



**Bow Valley
College**

Course Outline

PHRM2501

Hospital Dispensing Lab
Winter 2024 - Current

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PHRM2501 Hospital Dispensing Lab

COURSE DESCRIPTION

Learners will apply institutional dispensing policies and procedures while integrating skills and knowledge, including order interpretation, drug distribution systems, pharmacy calculations, documentation, and independent double checks. Operation of a high-speed automated drug packager (PACMED®) will be integrated into the dispensing process and extensive use of role-plays will further develop communication skills.

REQUISITES	<p>Complete all of the following</p> <ul style="list-style-type: none"> • Earn a minimum grade of C in each of the following courses <ul style="list-style-type: none"> ◦ PHRM1204 - Pharmacotherapy IV (3) ◦ PHRM1501 - Hospital Pharmacy Practice (3) • Earn a minimum grade of A- in each of the following courses <ul style="list-style-type: none"> ◦ PHRM1302 - Pharmacy Calculations II (3)
EQUIVALENTS	None
CREDITS	6
HOURS	90
ELIGIBLE FOR PLAR	No
ZERO TEXTBOOK COST	No

COURSE LEARNING OUTCOMES

Bow Valley College is committed to ensuring our graduates can demonstrate their abilities in key areas that will make them effective citizens and encourage their development as lifelong learners. In addition to the discipline-specific skills that learners acquire in their programs, the College has identified ten learning outcomes.

College-Wide Outcomes:

1. Communication
2. Thinking Skills
3. Numeracy and Financial Literacy
4. Working with Others
5. Digital Literacy
6. Positive Attitudes and Behaviours
7. Continuous Learning
8. Health and Wellness Awareness
9. Citizenship and Intercultural Competence
10. Environmental Sustainability

COURSE LEARNING OUTCOME(S) COLLEGE WIDE
OUTCOMES
SUPPORTED

1	Process medication orders according to hospital policies and procedures.	2, 3, 5, 8
2	Prepare products within various drug distribution systems according to hospital policies and procedures.	2, 3, 5, 8
3	Apply drug knowledge to perform drug distribution in the role of the pharmacy technician.	2
4	Perform independent double check procedures to ensure accuracy.	2, 3, 8
5	Demonstrate professionalism in the role of the pharmacy technician.	2, 4, 6
6	Communicate effectively with diverse patients, caregivers, colleagues, and other health care providers in the provision of patient-centred care.	1, 4, 6, 9
7	Collaborate effectively with diverse patients, caregivers, colleagues, and other health care providers in the provision of patient-centred care.	1, 2, 4, 8

COURSE MODULES AND SCHEDULE

**Course schedule subject to change, depending on delivery mode and term of study. For exact dates, please consult the Course Offering Information in Brightspace.*

WEEK/HOURS MODULES

Week 1	Lab Orientation; Infection Control
Week 2	Drug Distribution
Week 3	Drug Distribution
Week 4	Drug Distribution
Week 5	Drug Distribution
Week 6	Drug Distribution
Week 7	Drug Distribution
Week 8	Drug Distribution
Week 9	Drug Distribution
Week 10	Drug Distribution
Week 11	Drug Distribution
Week 12	Drug Distribution
Week 13	Drug Distribution
Week 14	Drug Distribution
Week 15	Midterm Evaluation
Week 16	Drug Distribution
Week 17	Drug Distribution
Week 18	Drug Distribution
Week 19	Drug Distribution
Week 20	Drug Distribution
Week 21	Drug Distribution
Week 22	Drug Distribution
Week 23	Drug Distribution
Week 24	Drug Distribution
Week 25	Drug Distribution
Week 26	Drug Distribution
Week 27	Drug Distribution
Week 28	Drug Distribution
Week 29	Drug Distribution ; Review
Week 30	Final Evaluation

ASSESSMENT

COURSE LEARNING OUTCOME(S)	ASSESSMENT	WEIGHT
1, 2, 3, 4, 5, 6, 7	Assignments	20%
3, 6	Quizzes	15%
1, 2, 3, 4, 5, 6	Midterm Evaluation	25%
1, 2, 3, 4, 5, 6, 7	Final Evaluation	40%
3	Cumulative Drug Exam	PASS/FAIL

Important: For details on each assignment and exam, please see the Course Offering Information.

