

EXPERIENCING MIS

FOURTH CANADIAN EDITION

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PEARSON

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To C.J., Carter, and Charlotte. DK

*This book is dedicated to my wife Kathy, my children
Christina and Matthew, and all of the students, teachers,
reviewers, and colleagues who helped us make a better book. AG*

*This book is dedicated to those who continue to teach me
great things. My partner, Susanne, our children, my parents,
colleagues, and, of course, my students, who never fail to
astound and inspire me. PT*

About the Authors



David Kroenke

David Kroenke has many years of teaching experience at Colorado State University, Seattle University, and the University of Washington. He has led dozens of seminars to college professors on the teaching of information systems and technology; in 1991, the International Association of Information Systems named him Computer Educator of the Year.

David worked for the U.S. Air Force and Boeing Computer Services. He was a principal in the startup of three companies. He also was vice-president of product marketing and development for the Microrim Corporation and was chief of technologies for the database division of Wall Data, Inc. He is the father of the semantic object data model. David's consulting clients have included IBM, Microsoft, and Computer Sciences Corporations, as well as numerous smaller companies. Recently, David has focused on using information systems for teaching collaboration.

His text *Database Processing* was first published in 1977 and was released in its twelfth edition in 2011. He has published many other textbooks, including *Database Concepts*, fifth edition (2011), and *Using MIS*, fourth edition (2011). David lives in Seattle. He is married and has two children and three grandchildren. He enjoys wood-working, making both furniture and small sailboats.



Andrew Gemino

Andrew Gemino has taught at Simon Fraser University (SFU) for over 15 years. He is an accomplished teacher who received the SFU Teaching Excellence Award, the TD Canada Trust Distinguished Teaching Award with the Beedie School of Business, and the MBA Teaching Excellence Award at the University of British Columbia.

Andrew is a past President of the Special Interest Group on Systems Analysis and Design in the Association of Information Systems. He teaches and consults in IT project management and his research is featured at www.PMPerspectives.org. He co-founded a software company that specialized in professional sports scouting and scheduling/payroll systems for sports and entertainment companies.

Andrew's research, has been funded through grants from the National Sciences and Engineering Research Council (NSERC) and the Social Sciences and Humanities Research Council (SSHRC). His work has been published in *Communications of the ACM*, *Journal of MIS*, *European Journal of IS*, *Data and Knowledge Engineering*, *Requirements Engineering*, and *Data Mining and Knowledge Discovery*. He lives in Coquitlam, B.C., with his wife and two children.

Peter Tingling

Peter Tingling has worked in information-intensive industries for more than 30 years. He has held senior line and staff positions at a variety of top-tier firms, and has provided consultations to government, startup, and Fortune 500 companies across North America.

Peter's research interest is in decision process and analysis and his work has involved organizations that run the range from banks to professional sports organizations. Peter's research has been published in academic and practitioner journals and has often been referenced in the public media.

Joining academia because he was interested in "why," Peter considers himself an eclectic reader, although he prefers biographies. His favourite authors are Feynman, Halberstam, Lewis, and Ferguson. Peter is the founder and chief executive officer of Octothorpe Software Corporation and now lives in Vancouver with his wife and four children.



Letter to Students

Dear Student:

You have chosen to begin a career as a business professional by majoring in a business discipline. If your experience is anything like that of the authors of this Canadian edition, you will not regret your choice. Working in business leads to fulfilling, enjoyable experiences and relationships with interesting, quality people.

The overall purpose of this book is to help you prepare for success in your business career, and in today's business environment success will most likely come through your ability to innovate. Canadian businesses face increasing pressure to improve the effectiveness and efficiency with which products and services are delivered to global customers. This innovation will require a workforce with new skills and an improved understanding of the role of information systems in business. In writing the book, we kept in mind three goals:

1. To explain the impact of information systems on organizational issues and how you can apply it address problems and make better decisions in business
2. To show you how to increase your unique value (and marketability) in business by applying knowledge of information systems
3. To describe, in the context of management information systems (MIS), how you can become a better business professional

Note that the emphasis is on you. It is up to you to prepare yourself. No particular book, no course, no professor, no TA can do it for you. However, many people have worked hard to structure this book, so you can maximize the benefit from your study time.

