INTRODUCTORY

NEW PERSPECTIVES SERIES

PARSONS / OJA

Computer Concepts

SECOND EDITION

COURSE TOOLS

1 Quickcheck

FEATURING THE WORLD WIDE WEB

NEW PERSPECTIVES SERIES

Computer Concepts

SECOND EDITION

INTRODUCTORY

June Jamrich Parsons
University of the Virgin Islands

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GuildWare, Inc.

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From the

New Perspectives Series Team

We believe that technology is transforming the way people teach and learn, and we are excited about providing instructors and students with materials that use technology to teach about technology.

Our development process is unparalleled in the higher education publishing industry. Every product we create goes through an exacting process of design, development, review, and testing.

Reviewers give us direction and insight that shape our manuscripts and bring them up to the latest standards. Every manuscript is quality tested. Students whose backgrounds match the intended audience work through every keystroke, carefully checking for clarity and pointing out errors in logic and sequence. Together with our own technical reviewers, these testers help us ensure that everything that carries our name is error-free and easy to use.

We show both how and why technology is critical to solving problems in college and in whatever field you choose to teach or pursue. Our time-tested, step-by-step instructions provide unparalleled clarity. Examples and applications are chosen and crafted to motivate students.

As the New Perspectives Series team at Course Technology, our goal is to produce the most timely, accurate, creative, and technologically sound product in the entire college publishing industry. We strive for consistent high quality. This takes a lot of communication, coordination, and hard work. But we love what we do. We are determined to be the best. Write us and let us know what you think. You can also e-mail us at newperspectives@course.com.

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Preface to the Instructor

An Integrated System of Instruction: Five Components

You hold in your hands a textbook that is one component of an integrated system of instruction. And what do we mean by an integrated system of instruction? We mean text, graphics, video, sound, animation, and simulations that are linked and that provide a flexible, unified, and interactive system to help you teach and to help your students learn. Specifically, the *New Perspectives Integrated System of Instruction* consists of five components: a Course Technology textbook (on computer concepts and/or microcomputer applications), Course Labs, Course Online, Course Presenter, and Course Test Manager. These components have been developed to work together to provide a complete, integrative teaching and learning experience.

The Textbook: The New Paradigm for Concepts Courses

This textbook–*New Perspectives on Computer Concepts*—is unique in many ways. It taps into the learning styles of today's students, and it empowers students to be self-sufficient computer users. It emphasizes the practical aspects of today's computing environment, such as the basics of installing software, expanding a computer system, defragmenting a disk, or decompressing a file. It contains SuperFigures—illustrations that students can read and that employ the well-known fact that people always look at the pictures first. And it includes a rich collection of end of chapter materials—Review, Projects, Resources, and Lab Assignments—that are thought-provoking and encourage critical thinking. Taken together these features propelled the first edition of *New Perspectives on Computer Concepts* to become the best-selling new first edition concepts book in over a decade.

The second edition of *New Perspectives on Computer Concepts* has retained all of the show-stopping features that made the first edition so popular. And now it includes more ways to choose your coverage, a reorganization of topics, new coverage, entirely new art and photographs, student notes, Internet Assignments, and much, much more. Here are *only a sampling* of the changes we've made to this feature-rich second edition:

- You can now choose the amount of coverage you want. Three editions are available—the Brief Edition (Chapters 1 through 5), the Introductory Edition (Chapters 1 through 8), or the Comprehensive Edition (Chapters 1 through 14). Also we are pleased to be the first computer concepts textbook to offer chapters (6 through 14) *available as separate modules* so you can order only the coverage you want. See below for more details about our Custom Editions and Course Kits.

- We've reorganized. The more technical topics have been delayed to Chapters 9 through 14. One example is how we moved coverage of topics formerly in Chapter 3 to Chapter 9.

- We've added new coverage. Obviously, we've updated our coverage to the latest technology; but we also now have two new chapters—one devoted entirely to buying a computer (Chapter 5) and one devoted entirely to the Internet and the information superhighway (Chapter 7). New *User Focus* sections—covering topics such as installing software, getting connected to the Internet, and setting up a modem—now conclude each chapter. We've beefed up our coverage of hardware, especially mainframes and peripheral devices.

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■ We have all new art and photographs. Many of these new figures were developed using state-of-the-art object-oriented technology. See for example, Figures 1-20, 2-14, 2-21 and 5-7.

■ We've divided the chapters into numbered sections that always begin at the top of a page. This affords several tangible benefits, among them: Learning is broken up into more assimilatable chunks. You can more accurately allocate time in your syllabus. The numbers make it easier to navigate and communicate about the chapter. Look on pages 1-4 and 3-4 for examples.

■ We've added focus questions. Every major heading in each section is followed by new focus questions designed to engage students, to pique their interest, and to establish the relevance of the material that follows. Look for examples on pages 2-8, 4-12 and 4-13, 5-22 and 5-23.

■ We've put student notes in the margins. Throughout the text these notes direct students' attention to concepts and activities that maximize learning. You can find examples on pages 2-48, 6-8 and 7-19.

Computer System Basics 1.2

Software

Why does a computer need software?

Categories of Computers

How is using a microcomputer different from using a mainframe?

Quick Check

A terminal somewhat resembles a microcomputer because it has a keyboard and screen. Unlike a microcomputer, a terminal does not have any processing power of its own.

Quick Check

■ At the end of each Section we've added meaningful, conceptual questions–called Quick Checks–that test students' understanding of what they read in the section. Answers to Quick Check questions are at the back of the book preceding the Index. You can find examples of Quick Checks on pages 1-6, 5-16 and 8-15.

