

# Essential Foundations of **ECONOMICS**



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Robin Bade

Michael Parkin

University of Western Ontario



NINTH EDITION



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**To Erin, Tessa, Jack, Abby, and Sophie**



## About the Authors



**Robin Bade** was an undergraduate at the University of Queensland, Australia, where she earned degrees in mathematics and economics. After a spell teaching high school math and physics, she enrolled in the Ph.D. program at the Australian National University, from which she graduated in 1970. She has held faculty appointments at the University of Edinburgh in Scotland, at Bond University in Australia, and at the Universities of Manitoba, Toronto, and Western Ontario in Canada. Her research on international capital flows appears in the *International Economic Review* and the *Economic Record*.

Robin first taught the principles of economics course in 1970 and has taught it (alongside intermediate macroeconomics and international trade and finance) most years since then. She developed many of the ideas found in this text while conducting tutorials with her students at the University of Western Ontario.



**Michael Parkin** studied economics in England and began his university teaching career immediately after graduating with a B.A. from the University of Leicester. He learned the subject on the job at the University of Essex, England's most exciting new university of the 1960s, and at the age of 30 became one of the youngest full professors. He is a past president of the Canadian Economics Association and has served on the editorial boards of the *American Economic Review* and the *Journal of Monetary Economics*. His research on macroeconomics, monetary economics, and international economics has resulted in more than 160 publications in journals and edited volumes, including the *American Economic Review*, the *Journal of Political Economy*, the *Review of Economic Studies*, the *Journal of Monetary Economics*, and the *Journal of Money, Credit, and Banking*. He is author of the best-selling textbook, *Economics* (Pearson), now in its Thirteenth Edition.

Robin and Michael are a wife-and-husband team. Their most notable joint research created the Bade-Parkin Index of central bank independence and spawned a vast amount of research on that topic. They don't claim credit for the independence of the new European Central Bank, but its constitution and the movement toward greater independence of central banks around the world were aided by their pioneering work. Their joint textbooks include *Macroeconomics* (Prentice Hall), *Modern Macroeconomics* (Pearson Education Canada), and *Economics: Canada in the Global Environment*, the Canadian adaptation of Parkin, *Economics* (Pearson). They are dedicated to the challenge of explaining economics ever more clearly to a growing body of students.

Music, the theater, art, walking on the beach, and five grandchildren provides their relaxation and fun.





# ECONOMICS

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# ESSENTIAL FOUNDATIONS OF ECONOMICS

delivers a complete, hands-on learning system designed around active learning.

## A Learning-by-Doing Approach

The **Checklist** that begins each chapter highlights the key topics covered and the chapter is divided into sections that directly correlate to the Checklist.

The **Checkpoint** that ends each section provides a full page of practice problems to encourage students to review the material while it is fresh in their minds.

Each chapter opens with a question about a central issue that sets the stage for the material.



Why does the price of avocados fluctuate?

## Demand and Supply

When you have completed your study of this chapter, you will be able to

- 1 Distinguish between quantity demanded and demand, and explain what determines demand.
- 2 Distinguish between quantity supplied and supply, and explain what determines supply.
- 3 Explain how demand and supply determine price and quantity in a market, and explain the effects of changes in demand and supply.

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CHAPTER CHECKLIST



### CHECKPOINT 4.1

Distinguish between quantity demanded and demand, and explain what determines demand.

#### Practice Problems

The following events occur one at a time in the market for smartphones:

- The price of a smartphone falls.
  - Producers announce that the price of a smartphone will fall next month.
  - The price of a call made from a smartphone falls.
  - The price of a call made from a land-line phone increases.
  - An increase in memory makes smartphones more popular.
1. Explain the effect of each event on the demand for smartphones.
  2. Use a graph to illustrate the effect of each event.
  3. Does any event (or events) illustrate the law of demand?

#### In the News

Netflix hikes its price



### EYE on the PRICE OF AVOCADOS

Why Does the Price of Avocados Fluctuate?

In August each year, the Californian avocado crop winds down and the Mexican crop takes over. But if Mexican production is not ramped up enough to replace the Californian crop, the quantity of avocados produced decreases and the price rises.