To help you achieve your goals, we have updated the content to ensure that it is as current as possible. Beyond the new sections added to the third edition (Web 2.0, Social Media, Smartphones, etc.), we have updated specific technologies such as cloud computing, social trends such as showrooming, and the business environment such as Blackberry.

We have made minor updates to the opening cases for each chapter and the four rich running cases that run through each group of three chapters. In addition, at the end of every third chapter, there are questions to promote analysis of the running case and collaborative questions that can be used to solidify your understanding of the running case and the material presented in each chapter.

We have retained the five Application Extensions, one for database design and one each on MS Excel, MS Access, MS Visio, and MS Project. We believe that these application extensions provide some basic skills for personal productivity software that will be important for future business professionals. The introduction that each of these application extensions provides is intended to make you aware of the capabilities of each application and enable you to explore the further power these applications offer.

In addition to content changes, the book contains five unique features that provide interesting opportunities for learning. First, we have organized the material in every chapter around a set of questions. Use these questions to manage your study time. Read until you can answer the questions.

Second, Collaborative Exercises have been included at the end of every chapter. These new assignments are designed to be accomplished in groups and are meant to help to build your teamwork skills and provide a larger opportunity for developing your interpersonal communication skills. The abilities to communicate and work in a team are critical skills for business professionals.

Third, short MIS in Use cases are included in each chapter, and we have added a number of new cases to this edition. These cases provide real-life examples of how organizations deal with information systems issues. You will also find a Case Study near the end of each chapter for additional insight.

Fourth, we have included a profile of a young and successful business student who has gone on to a professional career in information systems at the beginning of each part. These profiles demonstrate how important knowledge of information systems can be in developing your own career.

Finally, the two-page What Do YOU Think? feature found at the end of each chapter provides stimulating ideas for class discussion and individual thinking. The exercises often include ethical issues and ask you to develop opinions about important issues in information systems. If possible, discuss the questions in these guides with other people. Such discussions will give you a chance to develop your own opinions about important topics in information systems.

Like all worthwhile endeavours, this course takes work. That is just the way it is. No sustainable competitive advantage can ever result from something that is quickly and easily learned and no one can succeed in business without sustained focus, attention, desire, effort, and hard work. It will not always be easy, and it will not always be fun. On the other hand, you will learn concepts, skills, and behaviours that will serve you well throughout your business career.

We wish you, as an emerging business professional, the very best success!

Sincerely,

David Kroenke

Seattle, Washington

Andrew Gemino

Peter Tingling

Vancouver, British Columbia

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Preface

We undertook the development of the fourth Canadian edition of *Experiencing MIS* because we believe that the skills inherent in the study of information systems are important to the innovation and productivity of every Canadian industry. We are not alone in this belief. The Canadian Coalition for Tomorrow's ICT Skills (www.ccict.ca), a collection of companies and educational institutions, has recognized the growing innovation gap and the challenge of developing the skills for tomorrow's workplace in students today. The foundations for these skills are firmly rooted in studies of both information technology and business. We view this course as a gateway to these topics for many students. Our hope in developing this edition is to interest students in furthering their knowledge in the combined study of business and technology.

In the coming years, technologies will radically change how people relate to one another. Organizations will become more virtual, and people will work with other people they may never meet face to face. Many jobs that are here today will be eliminated, and new jobs will take their place. All of this change will be driven by people who experience MIS. So, start your experience today!