PERFORMANCE STANDARDS

A minimum grade of D is required to pass this course. However, a program may require a higher grade in this course to progress in the program or to meet specific program completion requirements.

The Pharmacy Technician Program requires a minimum grade of A- in this course to progress in the program.

Please consult with the program area or contact the program chair for further details. A minimum Grade Point Average of 2.0 is required for graduation.

GRADING SCHEME

Grade	Percentage	Grade Point	Description
A+	95-100	4.0	Exceptional: superior knowledge of subject matter
A	90-94	4.0	Excellent: outstanding knowledge of subject matter
A-	85-89	3.67	
B+	80-84	3.33	
B	75-79	3.0	Very Good: knowledge of subject matter generally mastered
B-	70-74	2.67	
C+	67-69	2.33	

C	64-66	2.0	Satisfactory/Acceptable: knowledge of subject matter adequately mastered
C-	60-63	1.67	
D+	57-59	1.33	
D	50-56	1.0	Minimal Pass
F	Less than 50	0.0	Fail: an unsatisfactory performance

REQUIRED LEARNING RESOURCES

Bow Valley College. (current year). *PHRM2501 Hospital dispensing lab manual*.

Canadian Pharmacists Association. *e-CPS*. Retrieved from <http://www.e-therapeutics.ca/>. BVC access provided.

Bow Valley College. (current year). *Pharmacy Technician Program Drug Reference Chapters I-IV*.

Additional learning resources may be found in the Course Offering Information or in Brightspace.

ADDITIONAL INFORMATION

NAPRA Competencies:

1.1 Practise within legal requirements.

1.1.1 Apply legal requirements to practice, including federal and provincial/territorial legislation, policies, by-laws, and standards.

1.1.2 Apply federal and provincial/territorial workplace, occupational health and safety, and other related legislation to the practice setting.

1.1.3 Apply federal and provincial/territorial privacy legislation to the collection, use, storage, disclosure and destruction of personal health information.

1.3 Manage actual and potential illegal, unethical, or unprofessional actions or situations in practice.

1.3.1 Identify illegal, unethical or unprofessional actions or situations.

1.3.2 Undertake appropriate intervention to address illegal, unethical or unprofessional actions or

situations.

1.4.1 Apply principles of self-regulation.

1.4.2 Accept responsibility and accountability for own actions and decisions.

1.4.3 Seek guidance when uncertain about own knowledge, skills, abilities, and scope of practice.

1.4.4 Apply principles of continuing professional development including assessing own learning needs and developing a plan to meet these needs.

1.4.5 Maintain appropriate professional boundaries.

1.4.6 Protect the privacy and confidentiality of the patient.

1.5.1 Maintain complete, accurate and secure patient records.

1.5.2 Identify situations in which documentation should and should not be shared with other health professionals or third parties.

1.5.3 Select appropriate methods to share documentation within the circle of care and facilitate patient care.

2.1.2 Demonstrate a caring, empathetic, and professional attitude.

2.1.3 Determine and acknowledge the patient's needs, values and desired level of care.

2.1.4 Identify and respect the roles and responsibilities of each party in the relationship.

2.2.3 Gather information from the patient's health records.

2.2.4 Gather information required for medication reconciliation.

2.2.6 Organize, reconcile and record the patient's information.

2.3.3 Gather monitoring parameter information for pharmacist review, including adherence information and lab test results.

3.1.1 Determine the validity, clarity, completeness and authenticity of the prescription and resolve concerns in collaboration with the pharmacist.

3.1.2 Transcribe verbal orders and ensure their accuracy.

3.1.4 Interpret numerals, symbols, measurement systems and Latin abbreviations.

3.1.5 Perform pharmaceutical calculations.

3.1.6 Identify patterns of unusual drug prescribing and usage including possible diversion or drug misuse and report relevant findings to the pharmacist or appropriate authority.

