New Course Outline

- The [PharmD Approval Process for New Course Outlines](#) document provides for more information on next steps and approval timelines.
- The [Course Outline Submission Overview](#) document provides more detailed guidelines on course learning objectives, topic outlines/scheduling requirements, and assessment methods.
- The [AFPC Educational Outcomes for Professional Programs](#) document provides complete information on roles and key competencies for Pharmacy Degree Programs.

**Course Number:**      PHM205H1

**Course Title:**      Medication Therapy Management 2 (MTM2)

**Outline Version Code:**

**Course Description:**

This Medication Therapy Management (MTM) course is the second of the four-part series of simulated pharmacy practice courses. MTM 2 will enable a student to continue to apply knowledge and develop skills needed by a pharmacist to provide patient care, using a systematic patient-care process to define and achieve the goals of optimizing safe, effective pharmacotherapy. MTM 2 course content is drawn from relevant co- and pre-requisite courses. Lectures and simulated practice sessions are designed to facilitate independent and collaborative learning that will be transferrable to diverse practice settings and prepare a student for early experiential learning. Students will be responsible to perform and document a comprehensive patient assessment to identify, resolve and prevent drug therapy problems, and educate patients on the appropriate use of medications. Students will be required to assess a patient’s health status; integrate relevant information to recommend appropriate therapy, determine efficacy and safety endpoints for monitoring therapy, document a care plan, and appropriate follow-up parameters with patients to evaluate their response to therapy, in a simulated practice environment. Students will also actively participate in the medication dispensing process, prepare extemporaneously compounded pharmaceutical products, and interpret the pharmacist’s professional, ethical and legal obligation within provincial and federal frameworks.

**Semester:**
- ☒ Fall
- ☐ Winter
- ☐ Summer

**Course Type:**
- ☐ Elective
- ☐ Selective
- ☒ Mandatory

1. **Course Learning Objectives:**

Upon completion of this course, students will have achieved the following level of learning objectives:

- Introductory = knowledge and comprehension of concepts, definitions
- Intermediate = application of concepts to simple situations
- Advanced = application of concepts to more complex situations with ability to synthesize and evaluate
Knowledge
Introductory Level:

• Identify ethical dilemmas inherent in the practice of pharmacy, and identify principles and theories for resolving them

Intermediate Level:

• Identify and differentiate activities and responsibilities within the scope of practice for pharmacists and pharmacy technicians as they relate to MTM

• Identify and understand the rationale of the legal requirements for written and verbal prescriptions needed for typical drug distribution activities in community practice, as required by relevant federal and provincial legislation

• Describe and/or demonstrate the administration of various medication dosage forms used to achieve therapeutic outcomes

• Identify, resolve and prevent factors that may contribute to drug therapy problems

Advanced Level:

Skills
Introductory Level:

• Demonstrate appropriate and effective collaborative skills when interacting with other health care providers, prescribers and pharmacists.

• Apply basic concepts used in the critical appraisal of primary, secondary and tertiary literature to integrate evidence-based medicine into patient-centered pharmacotherapeutic decision-making

• Employ rational clinical decision-making skills when accepting responsibility and demonstrating accountability to address patient needs when partnering with patients, their advocates, or other health care providers

• Develop and utilize an appropriate and effective format for patient care documentation (e.g. structured notes, MedsChecks, etc.)

Intermediate Level:

• Demonstrate the ability to effectively prioritize and organize workflow as an individual and within a group
• Complete an accurate patient profile by gathering a medication history and documenting other pertinent information for the purpose of carrying out an effective assessment of a patient’s drug therapy

• Interpret laboratory findings, clinical data and physical assessment to patient-specific disease management, when relevant for the purpose of carrying out an effective assessment of patient’s drug therapy

• Accurately interpret and process prescription orders

• Solve basic pharmaceutical calculations commonly encountered in pharmacy practice

• Adhere to relevant legal requirements for drug distribution activities in community practice

• Identify and resolve medication processing errors (MPEs)

