

**SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY**

**SAULT STE. MARIE, ONTARIO**



**COURSE OUTLINE**

<b>COURSE TITLE:</b>	Understanding Pharmacology and Medical Tests		
<b>CODE NO. :</b>	HOA110	<b>SEMESTER:</b>	F13
<b>PROGRAM:</b>	Health Office Administrative Support		
<b>AUTHOR:</b>	Laurie Poirier		
<b>DATE:</b>	Fall 2013	<b>PREVIOUS OUTLINE DATED:</b>	Spring 2009
<b>APPROVED:</b>	"Ted newbery"		Fall 2013
	<hr/>		
	<b>Chair</b>		<b>DATE</b>
<b>TOTAL CREDITS:</b>	3 CR		
<b>PREREQUISITE(S):</b>	MED111 – Medical Terminology		
<b>HOURS/WEEK:</b>	45 hours		

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*School of Continuing Education*

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**I. COURSE DESCRIPTION:**

This course has been designed to support medical office personnel to develop a basic understanding of a) pharmacology and b) medical tests. Content has been developed to guide you through the various body systems using a modular based approach.

**II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:**

Upon successful completion of this course, the student will demonstrate the ability to:

**PART I – PHARMACOLOGY (30 HOURS)**

1. Explain the basic principles related to the practice of pharmacology  
Potential Elements of the Performance:
  - Define pharmacology and four related subdivisions
  - Discuss the historical significance of pharmacology
  - Explain the role of the pharmacist and health office personnel
  - State 6 purposes of drug therapy
2. Discuss regulation, safety and controlled substances as each relates to the practice of pharmacology  
Potential Elements of the Performance:
  - Name the Canadian regulatory body responsible for maintaining and regulating drug safety.
  - Explain the purpose the regulating body and categories of regulation. (handout)
  - State three professions who can legally prescribe medications.
  - Define “controlled drugs”.
3. Describe drug sources and forms  
Potential Elements of the Performance:
  - Interpret the common drug names: chemical, generic and brand name.
  - Name the four common drug sources.
  - Differentiate among the three drug forms.
  - Name four types of solid preparations.
  - Explain why some tablets are scored.
  - Name three types of semisolid preparations.
  - Give examples of liquid preparations.
  - Name four forms of solutions.
  - Define abbreviations related to the forms of medications.
  - Explain the difference between ointment and cream.
  - Explain how a transdermal patch works.
4. Comprehend drug doses and effects.  
Potential Elements of the Performance:
  - Match age groups to appropriate categories.
  - Describe differences between local and systemic effects.

- Describe the steps necessary for ingested drugs to be effective.
  - Differentiate between therapeutic dose, maintenance dose, maximal dose and lethal dose.
  - Describe how to access the nearest Poison Control Centre
  - Define drug effect terminology.
  - Define therapeutic index, adverse effect and toxic effect.
  - Describe the manufacturer's responsibility regarding side effects.
  - Name four of the eight undesirable effects of drugs
  - Differentiate between drug abuse and drug addiction.
  - Explain drug interaction with certain foods, beverages or other medications.
5. Outline the basic concepts of drug administration.  
Potential Elements of the Performance:
- List the five main routes of drug administration.
  - Name the six "rights" of drug administration
  - Name the four forms of oral solid administration.
  - Name the advantages and disadvantages of oral administration.
  - Name the ways liquid medication can be measured.
  - Describe types of topical administration.
  - Explain the four types of parenteral injections.
  - Name 3 commonly used syringes.
  - List the 3 types of IV injections.
  - Differentiate between local and general anesthesia.
  - Explain the uses for inhalation therapy.
6. Interpret the components of a prescription.  
Potential Elements of the Performance:
- State 6 of the 14 patient responsibilities for taking medications.
  - Define common abbreviations written in physicians' orders for prescribing drugs.
  - Define common systems of measurement written in physicians' orders for prescribing drugs.
  - List the items included on an ambulatory care prescription slip.
  - Explain who may write a prescription.
  - Describe the part of a prescription slip.
  - Explain why prescription pads should be safely secured.
  - List the steps for safeguarding a prescription pad.
  - Explain the clerical steps for refilling a prescription.
  - Accurately define prescription abbreviations.
  - Name two classifications of medications having automatic stop policies.
7. Explain the use of drug reference resources.  
Potential Elements of Performance
- Name the most commonly used drug reference book in Canada
  - Differentiate generic and trade names from a given list of drugs

- Locate given drugs in a reference book.
8. Discuss in general terms, drug classifications and actions.  
Potential Elements of Performance
- Determine drug classifications of specified drugs using a drug reference book.
  - Explain the action on the body when a drug of a specific classification is administered.
  - Name the two major divisions of pain relievers.
  - Explain the difference among specific over-the-counter (OTC) pain relievers.
  - Give brand name examples for 5 OTC pain relievers.
  - State what the term NSAID represents.
  - List 2 examples of drugs from 10 selected drug classifications using a drug resource.
  - State the drug classification for 10 selected drugs using a drug resource.