- 3.2.1 Select appropriate products by applying knowledge of brand and generic names, dosages, and dosage forms.
- 3.2.2 Apply drug interchangeability principles in accordance with applicable formularies, policies or legislation.
- 3.2.3 Verify the integrity of a product by considering stability, and, where applicable, sterility, including checking expiry dates, physical appearance, and odour.
- 3.2.4 Measure products by counting, pouring or weighing using the appropriate equipment and technology.
- 3.2.5 Package products in a suitable container to maintain product integrity, stability, and, where applicable, sterility.
- 3.2.6 Use packaging that is safe and appropriate for the patient, including pre-packaging, multi-dose or unit dose packaging and child-resistant vials.
- 3.2.7 Label products according to legislative requirements, best safety practices, established protocols and patient-specific needs.
- 3.4.1 Identify when an independent double check should be performed.
- 3.4.2 Check the product and its prescription label against the prescription using a systematic approach.
- 3.5.1 Determine whether the legal and professional requirements for a product to be released to the patient have been met.
- 4.1.1 Demonstrate the organizational and time management skills necessary to effectively prioritize,
- 4.1.2 Supervise pharmacy support personnel so that accepted standards are met.
- 4.1.3 Use and maintain automation and other technology to enhance safety, efficacy and efficiency in the practice setting.
- 4.2.1 Apply inventory and formulary management systems and strategies that incorporate best practices, including new technologies.
- 4.2.3 Identify issues with the drug supply chain, including drug shortages and drug recalls, and collaborate with the pharmacist to resolve these issues.
- 4.2.5 Reconcile inventory for controlled substances, or any other substances selected.
- 4.2.6 Investigate inventory discrepancies and communicate findings to the pharmacist and/or other

appropriate authority.

4.3.1 Use appropriate information technology to organize, maintain and retrieve pharmacy records.

4.3.2 Use information technology and record-keeping procedures that maintain the integrity, security

and permanence of pharmacy records.5.2.3 Participate in organized initiatives for disaster, pandemic and emergency preparedness.

5.2.3 Participate in organized initiatives for disaster, pandemic and emergency preparedness.

5.3.1 Promote the proper handling and disposal of drugs and hazardous materials with the patient, self and others.

6.1.2 Use a variety of retrieval techniques to access reliable and appropriate information, including

7.1.1 Demonstrate proficiency in written and verbal English or French.

7.1.2 Demonstrate appropriate verbal and non-verbal communication skills, including listening skills.

7.1.4 Select appropriate communication and education techniques for use with the patient and other health professionals.

7.1.5 Conduct interpersonal interactions, including conflict management, in a professional manner.

7.1.6 Communicate with sensitivity, respect and empathy.

7.2.1 Use communication techniques that maximize safety and understanding, including repeating back verbal orders, using recognized terminology and avoiding unnecessary or unsafe abbreviations.

7.2.2 Record and store information in a consistent manner for efficient access and retrieval by relevant personnel.

7.2.3 Select appropriate technology to facilitate communication.

8.1.2 Collaborate with other parties in the relationship to define the roles and responsibilities of each party.

8.2.1 Interact respectfully with other members of the team by accepting accountability for themselves and managing disagreements and conflict.

8.3.1 Collaborate with team members to ensure appropriate utilization of resources.

8.3.2 Collaborate with team members to determine and achieve team goals and objectives.

8.3.3 Facilitate continuity of care.

8.4.1 Recognize situations that fall beyond the scope of practice of pharmacy technicians and refer these situations to the pharmacist.

8.4.2 Accept responsibility for referrals from the pharmacist.

9.1.1 Apply principles of patient safety to improve practice.

9.1.3 Share information about problems, resolutions, system changes and lessons learned with the workplace team.

9.2 Contribute to continuous quality improvement and risk management activities related to the drug distribution system.

9.2.3 Identify the occurrence of a medication incident or close call and respond effectively to mitigate harm and prevent reoccurrence.

9.2.4 Identify high-alert drugs and high-risk processes in order to respond effectively.

9.3.1 Maintain the cleanliness, functionality and integrity of compounding, packaging, dispensing, and storage equipment.

9.3.2 Ensure that products are stored and transported under the conditions required to maintain product quality, safety and integrity, including cold chain management.

9.3.3 Evaluate the quality of supplies and products using recognized quality assurance techniques including visual inspection, verification of the legitimacy of the supplier and use of manufacturers' quality markers.

9.4 Create and maintain a working environment that promotes safety.

9.4.1 Minimize and manage distractions in the work environment.

9.4.3 Identify factors that impact the safety of the working environment, including resource allocation, procedural consistency and ergonomics.