Key Updates to This Edition

We have revised this edition of *Experiencing MIS* to include the latest innovations in the field of information systems. We have also added unique new features and application information to help students interact with and apply the material. Key updates to the fourth Canadian edition include the following:

- New and updated material on Database Design
- New thorough coverage on how to use Microsoft Access 2013
- New useful guide covering an Introduction to Microsoft Excel 2013
- New discussion regarding *Big Data* and the controversies about this new term
- Expanded coverage of ereaders and tablets and their influence on information sharing
- Expanded and up-to-date discussion on cloud computing

In addition, for those instructors looking for a more detailed discussion of enterprise systems, we have coordinated the material in this third Canadian edition to fit neatly with Chapters 7 and 8 from the book *Processes, Systems and Information: An Introduction to MIS*. These additional resources focus on procurement (Chapter 7) and sales (Chapter 8) as detailed in SAP enterprise application. These chapters are available on the MyMISLab platform.

The features in this book are designed to encourage students to take an active role in developing their own understanding of MIS and how it relates to their business career. We believe that when we experience MIS from our own personal perspective, we realize the important role that information systems play in our lives now and in our future careers.

Features

Experiencing MIS is the theme of this book and student engagement is the ultimate objective. We have designed the book to engage students through a variety of features and to provide opportunities for students to ground their knowledge in practical exercises and real-life examples.

Student Profiles

Profiles of young, successful students from across Canada that illustrate why they believe that having knowledge of MIS is important and how they have applied it toward their everyday and longer-term goals open each part.

Running Cases

The four parts in the book each begin with a Running Case Introduction to help introduce that section. Following this Running Case Introduction, the chapter opens with a Running Case providing rich examples that run through each group of three chapters. The running cases provide an example that can be used in class and that students can relate to. Each part ends with a Running Case Assignment to promote analysis and collaborative questions that can be used to solidify understanding of the running case and the material presented in each chapter.

Chapter Study Questions

We made a choice to organize all of our content around questions. Each chapter typically focuses on seven or eight questions that guide students through the content. Using questions helps engage students in a search for relevant knowledge and challenges students to think about the material rather than memorize sections and lists.

Active Review

The chapter study questions are supported by Active Review questions near the end of each chapter. These questions are more detailed and offer an opportunity for students to see how much they have learned. If students are unable to answer the Active Review questions, they can turn back and review the appropriate section earlier in the chapter. This section reinforces learning and provides feedback to students so they can better target their study.

MIS in Use and Case Studies

Each chapter includes an MIS in Use mini-case that provides a real-life example of the questions discussed in the chapter. Each MIS in Use mini-case also comes with a set of questions that can be used in the lecture or as hand-in assignments. The mini-cases and their questions provide an additional opportunity to highlight important issues and create student engagement with the material. A Case Study at the end of each chapter provides additional real-world examples. We have worked to provide a wide range of case studies so that students are aware of the differences in MIS across organizations.

Using Your Knowledge

At the end of each chapter, we have included a number of Using Your Knowledge questions. These questions provide opportunities for written assignments or discussion questions that often integrate the various issues raised in the chapter. The Using Your Knowledge questions provide another mechanism for engaging students in developing their own ideas about what MIS means to them.

What Do YOU Think?

These exercises are a unique feature of *Experiencing MIS* because they are designed to encourage students to develop their personal perspectives about issues in MIS. Several of the exercises (Chapters 3, 8, 9, and 10) focus on ethical issues, but a variety of issues is covered. These exercises can be used in class for discussion or outside the classroom as personal assignments. The answers to these exercises are not hard and fast—they require students to develop their own opinions. This forging of opinions creates further

engagement with the material. We encourage instructors to find ways to incorporate these exercises in their classes so that students can experience MIS in a personal way.

Collaborative Exercises

Students often comment that they learn from group experiences. The Collaborative Exercises at the end of each chapter provide opportunities for students to interact and discuss topics related to chapter content. These assignments allow students to engage with the material in a group format designed to stimulate discussion and feedback that supports individual learning.

