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: PHM101H1

Course Title: Foundations and General Medicine (Pharmacotherapy 1 [PCT 1])

Outline Version Code:

Course Description:

This is the first of a series of courses taught over three years of the program which will provide the required knowledge and skills to effectively manage patients’ drug therapy. In addition to covering selected therapeutic topics, the course will integrate relevant pathophysiology, pharmacology, clinical pharmacokinetics, selected pharmaceautics and principles of evidence-based pharmacotherapy. Principles of drug therapy in geriatrics, pediatrics and other special populations will be addressed. Various learning and teaching methodologies will be used including didactic teaching, small group case discussions, and in-depth discussions of cases in small case study seminar groups. This course will help students prepare for the Medication Therapy Management course and the other Pharmacotherapy courses.

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:

Describe the various laboratory parameters relevant to normal physiology, as well as selected medical conditions, which are important in the evaluation and monitoring of drug therapy. Explain the impact of age-related changes in renal and hepatic function, body composition, and Central Nervous System sensitivity on drug selection and dose. Identify medications, including anticholinergic, psychoactive, anticoagulant, analgesic, hypoglycemic, and cardiovascular drugs that should be avoided or used with caution in older adults and explain the potential problems associated with each. Apply knowledge of the biological, physical, cognitive, psychological, and social changes commonly associated with aging. Assess specific medication related risks and barriers to older adult safety, including falls and other risks in community, home, and care environments. Describe the mechanism of selected drug-induced disorders (hepatotoxicity, nephrotoxicity). Describe the role of other health professionals in the management of selected medical conditions. List commonly used resources and sources of evidence for drug therapy management in selected therapeutic conditions.

Intermediate Level:

Recognize the principles and practices of safe, appropriate, and effective medication use in older adults. Describe the pathophysiology of selected disease states or syndromes (e.g. peptic ulcer disease, constipation, osteoporosis, osteoarthritis, gout, COPD, asthma, dyspepsia) including the epidemiology, natural history, and risk factors. Identify the appropriate biochemical markers and/or radiographic studies used in the diagnosis of selected conditions and be able to interpret them (e.g. X-ray findings in OA, Bone Scan results in Osteoporosis). Describe the effectiveness, safety, and convenience of pharmacotherapies utilized to manage selected medical conditions. Contrast criteria used in clinical trials to compare effectiveness of selected therapies. Compare and contrast the delivery systems/formulations that influence the selection of therapy (patches, creams, gels, oral, local injections; daily, weekly, monthly, annual administration). Given a patient scenario, be able to identify common, non complex drug therapy problems in selected therapeutic conditions.

Advanced Level:

Assess the effectiveness, safety and convenience of complementary/herbal therapies related to selected therapeutic topics. Select appropriate parameters to assess effectiveness and safety when monitoring therapy for selected therapeutic areas. Explain and support the choice of therapeutic options for a simulated patient related to selected therapeutic areas.

Skills
Introductory Level:

Design a monitoring plan for a selected therapeutic regimen including physiological and biochemistry parameters.

Intermediate Level:

Use a systematic process to select and defend effective therapeutic options for a given patient.
Advanced Level:

**Attitudes/Values:**

Introductory Level:

Students develop a sense of responsibility to manage a patient's medication related needs. The student will undertake assessment and care plan development activities in a manner respecting patient autonomy and the individual therapeutic goals. The student will use interprofessional patient centered care principles to reach decisions for therapeutic alternatives.

Intermediate Level:

Advanced Level:

2. **Rationale for Inclusion in the Curriculum:**

Experiential education. In this course, students will be required to integrate knowledge learned in previous and concurrent courses including, anatomy, physiology, pathobiology and pathophysiology, pharmaceutics, pharmacology, pharmacokinetics, Informatics and Clinical Trials, and incorporate new pharmacotherapeutic information, in order to identify and resolve drug therapy problems in simulated patient cases.

Through discussion in small groups and within the large class, students will acquire and reinforce their knowledge of therapeutics and skills in assessing patient’s medical conditions and medications in order to identify and resolve patients' drug therapy problems. Teaching will occur through large class didactic sessions, small group seminars, self-directed on-line learning and patient case discussions in groups of 60.