The table below provides some data on the quantity and price of avocados at

You can answer this question from the information provided. You know that an increase in demand brings a rise in the price and an increase in the quantity traded, while a decrease in supply brings a rise in the price and a decrease in the quantity traded.

Because the quantity of avocados bought decreased and the price

avocados, which we will assume was the same in both months.

At the end of July, the supply curve was  $S_{July}$ , the equilibrium price was \$1.03 per avocado, and the equilibrium quantity of avocados was 48 million pounds.

During August, decreased production in California decreased supply to

FIGURE 4.4

Change in Quantity Demanded Versus Change in Demand

#### 1 A decrease in the quantity demanded

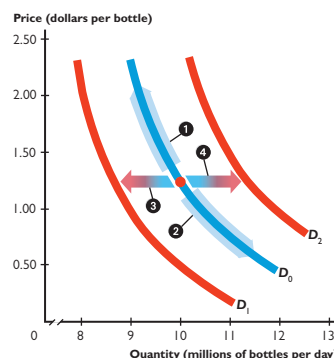
The quantity demanded decreases and there is a movement up along the demand curve  $D_0$  if the price of the good rises and other things remain the same.

#### 3 A decrease in demand

Demand decreases and the demand curve shifts leftward (from  $D_0$  to  $D_1$ ) if

- The price of a substitute falls or the price of a complement rises.
- The price of the good is expected to fall.
- Income decreases.\*
- Expected future income or credit decreases.
- The number of buyers decreases.

\* Bottled water is a normal good.



#### 2 An increase in the quantity demanded

The quantity demanded increases and there is a movement down along the demand curve  $D_0$  if the price of the good falls and other things remain the same.

#### 4 An increase in demand

Demand increases and the demand curve shifts rightward (from  $D_0$  to  $D_1$ ) if

- The price of a substitute rises or the price of a complement falls.
- The price of the good is expected to rise.
- Income increases.
- Expected future income or credit increases.
- The number of buyers increases.

**Eye On** boxes apply theory to important issues and problems that shape our global society and individual decisions.

## Confidence-Building Graphs

use color to show the direction of shifts and detailed, numbered captions guide students step-by-step through the action.





# Preface



Students know that throughout their lives they will make economic decisions and be influenced by economic forces. They want to understand the economic principles that can help them navigate these forces and guide their decisions. *Essential Foundations of Economics* is our attempt to satisfy this want.

The response to our earlier editions from hundreds of colleagues across the United States and throughout the world tells us that most of you agree with our view that the principles course must do four things well. It must

- Motivate with compelling issues and questions
- Focus on core ideas
- Steer a path between an overload of detail and too much left unsaid
- Encourage and aid learning by doing

The Foundations icon with its four blocks (on the cover and throughout the book) symbolizes this four-point approach that has guided all our choices in writing this text and creating its comprehensive teaching and learning features.

## WHAT'S NEW IN THE NINTH EDITION

New in this Ninth Edition revision are: Fine-tuning of the content; several notable content changes in micro and macro; an emphasis on economics as a foundation for effective citizenship; and highlighting the role of economics as a life skill and a job skill.

### ■ Fine-Tuning the Content

The content of this revision is driven by the drama of the extraordinary period of economic history in which we are living and its rich display of events and forces through which students can be motivated to discover the economic way of thinking. Persistent slow economic growth; increasing concentration of wealth; headwinds from Europe's stagnant economy and the UK decision to leave the economic union (Brexit); ongoing tensions arising from the loss of American jobs to offshore outsourcing and the political popularity of trade protection; a slowing pace of China's expansion; enhanced concern about carbon emission and climate change; relentless pressure on the federal budget from the demands of an aging

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population and a sometimes dysfunctional Congress with its associated rising government debt; the dilemma posed by slow, more than decade-long recovery from a global financial crisis and recession and the related question of when and how fast to exit an era of extreme monetary stimulus. These are just a few of these interest-arousing events. All of them feature at the appropriate points in our new edition.

Every chapter contains many small changes, all designed to enhance clarity and currency, and the text and examples are all updated to reflect the most recently available data and events.

### ■ Notable Content Changes

In Chapter 1, Getting Started, we have expanded and reorganized our explanation of economics as a social science and as a policy decision tool. And we have broadened our explanation of how economics is used as an aid to critical thinking and a job tool. In a new section, Economics as a Life Skill and Job Skill, we describe the jobs that economics majors do and the incomes they earn.

