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: Microbiology of Infectious Diseases

Course Title: PHM242H1

Outline Version Code:

Course Description:

The course provides a brief introduction to the general biology of organisms, and an overview of the host response to infection. Attention is then focused on common bacterial, fungal, viral and parasitic infections of man, and their epidemiology, prevention and treatment. Other topics include sterilization, disinfection, and a survey of antibiotics and chemotherapeutic agents.

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:**

Students are expected to demonstrate an understanding of the terms and definitions that are unique to microbiology and infectious diseases.

**Intermediate Level:**

Students are expected to demonstrate an understanding of:

1) why various microbes cause disease; and
2) the concept of the “coverage” of antimicrobial agents and that antimicrobial agents need to be used rationally.

**Advanced Level:**

**Skills**

**Introductory Level:**


**Intermediate Level:**


**Advanced Level:**
Attitudes/Values:
Introductory Level:

Intermediate Level:

Advanced Level:

2. Rationale for Inclusion in the Curriculum:

The treatment of infectious diseases is becoming more complex. An understanding of infectious diseases, the mechanism of antibiotic action, and the reasons for the emergence of drug resistance is a requirement for every health professional. This course also provides the background information the complements topics discussed in PHM201H1 Derm, EENT & other topics and PHM203H1 Infectious Diseases.

3. Pre-requisites:

PHM142H1: Metabolic Biochemistry and Immunology (http://phm.utoronto.ca/~jeffh/phmoutlineb.htm)

The full term course previously offered had lectures on the immune response to infectious agents and how this response could be used for diagnostic purposes. This material is covered in PHM 142 under the lecture categories "Introduction to Immunology and Immune drugs", "Molecular Mechanisms of White Blood Cells" and "Intermediary Metabolism of White Blood Cells".

4. Co-requisites:

PHM201H1
5. Course Contact Hours and Teaching Methodologies:

<table>
<thead>
<tr>
<th>Methodology</th>
<th>Hours:</th>
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</thead>
<tbody>
<tr>
<td>Didactic (lecture)</td>
<td>38</td>
</tr>
<tr>
<td>Large group problem-based/ case-based learning</td>
<td></td>
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<tr>
<td>(group size: 240)</td>
<td></td>
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<tr>
<td>Laboratory or Simulation</td>
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<tr>
<td>Tutorial/Seminar/Workshop/Small Group</td>
<td>1</td>
</tr>
<tr>
<td>(group size: )</td>
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<tr>
<td>Experiential</td>
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<tr>
<td>On-line</td>
<td></td>
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<tr>
<td>Other (please specify):</td>
<td></td>
</tr>
<tr>
<td><strong>Total Course Contact Hours</strong></td>
<td>39</td>
</tr>
</tbody>
</table>

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

4 hours per week should be adequate. Students are expected to print out the notes, spend some time after the lecture reviewing the material to determine the important concepts, and then review the material prior to the exams.

7. Topics Covered and Lecture Specific Learning Objectives

**Week 1**

**Lecture Topic:** Introduction (1h); Ectoparasites (1h); Introduction to fungi and cutaneous fungal infections (1h)

**Lecture Learning Objectives:**

Introduction (1h): orientation to the course with an emphasis on the purpose and content of the course, the format of the course, and the evaluation methods used. Ectoparasites (1h): the biology, epidemiology, diagnosis and treatment of external parasitic infections will be explained. Introduction to fungi and cutaneous fungal infections (1h): The unique biology of fungi and their capacity to cause infections in humans will be explained. The growing importance of fungal infections to at risk individuals will be discussed.

**Week 2**

**Lecture Topic:** Fungal infections (1.5hr); Antifungal agents (0.5h); Bacterial structure and normal flora (1h)

**Lecture Learning Objectives:**

Fungal infections (1.5h): fungal organisms which cause systemic and sub cutaneous infections will be explained. The epidemiology, geographical distribution, diagnosis and treatment of specific fungal infections will be compared and contrasted. Antifungal agents (0.5h): the mechanism of action and properties of currently available antifungal agents will be explained. The evolving need for novel and effective antifungal agents will be discussed. Bacterial structure and normal flora (1h): distinguish the structure and function of bacterial components and contrast these with eukaryotic cells. Explain the presence and role of bacteria found in and on healthy individuals and contrast this to the presence of pathogens.

**Week 3**

**Lecture Topic:** Bacterial virulence and pathogenesis (1h); Skin and wound infections (1h); Infective endocarditis (1h)
Lecture Learning Objectives:

Bacterial virulence and pathogenesis (1h): define and identify virulence factors found in pathogens and relate these factors to disease states associated with specific bacterial infections. Skin and wound infections (1h): The effect of bacterial infections at different levels of the dermis will be contrasted with a reference to differing degrees of severity of disease. The effect of toxin-producing bacteria will be examined and this will be related to clinical and laboratory findings. Strategies for reducing bacterial contamination during medical procedures will be described. Infective endocarditis (1h): organisms associated with IE are identified and the different etiologies of IE will be contrasted. Clinical and laboratory diagnostic methods for IE are appraised and treatment strategies examined.

