



## I. COURSE DESCRIPTION:

Non-prescription medications, over-the-counter products; vitamins, herbs and supplements will be studied from an evidence-based perspective. Overview of the most commonly used complementary therapies and their relation to the use of pharmaceutical products. The use and retailing of home health care items and assistive devices will be studied.

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

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

1. Explore the retail pharmacy outside the dispensary areas and demonstrate an understanding of non-prescription drugs and various complementary therapies.

MODULE 1: Non-prescription medications and self care

### Potential Elements of the Performance:

- Outline the role and responsibility as a Pharmacy Technician in directing communications to the pharmacist from either patients or other healthcare providers.
  - Outline the role of the Pharmacy Technician in regards to various therapies
  - Demonstrate effective communication skills in dealing with patients, pharmacists, colleagues, and other healthcare providers
  - Discuss drug schedules and categories including prescription, non-prescription, herbal, nutraceuticals and homeopathic remedies.
  - Define behind the counter medications and explain how these differ from OTC items
2. Explore the over-the-counter (OTC)/non-prescription products available for self medication

MODULE 2: Over the counter products

### Potential Elements of the Performance:

- Describe why OTC products are popular
- List considerations concerning the use of OTC drugs
- List the categories for designating a medication as an OTC drug

- Describe OTC products that fall within each of the following categories:
    - Pain and fever medications
      - Indications, classifications, contraindications, and side effects
    - Respiratory medications
      - Indications, contraindications, side effects, warning/advice labels
      - Introduce classification and mechanism of action
      - Be familiar with immunization records
    - Gastrointestinal medications
      - Indications, contraindications, side effects, warning/advice labels
    - Ophthalmic and Otic medications
      - Indications, classifications, contraindications, and side effects
    - Dermatological medications
      - Etiology, symptoms, classification, aggravating factors, prevention
      - Treatments with associated classification, side effects, warning/advice labels, contraindications, special considerations
    - Other medical disorders
      - Insomnia
      - Drowsiness & Fatigue
  - List a minimum of five conditions treated with OTC drugs
  - Explain why special precautions are taken with geriatric and pediatric populations in the selection of OTC drugs
  - List various non-prescription drugs of abuse and associated therapeutic category.
3. Explore the idea of natural healing processes and the benefits and drawbacks of non-conventional medicine

### MODULE 3: Complementary and Alternative Therapies

#### Potential Elements of the Performance:

- Differentiate between complementary and alternative therapies
- Differentiate between Eastern and Western medicine
- Describe why alternative medicine has gained popularity
- Describe complementary therapies and their relation to the use of pharmaceutical products
- Explain what is meant by the placebo effect

- Differentiate between the following alternative professionals and/or treatments and belief systems of each:
  - Acupressure/ Acupuncture
  - Massage therapy
  - Aromatherapy
  - Chiropractic
  - Naturopathy
  - Homeopathy
  - Energy medicine
  
- 4. Explore the most common vitamins and minerals available in retail pharmacies.

#### MODULE 4: Vitamins and Minerals

##### Potential Elements of the Performance:

- List the conditions that occur from a deficiency of the vitamins covered in this module
  - Explain the functions of vitamins and minerals
  - Describe the differences between water-soluble and fat-soluble vitamins
  - Understand what is meant by a daily allowance and be able to apply this knowledge when reading labels
  - Understand the definition of a trace element
  - List the common minerals and be able to recognize their chemical symbol
  - Describe the adverse effects of overuse of both vitamins and minerals
  - List the foods that contain the common elements discussed
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5. Explore a variety of herbal remedies and nutraceuticals through relevant literature research.

#### MODULE 5: Herbs and Supplements

##### Potential Elements of the Performance:

- Define “natural health products” as per Health Canada
- Demonstrate an understanding of what resources are available to find accurate, reliable, authoritative information on the therapeutic constituents of herbs and other natural medicinals.
- Describe the appropriate clinical indications, uses, dosages, interactions, side effects and pharmacology of common phytomedicinals:

- St. Johns wort
  - Kava Kava
  - Valerian
  - Ginkgo
  - Black cohosh
  - Saw palmetto
  - Ginseng
  - Bilberry
  - Describe the regulatory and labeling issues as well as how they apply to natural products and other dietary supplements
  - Explore various nutritional supplements available in retail pharmacies and note indications, special formulations, and terminology associated with the product.
6. Explore the various home healthcare items available in retail pharmacies.