In Chapter 4, Demand and Supply, we explain and illustrate the power of the demand-supply model to predict and explain large recent swings in the price of avocados.

In Chapter 6, Efficiency and Fairness of Markets, we have replaced a discussion of gouging with a new exploration of the efficiency and fairness of ticket scalping.

In Chapter 8, Global Markets in Action, provides the student with the tools needed to evaluate the Trump upheaval of global trade and illustrates the effects of protection by examining U.S. tariffs on Canadian softwood imports and the U.S. import quota on sugar.

In Chapter 9, Externalities: Pollution, Education, and Healthcare, we have expanded our discussion of externalities in everyday life with compelling current examples. And we have revised and improved our coverage of policies for dealing with carbon emissions and the global challenge of achieving an efficient use of energy resources. We describe command-and-control proposals like the Green New Deal and explain why economists favor pricing and taxing emissions.

In Chapter 12, Monopoly, we have updated our discussion of information-age monopolies.

In Chapter 13, Monopolistic Competition and Oligopoly, we have updated our examination of wireless oligopolies and a wireless service merger decision.

In Chapter 14, GDP: A Measure of Total Production and Income, Chapter 15, Jobs and Unemployment, Chapter 16, The CPI and the Cost of Living, Chapter 17, Potential GDP and Economic Growth, Chapter 18, Money and Inflation, Chapter 19, Aggregate Supply and Aggregate Demand, and Chapter 20, Fiscal Policy and Monetary Policy, have all been updated to include the latest available data on the national accounts, the labor market, price indexes, global economic growth, banks and the money market, and recent developments in fiscal policy and monetary policy.

## THE FOUNDATIONS VISION

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### ■ Focus on Core Concepts

Each chapter of *Foundations* concentrates on a manageable number of main ideas (most commonly three or four) and reinforces each idea several times throughout the chapter. This patient, confidence-building approach guides students through unfamiliar terrain and helps them to focus their efforts on the most important tools and concepts of our discipline.

### ■ Showing the Action and Telling the Whole Story

Through earlier editions, we have developed the style of our diagrams and set the standard of their clarity. The ninth edition continues to uphold this tradition. Our goal is to show “where the economic action is.” Our diagrams continue to generate an enormously positive response, which confirms our view that graphical analysis is the most powerful tool available for teaching and learning economics at the principles level. Recognizing that some students find graphs hard to work with, we have developed the entire art program with the study and review needs of the student in mind.

Because beginning students of economics are often apprehensive about working with graphs, we have made a special effort to present the information in as many as three ways—with graphs, words, and tables—in the same figure. In an innovation that seems necessary, but is to our knowledge unmatched, nearly all of the information supporting a figure appears on the same page as the figure itself. No more flipping pages back and forth!

### ■ Real-World Connections That Bring Theory to Life

Students learn best when they can see the purpose of what they are studying, apply it to illuminate the world around them, and use it in their lives.

*Eye On* boxes offer fresh new examples to help students see that economics is everywhere. Current and recent events appear in *Eye on the U.S. Economy* boxes; we place current U.S. economic events in global and historical perspectives in our *Eye on the Global Economy* and *Eye on the Past* boxes; and we show how students can use economics in day-to-day decisions in *Eye on Your Life* boxes.

Each chapter-opening question is answered in an *Eye On* box that helps students see the economics behind a key issue facing the world and highlights a major aspect of the chapter’s story.

### ■ Foundation for Job and Life

A centerpiece of the Foundations vision is enabling the principles of economics course to prepare the student for a productive career and life. It identifies three skills that further this goal:

- Problem solving
- Critical thinking
- Decision making

Problem solving is central to the Foundations story. A Checkpoint at the end of each topic, typically three per chapter, provides a pause and opportunity to check understanding with problems, one of which is driven by a recent news clip, and worked solutions.

Critical thinking is encouraged and supported through a series of exercises. In each chapter, there is one exercise that is based on the question or issue that opens and motivates the chapter, and a second that builds from an *Economics in Your Life* feature.

Decision making is at the core of economics, and the principles course, with its emphasis on choice at the margin and opportunity cost, teaches decision-making skills like no other subject.