Week 4
Lecture Topic: Bacterial gastrointestinal infections (1h); Typical and atypical pneumonia (2h)

Lecture Learning Objectives:

Bacterial gastrointestinal infections (1h): the effects of pathogenic bacteria in the gastrointestinal tract will be contrasted with the effects of normal gut flora. The consequences of invasive and toxin-producing pathogens in the GI tract will be examined at the level of the disease states they produce, the expected outcomes in normal and compromised individuals, and treatment options will be explored. The management of traveler’s diarrhoea and peptic ulcers will be described. Typical and atypical pneumonia (2h): the symptoms associated with bacterial pneumonia resulting from various organisms will be contrasted. At risk populations will be identified and appropriate treatment will be explained.

Week 5
Lecture Topic: Bacterial meningitis (1h); Urinary tract infections (1h); Sexually transmitted infections (1h)

Lecture Learning Objectives:

Bacterial meningitis (1h): the consequences of bacterial infection of the central nervous system will be examined. The clinical and laboratory findings produced by meningitis and brain abscesses will be explained and contrasted and treatment strategies will be described. Urinary tract infections (1h): Normal urinary tract function will be reviewed followed by an explanation of the causes and consequences of urinary tract infections in various patient groups. Treatment options will be explored and their appropriateness under varying situations evaluated. Sexually transmitted infections (1h): The male and female reproductive systems will be reviewed and then the consequences of bacterial infections will be examined. Treatment options and public health strategies for controlling STIs will be described.

Week 6
Lecture Topic: Tuberculosis (1h); Eye infections (1h); Upper respiratory tract infections (1h)

Lecture Learning Objectives:

Tuberculosis (1h): The potential outcomes of infection with mycobacteria will be discussed and contrasted. The clinical presentation of individuals with TB will be described and the laboratory diagnosis and its interpretation will be discussed. Treatment options and strategies will be summarized and critiqued. Eye infections (1h): bacterial, viral and parasitic eye infections will be described. The symptoms associated with different etiologies will be compared and contrasted and the treatment options for various conditions will be discussed. Upper respiratory tract infections (1h): Infections of the ear, nose and throat will be described and the at-risk patient
populations for various infections will be contrasted. The symptoms and potential consequences of various infections will be described and appropriate treatment options explained.

Week 7
Lecture Topic: Bone and joint infections (1h); Sterilization and infection control (1h); Bacterial cell wall synthesis inhibitors (1h)

Lecture Learning Objectives:

Bone and joint infections (1h): The consequences of bone infections will be compared with joint infections. The clinical and laboratory methods of diagnosing bone and joint infections are explained and the challenges of treating bone infections reviewed. Sterilization and infection control (1h): The methods and strategies of reducing or eliminating microbes in or on objects or in pharmaceutical products will be identified. The need for infection control programs and procedures in hospitals will be explained and the responsibility of Pharmacists in this process will be highlighted. Bacterial cell wall synthesis inhibitors (1h): The mechanism of action of the penicillin and cephalosporin groups of antibacterial agents will be explained. The properties and uses of various drugs with the class will be contrasted and specific uses for particular agents will be used to illustrate the concept of appropriate coverage and use of specific agents. Vancomycin will be discussed.

Week 8
Lecture Topic: Anti-folate agents and quinolones (1h); Bacterial protein synthesis inhibitors (1h); Introduction to virology and viral pathogenesis (1h)

Lecture Learning Objectives:

Anti-folate agents and quinolones (1h): The mechanism of action of agents that target folate synthesis and DNA replication will be explained. Appropriate use of these agents will be evaluated. Bacterial protein synthesis inhibitors (1h): the mechanism of action of aminoglycosides, macrolides, tetracyclins, and other protein synthesis inhibitors will be explained. Appropriate use, adverse effects and the pharmacokinetics of various agents will be discussed. Introduction to virology and viral pathogenesis (1h): The replicative strategies and diversity of viruses will be reviewed. The relationship between viral cell tropism and pathogenesis will be discussed and the role of innate immune components in controlling viral infections will be explained.

