INTRODUCTION TO PROFESSIONAL ENGINEERING IN CANADA is intended to explain the elements of what every beginning engineering student should know about the engineering profession in Canada, emphasizing basic skills and knowledge that are well known to practicing engineers and particularly useful to students.

The fourth edition has undergone extensive detailed revision, but the overall structure and topics covered remain, except for chapter reordering, as in previous editions. Developments continue within the profession in Canada, and much discussion on climate change continues among professionals and the public alike, so Parts I and IV have changed the most, although a glance at the other parts will reveal places where updates and additions have been made.

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### Organization

- Chapters 1, 2, and 3 emphasize that “engineering” is more than just a set of courses. It is an organized profession, with strict requirements for admission, a code of ethics, and professional regulations. Chapter 4 explains how engineering societies focus on activities outside the main mandate of the provincial regulatory organizations, and Chapter 5 gives advice for studying and writing examinations to help students, both in their immediate task of acquiring an engineering education and for lifelong learning.

- In emphasizing the value of communicating effectively in print and electronically, Chapter 6 reviews technical document types, including some that are not typically discussed in English courses, and Chapter 7 reviews basic writing techniques. Chapter 8 contains a thorough discussion of the purpose and structure of engineering reports and the mechanics of writing them.

- Part III introduces techniques for interpreting, manipulating, and presenting measured quantities. Chapter 10 contains a careful treatment of unit systems, with emphasis on SI units and rules for including them in written documents. Systematic and random measurement errors are treated in Chapter 11, together with correct use of significant digits. Chapter 12 introduces methods for estimating propagated error and provides motivation for the elementary application of statistics and probability to measurements in Chapters 13 and 14.

- This part introduces several distinctive topics that make engineering a profession of practice, rather than of purely academic study. Chapter 15 is a basic introduction to the design process, emphasizing the iterative nature of design. Chapter 16 briefly introduces project management and illustrates several common planning techniques using examples. Chapter 17 introduces safety in engineering design and practice and lists guidelines for eliminating workplace and other hazards.