The Master of Education in Health Sciences Education (MEd in HSE) program extends the knowledge and skills of health sciences educators in the areas of educational psychology, educational research, and interprofessional leadership within the collaborative context of communities of practice of professional educators.

Goals of the Program

The MEd in HSE program was developed to address the need and desire of health professionals and clinical faculty to enhance their teaching, leadership, and educational research skills.

Specific curricular and program features include:

- Interprofessional communities of practice/learners, facilitating regular opportunities for engagement, practice and critical reflection. Instructors and learners come from different professional backgrounds, contexts and perspectives and course subject matter will be interprofessional in nature;

- Clinically and professionally relevant educational content;

- Exposure to new technologies used in teaching, research and practice (eg. simulations, digital media in health care, blended learning environments);

- Practical considerations of the learning needs of health providers/educators to continue full-time employment while studying;

- Instructors and supervisors from the Faculty of Education and health sciences faculties.
Six academic components serve as a foundation for the program:

1. Philosophy of Teaching
2. Learning and Teaching at the Adult Level
3. Methods of Educational Research
4. Curriculum Studies
5. Integrating Technology Across the Curriculum
6. Assessment and Program Evaluation
PROGRAM OUTCOMES

1. **Curriculum Design and Instructional Delivery**

   Involves – Models for curriculum design (SPICES model, Harden's Model, Kern's Model, backward design), curriculum delivery (active learning, inquiry-based learning, problem-based learning, self-directed learning, on-line learning, distributed learning supported by technology), Understanding the learner, hidden curriculum.

   Courses with primary emphasis:
   1. Philosophy of Teaching & Learning
   2. Pedagogy of Adult Learning
   3. Pedagogy of Technology Integration
   4. Theories of Curriculum

2. **Communication Skills in Leadership Development**

   Involves – Interpersonal communication skills as they apply to presenting, writing and teamwork. Information management, critical evaluation of information and the presentation of findings. Effective leadership in health Sciences is built upon effective communication.

   Courses with primary emphasis:
   1. Research Design
   2. Pedagogy of Technology Integration

3. **Professionalism and Ethics**

   Involves – Professional values, attitudes and behaviors, moral reasoning, behaviors. The reflective practitioner, lifelong learning and professional development, tenets of research ethics, commitment to continuous improvement of programs and individuals, and change management.

   Courses with primary emphasis:
   1. Philosophy of Teaching & Learning
   2. Pedagogy of Technology Integration
   3. Research Design
   4. Assessment & Evaluation

4. **Assessment and Evaluation**

   Involves – assessment of learners, programs and teaching strategies. Determining the validity between assessment and program goals.

   Course with primary emphasis:
   1. Assessment & Evaluation
SUMMARY KNOWLEDGE SKILLS AND ATTITUDES

1. Curriculum Design and Instructional Delivery

**Knowledge**
The learner will be able to:

1.1 Explain how specific philosophical positions impact the teaching and learning process.
   - a. Construct an inventory of philosophical paradigms.
     - Liberal educational philosophies.
     - Progressive Educational Philosophies.
     - Behaviorist Educational Philosophies.
     - Humanist Educational Philosophies.
     - Radical/Critical Educational Philosophies.
     - Analytic Educational Philosophies.
     - Postmodern perspectives.
   - b. Predict how different philosophical orientations influence educational practice.

1.2 List personal beliefs that have been influenced by specific philosophies.

**Skills**
The learner will be able to:

1.1 Map links between philosophy and pedagogic practice.
   - a. Develop a personal inventory of philosophies that influence your practice as a teacher.
   - b. Map how tensions are created when divergent and opposing philosophies are synthesized into a framework for teaching/student learning.
   - c. Reflection upon your own teaching by examining pervasive philosophies used in your teaching.

1.2 Create an action plan for changing your own educational practices.
   - a. Value how societal influences, economic priorities and moral values influence educational practice.
   - b. Recognize that different philosophical perspectives have dominated thinking over time.
   - c. Consider how specific philosophies are translated into practices that advantage or disadvantage certain learners.