Application Extensions

We have included five Application Extensions that focus on practical introductory skills for MS Visio, MS Excel, Database Design, MS Access, and MS Project. The Application Extensions on MS Excel and MS Project reflect the personal productivity skills that are now expected of graduating students in any business career.

We believe that the key to creating an effective experience for students in this course is to provide opportunities for them to engage with the material and to develop their own personal perspective on MIS. The features provided in this book are designed to support this development, while providing a stimulating introduction to the world of MIS. We believe this book effectively presents information that students will need to be successful in their careers. We trust that this book demonstrates that the field of MIS remains as important today as it was in the past and that our success in developing students with knowledge of MIS will play a critical role in our future economic development.

Additional Chapters on SAP Enterprise Systems

Through Pearson Canada, we have the unique opportunity to coordinate the material in this fourth Canadian edition to fit neatly with Chapters 7 and 8 from the book *Processes, Systems, and Information: An Introduction to MIS* by Kroenke and McKinney. Instructors who would like to provide students with more in-depth knowledge of how SAP treats the procurement and sales processes are encouraged to consider these additional resources. We have adjusted Chapters 1 through 7 in the Canadian edition so that the definitions and business process approach provide a seamless transition to these additional resources. These additional chapters are available on MyMISLab.

Supplements

The fourth Canadian edition of *Experiencing MIS* is accompanied by a range of supplementary material available to both instructors and students.

Teaching Tools for Instructors

The following instructor supplements are available for downloading from a password-protected section of Pearson Canada's online catalogue (www.pearsoncanada.ca/highered). Navigate to your book's catalogue page to view a list of those supplements that are available. See your local sales representative for details and access.

Instructor's Resource Manual

This valuable resource features numerous teaching tools to help instructors make the most of the textbook in the classroom. Chapter objectives, chapter outlines, and answers to the questions are provided for each chapter.

Computerized Test Bank

Pearson's computerized test banks allow instructors to filter and select questions to create quizzes, tests or homework. Instructors can revise questions or add their own, and may be able to choose print or online options. These questions are also available in Microsoft Word format.

Test Item File

This test bank includes all the questions from the computerized test bank in Microsoft Word format.

PowerPoint® Presentations

These presentations combine lecture notes with images from the textbook. The lecture presentations for each chapter can be viewed electronically in the classroom or printed as black-and-white transparency masters.

Image Library

This library contains .gif or .jpg versions of figures from the textbook.

Learning Solutions Managers

Pearson's Learning Solutions Managers work with faculty and campus course designers to ensure that Pearson technology products, assessment tools, and online course materials are tailored to meet your specific needs. This highly qualified team is dedicated to helping schools take full advantage of a wide range of educational resources by assisting in the integration of a variety of instructional materials and media formats. Your local Pearson Canada sales representative can provide you with more details on this service program.

MyMISLab

MyMISLab

MyMISLab for Kroenke/Gemino/Tingling's *Experiencing MIS*, Fourth Canadian Edition, is a state-of-the-art learning management system complete with diagnostic tests with customized study plans, student remediation, and media resources such as case studies, PowerPoints, simulations, videos, and an eText. MyMISLab is the most effective way to manage and deliver your course and help your students master the material.

MyMISLab delivers proven results in helping individual students succeed. It provides engaging experiences that personalize, stimulate, and measure learning for each student. And, it comes from a trusted partner with educational expertise and an eye on the future. MyMISLab can be used by itself or linked to any learning management system. To learn more about how MyMISLab combines proven learning applications with powerful assessment, visit www.pearsonmylabandmastering.com.

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Pearson Custom Library

For enrollments of at least 25 students, you can create your own textbook by choosing the chapters that best suit your own course needs. To begin building your custom text, visit www.pearsoncustomlibrary.com. You may also work with a dedicated Pearson Custom editor to create your ideal text—publishing your own original content or mixing and matching Pearson content. Contact your local Pearson Representative to get started.

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Andrew Gemino
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