### **PART II – MEDICAL TESTS (15 HOURS)**

1. Explain the basic principles related to medical tests  
Potential Elements of Performance:
- Categorize the two types into which medical tests fall.
  - Describe each category.
2. Discuss the rights of the patient in relation to medical testing.  
Potential Elements of Performance
- Define “basic human rights”
  - List the four statements of patient/client rights related to receiving care.
  - Name the legislation that refers to informed consent.
  - Outline who is responsible for providing informed consent.
  - Explore the role of clerical health office personnel in relation to informed consent.
3. Examine the potential responses to medical testing  
Potential Elements of Performance
- List 3 potential responses a person might have in relation to medical testing.
  - Explore the role of clerical health office personnel in relation to response to medical testing.
4. Outline basic medical tests  
Potential Elements of Performance:
- State 2 tests commonly ordered in each of the following areas of Clinical Laboratory Testing
    - Hematology
    - Chemistry

- Microbiology
- State what procedure produces samples sent to the Histology department.
- List 3 tests that may be ordered from Diagnostic Imaging
- Describe the impact of using a contrast medium in an x-ray procedure
- State 3 Cardiology tests
- List 4 types of Endoscopic procedures.
- Describe 2 screening tests related to the health of women.
- Describe 1 screening test related to the health of men.
- Describe 1 screening test related to the health of both men and women.

### III. TOPICS: Pharmacology

#### a)

1. Overview – history, definition, subgroups, purpose, role of health office support personnel
2. Regulation – organizations, safety, controlled substances
3. Drug sources and forms
4. Drug dosage and effects
5. Routes, methods and documentation
6. Understanding prescriptions – terminology, abbreviations, system of measurement and components of a prescription
7. Reference and resource
8. Drug classifications and action

### III. TOPICS: Medical Tests

#### b)

1. Overview – categories (screening, diagnostic), techniques ( p. 4)
2. Patient rights (p. 5)
3. Patient response to medical testing (p. 5)
4. Common medical tests:
  - Clinical Laboratory Testing
  - Diagnostic Imaging
  - Cardiology
  - Endoscopy
  - Neurology
  - Screening for Men and Women.

### IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

*Struck, Barb (2001). Medical Office Pharmacology. New Jersey. Prentice-Hall. ISBN 0-8359-5290-8*

*Health Canada – Food and Drug Act [http://www.hc-sc.gc.ca/fn-an/legislation/acts-lois/fdr-rad/index\\_e.html](http://www.hc-sc.gc.ca/fn-an/legislation/acts-lois/fdr-rad/index_e.html)*

*Guide to Diagnostic Tests - <http://www.health.harvard.edu/diagnostic-tests/>*

**V. EVALUATION PROCESS/GRADING SYSTEM:**

<i>Pharmacology</i>	
<i>5 quizzes – 10% each</i>	<i>50%</i>
<i>Medical Tests</i>	
<i>2 quizzes – 10% each</i>	<i>20%</i>
<i>Class assignment participation</i>	<i>20%</i>
<i>Attendance (must attend 100% to obtain %)</i>	<i>10%</i>

The following semester grades will be assigned to students:

<b>Grade</b>	<b><u>Definition</u></b>	<b><i>Grade Point Equivalent</i></b>
A+	90 – 100%	4.00
A	80 – 89%	
B	70 - 79%	3.00
C	60 - 69%	2.00
D	50 – 59%	1.00
F (Fail)	49% and below	0.00
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field /clinical placement or non-graded subject area.	
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.	
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.	
NR	Grade not reported to Registrar's office.	
W	Student has withdrawn from the course without academic penalty.	

**VI. SPECIAL NOTES:**Attendance:

Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session.

**VII. COURSE OUTLINE ADDENDUM:**

The provisions contained in the addendum located on the portal form part of this course outline.