CPTEA Educational Outcomes:

6.3.1 Apply foundational knowledge related to the pharmacy technician role including:

- Pharmacy practice;
 - Social, developmental, communication, interpersonal and behavioural science;
 - Biomedical science;
 - Health, wellbeing, and health promotion;
 - Health care systems;
 - Informatics, administrative, and business theory;
 - Pharmaceutical sciences; and,
 - Legislation and regulatory requirements.
1. Act in a manner that demonstrates the comprehensive knowledge required for the professional role.
 2. Apply knowledge and expertise to resolve routine, previously encountered problems, issues, and situations.
 3. Collaborate with the pharmacist to resolve novel problems, issues, and situations.

Additional information may be found in the Course Offering Information or in Brightspace.

ACADEMIC ACCOMMODATIONS

Learners with a disability (learning, physical, and/or mental health) may qualify for academic and exam accommodations. For more information, or to apply for accommodations, learners should make an appointment with Accessibility Services in the Learner Success Services (LSS) Department. Accessibility Services can also assist learners who may be struggling with learning but do not have a formal diagnosis. To make an appointment visit LSS on the first floor of the south campus or call 403-410-1440. It is the learner's responsibility to contact Accessibility Services and request academic accommodations. For more information, please visit our website at <http://www.bowvalleycollege.ca/accessibility>.

INSTITUTIONAL POLICIES

Bow Valley College is committed to the highest standards of academic integrity and honesty. Learners are urged to become familiar with and uphold the following policies: Academic Integrity (500-1-7), Learner Code of Conduct, Procedures and Guidelines (500-1-1), Learner Appeals (500-1-12), Attendance (500-1-10), Grading (500-1-6), Academic Continuance and Graduation (500-1-5), and Electronic Communications (300-2-13). Audio or video recording of lectures, labs, seminars, or any other teaching and learning environment by learners is allowed only with consent of the instructor as part of an approved accommodation plan. Recorded material is to be used solely for personal study and is not being used or distributed without prior written consent from the instructor.

Turnitin:

Students may be required to submit their course work to Turnitin, a third-party service provider engaged by BVC. Turnitin identifies plagiarism by checking databases of electronic books and articles, archived webpages, and

previously submitted student papers. Students acknowledge that any course work or essays submitted to Turnitin will be included as source documents in the Turnitin.com reference database, where it will be used solely to detect plagiarism. The terms that apply to a student's use of Turnitin are described on Turnitin.com.

Online Exam Proctoring:

Examinations for this course may require proctoring through an online proctoring service. Online proctoring enables online exam taking within a controlled and monitored environment, thereby enhancing academic integrity. Online proctoring may occur through a variety of methods, including but not limited to:

- a. live online proctoring where a remote invigilator authenticates identity and observes completion of an exam using specialized software and recordings;
- b. automated proctoring where the exam session is recorded and AI (artificial intelligence) analyzed;
- c. browser lockdown that limits access to other applications, websites, copying, printing, screen capture and other functions; or
- d. a combination of both live/automated proctoring and browser lockdown.

Course instructors will review recordings, analyses, and data obtained through online proctoring for academic integrity infractions. It is the student's responsibility to meet the technical, software, location, and identity verification requirements necessary to enable online proctoring.

Further details of these policies are available in the Academic Calendar and on the Bow Valley College website, bowvalleycollege.ca.

Learners are encouraged to keep a copy of this course outline for future reference.

Collection of Personal Information:

This course, including your image and voice, may be recorded and made available to you and other students taking the course section. By attending the class(es) online or in person, you consent to the collection of your personal information. If you do not wish to be recorded, please contact your instructor before starting the course/class to discuss alternative arrangements.

You may use the recordings only for educational purposes and you must not copy, share, or use the recordings for any other purpose without the instructor's express permission.

Your personal information is collected in accordance with section 33(c) of the Freedom of Information and Protection of Privacy Act (Alberta) to deliver academic programming, support learner flexibility, promote universal design for learning principles, and for purposes consistent with the course activities and outcomes. If you have any questions about the collection, disclosure, use, or protection of this information, please contact the College's Access and Privacy Officer at foip@bowvalleycollege.ca.