

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



**SAULT
COLLEGE**

COURSE OUTLINE

COURSE TITLE:	Pharmaceutical Compounding I		
CODE NO. :	PTN210	SEMESTER:	2
PROGRAM:	Pharmacy Technician		
AUTHOR:	Julie Freestone B.Pharm R.Ph.		
DATE:	June 2015	PREVIOUS OUTLINE DATED:	N/A
APPROVED:	<i>"Marilyn King"</i>		<i>Dec. 2015</i>
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	CHAIR, HEALTH PROGRAMS		DATE
TOTAL CREDITS:	4		
PREREQUISITE(S):	PTN101, PTN102		
HOURS/WEEK:	4		

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For additional information, please contact the Chair, Health Programs
School of Health, Wellness and Continuing Education
(705) 759-2554, Ext. 2689

I. COURSE DESCRIPTION:

Students will learn how to prepare basic pharmaceutical compounds. The complexity of accurate compounding from preparation techniques, calculations, weights, and measures will be covered. The legislation and methods of documentation for these products will be emphasized. The creation of a quality product while maintaining the equipment and lab appropriately will be an expectation in this class.

This course is designed to enable students to attain competencies specified in the National Association of Pharmacy Regulatory Authorities (NAPRA) Professional Competencies for Canadian Pharmacy Technicians at Entry to Practice (March 2014). (Full document available at www.napra.ca)

This course is designed to enable students to attain the educational outcomes specified in the Canadian Pharmacy Technician Educators Association (CPTA) Educational Outcomes for Pharmacy Technician Programs in Canada (March 2007). (Full document available at www.cptea.ca)

This course is designed to enable students to meet and maintain the standards of practice expected within the pharmacy technician's role. The standards are specified in the National Association of Pharmacy Regulatory Authorities (NAPRA) Model Standards of Practice for Canadian Pharmacy Technicians (November 2011). (Full document available at www.napra.ca)

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. determine the suitable environment/conditions, equipment, and formulation procedures and techniques required to prepare or compound products.

Potential Elements of the Performance:

- Determine the set up requirements needed, including gathering of equipment and supplies; proper selecting and weighing of ingredients.
- Accurately perform pharmaceutical calculations required to compound various non-sterile dosage forms.
- Identify the purpose of each ingredient used in a formulation.
- Describe and discuss the records that are required to be maintained for compounded products.

2. prepare various non-sterile compounded products.

Potential Elements of the Performance:

- Demonstrate competency in the use and completion of master formula sheets.
- Accurately perform pharmaceutical calculations required to compound various non-sterile dosage forms.
- Use clean technique when compounding non-sterile preparations
- Accurately and appropriately use an electronic balance and torsion balance.

3. determine if final product suitable for release.

Potential Elements of the Performance:

- Assure the principles of compounding a product accurately, using proper technique have been applied.
- Assure appropriate packaging and labelling of the finished product.
- Explain and identify the appropriate expiration date, storage and handling conditions for compounded products.

4. comply with legislative requirements and established policies and procedures.

Potential Elements of the Performance:

- Describe and differentiate “compounding” and “manufacturing”.
- Be familiar with and meet the established Good Manufacturing Practices (GMP) guidelines, Ontario College of Pharmacists (OCP) guidelines and Workplace Hazardous Materials Information System (WHMIS) guidelines
- Discuss when the compounding of drug products is appropriate

III. TOPICS:

1. Introduction

- Introduction to compounding
- Why compound
- Advantages and disadvantages of compounding
- Patient considerations
- Role of the pharmacy technician

2. Compounding practices and considerations

- Information resources
- Legislation
- Considerations for stability, solubility, shelf life, storage
- Definitions and terminology

3. Calculations and compounding math

- Dilutions and stock solutions
- Expanding and reducing formulae
- Percentages, conversions

- Alligations
 - Aliquots and triturations
4. Facilities, equipment and supplies
 - Lab practices and safety procedures
 - Operation, maintenance, cleaning and storage of equipment
 - Handling of hazardous materials
 5. Quality assurance and record keeping
 - Definitions of Quality Assurance (QA) and Quality Control (QC)
 - Standard Operating Procedures (SOPs)
 - Formulation records
 - Compounding records
 6. Ointments, creams, pastes and gels
 - Types and definitions
 - Composition and ingredients
 - Preparation and compounding techniques
 - Quality control
 - Packaging, labelling and stability
 7. Solutions, suspensions and emulsions
 - Types and definitions
 - Composition and ingredients
 - Preparation and compounding techniques
 - Quality control
 - Packaging, labelling and stability
 8. Medication flavouring
 - Taste types
 - Flavouring techniques
 - Compatibility

V. REQUIRED RESOURCES/TEXTS/MATERIALS:

1. Compounding – The Pharmacy Technician Series by Mike Johnston ISBN: 9780131147607 Publisher : Prentice Hall
2. Introduction to Pharmaceutical Dosage Forms for Pharmacy Technicians, 2014. Marie Atlas and Audrey Faris. Pharmacy Tech. Consultants Ltd. ISBN:978-1-927904-00-8
3. Sault College Learning Management System (D2L)
4. White lab coat and safety glasses

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: 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.

A minimum of a “C” grade is required to be successful in most PTN coded courses.

It is also important to note, that the minimum overall GPA required in order to graduate from a Sault College program remains 2.0.

If a faculty member determines that a student is at risk of not being successful in their academic pursuits and has exhausted all strategies available to faculty, student contact information may be confidentially provided to Student Services in an effort to offer even more assistance with options for success. Any student wishing to restrict the sharing of such information should make their wishes known to the coordinator or faculty member.

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 in D2L and on the portal form part of this course outline.