**Attitudes**
The learner will be encouraged to:

1.1 Appreciate how educational philosophies have influenced educational practice.
   - a. Value how societal influences, economic priorities and moral values influence educational practice.
   - b. Recognize that different philosophical perspectives have dominated thinking over time.
   - c. Consider how specific philosophies are translated into practices that advantage or disadvantage certain learners.

1.2 Recognize the importance of reflecting upon their own personal philosophies of teaching and recognize how they have influenced their own teaching practices.
   - a. Value reflective practice through journaling.
   - b. Commit to changing practice to improve student-learning experiences.

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Primary Course Emphasis

Philosophy of Teaching
1. Curriculum Design and Instructional Delivery (continued)

Knowledge
The learner will be able to:

1. List and explain each component of curriculum design models (Hardens Model, Kern’s Model, SPICES and backward design)
   a. Describe strengths and limitations of each of the curriculum design models.
   b. Explain how models can be used to organize curriculum innovation.

1. Define vertical and horizontal curriculum articulation.

Skills
The learner will be able to:

1. Map their individual project using one of the curriculum design models.
2. Build vertical and horizontal links for learner objectives or competencies between different courses.

Attitudes
The learner will be encouraged to:

1. Value the importance of using curriculum design models to assist in organizing program or course changes.
2. Appreciate how reinforcing the knowledge and skills gained in previous courses assists student learning, while making incorrect assumptions about the knowledge and skills gained in previous courses needlessly adds to the frustration learners experience.

Primary Course Emphasis
Curriculum Studies
1. Curriculum Design and Instructional Delivery (continued)

**Knowledge**
The learner will be able to:

1.5 Identify learner objectives or competencies within curriculum documents and explain why objectives/competencies are important for learner and instructors.
   a. Differentiate between traditional, learner-based outcomes and competencies.
   b. Define “Skills, Knowledge and Attitudes.”

**Skills**
The learner will be able to:

1.5 Write learner outcomes or competencies.
   a. Assess the quality and specificity of learner outcomes.
   b. Using backward design, link learner outcomes with assessment strategies.
   c. Using backward design link learner outcomes with appropriate teaching strategies.
   d. Create a curriculum map for your personal project.

**Attitudes**
The learner will be encouraged to:

1.5 Recognize how learner outcomes or competencies direct learning within a course and link learning between courses within a program.

______________  Primary Course Emphasis  ________________

Curriculum Studies  |  Methods of Educational Research  |  Learning and Teaching at the Adult Level
SUMMARY KNOWLEDGE SKILLS AND ATTITUDES

1. Curriculum Design and Instructional Delivery (continued)

Knowledge
The learner will be able to:

1.6 Examine various teaching strategies that promote active learning and teamwork.
   a. Case-based learning
   b. Problem-based learning
   c. Inquiry-based learning
   d. Simulations
   e. Computer-assisted instruction
   f. Animations

Skills
The learner will be able to:

1.6 Apply appropriate teaching strategies to meet learning outcomes for your personal project.
   a. Maximize student involvement and emphasize collaboration.
   b. Create lesson plans that promote active learning, such as animations.
   Evaluate the success of lessons for various learners.

Attitudes
The learner will be encouraged to:

1.6 Value the principles of “active learning” when choosing teaching strategies to support learning outcomes.

Primary Course Emphasis
Curriculum Studies | Integrating Technology Across the Curriculum | Learning and Teaching at the Adult Level
SUMMARY KNOWLEDGE SKILLS AND ATTITUDES

1. Curriculum Design and Instructional Delivery (continued)

**Knowledge**

The learner will be able to:

1.7 Identify characteristics of learners.
   a. Differentiate between adult learners and K-12 educational settings.
   b. Explain how learners are changing within a digital age. (21st Century Learning).
   c. Hypothesize about how programs will change in the future to meet the demands of new learners.
   d. Identify factors that affect how students learn.
   e. Identify assumptions that are made about learning.
   f. Provide examples that demonstrate diversity among learners.
   g. Examine curriculum delivery models and compare them to traditional classroom models of instruction in meeting the “needs of the learner”, e.g. self-paced learning, on-line learning, seminar structures, blended-delivery models.