#### MODULE 6: Home Healthcare Items

##### Potential Elements of the Performance:

- List the advantages and disadvantages of home diagnostic products
- Identify various types of sanitary products-diapers, enuresis products, sanitary napkins, tampons, and related products.
- List indications, contraindications, and side effects of vaginal and rectal products
- Be familiar with common therapeutic questions for the pharmacist associated with vaginal and rectal products
- Be familiar with products categorized as family planning
  - Fertility
    - Symptoms, and treatments (medicinal and non-medicinal)
  - Pregnancy tests
    - Lab demonstration, observations, and documentation, disposal, results (including false positive and negative)
  - Contraceptives:
    - Non-hormonal
      - Advantages, disadvantages
    - Hormonal emergency contraceptive
- Identify various first aid products and explain methods of use
- Identify various mobility aids and explain methods of use, indications, contraindications

- Be familiar with various forms of fittings available including compression stockings, orthotics (braces/ supports)
  - Identify various smoking cessation products available and be familiar with products available
    - Proper selection, use, side effects and disposal
7. Explore the use of various assistive devices commonly used in retail pharmacy.

## MODULE 7: Medical Devices and Equipment

### Potential Elements of the Performance:

- Advise patients on the optimal use of analyses and devices
- Be familiar and be able to advise patients of funding through the Assistive Devices Program ([www.health.gov.ca](http://www.health.gov.ca))
- Identify the various types of glucose meters and continuous glucose monitoring systems
- Describe the steps in measuring blood glucose
- Describe the nondurable medical supplies used in insulin delivery, blood glucose, and lab monitoring
- Identify the various types of blood pressure monitors and explain the methods of measuring blood pressure
- Describe medical supplies used in severe allergic reactions
  - Demonstrate proper use, maintenance, indications, contraindications, storage, and disposal
- Identify commonly used pedometers and heart rate monitors
- Identify various respiratory medical devices.
  - Demonstrate proper use, maintenance, indications, storage, and disposal

### III. TOPICS:

1. Over-the-counter products
  - Pain and fever medications
  - Respiratory medications
  - Gastrointestinal medications
  - Ophthalmic and Otic medications
  - Dermatological medications
  - Other medical disorders
2. Complementary and alternative therapies
3. Vitamins and minerals
4. Herbal products and supplements
5. Home healthcare products
6. Medical devices

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

1. Berardi RR, McDermott JH, et al. Handbook of Nonprescription Drugs: An Interactive Approach to Self- Care, 16<sup>th</sup> edition, Washington, DC, American Pharmaceutical Association, 2006.
2. Atlas M, Faris A. Introduction to Pharmaceutical Dosage Forms for Pharmacy Technicians. Pharmacy Tech Consultants, 2008-2009.

NB: Research articles and/or other online resources as indicated by the instructor.

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

Written Assignments (3x5%)	=	15%
Presentations (2x15%)	=	30%
Quizzes (4x5%)	=	20%
Final exam (1x35%)	=	35%

Students in the Pharmacy Technician program must attain 60% in order to pass the course.

All evaluation strategies must be submitted in order to receive credit for the course.

All policies and procedures as outlined in the current Student Success Guide related to submitting assignments, scholarly work/academic honesty, tests, and examinations.

No supplements will be provided for tests.

The following semester grades will be assigned to students:

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 – 100%	4.00
A	80 – 89%	3.00
B	70 - 79%	2.00
C	60 - 69%	1.00
D	50 – 59%	0.00
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.

***NOTE: Mid Term grades are provided in theory classes and clinical/field placement experiences. Students are notified that the midterm grade is an interim grade and is subject to change.***

**Note:** For such reasons as program certification or program articulation, certain courses require minimums of greater than 50% and/or have mandatory components to achieve a passing grade.

#### **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.