• Effectively document the care plan (recommendations and interventions) as they pertain to optimizing a patient’s medication therapy

• Demonstrate understanding of the pharmacist’s responsibilities in ensuring optimal health outcomes for patients

• Demonstrate appropriate and effective communication skills when interacting with patients to address patient care issues

• Demonstrate the ability to analyze, prioritize and resolve drug-therapy problems in a patient-centered manner for patients presenting with various medical conditions taught in PCT- 1, 2 and 3

• Develop focused (directed) patient interviewing skills

• Demonstrate competency in pharmaceutical calculations for extemporaneously compounded prescriptions

• Produce specialty topical dosage forms that are pharmaceutically elegant, by applying the Guidelines for Compounding Preparations in conjunction with the Model Standards of Practice

Advanced Level:

**Attitudes/Values:**

Introductory Level:

Intermediate Level:

• Demonstrate professionalism and use of ethical principles through appropriate behaviours and attitudes during any interactions with patients and other health professionals/colleagues, as guided by faculty expectations on professionalism and ethics
Advanced Level:

2. Rationale for Inclusion in the Curriculum:

This course provides students with the opportunity to develop the skills required to apply clinical knowledge in a practical, patient-focused manner, in order to effectively manage patients' drug therapy. The problem-based, small group simulated pharmacy environment and role-playing scenarios provide students with a unique setting by bridging the theoretical knowledge with the practical skills necessary for practice. Large group lectures will support the practice sessions for students to develop and demonstrate competency through written documentation, verbal telephone, face-to-face interactions, and role-playing. Pharmacotherapy topics taught in Years 1 and 2 are used as the basis for a student to identify, prevent and resolve patients' drug therapy problems, and to develop and communicate a care plan to meet patients' health outcomes. Students will also be required to address issues, such as professionalism and ethics, which can impact on the provision of optimal patient care. The knowledge, skills and attitudes acquired in this course are essential in preparing a student for experiential, and future, pharmacy practice.

3. Pre-requisites:

PHM 101: Pharmacotherapy;
PHM 105: Medication Therapy Management
PHM 114: Social and Behavioural Health;
PHM 151: Early Practice Experience 1

4. Co-requisites:

PHM 212: Pharmacy Practice Research;
PHM 201: PCT-2 Dermatology, EENT;
PHM 202: PCT-3 Endocrinology, Nephrology, Urology;
PHM 241: Topics in Pharmaceutical Quality and Clinical Laboratory Medicine

5. Course Contact Hours and Teaching Methodologies:

<table>
<thead>
<tr>
<th>Didactic (lecture)</th>
<th>Hours: 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large group problem-based/ case-based learning (group size: 240)</td>
<td>Hours:</td>
</tr>
<tr>
<td>Laboratory or Simulation</td>
<td>Hours: 27hrs + 2hrs BPMH</td>
</tr>
<tr>
<td>Tutorial/Seminar/Workshop/Small Group (group size: 6-12 )</td>
<td>Hours:</td>
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<tr>
<td>Experiential</td>
<td>Hours:</td>
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<tr>
<td>On-line</td>
<td>Hours:</td>
</tr>
<tr>
<td>Other (please specify):</td>
<td>Hours:</td>
</tr>
<tr>
<td><strong>Total Course Contact Hours</strong></td>
<td><strong>Hours: 39</strong></td>
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</tbody>
</table>
6. Estimate and description of student's weekly out-of-class preparation time excluding exam preparation:

Preparation will be required for each of the nine simulated practice sessions. A student will receive a list of themes associated with each simulated practice session, related to the topics taught in the pharmacotherapy/general medicine courses from Year 1 and 2. Students will research medical conditions and therapies pertaining to each pharmacotherapy theme to prepare for each simulated practice session using a combination of product monographs, primary and tertiary references. Students will also be responsible for reviewing all pre- and co-requisite course material to prepare for each simulated practice session. The preparation time for each lab is estimated to be 1.5 to 2 hours x 10 laboratories= 15-20 hours per term. Much of the preparation time occurs during the actual simulated practice sessions.