**Skills**

The learner will be able to:

1.7 Examine the match between curriculum delivery and learner needs.
   a. Critique programs or courses that mismatch curriculum delivery with learner needs.
   b. Identify strengths and weaknesses of self-paced instructional models.
   c. Identify strengths and weaknesses of online learning and other digital approaches for curriculum delivery.
   d. Devise and justify a plan for selecting an appropriate curriculum delivery model within a health sciences environment at a university or a work environment.

**Attitudes**

The learner will be encouraged to:

1.7 Recognize the strengths and weaknesses inherent within different curriculum delivery models.

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**Primary Course Emphasis**

Curriculum Studies  |  Philosophy of Teaching  |  Integrating Technology Across the Curriculum  |  Learning and Teaching at the Adult Level
2. Communication Skills in Leadership Development

**Knowledge**
The learner will be able to:

- 2.1 List different communication strategies and discuss the appropriateness of audience for each strategy.
- 2.2 Identify different communication technologies to support communication and promote discussion.

**Skills**
The learner will be able to:

- 2.1 Communicate in various settings.
  - a. Use listening, negotiating, and organizational skills within group work or teamwork both on-line and in a classroom.
  - b. Build and maintain healthy relationships.
  - c. Display competence in written, oral and visual communication.
- 2.2 Select different communication technologies to support communication and promote discussions.

**Attitudes**
The learner will be encouraged to:

- 2.1 Communicate ethically.
  - a. Respond effectively to cultural differences in communication.
  - b. Value divergent perspectives and recognize insights and specific knowledge of different professions within interdisciplinary groups.
  - c. Practice communication skills across setting, purposes and audiences.
- 2.2 Values and uses current technology for communication.

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Primary Course Emphasis

- Philosophy of Teaching
- Integrating Technology Across the Curriculum
- Learning and Teaching at the Adult Level
- Methods of Educational Research
- Assessment and Program Evaluation
2. Communication Skills in Leadership Development (continued)

**Knowledge**
The learner will be able to:

- 2.3 Express how collaboration and teamwork enhances a professional setting.
  - a. Describe why interdisciplinary and intra-disciplinary teams are important.
  - b. Identify the problems associated with organizing and managing teams.
  - c. Explain the importance of providing an instructional framework to define the task and scope of the work undertaken.
  - d. Identify problems best addressed by teams and problems that can be addressed by individuals.

**Skills**
The learner will be able to:

- 2.3 Employ collaboration and teamwork within a professional setting.
  - a. Respond to problems associated with organizing and managing teams.
  - b. Provide an instructional framework to define the task and scope of the work undertaken.
  - c. Identify problems best addressed by teams and problems that can be added.

**Attitudes**
The learner will be encouraged to:

- 2.3 Value collaboration and teamwork within a professional setting.
  - a. Respond to problems associated with organizing and managing teams.
  - b. Prioritize an instructional framework to define the task and scope of the work undertaken.
  - c. Be prepared to identify problems that do not have to be solved by a team.

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**Primary Course Emphasis**

Philosophy of Teaching  |  Integrating Technology Across the Curriculum  |  Curriculum Studies  |  Methods of Educational Research  |  Assessment and Program Evaluation
SUMMARY KNOWLEDGE SKILLS AND ATTITUDES

2. Communication Skills in Leadership Development (continued)

Knowledge
The learner will be able to:

2.4 Describe how effective leadership is built upon solid communication.
   a. Identify personal values
   b. Explain the purpose of setting a vision, identifying measurable goals and establishing indicator for success to bring about change.
   c. Exhibit an understanding of why meaningful and sustainable change is a collaborative effort built upon teamwork.
   d. Explain how visions and goals continue to evolve within a team.