## ■ Foundation for Effective Citizenship

An effective citizen is a person who participates in the public conversation and votes in elections with a solid sense of the efficiency and fairness of alternative public, collective decisions.

This text lays the foundation for effective citizenship by explaining the principles of welfare economics and the competing ideas about fairness, and repeatedly applying these principles to a comprehensive range of public choice problems. And our *Economics in Your Life* feature connects these principles with the student's own life and public choices.

## ORGANIZATION

---

We have organized the sequence of topics and chapters in what we think is the most natural order in which to cover the material. But we recognize that there are alternative views on the best order. We have kept this fact and the need for flexibility firmly in mind throughout the text. Many alternative sequences work, and the Flexibility Chart on p. xxxi explain the alternative pathways through the chapters. In using the flexibility information, keep in mind that the best sequence is the one in which we present the topics. And even chapters that the flexibility charts identify as strictly optional are better covered than omitted.

## ACKNOWLEDGMENTS

---

Working on a project such as this one generates many debts that can never be repaid. But they can be acknowledged, and it is a special pleasure to be able to do so here and to express our heartfelt thanks to each and every one on the following long list, without whose contributions we could not have produced *Foundations*.

Mark Rush again coordinated, managed, and contributed to our Solutions Manual, Instructor's Manual, and Test Item Files. He assembled, polished, wrote, and rewrote these materials to ensure their close consistency with the text. He and we were in constant contact as all the elements of our text and package came together. Mark also made many valuable suggestions for improving the text and the Checkpoint Problems. His contribution went well beyond that of a reviewer, and his effervescent sense of humor kept us all in good spirits along the way.

The ideas from which *Foundations* grew began to form over dinner at the Andover Inn in Andover, Massachusetts, with Denise Clinton and Sylvia Mallory. We gratefully acknowledge Sylvia's role not only at the birth of this project but also in managing its initial development team. Denise was an ongoing inspiration for 15 years, and we are privileged to have had the benefit of her enormous experience.

The success of *Foundations* owes much to its outstanding editors: Director of Product Management, Adrienne D'Ambrosio. Adrienne's acute intelligence and sensitive understanding of the market have helped sharpen our vision of this text and package over earlier editions. The value-added of Adrienne has been huge and we hope it will, for many future editions, remain a joy to work with her.

As the revision progressed, Christopher DeJohn, Samantha Lewis, and Thomas Hayward brought fresh new ideas to our ninth edition.

Sugandh Juneja, our Content Producer, worked with a talented team at Integra, Project Editor, Heather Johnson, and the designer, art coordinator, and typesetter. Our copy editor, Catherine Baum, gave our work a thorough review and helpful polish, and our proofreader ensured the most error-free text we have yet produced.

Our marketing team, comprised of Nayke Heine and Ashley DePace, has been an integral part of this revision process. They have provided great knowledge and strategies to help continuously improve our suite of materials and keep them relevant and valuable in these ever-changing times.