7. Topics Covered and Lecture Specific Learning Objectives

**Week 1**
**Lecture Topic:** Orientation/Overview and Introduction of On-line learning module of Sunnybrook's BPMH

**Lecture Learning Objectives:**

**Week 2**
**Lecture Topic:** Care Plans; Patient Care; Assessment & Documentation

**Lecture Learning Objectives:**

SIMULATED PRACTICE SESSION #1: Musculoskeletal (MSK) Ailments: Osteoarthritis, Osteoporosis, Gout, Pain Management (3h)

Specialty Topical Dosage Forms Formulation (2h)

**Week 3**
**Lecture Topic:** Inhalant Devices

**Lecture Learning Objectives:**

SIMULATED PRACTICE SESSION #3: Gastrointestinal (GI) Ailments: constipation, GERD, peptic ulcer disease (3h)
Week 4
Lecture Topic: Professionalism, Ethics, and Communication Skills

Lecture Learning Objectives:

SIMULATED PRACTICE SESSION #4: Asthma, Chronic Obstructive Pulmonary Disease (COPD) & Devices (3h)

Week 5
Lecture Topic: Patient Safety

Lecture Learning Objectives:

SIMULATED PRACTICE SESSION #5: Urology: Erectile Dysfunction (ED), Benign Prostatic Hyperplasia (BPH), Urinary Incontinence (3h)

Week 6
Lecture Topic: Diabetes Medscheck and Medication Reconciliation

Lecture Learning Objectives:

SIMULATED PRACTICE SESSION# 6: Endocrine: Contraception, Menopause, Thyroid conditions (3h)

Week 7
Lecture Topic: Common Errors in Lab

Lecture Learning Objectives:

SIMULATED PRACTICE SESSION #8: Dermatology: Lice, Scabies, Insect Bites And Stings, First Aid: Burns, Plantar Warts/Corns/Calluses, Athlete’s Foot, Dermatitis, Contact Dermatitis, Diaper Dermatitis, Atopic Dermatitis, Seborrheic Dermatitis, Photosensitivity, Acne, Psoriasis

Week 8
Lecture Topic: Diabetes Devices, Insulin Dosing

Lecture Learning Objectives:

SIMULATED PRACTICE SESSION #7: Endocrine: Diabetes: Oral agents, MedsCheck, MedRec (3h)
**Week 9**  
**Lecture Topic:** Diabetes Devices and Insulin Dosing  
**Lecture Learning Objectives:**  
SIMULATED PRACTICE SESSION: Endocrine: Diabetes Devices: Blood Glucose Meter (BGM), Insulin Pen; Insulin Dosing (3h)

**Week 10**  
**Lecture Topic:** N/A  
**Lecture Learning Objectives:**  
SIMULATED PRACTICE SESSION #10: Medley of topics (simulated final examination)

**Week 11**  
**Lecture Topic:** Final Examination Overview tutorial  
**Lecture Learning Objectives:**  
SIMULATED PRACTICE SESSION: FINAL EXAMINATION (comprehensive)

**Week 12**  
**Lecture Topic:**  
**Lecture Learning Objectives:**

**Week 13**  
**Lecture Topic:**  
**Lecture Learning Objectives:**
8. Assessment Methodologies Used:

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Course Learning Objectives Addressed</th>
<th>Assessment Method Used</th>
<th>Percent of Course Grade</th>
<th>For Group Work: Individualized or same mark for all group members</th>
</tr>
</thead>
<tbody>
<tr>
<td>☒ Assignment</td>
<td></td>
<td>Performance-based (Term Work - Sessions 1 through 9) contribute to the final grade</td>
<td></td>
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<tr>
<td>☐ Presentation</td>
<td></td>
<td>Performance-based (Simulation practice Final Examination)</td>
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<tr>
<td>☐ Participation</td>
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<tr>
<td>☐ Mid-term</td>
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<tr>
<td>☐ Final Exam</td>
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Expectation for pass grades for all Pharmacy courses is 60%

9. Policy and procedure regarding late assignments/examinations/laboratories:

Provided an annual Grade Point Average of at least 1.70 is obtained, a student who fails the course will be permitted to undertake a supplemental examination. The supplemental will be a cumulative examination comprising the entire assessment component of the course. A weight of 100% will be assigned.

