be held in the afternoon class time.

The entire 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 (Part A). He/she is to identify any **pharmacological issues and/or concerns** related to this statement. This **initial list** will be submitted to the instructor before the student receives more information about the patient. From this new information (Part B), 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

35% of Final Mark

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

Assignment Details

Legal / Ethical Essay

15% of Final Mark

You will select one legal/ethical situation from the five situations provided. 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 6 to 7 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. The five patient situations are included on the next page. A resource list for some of the references you may wish to consult can be found by clicking the Reference icon on the top of this page.

The maximum length of six to seven 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 essay. 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 with your essay.

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
- 5 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
- 5 format including reference list (APA guidelines for reference citing and reference list)

30 Total Marks

Late papers will have 5 marks deducted for the first day late. Two marks per day will be deducted thereafter. Papers must be submitted to pass the course.

Please submit your essay via e-mail to your instructor, Diane. Word or WordPerfect documents can be sent to me as attachments to your e-mail message. For any assistance with your essay, including submitting your essay as an attachment, please contact the Instructor via course e-mail.

Group Participation

10% of Final Mark

Group discussion assignment

As well as gaining personal knowledge, you will be contributing to your group's understanding of pharmacology as you participate in weekly discussions, group summaries and reports to the class forum.

The marking criteria includes:

- actively participating in group forum discussions in
- providing information to increase depth of discussions using
- reporting an accurate and thoughtful summary of discussions when assigned - see



bulletins



references



calendar

The instructor will review your participation at least four times during the course. This review will occur on a random basis

Herbal remedies assignment

Each group is assigned a specific herbal product to research. You are to gather information from health food stores, special stores, pharmacists, physicians and the internet. You should ask what the product is recommended for and whether it can be used by men or women. Your group will prepare a summary of your research which must include a discussion of the benefits and risks with the herbal product and an evaluation of the quality of information acquired from each source.

You are also welcome to discuss additional herbal products that you or someone you know currently uses. We could discuss safety and efficacy for these products as well as those indicated above.

Your group's summary and participation in the discussion of these remedies will contribute toward your individual participation in the course.



BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

School of Health
Program: Nursing

Schedule

Week of	Outcome/Material Covered	Reference/Reading	Assignment & Due Date
Aug. 17\98 MODULE #1	Introduction to learning on-line and NURS 1060 Drug Classifications: <ul style="list-style-type: none"> historical perspectives selected categories Pharmacokinetics and Pharmacodynamics	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.	
Aug. 24\98 MODULE #2	Assessment and Monitoring: <ul style="list-style-type: none"> efficacy, toxicity side effects and adverse reactions geriatric and pediatric considerations client teaching Diuretics: <ul style="list-style-type: none"> Introduction to patient case learning Patient Case: <ul style="list-style-type: none"> Hypertension 	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 33: Diuretics, 489-501. Kee and Hayes, Chapter 2: Nursing process and client teaching, 14-21.	
Aug. 31\98 MODULE #3	Cardiovascular Drugs: <ul style="list-style-type: none"> Cardiac Drugs Hypotensive Agents Patient Cases: <ul style="list-style-type: none"> Heart failure Atrial fibrillation 	Kee and Hayes, Chapter 32: Drugs for cardiac disorders, 473-488. Kee and Hayes, Chapter 34: Antihypertensive drugs, 502-517.	
Sept. 7\98 MODULE #4	Autonomic Drugs: <ul style="list-style-type: none"> Adrenergics and Adrenergic Blockers Cholinergics and Anticholinergics Patient Case <ul style="list-style-type: none"> "Auto" 	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.	
Sept. 14\98 MODULE #5	Anti-infectives: <ul style="list-style-type: none"> Aminoglycosides Cephalosporins Penicillins Fluoroquinolones Sulfonamides Patient Cases: <ul style="list-style-type: none"> Urinary tract infections 	Kee and Hayes, Chapter 22: Antibacterials: Penicillins and cephalosporins, 341-354. Kee and Hayes, Chapter 23: Antibacterials: Macrolides, tetracyclines, aminoglycosides, fluoroquinolones, 355-369. Kee and Hayes, Chapter 24: Antibacterials: Sulfonamides, 370-375.	
Sept. 21\98 MODULE #6	Central Nervous System Agents Antiinflammatory drugs, Analgesics, and Antipyretics:	Kee and Hayes, Chapter 21: Antiinflammatory drugs, 326-334. Kee and Hayes, Chapter 14:	