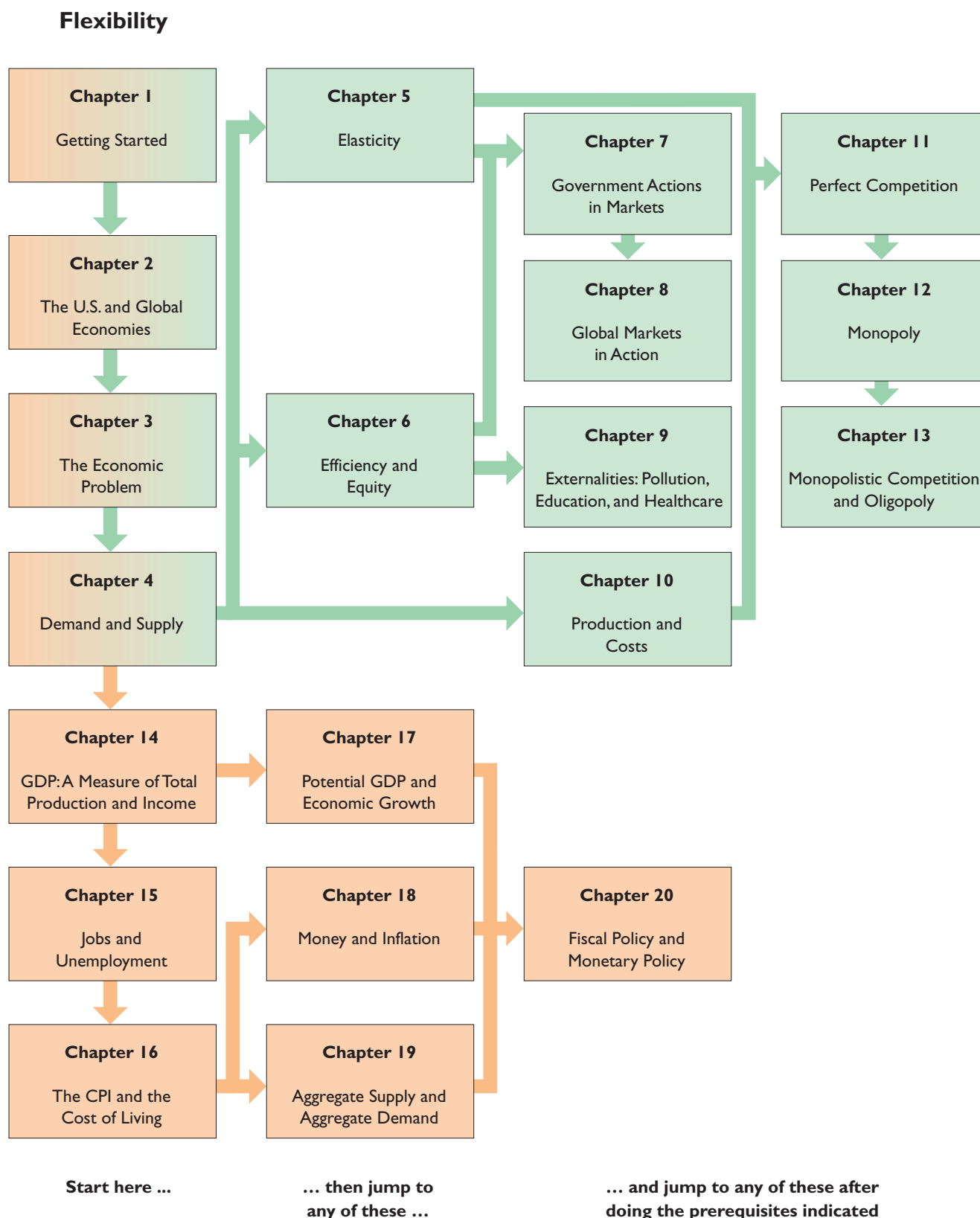
Richard Parkin, our technical illustrator, created the figures in the text and the PowerPoint presentations. Jeannie Shearer, our long-standing personal assistant, worked closely with us to create assignment problems.

Finally, our reviewers, whose names appear on the following pages, have made an enormous contribution to this text. Once again we find ourselves using superlatives, but they are called for. In the many texts that we've written, we've not seen reviewing of the quality that we enjoyed on this revision. It has been a pleasure (if at times a challenge) to respond constructively to their many excellent suggestions.

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## ESSENTIAL FOUNDATIONS OF ECONOMICS: FLEXIBILITY CHART



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 Community College  
 Stephen McCafferty, Ohio State  
 University  
 Thomas S. McCaleb, Florida State  
 University  
 Katherine S. McCann, University of  
 Delaware  
 William McLean, Oklahoma State  
 University  
 Diego Mendez-Carbajo, Illinois  
 Wesleyan University  
 Evelina Mengova, California State  
 University, Fullerton  
 Thomas Meyer, Patrick Henry  
 Community College  
 Meghan Millea, Mississippi State  
 University  
 Michael Milligan, Front Range  
 Community College  
 Jenny Minier, University of Miami