Therapeutic areas covered in this course include familiarity and utilization of laboratory values for diagnosing and managing various conditions, assessment and management of adverse drug reactions and drug allergies, principles of drug therapy in special populations including pediatrics, geriatrics and pregnancy, and will include topics related to gastrointestinal, musculoskeletal, respiratory diseases and others.

3. **Pre-requisites:**

PHM113H1; PHM142H1; PHM144H1; PHM145H1; PHM146H1

4. **Co-requisites:**

PHM105H1; PHM141H1; PHM143H1
5. Course Contact Hours and Teaching Methodologies:

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<tr>
<th>Didactic (lecture)</th>
<th>Hours: 25.5</th>
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<tr>
<td>Large group problem-based/ case-based learning (group size: )</td>
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<tr>
<td>Laboratory or Simulation</td>
<td>Hours:</td>
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<tr>
<td>Tutorial/Seminar/Workshop/Small Group (group size: )</td>
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<td>Experiential</td>
<td>Hours:</td>
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<tr>
<td>On-line</td>
<td>Hours:</td>
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<tr>
<td>Other (please specify):</td>
<td>Hours: 1</td>
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<tr>
<td><strong>Total Course Contact Hours</strong></td>
<td><strong>Hours: 44</strong></td>
</tr>
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</table>

6. Estimate and description of student's weekly out-of-class preparation time excluding exam preparation:

There are 7 case-based discussions (1.5-2 h in duration) distributed throughout the term. Students are expected to work-up the cases and come to the workshops prepared to discuss the elements of the case. It is estimated that each case would require 3-5 hours of preparation. There is also one small group seminar (3h), which covers a therapeutic topic in more detail. The preparation time for the seminar is 10-25h.

7. Topics Covered and Lecture Specific Learning Objectives

**Week 1**

**Lecture Topic:** Introduction: Orientation to course and to Pharmacotherapeutics

**Lecture Learning Objectives:**

Review Pharmacotherapy courses in general, outline how they progress over the years. Be able to describe the concept of depth of knowledge, and recognize that some content will be covered at an introductory level, while others will be at an advanced level. Review teaching methodology didactic, PBL, online. Review assessment methods. Discuss Pharmacotherapeutics (what it is, how courses tie together, topics and how they bring in the information, self-directed nature, learning skills that will allow them to teach themselves, topics that are not covered)

**Week 2**

**Lecture Topic:** Utilizing Laboratory Values in Therapeutics

**Lecture Learning Objectives:**

- a) How to interpret lab test results, and causes for abnormal results; for the various laboratory tests discussed (electrolyte disorders, CBC) explain clinical use, how it relates to the pathophysiology of the disease,
- b) Describe the advantages, assumptions and limitations of various methods used to estimate glomerular filtration rate (Cockcroft-Gault, MDRD, inulin, 24 hour urine collection).
- c) Describe the effect of liver disease on the bioavailability, metabolism and elimination of drugs
- d) Demonstrate an understanding of dosing adjustments in renal and hepatic disease.
- e) Develop an understanding of the concept and role of therapeutic drug monitoring

**Week 3**

**Lecture Topic:** Adverse Drug Reactions and Drug Allergies
Lecture Learning Objectives:

a) Describe basic immunology in order to understand allergic drug reactions
b) Identify the impact of pharmacogenetics on adverse drug reactions, and its role in developing predictive tests
c) Identify a general approach to assessing a patient with a potential ADR

Week 4
Lecture Topic: Geriatrics Overview

Lecture Learning Objectives:

a) Utilize a general approach to seniors care, incorporating an approach to information gathering, problem solving (consider drug related cause of symptoms), establishing targets or goals of therapy and monitoring the outcomes
b) Contrast the pharmacokinetics (absorption, distribution, metabolism, elimination) pharmacodynamics, and physiological changes in an aging population with that of a young healthy individual
c) Identify the common conditions/ indications for therapy that seniors need to be screened for including delirium, dementia, depression, falls, urinary incontinence, osteoporosis and vaccinations
d) Justify the age related selection of a preferred alternative (drug and dose) for a given therapeutic scenario based on the changes in PK, PD and drug sensitivity
e) Identify medications including anticholinergic, psychoactive, anticoagulant, hypoglycemic, analgesic, and cardiovascular drugs that should be used with caution or avoided in older adults.
f) Explain the problems associated with the drugs in (e).
g) Develop a care plan with follow up for a given simple clinical situation.
h) Justify the proposed interventions of the care plan to meet the stated goals of therapy.