Week 9
Lecture Topic: Viral encephalitis (1h); Measles, Chicken Pox, Mumps and Rubella (1h); Tropical fevers and viral infections of the gastrointestinal tract (1h)

Lecture Learning Objectives:

Viral encephalitis (1h): the characteristics of seasonal and sporadic viral infections of the central nervous system will be compared and contrasted. The clinical and laboratory diagnosis of CNS infections will be explained and appraised and potential treatment options, including vaccinations will be discussed. Measles, Chicken Pox, Mumps and Rubella (1h): the consequences of infection with these “childhood viral infections” will be explained. The epidemiology of these conditions and strategies to prevent their transmission will be discussed. Tropical fevers and viral infections of the gastrointestinal tract (1h): viral infections that result in a fever or diarrhoea, including conditions seen in returning travelers, will be explained. Global distribution, at risk populations and consequences of infection will be contrasted for conditions such as Yellow Fever, Dengue and Noro virus.
Week 10
Lecture Topic: Neonatal and fetal viral infections (1h); Herpes viruses (1h); Vaccines (1h)

Lecture Learning Objectives:

Neonatal and fetal viral infections (1h): the consequences of viral infections acquired in utero or neonatally on the long term health of the child will be explained. Strategies to reduce risk to the child and potential treatment options will be discussed. Herpes viruses (1h): the biology and pathogenesis of various herpes viruses will be explained. The natural history of herpes virus infections will be described, and treatment options and containment strategies will be discussed. Vaccines (1h): The general concept of how vaccines work and specific examples of vaccines will be explained. Currently used vaccines and the strategies for controlling the spread of disease through their use will be summarized. Social factors in the acceptance of vaccines and vaccination programs will be discussed.

Week 11
Lecture Topic: Respiratory viruses (1h); Viral hepatitis (1h); Antiviral agents and the diagnosis of viral infections (1h)

Lecture Learning Objectives:

Respiratory viruses (1h): the pathogenesis of common respiratory viral infections, including influenza, corona viruses and RSV will be explained. Efforts to control the spread of respiratory viruses and potential treatments will be discussed. Viral hepatitis (1h): The pathogenesis of viral hepatitis will be explained, with a particular emphasis on Hepatitis B and C. Treatment strategies, epidemiology and our evolving understanding of viral hepatitis will be discussed. Antiviral agents and the diagnosis of viral infections (1h): the mechanism of action and uses of antiviral agents not used to treat HIV will be described. Laboratory methods used to diagnose viral infections will be summarized and examples of specific tests will be explained.

Week 12
Lecture Topic: HIV/AIDS (1h); Anti-retroviral agents (1h); Protozoan parasites (1h)

Lecture Learning Objectives:

HIV/AIDS (1h): the biology and pathogenesis of HIV will be explained. Treatment options and containment strategies will be discussed. Anti-retroviral agents (1h): The mechanism of action of the different classes of anti-retroviral agents will be explained. The evolution of strategies to suppress HIV and detailed regimes will be discussed, including the development of resistance to current therapies. Protozoan parasites (1h): The epidemiology, diagnosis and treatment of Toxoplasma, Giardia, etc will be explained. Prevention measures and relative risks of acquiring the infections will be discussed.

Week 13
Lecture Topic: Parasitic worms (2h); Malaria (0.75h); Exam review (0.25h)

Lecture Learning Objectives:

Parasitic worms (1h): The life cycles, global distribution and biology of nematodes will be explained. Treatments, prevention strategies and future outlook for control will be discussed. Parasitic worms (1h): The life cycles, global distribution and biology of various cestodes and trematodes will be explained. Treatments,
prevention strategies and future outlook for control will be discussed. Malaria (0.75h): Malaria’s global distribution, biology, and epidemiology plus the mechanism of action of antimalarial agents will be explained. Treatment options, prevention strategies and the impact of malaria on the global economy will be discussed. Exam review (0.25h): The format of the exam will be defined, suggestions will be made on exam preparation, and a summary of the course will be offered. A course evaluation will be carried out.

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>MCQs</td>
<td>45%</td>
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<tr>
<td>☐ Presentation</td>
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<tr>
<td>☐ Participation</td>
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<tr>
<td>☉ Mid-term</td>
<td>Students are expected to answer factual questions and to be able to apply concepts learned during lectures that took place in weeks 1 to 6.</td>
<td>MCQs</td>
<td>55%</td>
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<tr>
<td>☐ Final Exam</td>
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<tr>
<td>☐ Assignment</td>
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<tr>
<td>☐ Presentation</td>
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<tr>
<td>☐ Participation</td>
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<tr>
<td>☐ Mid-term</td>
<td>Students are expected to answer factual questions and to be able to apply concepts learned during lectures that took place in weeks 7 to 13</td>
<td>MCQs</td>
<td>55%</td>
<td>N/A</td>
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<tr>
<td>☐ Final Exam</td>
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<td>☐ Assignment</td>
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<tr>
<td>☐ Mid-term</td>
<td>Students are expected to answer factual questions and to be able to apply concepts learned during lectures that took place in weeks 7 to 13</td>
<td>MCQs</td>
<td>55%</td>
<td>N/A</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:

Supplemental examinations will be offered as per Faculty policy. The format of supplemental exams may differ from the format of the exams offered during the course.

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

Students who miss an examination or a test and who have a valid petition filed with the Registrar’s office will be eligible to complete a make-up examination or test. The format of this examination or test will be at the discretion of the course coordinator, and may include, for example, an oral examination.
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
  - CP2.4.4 dispensing and/or compounding and/or 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.