10. Policy and procedure regarding missed assignments/examinations/laboratories:

All simulated practice laboratory sessions are mandatory and begin punctually. A student who misses a simulated practice laboratory session must submit a petition to the Faculty Registrar within 7 calendar days of the missed session as outlined in the Faculty Calendar (under Missed Examinations or Assignments). If the petition is deemed valid by the Faculty, the student will be given an opportunity to attend a scheduled make-up simulated practice laboratory session at the end of the term.

A student who misses an examination must submit a petition to the Faculty Registrar within 7 calendar days of the missed examination. If the petition is deemed valid by the Faculty, the student will be given an opportunity to complete a make-up examination.

A student who is given permission to make up a missed simulated practice laboratory session or examination, must pay a ‘Special Examination’ fee of $70 per simulated practice laboratory session or examination. Failure to make the necessary arrangements for paying the fee by the deadline provided will result in the loss of privilege to attend the make-up, and a grade of ‘Fail’ will be assigned for the missed component.
11. AFPC Education Outcomes addressed (check all those that apply):
- Refer to AFPC Educational Outcomes for Professional Programs for further information about the role and key competencies.

As Care Providers, pharmacy graduates:

**CP1 – Practice within the pharmacist scope of practice and expertise**

- **CP1.1** Apply knowledge from the foundational sciences to make decisions relevant to the contemporary and evolving scope of pharmacist practice;
- **CP1.2** Integrate AFPC Communicator, Collaborator, Leader-Manager, Health Advocate, Scholar, and Professional roles in their practice of pharmacy;
- **CP1.3** Recognize and respond to the complexity, uncertainty and ambiguity inherent in pharmacy practice;
- **CP1.4** Explain the benefits, risks and rationale associated with pharmacist-provided care as an important step in obtaining and documenting consent to pharmacist care;
- **CP1.5** Recognize and take appropriate action when signs, symptoms and risk factors that relate to medical or health problems that fall into the scope of practice of other health professionals are encountered.

**CP2 – Provide patient-centred care**

- **CP2.1** Collect, interpret, and assess relevant, necessary information about a patient's health-related care needs;
- **CP2.2** Formulate assessments of actual and potential issues and in collaboration with the patient and other health team members as appropriate, prioritize issues to be addressed in a given patient encounter;
- **CP2.3** Create and document plans in collaboration with the patient and other health team members as appropriate, and make recommendations to prevent, improve or resolve issues;
- **CP2.4** Implement plans in collaboration with the patient and other health team members as appropriate, including:
  - CP2.4.1 obtaining consent
  - CP2.4.2 making a referral or consulting others
  - CP2.4.3 adapting, initiating, renewing/continuing, discontinuing or administering medication as authorized
  - CP2.4.4a dispensing and/or
  - CP2.4.4b compounding and/or
  - CP2.4.4c delegating/authorizing such tasks to others appropriately
CP2.4.5 engaging the patient or care-giver through education, empowerment and self-management, and
CP2.4.6 negotiating the role of pharmacy and non-pharmacy team members in continuity and transitions of care.

CP2.5 Follow-up by monitoring, evaluating progress toward achievement of the patient’s goals of therapy, adjusting plans in collaboration with the patient and health team members across the care continuum.