Skills
The learner will be able to:

2.4. Use effective communication skills within a professional setting.
   a. Select appropriate modes of communication.
   b. Employ distributed leadership and ownership during decision-making.

Attitudes
The learner will be encouraged to:

2.4 Use effective communication skills within a professional setting.
   a. Select appropriate modes of communication.
   b. Employ distributed leadership and ownership during decision-making.

Primary Course Emphasis

Philosophy of Teaching | Integrating Technology Across the Curriculum | Methods of Educational Research
2. Communication Skills in Leadership Development (continued)

**Knowledge**
The learner will be able to:

2.5 Identify a range of leadership skills and abilities leading to change and motivating others.
   a. Demonstrate an understanding of group dynamics and effective teamwork.
   b. Identify examples of effective verbal and written communication.
   c. Explain the importance of adjusting a leadership style to meet the needs of the group or situation.
   d. Identify critical thinking skills that might be used within a collaborative setting.
   e. Identify conflict resolution skills and approaches that can motivate others.

**Skills**
The learner will be able to:

2.5 Practice a range of leadership skills and abilities leading to change and motivating others.
   a. Identify examples of effective verbal and written communication.
   b. Distinguish ways to adjust a leadership style to meet the needs of the group or situation.
   c. Practice critical thinking skills within a collaborative setting.
   d. Use conflict resolution skills and employ skills that can motivate others.

**Attitudes**
The learner will be encouraged to:

2.5 Value a range of leadership skills and abilities leading to change and motivating others.
   a. Identify examples of effective verbal and written communication.
   b. Distinguish ways to adjust a leadership style to meet the needs of the group or situation.
   c. Practice critical thinking skills within a collaborative setting.
   d. Use conflict resolution skills and employ skills that can motivate others.
3. Professionalism and Ethics

**Knowledge**
The learner will be able to:

3.1 Explain the importance of evidenced-based research.

3.2 Understand the rules governing research ethics.
   a. Objectivity
   b. Carefulness to avoid error
   c. Honesty in reporting
   d. Openness and transparency
   e. Responsibility to publish
   f. Respect for individual property.
   g. Informed consent and confidentiality

**Skills**
The learner will be able to:

3.1 Conduct evidence-based Research
   a. Demonstrate competence in gathering information.
   b. Demonstrate competence in evaluating information.
   c. Demonstrate competence in assessing both quantitative data and qualitative data.

3.2 Conduct a program review in an ethical manner.
   a. Facilitate research and innovation that contributes to knowledge and improves health care.
   b. Protect participants in research.
   c. Provide accountability measures that allow continuous systematic reviews.
   d. Jurisdictional authority is recognized. Individuals affected by the program are provided a voice.

**Attitudes**
The learner will be encouraged to:

3.1 Value the role of research in decision-making.

3.2 Value the ethics approval processes that governs research.

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**Primary Course Emphasis**

Methods of Educational Research | Assessment and Program Evaluation
SUMMARY KNOWLEDGE SKILLS AND ATTITUDES

3. Professionalism and Ethics (continued)

**Knowledge**
The learner will be able to:

3.3 Explain why it is important to match research methodology with the "question asked".
   - a. List various research methodologies.
   - b. Identify the limitations of a research study.

3.4 Examine different models used in program evaluation.
   - a. Differentiate between formative and summative evaluation.
   - b. Identify the 10-steps of program evaluation.

**Skills**
The learner will be able to:

3.3 Critique research designs that fail to meet ethical standards.
3.4 Compare and contrast program evaluation, quality improvement, and research.
   - a. Develop a program evaluation question, quality improvement question, and a research question.
   - b. Link research questions with program or course objectives.

**Attitudes**
The learner will be encouraged to:

3.3 Recognize the importance of matching research methodology with the question asked.
   - a. Appreciate the importance of peer review and critique in developing your own research study.
   - b. Value providing a detailed rationale that explains why a methodology was chosen and how the research was conducted.
   - c. Value detailed record keeping during the study.