Week 5
Lecture Topic: Pediatric principles

Lecture Learning Objectives:

a) Utilize a general approach to pediatric care, incorporating an approach to information gathering (often from third party, weight required), problem solving, establishing targets or goals of therapy and monitoring the outcomes
b) Contrast the pharmacokinetics (absorption, distribution, metabolism, elimination) pharmacodynamics, and physiological maturity with that of a healthy adult. Be aware that neonate, infants, children and adolescents will differ.
c) Differentiate potential drug delivery systems or formulations of drugs used in pediatrics in selecting the most appropriate product for the management of a pediatric patient (e.g suspensions, solutions, injections, popsicles, enemas and suppositories).
d) Justify the age related selection of a preferred alternative (drug and dose) for a given therapeutic scenario based on the parameters noted in (b) as well as safety.
e) Utilize weight based dosing to calculate pediatric doses
f) Describe pediatric vaccination principles (include volumes of single IM injections), schedules, and alternatives for pain management

Week 6
Lecture Topic: Pregnancy and Lactation
Week 7
Lecture Topic: Constipation

Lecture Learning Objectives:

a) Discuss the etiology, pathophysiology, epidemiology, clinical presentation, risk factors and natural history for constipation.
b) Identify the appropriate (laboratory, clinical biochemistry, radiographic) findings related to the diagnosis.
c) Compare and contrast the relevant (available, investigational, complementary and alternative and emerging) classes of agents used for the therapeutic condition based on the following criteria: indications, mechanism of action, pharmacokinetics, pharmacodynamics, pharmacogenomics, efficacy, adverse effects, contraindications, drug interactions (drug-drug, drug-food, drug-laboratory), convenience, cost, availability, onset of action, formulations, stability.
d) Justify the selection of a preferred alternative for a given therapeutic scenario based on assessment of relevant therapeutic alternatives.
e) Demonstrate the use of a framework for assessing a patient with constipation to determine the most appropriate drug therapy including complementary drugs.
f) Develop a care plan with follow up for a given clinical situation.
g) Justify the proposed interventions of the care plan to meet the stated goals of therapy.
h) Evaluate the quality, accuracy, and completeness of the care plan (own and peer).
i) Extract relevant data from review of systems, laboratory tests, medical imaging provided
j) Apply relevant findings from: ROS, laboratory tests, medical imaging to determine actual and potential drug therapy needs.
k) Recommend appropriate therapeutic care plans to manage drug therapy problems in patients with constipation.

Week 8
Lecture Topic: Asthma and COPD

Lecture Learning Objectives:

a) Describe the pathophysiology, clinical presentation, epidemiology, natural history, of selected respiratory diseases (COPD, asthma).
b) Define the most common risk factors of the selected respiratory diseases (COPD, asthma)
c) Outline the main diagnostic tools (pulmonary function tests and biochemistry markers) utilized in diagnosing asthma and COPD
d) Describe the mechanism of action, pharmacokinetic parameters, onset of action, efficacy, adverse effects, drug interactions and dosage forms of medications used in the treatment of Asthma and COPD (e.g. sympathomimetics, anticholinergics, corticosteroids, leukotriene receptor agonists, xanthines)
e) Describe the advantages and disadvantages of inhaled vs. systemic drug therapy for selected medications (corticosteroids and beta-agonists)

f) Summarize and define the role of selected non-pharmacological therapies and supportive care for COPD and asthma.

g) Describe the therapeutic approach to care in managing patients’ acute COPD exacerbations.

h) Describe the therapeutic approach to care for maintenance therapy for COPD patients.

i) Describe the therapeutic approach to care in managing patients’ acute asthma exacerbations.

j) Describe the therapeutic approach to care for maintenance therapy for asthma patients.

