

**SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY**

**SAULT STE. MARIE, ON**

**COURSE OUTLINE**

**COURSE TITLE: PHARMACOLOGY**

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**CODE NO.: DSW 203**

**SEMESTER: 3**

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**PROGRAM: DEVELOPMENTAL SERVICES WORKER**

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**AUTHOR: MARGARET HURTUBISE**

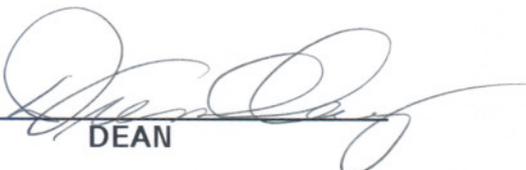
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**DATE: SEPT/96**

**PREVIOUS OUTLINE DATED: SEPT/95**

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**APPROVED:**

  
DEAN

  
DATE



**PHARMACOLOGY**

**DSW 203**

**COURSE NAME**

**CODE NO.**

**TOTAL CREDITS:**

**PREREQUISITE(S):**

**I. PHILOSOPHY/GOALS**

This course will broaden the students' knowledge of specific drugs which may be administered by D.S.W. graduates. Students will also learn the basics of administering drugs, documentation and legalities governing the various drugs.

**II. STUDENT PERFORMANCE OBJECTIVES (OUTCOMES)**

Upon successful completion of this course the student will:

1. define key words related to pharmacology.
2. briefly explain the Canadian laws governing various drugs.
3. discuss the alternatives to drug therapy.
4. explain common drug forms, effects of drugs and routes of administration.
5. discuss and explain the various elements of drug administration.
6. demonstrate accurate calculations for dosage of an oral medication.
7. demonstrate the safe administration and charting for an oral medication (or medication permitted to be administered by a D.S.W. graduate).
8. state the action, uses, adverse reactions and special precautions for specified drugs.

**III. TOPICS TO BE COVERED**

1. Introduction to Pharmacology
2. Alternatives to Drug Therapy
3. Drug Standards
4. Drug Names
5. Canadian laws Governing Drugs
6. Common Drug Forms
7. Factors Influencing Drugs
8. Routes of Drug Administration
9. Pharmacokinetics
10. Mathematics for Administration of Medications
11. Administration of Medications
12. Vitamins and Minerals
13. Antibiotics, Antifungals, Antivirals, Antiparasitics, Sulfonamides
14. Drugs Affecting the Respiratory System
15. Drugs Affecting the Nervous System
16. Drugs Affecting the Digestive System
17. Drugs Affecting the Circulatory System
18. Drugs Affecting the Endocrine System
19. Diuretics and Urinary Antiseptics

**IV. LEARNING ACTIVITIES/REQUIRED RESOURCES**

**Topic/Unit** - Introduction to Pharmacology

**Learning Activities:**

- Review course outline.
- Listen to presentation on general aspects of drugs and the historical trends of pharmacology, drug names.
- Review terms used in the study of pharmacology.
- Discuss the alternatives to drug therapy.
- Participate in any class discussions.

**Resources:**

- transparencies, possible handouts, text
- =====

**Topic/Unit** - Laws Governing Drugs

**Learning Activities:**

- Listen to presentation on the general names of drugs and drug standards and Canadian Drug Legislation.
- Compare the prescription and non-prescription drugs.
- Discuss the various forms of drug preparations: oralliquids, oral solids, topical use, use on mucous membranes.
- Discuss the roles of the pharmacological team members.
- Explain the factors influencing dosage or response to drugs.

**Resources:**

- transparencies, text
- =====

**Topic/Unit** - Administration of Drugs

**Learning Activities:**

- Discuss the routes of administration as they relate to local effect or systemic effect.
- Listen to presentation of general properties of drugs.
- Discuss the mechanisms of drug action.

**Resources:**

- transparencies, text
- =====

**IV. LEARNING ACTIVITIES/REQUIRED RESOURCES**

Topic/Unit - Administration of Drugs Continued . . .

Learning Activities:

- Quiz on Weeks #1, 2, 3.
- Discuss the 5 Rs in Drug Administration
- Discuss the guidelines for safe administration
- Learn the abbreviations associated with medications
- Translate various doctor's orders associated with medications

Resources:

- transparencies, handouts, text
- =====

Topic/Unit - Administration of Drugs Continued . . .

Learning Activities:

- Metric conversions for administration of medications
- Mathematics for administration of medications
- Watch video on the administration of eye, ear and nose drops/sprays, suppositories, topical medications
- Discuss the steps for administration of meds
- Review abbreviations, translating doctor's orders

Resources:

- transparencies, handouts, text
- =====

Topic/Unit - Specific Drug Information

Learning Activities:

- Listen to presentation on characteristics and classification of vitamins
- Discuss the groups of people who require vitamins and the different types of preparations
- Discuss the function, source, requirements and deficiencies for specified vitamins and minerals
- Drug Assignment #1 due
- Practice and review mathematics calculations

Resources:

- transparencies, handouts, text
- =====

I. **LEARNING ACTIVITIES/REQUIRED RESOURCES**

**Topic/Unit** – Specific Drug Information Continued . . .

**Learning Activities:**

- Write midterm test (on Weeks #1-6)
- Listen to presentation on Antibiotics and Antifungals

**Resources:**

- transparencies, text
- =====

**Topic/Unit** – Specific Drug Information Continued. . .

**Learning Activities:**

- Take up mid-term test
- Listen to presentation on Antivirals, Antiparasitics, and Sulfonamides
- Practice administration of medications

**Resources:**

- transparencies, text
- =====

**Topic/Unit** – Specific Drug Information Continued . . .

**Learning Activities:**

- Drug Assignment #1 due
- Listen to and discuss drugs affecting the respiratory system
- Practice administration of medications

**Resources:**

- transparencies, text
- =====

**Topic/Unit** – Specific Drug Information Continued . . .

**Learning Activities:**

- Discuss the drugs affecting the C.N.S.
- Discuss tranquilizers and antidepressants

**Resources:**

- transparencies, text

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**Topic/Unit** – Specific Drug Information Continued . . .