3.4 Make a commitment to continuous program improvement and program innovation.

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Primary Course Emphasis

Methods of Educational Research | Assessment and Program Evaluation
3. Professionalism and Ethics (continued)

**Knowledge**
The learner will be able to:

3.5 Describe professional standards that ensure ethical innovation and change.
   a. Define your question.
   b. Explain a rationale for the study.
   c. Describe how your study will bring about change.
   d. Identify potential resistance to change/innovation.
   e. Identify competing jurisdictional or organizational authorities impacted by your research.

3.6 Explain how technology can be used to gather data and facilitate research.

**Skills**
The learner will be able to:

3.5 Create a study design model that will bring about innovative program change.
   a. Select an evaluation model.
   b. Identify evaluation instruments.
   c. Identify members of the study team and define their roles and responsibilities.
   d. Establish a timeline for the study.
   e. Create opportunities for informal and formal review of your findings.

3.6 Examine how technology can be used to facilitate research.

**Attitudes**
The learner will be encouraged to:

3.5 Recognize the impact of your study and acknowledge why professional standards must be maintained.
   a. Value various stakeholders in your study.
   b. Value how innovation/change might impact various jurisdictional or organizational authorities.

3.6. Appreciate the strengths and weaknesses of technology-based health care research.
4. Assessment and Evaluation

Knowledge
The learner will be able to:

4.1 Explain the importance of aligning assessment with learning outcome/learner competencies.

4.2 Understand the importance and basic procedures required to develop and analyze test items.
   a. Calculate and interpret reliability and validity-related statistics.
   b. Conduct an item analysis

4.3 Describe how digital technologies can be used to improve large-scale testing.
   a. Automated essay scoring.
   b. Computer adaptive testing.
   c. Using automated item generation to construct a test.

Skills
The learner will be able to:

4.1 Conduct a self-assessment on a testing experience that was personally negative.

4.2 Use Microsoft EXCEL to conduct an item analysis from a CTT perspective.

4.3 Identify strengths and weaknesses of computer-based testing.

Attitudes
The learner will be encouraged to:

4.1 Value matching “what is taught” with “how it is assessed”.

4.2 Appreciate how statistics can be used to identify potential testing problems.

4.3 Reflect upon the potentials of computer-based testing.

Primary Course Emphasis
Assessment and Program Evaluation | Integrating Technology Across the Curriculum
SUMMARY KNOWLEDGE SKILLS AND ATTITUDES

4. Assessment and Evaluation

**Knowledge**
The learner will be able to:

4.4 Describe a number of methods for the assessment of learner knowledge.
   a. Using multiple-choice testing.
   b. Using and administering OSCE stations.
   c. Using portfolio assessment.
   d. Work-based (performance-based) assessment.
   e. Using simulations for assessment.

4.5 Describe the importance of standard setting and score reporting for student evaluation.
   a. Describe various methods for standard setting.
   b. Explain how tests are interpreted.

**Skills**
The learner will be able to:

4.4 Outline common "pitfalls in the design of items and critique testing experiences.
   a. Construct a high-quality multiple-choice test.
   b. Describe how to maintain an item bank.

4.5 Perform a standard setting.
   a. Use standard setting to make predictions.
   b. Use standard setting to interpret student test scores.
   c. Use standard setting in reporting student scores.

**Attitudes**
The learner will be encouraged to:

4.4 Acknowledge that each testing methodology has strengths and weaknesses.
   a. Value the use of a testing "blueprint" that ensures that each major learning outcome is tested.
   b. Value the use of a diversity of approaches in testing.

4.5 Recognize the importance of using statistical analysis in reporting and interpreting testing results.

Primary Course Emphasis
Assessment and Program Evaluation  |  Integrating Technology Across the Curriculum

DESIGNED BY Connie L. Yuen (HSE Program Administrator)