k) Outline the therapeutic approach to care for preventative therapy of COPD and asthma including role of vaccinations, smoking cessation, risk factor modification, trigger avoidance.

l) List common drugs/ and or chemicals that can induce asthma and outline the mechanism of action of drugs/ and or chemicals which can induce asthma

m) Summarize the role of antibiotic therapy for patients with an acute exacerbation of COPD

Skills:

a) Recognize and describe the various stages of the severity of Asthma and COPD in patients based on patient signs and symptoms.

b) Identify the appropriate resources and sources (evidence) for drug therapy management to justify the selection of a therapeutic regimen for COPD and Asthma based on the severity of disease.

c) Select an appropriate regimen by comparing and contrasting the advantages and disadvantages of specific drug formulations for managing patients with respiratory diseases.

d) Recognize clinically significant drug-drug interactions for medications of selected respiratory diseases and recommend appropriate therapeutic management plans.

e) Identify common drug therapy problems in patients with COPD, and asthma.

f) Recommend appropriate therapeutic care plans to manage drug therapy problems in patients with COPD and asthma.

Week 9
Lecture Topic: Peptic Ulcer Disease/ GERD

Lecture Learning Objectives:

a) Discuss, for the following diseases or therapeutic conditions (peptic ulcer disease, GERD) the etiology, pathophysiology, epidemiology, clinical presentation, risk factors and natural history.

b) Identify the appropriate (laboratory, clinical biochemistry, pathology, histology, microbiology, medical imaging, endoscopy) findings in order to relate the clinical findings to the diagnosis.

c) Compare and contrast the relevant (available, investigational, complementary and alternative and emerging) classes of agents used for the selected diseases or therapeutic conditions based on the following criteria: indications, mechanism of action, mechanism of resistance, pharmacokinetics, pharmacodynamics, pharmacogenomics, efficacy, adverse effects, contraindications, drug interactions (drug-drug, drug-food, drug-laboratory), convenience, cost, availability, onset of action, formulations, stability, sterility.

d) Justify the selection of a preferred alternative for a given therapeutic scenario based on assessment of relevant therapeutic alternatives.

e) Demonstrate the use of a framework for assessing a patient with a GI disorder to determine the most appropriate drug therapy including complementary drugs.

f) Develop a care plan with follow up for a given clinical situation.

g) Justify the proposed interventions of the care plan to meet the stated goals of therapy.

h) Evaluate the quality, accuracy, and completeness of the care plan (own and peer).
i) Apply relevant findings from: ROS, laboratory tests, microbiology, endoscopy, medical imaging to determine actual and potential drug therapy needs.

j) Synthesize relevant information from subjective and objective sources (ROS, medical imaging, diagnostic test, biochemical markers, microbiology; list all the objective findings) to determine drug therapy problems, urgency, and priority for a given clinical situation.

k) Differentiate potential drug delivery systems or formulations of drugs used in GI disorders in selecting the most appropriate product for the management of the selected GI conditions (e.g. oral SR vs. EC vs other coatings used in rectal administration, enemas and suppositories).

l) Critically evaluate information related to drug therapy management of selected GI disorders.

m) Demonstrate the ability to communicate clearly and precisely, verbally and in writing an assessment of therapeutic options for a patient in a given scenario (paper patient case) with a GI disorder.

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**Week 10**

**Lecture Topic:** Osteoporosis

**Lecture Learning Objectives:**

a) Describe the pathophysiology of selected disease states or syndromes (osteoporosis) including the epidemiology, natural history, and risk factors.

b) Describe the mechanism of drug (corticosteroids, PPI's) induced disorders such as osteoporosis and how to manage them.

c) Identify the appropriate biochemical markers and/or radiographic studies (x-rays, bone mineral density tests) used in the diagnosis of these conditions and be able to interpret them (Bone Scan results and Osteoporosis).

d) Compare and contrast the relevant (available, investigational, complementary and alternative and emerging) classes of agents used for the selected diseases or therapeutic conditions (osteoporosis) based on the following criteria: indications, mechanism of action, pharmacokinetics, efficacy, adverse effects, contraindications, drug interactions (drug-drug, drug-food, drug-laboratory), convenience, cost, onset of action, formulations, stability, sterility.

e) List commonly used resources and sources of evidence for drug therapy management of osteoporosis.