**Learning Activities:**

- Quiz on material from Weeks 7, 8, 9 and 10
- Discuss drug abuse – what drugs, what people, the signs and community organizations
- Listen to presentation of drugs affecting the digestive system
- Read the implications for students

**Resources:**

- transparencies, text

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**Topic/Unit** – Specific Drug Information Continued . . .

**Learning Activities:**

- Take up quiz from last week
- Listen to presentation on drugs affecting the circulatory system
- Read implications for the student (p. 135 & 136)
- Practice transcribing doctor's orders
- Math worksheets due

**Resources:**

- transparencies, text

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Topic/Unit – Specific Drug Information Continued . . .

Learning Activities:

- Listen to presentation on hormones, diuretics and urinary antiseptics
- Assessment for administration of medications
- Prepare questions for review
- Drug assignment #2 due

Resources:

- transparencies, text

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Topic/Unit – Specific Drug Information Continued . . .

Learning Activities:

- Review of course
- Assessment for administration of medications.

Resources:

- course notes, text

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Topic/Unit – Review

Learning Activities:

- Assessment for administration of medications
- Final exam on Weeks #7-14

Resources:

- notes, text

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Topic/Unit – Review

Learning Activities:

- Assessment for administration of medications

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**V. EVALUATION METHODS**

A final grade will be derived as follows:

|  |             |
|--|-------------|
| 2 quizzes (week of Sept. 23 & Nov. 11)   | 20%         |
| Midterm test (week of Oct. 14)           | 20%         |
| Drug Assignment #1 (due week of Oct. 28) | 10%         |
| Drug Assignment #2 (due week of Nov. 25) | 10%         |
| Math worksheets (due week of Nov. 18)    | 10%         |
| Final Exam (week of Dec. 9)              | 30%         |
| <b>TOTAL</b>                             | <b>100%</b> |

Grading

- A+ = 90-100%
- A = 80-89%
- B = 70-79%
- C = 60-69%

Practicum Tests

All students must attain a Satisfactory in the areas of transferring doctor's orders to the MAR sheets, accurately administering medications and documenting the medications in order to pass the course with the mark attained from the tests, assignments and attendance described above.

**VI. PRIOR LEARNING ASSESSMENT**

**VII. REQUIRED STUDENT RESOURCES**

Asperheim, M.K. 1996 Pharmacology: An Introductory Text 8th ed. Toronto: W.B. Saunders Company

**VIII. SPECIAL NOTES**

Students with special needs (eg. physical limitations, visual impairments, hearing impairments, learning disabilities) are encouraged to discuss required accommodations confidentially with the instructor.

Your instructor reserves the right to modify the course as he/she deems necessary to meet the needs of students.

**X. COURSE ANALYSIS SHEET**

## PHARMACOLOGY

### Week 1

- a) Introduction to pharmacology
- b) Definitions related to pharmacology
- c) Standards
- d) Definition of names for drugs

### Week 2

- a) Canadian Laws governing drugs
- b) Terms associated with laws
- c) Implications of laws to worker
- d) Prescription/nonprescription drugs

### Week 3

- a) Role of pharmacological team
- b) Common drug forms
- c) Factors determining the effects of drugs and drug interaction
- d) Routes of drug administration

### Week 4

- a) Drug interaction
- b) Pharmacokinetics
- c) Care and storage of drugs
- d) 5 R's
- e) Guidelines for safe administration

### Week 5

- a) Safety precautions for administering medications (principles of asepsis)
- b) Abbreviations
- c) Prescription
- d) Translating & transcribing doctor's orders
- e) Practicum

### Week 6

- a) Video-procedure for administering eye, ear, nose drops & sprays, suppositories, topical medications
- b) demonstration
- c) practicum

### Week 7

- a) Midterm
- b) Practicum for administration of ear, nose, eye, suppositories topical medication

## Week 8

- a) Systems of Measurements
- b) Conversions
- c) Ratio, proportion, math for meds
- d) Calculations of Drug Dosages
- e) Practicum

## Week 9

### **Drugs Affecting Respiratory System**

- a) Diagram, Functions of Respiratory System
- b) Use, action, pharmacokinetics, onset, duration of medication

### **Vitamins, fat soluble, water soluble** uses, action, sources

### **Minerals**

uses, actions, sources

### **Oral Med Administration**

## Week 10

### **Antibiotics & Antifungal, Antiviral Drugs**

- a) Definitions
- b) Sulfonamides
- c) Penicillins
- d) Cephalosporins
- e) Tetracyclines
- f) Erythromycins
- g) Antifungals
- h) Antiviral

## Week 11

### **Drugs Affecting the Nervous System**

- ) Anatomy of nervous system
  - ) Analgesic-narcotic, non-narcotic
  - ) Sedatives and Hypnotics
  - ) Anticonvulsants
  - ) Antipsychotic drugs
  - ) Antianxiety drugs
- In class practicum/administering and charting

