**Learning Tips for Chapter 1**

This chapter provides an introductory overview of enterprise networks and summarizes why they are important and technologies that are shaping their evolution. It is “big picture” chapter that introduces enterprise network components that are described in more detail in subsequent chapters.

Like most chapters in this book, it is more important for you to develop an accurate general understanding of what each section is saying than to try to master its details. When you understand the section’s major points, it becomes easier to understand the details. In short, if you find yourself tripping over details, you need to step back and consider the section’s primary focus.

Students often need to read each chapter (and its major sections) more than once to understand what is being said. Many report that they find chapter contents to be more comprehensive and technically detailed than those in textbooks in other courses.

If you experience this very common reaction to the book and course, the best way to respond is by rereading each chapter more than once in digestible chunks until you feel more comfortable with what you are learning.

It is important to devote some time and attention to Section 1.1 and its subsections because they identify some of the distinguishing characteristics of enterprise networks and summarize their major components.

It is also important to spend some time on Section 1.3 and its subsections because they provide insights into how/why enterprise network infrastructure aligns with business objectives.

Section 1.5 and its subsections are important because they introduce some of the technologies that are shaping the evolution of enterprise networks.

Do not ignore the Key Concepts in Chapter 1 Presentation.

You are also encouraged to leverage the supplement videos and readings for this chapter.

Use the Chapter 1 Problems and Exercises tips to assist with any problems and exercises that you may be assigned.

**Especially Important Sections**

Section 1.1 and each of its subsections (1.1.1, 1.1.2, and 1.1.3) are important because they focus on several of the major characteristics of enterprise networks.

Section 1.2.1 provides a useful introduction to the OSI and TCP/IP layered communication models. You need to get a general understanding of these; both are discussed in greater detail beginning in Chapter 4.

Section 1.3 and each of its subsections are important. This section provides the most comprehensive overview of Enterprise Architecture (EA) domains and provides insights into how enterprise network components align with business objectives and requirements.

Section 1.5 introduces network standards and standard setting organizations (SSOs)

Section 1.6 and each of its subsections are important

**Especially Important Figures and Tables**

*Note:* It is important to read/study the discussion related to each figure and table that is identified.

Figures 1-2 and 1-3

Figures 1-4 and 1-5

Figures 1-10a and 1-10b

Figure 1-12

Figure 1-13

Table 1-2

Table 1-3

Table 1-5

Figure 1-22

**Especially Important Key Terms**

Big Data

Enterprise Architecture (EA)

Enterprise network

Enterprise system

Mission-critical application

Software-defined networking (SDN)

**Especially Important Review Questions**

Questions 1-5, 7-14, 19, 21, 25, 27-32