Week of	Outcome/Material Covered	Reference/Reading	Assignment & Due Date
	<ul style="list-style-type: none"> NSAIDS Nonnarcotic and narcotic analgesics Narcotic Control Act and Regulations Patient Cases: <ul style="list-style-type: none"> Pre and Post-operative Pain Pyrexia 	Nonnarcotic and narcotic analgesics, 228-241.	
Sept. 28/98 MODULE #7	Issues in Pain Management: <ul style="list-style-type: none"> efficacy legal and ethical issues Central Nervous System Agents: <ul style="list-style-type: none"> Anticonvulsants Patient Cases: <ul style="list-style-type: none"> Epilepsy Febrile Convulsion 	Kee and Hayes, Chapter 15: Anticonvulsants, 242-250. Review previous materials on pain if required.	
Oct. 5/98 MIDTERM EXAM	<ul style="list-style-type: none"> 100 Minutes Multiple choice questions - 50 minutes Problem based exercise - 50 minutes 	Exam covers all content from Modules #1 to 7	
Oct. 12/98 MODULE #8	Midterm Exam Review Drug Overdoses: <ul style="list-style-type: none"> ASA 	Kee and Hayes, Chapter 47: Adult and pediatric emergency drugs, Emergency drugs for poisoning, 759-761.	
Oct. 19/98 MODULE #9	Central Nervous System Agents: <ul style="list-style-type: none"> Antipsychotics and Antidepressants Patient Cases: <ul style="list-style-type: none"> Schizophrenia Panic Disorder 	Kee and Hayes, Chapter 16: Antipsychotics, anxiolytics and antidepressants, 251-274.	
Oct. 26/98 MODULE #10	Fluid and Electrolyte replacement Endocrine pharmacology: <ul style="list-style-type: none"> Adrenal hormones Patient Cases: <ul style="list-style-type: none"> Addison's Disease Ulcerative Colitis 	Kee and Hayes, Chapter 10: Fluid and electrolyte replacement, 177-193. Kee and Hayes, Chapter 40: Endocrine pharmacology: Pituitary, thyroid, parathyroids and adrenals, 621-627.	Legal/Ethical Essay due October 26 @ 2330 hrs.
Nov. 2/98 MODULE #11	Respiratory drugs: <ul style="list-style-type: none"> Sympathomimetics Anticholinergics Corticosteroids Xanthine derivatives Patient Cases: <ul style="list-style-type: none"> Asthma COPD 	Kee and Hayes, Chapter 31: Drugs for acute and chronic lower respiratory disorders, 455-467. See also pages 31-33.	
Nov. 9/98 MODULE #12	Endocrine pharmacology: <ul style="list-style-type: none"> Antidiabetic drugs Hyperglycemic drug Patient Cases: <ul style="list-style-type: none"> Type I DKA Type 2 	Kee and Hayes, Chapter 41: Antidiabetic drugs, 628-639.	

Week of	Outcome/Material Covered	Reference/Reading	Assignment & Due Date
Nov. 16\98 MODULE #13	Reproductive pharmacology: <ul style="list-style-type: none"> Hormone replacement therapy Complementary Therapies: <ul style="list-style-type: none"> Herbal Remedies Food and Drug Act and Regulations Patient Case: <ul style="list-style-type: none"> Menopause 	Kee and Hayes, Chapter 44: Drugs related to women's health and disorders, 710-717. Kee and Hayes, Chapter 45: Drugs related to reproductive health: Male reproductive disorders, 718-730. Kee and Hayes, Chapter 5: The drug approval process (US and Canadian), 134-136.	
Nov. 23\98 MODULE #14	Antineoplastic Agents: <ul style="list-style-type: none"> Cycle-Phase Specific drugs Cycle-Phase Nonspecific drugs Handling Cytotoxic and Hazardous Drugs Antiemetics Patient Case: <ul style="list-style-type: none"> Breast Cancer 	Kee and Hayes, Chapter 28: Anticancer drugs, 407-423. Kee and Hayes, Chapter 36: Gastrointestinal tract disorders, Antiemetics, 541-551.	
Nov. 30\98 MODULE #15	Blood Formation and Coagulation: <ul style="list-style-type: none"> Anticoagulants and anticoagulant antagonists Thrombolytic Agents Antianemia Drugs Hematopoietic drugs Laxatives Patient Cases: <ul style="list-style-type: none"> Deep Vein Thrombosis Anemia 	Kee and Hayes, Chapter 35: Drugs for circulatory disorders, 518-533. Kee and Hayes, Chapter 29: Biologic response modifiers, Erythropoietin, 430-435. Kee and Hayes, Chapter 9: Vitamin and mineral replacement, Iron, 173-176. Kee and Hayes, Chapter 36: Gastrointestinal tract disorders, Laxatives, 555-562.	
Dec. 7\98 FINAL EXAM	<ul style="list-style-type: none"> Multiple choice questions - 110 minutes Date and time to be announced 		TBA