CP3 – Actively contribute, as an individual and as a member of a team providing care, to the continuous improvement of health care quality and patient safety

CP3.1 Recognize and respond to harm and potential harm from health care delivery, including patient safety incidents;
CP3.2 Adopt strategies that promote patient safety and address human and system factors;

As Communicators, pharmacy graduates:

CM1 – Communicate in a responsible and responsive manner that encourages trust and confidence

CM1.1 Select and use oral, non-verbal and written communication strategies (tools, techniques, technologies, etc.) effectively so that the patient’s best interests are foremost;
CM1.2 Provide timely, clear responses that are tailored to the context and audience;
CM1.3 Express facts, evidence, opinions and positions accurately and effectively, with clarity and confidence;
CM1.4 Listen, actively solicit and respond appropriately to ideas, opinions and feedback from others;
CM1.5 Use language, pace, tone, and non-verbal communication that is suitable for:
   a) the intended outcomes of the communication, and
   b) the complexity, ambiguity, urgency and/or difficulty of a situation, conversation or conflict
CM1.6 Seek and synthesize relevant information from others in a manner that ensures common understanding and where applicable, clarifies and secures agreement and/or consent;
CM1.7 Compose and share oral, written, and electronic information in a manner that optimizes patient safety, dignity, confidentiality, and privacy.

CM2 – Communicate in a manner that supports a team approach to health promotion and health care

CM2.1 Engage in respectful, empathetic, compassionate, non-judgmental, culturally safe, tactful conversations with patients, communities, populations, and health team members;
**CM2.2** Demonstrate awareness of the impact of one's own experience level, professional culture, biases and power and hierarchy within the health team on effective working relationships, communication and conflict resolution with health team members and adapt the approach to the situation appropriately;

**CM2.3** Demonstrate accuracy and appropriateness of communication as well as respect for the role of other health team members when disclosing information about harmful or potentially harmful situations;

**CM2.4** In word and in action, convey the importance of teamwork in patient-centred care, patient safety, health care quality improvement and health program delivery.

As **Collaborators**, pharmacy graduates:

**CL1 – Work effectively with members of the health team including patients, pharmacy colleagues and individuals from other professions**

**CL1.1** Establish and maintain positive relationships;

**CL1.2** Recognize, respect and negotiate the roles and shared/overlapping responsibilities of team members;

**CL1.3** Join with others in respectful, effective shared decision-making.

**CL2 – Hand over the care of the patient to other pharmacy team members and non-pharmacy team members to facilitate continuity of safe patient care**

**CL2.1** Determine when and how care should be handed over to another team member;

**CL2.2** Recognize, respect and honour the negotiate shared and overlapping responsibilities of patients, pharmacy team members and other health members when handovers occur;

**CL2.3** Demonstrate safe handover of care, using oral, written, and electronic communication, during a patient transition to a different care provider or setting.

As **Leader- Managers**, pharmacy graduates:

**LM1 – Contribute to optimizing health care delivery and pharmacy services**

**LM1.1** Work with others to apply quality improvement strategies and techniques to optimize pharmacy care;

**LM1.2** Contribute to a culture of patient safety;

**LM1.3** Confirm the quality, safety, and integrity of products;

**LM1.4** Use health informatics to improve the quality of care, manage resources and optimize patient safety.
LM2 – Contribute to the stewardship of resources in health care systems

☐LM2.1 Apply evidence and management processes to achieve cost appropriate care;

☐LM2.2 Allocate health care resources for optimal patient care;

☒LM2.3 Contribute to the management of finances and health human resources in pharmacy practice settings;

LM3 – Demonstrate leadership skills

☐LM3.1 Demonstrate leadership skills to enhance pharmacy practice and health care.

LM4 – Demonstrate management skills

☐LM4.1 Work with others to apply the principles of effective management and supervision of health human resources and medication use systems;

☐LM4.2 Use effective strategies to manage and improve their own practice of pharmacy.

As Health Advocates, pharmacy graduates:

HA1 – Respond to an individual patient’s health needs by advocating with the patient within and beyond the patient care environment

☒HA1.1 Work with patients to address determinants of health that affect them and their access to needed health services or resources;

☒HA1.2 Work with patients to increase opportunities to adopt healthy behaviours;

☒HA1.3 Incorporate disease prevention, health promotion and health surveillance into interactions with individual patients.