David Mitchell, Valdosta State  
 University  
 Dr. Carl B. Montano, Lamar University  
 Christine Moser, Western Michigan  
 University  
 William Mosher, Clark University  
 Mike Munoz, Northwest Vista College  
 John R. Mundy, St. Johns River State  
 College  
 Kevin Murphy, Oakland University  
 Ronald Nate, Brigham Young University,  
 Idaho  
 Nasrin Nazemzadeh, Rowan Cabarrus  
 Community College  
 Michael Nelson, Texas A&M University  
 Rebecca Neumann, University of  
 Wisconsin—Milwaukee  
 Charles Newton, Houston Community  
 College Southwest  
 Melinda Nish, Salt Lake Community  
 College  
 Lee Nordgren, Indiana University at  
 Bloomington  
 Norman P. Obst, Michigan State  
 University  
 Inge O'Connor, Syracuse University  
 William C. O'Connor, Western Montana  
 College—University of Montana  
 Fola Odebunmi, Cypress College  
 Victor I. Oguledo, Florida A&M  
 University  
 Charles Okeke, College of Southern  
 Nevada  
 Lydia M. Ortega, St. Philip's College  
 P. Marcelo Oviedo, Iowa State University  
 Jennifer Pate, Ph.D., Loyola Marymount  
 University  
 Sanjay Paul, Elizabethtown College  
 Ken Peterson, Furman University  
 Tim Petry, North Dakota State  
 University  
 Charles Pflanz, Scottsdale Community  
 College  
 Jonathon Phillips, North Carolina State  
 University  
 Basharat Pitafi, Southern Illinois  
 University  
 Anthony Plunkett, Harrison College  
 Paul Poast, Ohio State University  
 Greg Pratt, Mesa Community College  
 Fernando Quijano, Dickinson State  
 University  
 Andy Radler, Butte Community College  
 Ratha Ramoo, Diablo Valley College  
 Karen Reid, University of Wisconsin,  
 Parkside

Mary Rigdon, University of Texas,  
 Austin  
 Helen Roberts, University of Illinois at  
 Chicago  
 Greg Rose, Sacramento City College  
 Barbara Ross, Kapi'olani Community  
 College  
 Elham Rouhani, Gwinnett Technical  
 College  
 Jeffrey Rous, University of North Texas  
 June Roux, Salem Community College  
 Udayan Roy, Long Island University  
 Nancy C. Rumore, University of  
 Louisiana—Lafayette  
 Mark Rush, University of Florida  
 Rolando Sanchez, Northwest Vista  
 College  
 Joseph Santos, South Dakota State  
 University  
 Roland Santos, Lakeland Community  
 College  
 Mark Scanlan, Stephen F. Austin State  
 University  
 Ted Scheinman, Mount Hood  
 Community College  
 Buffie Schmidt, Augusta State University  
 Jerry Schwartz, Broward Community  
 College  
 Gautam Sethi, Bard College  
 Margaret Anne Shannon, Georgia  
 Southern University  
 Mushtaq Sheikh, Union County College  
 Michelle Sheran-Andrews, University of  
 North Carolina at Greensboro  
 Virginia Shingleton, Valparaiso  
 University  
 Steven S. Shwiff, Texas A & M  
 University—Commerce  
 Charles Sicotte, Rock Valley College  
 Issoufou Soumaila, Texas Tech  
 University  
 Martin Spechler, Indiana University  
 Leticia Starkov, Elgin Community  
 College  
 Stela Stefanova, University of Delaware  
 John Stiver, University of Connecticut  
 Richard W. Stratton, The University of  
 Akron  
 Abdulhamid Sukar, Cameron University  
 Terry Sutton, Southeast Missouri State  
 University  
 Janet M. Thomas, Bentley College  
 Donna Thompson, Brookdale  
 Community College  
 Deborah Thorsen, Palm Beach State  
 College

James Thorson, Southern Connecticut  
State University

Marc Tomljanovich, Colgate University

Cynthia Royal Tori, Valdosta State  
University

Ngoc-Bich Tran, San Jacinto College South

Nora Underwood, University of

California, Davis

Jogindar S. Uppal, State University of  
New York

Va Nee L. Van Vleck, California State  
University, Fresno

Victoria Vernon, Empire State College /  
SUNY

Christian Weber, Seattle University

Ethel Weeks, Nassau Community  
College

Jack Wegman, Santa Rosa Junior College

Jason White, Northwest Missouri State  
University

Benjamin Widner, Colorado State  
University

Barbara Wiens-Tuers, Pennsylvania State  
University, Altoona

Katherine Wolfe, University of  
Pittsburgh

Kristen Wolfe, St. Johns River State  
College

