

# **Degree Level Expectations for Graduates Receiving the Degree of Master of Applied Science**

## **Faculty of Applied Science and Engineering University of Toronto**

This degree is awarded to students who have demonstrated the following:

### **1. Depth and Breadth of Knowledge**

A systematic understanding of engineering and applied science knowledge including, where appropriate, relevant knowledge outside the field and engineering discipline, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of their engineering or applied science discipline.

### **2. Research and Scholarship**

A conceptual understanding and methodological competence that

- (a) Enables a working comprehension of how established techniques of research and inquiry are used to create and interpret knowledge in the discipline;
- (b) Enables a critical evaluation of current research and advanced research and scholarship in the discipline;
- (c) Enables a treatment of complex issues and judgments based on established principles and techniques; and

On the basis of that competence, has shown both of the following:

- (d) The development and support of a sustained argument in written form; and
- (e) Originality in the application of engineering or applied science knowledge.

### **3. Level of Application of Knowledge**

- (a) Competence in the research process by applying an existing body of knowledge in the critical analysis of a new question or of a specific problem or issue in a new setting; and
- (b) The ability to exercise leadership in research innovation.

#### **4. Professional Capacity/Autonomy**

- (a) The qualities and transferable skills necessary for employment requiring:
  - (i) The exercise of initiative and of personal responsibility and accountability; and
  - (ii) Decision-making in complex situations;
- (b) The intellectual independence required for continuing professional development including the ability for self-directed life-long learning;
- (c) The ethical behaviour consistent with academic integrity and the use of appropriate guidelines and procedures for responsible conduct of research; and
- (d) The ability to appreciate the broader implications of applying knowledge to particular context.

#### **5. Level of Communications Skills**

The ability to communicate ideas, issues, and conclusions clearly in oral and written form.

#### **6. Awareness of the Limits of Knowledge**

Cognizance of the complexity of knowledge, its underlying assumptions, and the potential contributions of other interpretations, methods, and disciplines.

*Approved on March 8, 2011 by Faculty Council*