HA2 – Respond to needs of communities or populations they serve by advocating with them for system-level change in a socially accountable manner

☒HA2.1 Work with community or population to identify the determinants of health that affect them;

☒HA2.2 Participate in health promotion and disease prevention programs.

As Scholars, pharmacy graduates:

SC1 – Apply medication therapy expertise to optimize pharmacy care, pharmacy services and health care delivery
SC1.1 Use knowledge and problem-solving to arrive at recommendations and decisions that are appropriate, accurate, and practical;
SC1.2 Use professional experience to solve routine, previously encountered problems;
SC1.3 Use established decision-making frameworks and apply learning required to manage new situations and problems.

SC2 – Integrate best available evidence into pharmacy practice

SC2.1 Generate focused questions related to needs for information, recommendations and decisions in practice;
SC2.2 Use systematic approaches in the search for best available evidence;
SC2.3 Critically appraise health-related research and literature;
SC2.4 Incorporate best available evidence in the decision-making process.

SC3 – Contribute to the creation of knowledge or practices in the field of pharmacy

□ SC3.1 Apply scientific principles of research and scholarly inquiry;
□ SC3.2 Apply ethical principles that underlie research and scholarly inquiry.

SC4 – Teach other pharmacy team members, the public and other health care professionals including students

SC4.1 Provide effective education to others;
SC4.2 Employ appropriate teaching roles when teaching others;
SC4.3 Deliver effective feedback in teaching and learning situations;
SC4.4 Use appropriate learning assessment and evaluation strategies when working with patients, team members, students and teachers.

As Professionals, pharmacy graduates:

PR1 – Committed to apply best practices and adhere to high ethical standards in the delivery of pharmacy care

PR1.1 Exhibit professional behaviour whether face-to-face, in writing, or via technology-enabled communication. Professional; behaviour includes, but is not limited to:

a) demonstrating honesty, integrity, humility, commitment, altruism, compassion, respect for diversity and patient autonomy;

b) being accessible, diligent, timely and reliable in service to others;

c) abiding by the principle of non-abandonment;
d) maintaining appropriate interpersonal boundaries;
e) maintaining professional composure, demeanor, and language even in difficult situations, and;
f) maintaining privacy and confidentiality;

PR1.2 Use ethical frameworks as one component of professional judgment;
PR1.3 Recognize and respond to situations presenting ethical dilemmas, including conflicts of interest;
PR1.4 Engage in activities that:
   a) protect the public, and;
   b) advance the practice of pharmacy.

PR2 – Able to recognize and respond to societal expectations of regulated health care professionals

PR2.1 Take responsibility and accountability for actions and inactions;
PR2.2 Demonstrate a commitment to patient safety and quality improvement;
PR2.3 Honour the laws, ethical codes, and regulatory requirements (by-laws, standards, policies) that govern the self-regulated profession of pharmacy;
PR2.4 Demonstrate an understanding of federal, provincial/territorial, and municipal laws, policies and standards that apply to pharmacy workplaces;
PR2.5 Demonstrate an ability to maintain competence to practice through evaluating areas for improvement and planning, undertaking learning activities to address limitations in competence and/or performance and incorporating learning into practice;
PR2.6 Identify and respond to unprofessional, unethical, and illegal behaviours in pharmacists, other pharmacy team members, and other health professionals.

PR3 – Committed to self-awareness in the management of personal and professional well being

PR3.1 Set professional and personal goals, priorities, and manage their time to balance patient care, workflow, and practice requirements;
PR3.2 Examine, reflect upon, and manage personal attributes (knowledge, skills, beliefs, biases, motivations, emotions, etc.) that could influence self-development and professional performance;
PR3.3 Adapt their practice of pharmacy to fulfill evolving professional roles;
PR3.4 Recognize and respond to self and colleagues in need.