**Skills:**

f) Compare and contrast the delivery systems/formulations that influence the selection of therapy (patches, creams, gels, oral, local injections, daily, weekly, monthly, yearly).

g) Given a patient scenario be able to identify common, non complex drug therapy problems in osteoporosis.

h) Develop a care plan with follow up for a given clinical situation.

i) Justify the selection of a preferred alternative for a given therapeutic scenario based on assessment of relevant therapeutic alternatives.

j) Design a monitoring plan for a selected therapeutic regimen in order to assess efficacy including physiological and biochemistry parameters.

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**Week 11**

**Lecture Topic:** Osteoarthritis, Gout

**Lecture Learning Objectives:**

a) Describe the pathophysiology of selected disease states or syndromes (osteoarthritis, gout) including the epidemiology, natural history, and risk factors.
b) Describe in basic terms the pathophysiology of pain

c) Identify the appropriate biochemical markers (erythrocyte sedimentation rate, C-reactive protein) and/or radiographic studies (x-rays, bone mineral density tests, bone scans) used in the diagnosis of these conditions and be able to interpret them.

d) Compare and contrast the relevant (available, investigational, complementary and alternative and emerging) classes of agents used for the selected diseases or therapeutic conditions (osteoarthritis, gout) based on the following criteria: indications, mechanism of action, pharmacokinetics, efficacy, adverse effects, contraindications, drug interactions (drug-drug, drug-food, drug-laboratory), convenience, cost, onset of action, formulations, stability, sterility.

e) Compare and contrast the relevant classes of agents used for the treatment of pain related to MSK disorders based on the following criteria: (Also be able to apply these principles to other pain conditions such as headaches) indications, mechanism of action, pharmacokinetics, efficacy, adverse effects, contraindications, drug interactions (drug-drug, drug-food, drug-laboratory), convenience, cost, onset of action, formulations.

f) Describe the role of other therapies such as joint replacement, physiotherapy, occupational therapy, acupuncture.

g) List commonly used resources and sources of evidence for drug therapy management in the above MSK conditions.

Skills:

h) Compare and contrast the delivery systems/formulations that influence the selection of therapy (patches, creams, gels, oral, local injections, daily, weekly, monthly, yearly).

i) Given a patient scenario be able to identify common, non complex drug therapy problems in the above MSK conditions.

j) Develop a care plan with follow up for a given clinical situation.

k) Justify the selection of a preferred alternative for a given therapeutic scenario based on assessment of relevant therapeutic alternatives.

l) Design a monitoring plan for a selected therapeutic regimen in order to assess efficacy including physiological and biochemistry parameters.

Week 12
Lecture Topic: Complementary Therapy

Lecture Learning Objectives:

a) Identify evidence-based information sources related to natural health products.

b) Evaluate vitamins and complementary medicines.

c) Explain how and why natural health products should be assessed as part of the Pharmaceutical Care Process.

d) Evaluate the safety and efficacy of common natural health products used by Canadians in attempts to prevent and treat the common cold.

Week 13
Lecture Topic: Course and Exam Review

Lecture Learning Objectives:

- Review content and methods of assessment for final exam.
- Have students complete course evaluation.
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>
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<tr>
<td>☒ Assignment</td>
<td>1) Case-based Discussions/ Participation</td>
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*Expectation for pass grades for all Pharmacy courses is 60%*

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

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

If a student is absent due to illness from a Small Group Seminar and the seminar cannot be rescheduled, an alternative form of assessment will be determined by the course coordinator.

As per Faculty policy, petitions must be filed with the Faculty Registrar for missed small group seminars, Case-based Discussion (workshops) and examinations. One make-up examination (oral and/or written) will be arranged by the course coordinator for students with a valid petition for missed exams (as determined by the Registrar). If not judged legitimate by the Faculty, the student shall receive a mark of zero for that component.

NOTE: The student will be provided with one opportunity to write a make-up exam which may be an oral and/or written exam.
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.