■ We now have Internet Projects. Icons in the Projects section designate those projects that have been carefully designed to require use of the Internet, or to permit use of the Internet and/or traditional library resources to complete the Project. Some representative examples are Project 4 in Chapter 1, Project 6 in Chapter 2, and Project 12 in Chapter 5, and Project 1 in Chapter 7.

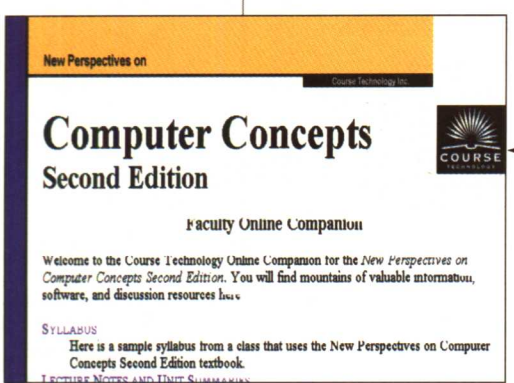
INTERNET OPTIONAL

INTERNET

Remember, this list includes only a few of the many changes and enhancements to this new second edition.

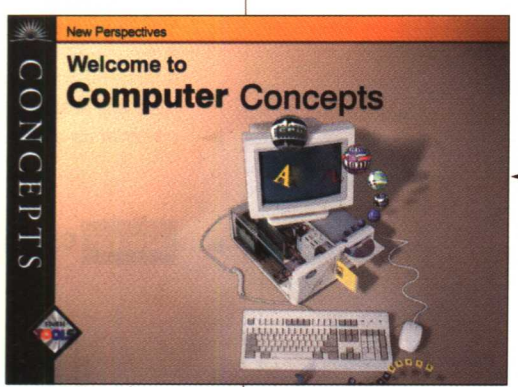
Course Labs: Now, Concepts Come to Life

Computer skills and concepts come to life with these New Perspectives Course Labs–25 highly interactive tutorials that combine illustrations, animation, digital images, and simulations. The Labs guide students step-by-step, present them with Quick Check questions, allow them to explore on their own, test them on their comprehension, and provide printed feedback. All of the Labs are either new or completely revised. *The Labs show students what textbooks can only talk about.* See pages xiv and xv for a complete list and brief description of the Labs.



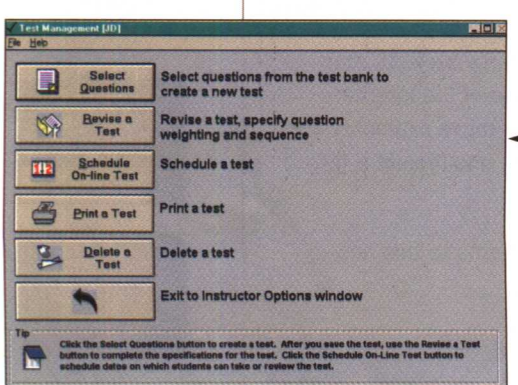
Course Online: A Site Dedicated to Keeping You and Your Students Up-To-Date

Once again Course Technology ushers technology into the classroom by providing a dedicated site on the World Wide Web for users of *New Perspectives on Computer Concepts*. Instructors may visit the *password-protected* Faculty Online Companion for additional assignments with solutions, "Hot Tips" from other users, most commonly asked questions with answers, articles, content updates, and more. Students may visit the Student Online Companion where they'll find resources such as content updates to the text, links to interesting sites, additional graphics and exercises, and Internet Projects. Please see your Instructor's Manual or call your Course Technology customer service representative for more information.



Course Presenter: Ready-Made or Customized Dynamic Presentations

Course Presenter is a CD ROM-based presentation tool that provides you a wealth of resources for use in the classroom, replacing traditional overhead transparencies with computer generated screenshows. Presenter includes a structured presentation for each chapter of the textbook and also provides the flexibility to create your own custom presentations, complete with matching students notes and lecture notes pages.

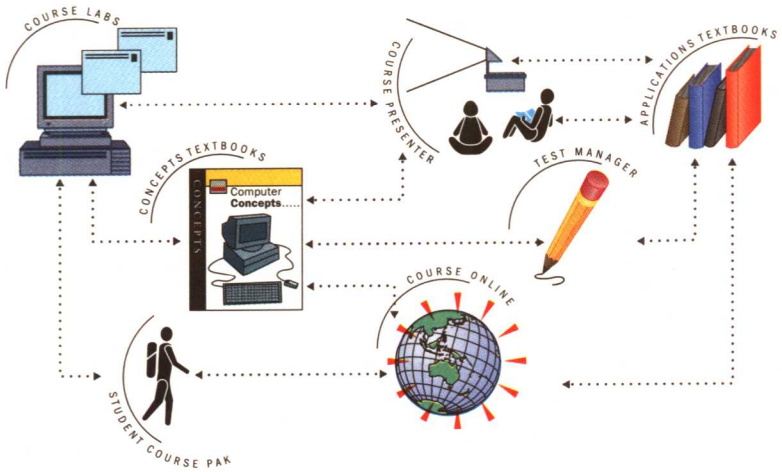


Course Test Manager: Testing and Practice Online or On Paper

Course Test Manager is cutting edge Windows-based testing software that helps instructors design and administer pre-tests, practice tests, and actual examinations. The full-featured program allows students to randomly generate practice tests that provide immediate online feedback and detailed study guides for questions incorrectly answered. Online pre-tests help you assess student skills and plan instruction. You can use Course Test Manager to generate traditional paper tests. Also students can take tests at the computer that can be automatically graded and generate statistical information on student individual and group performance.

Integrating the Five Components: The Formula for Successful Teaching and Learning

The text, graphics, video, sound, animation, and simulations contained in the Textbook, Labs, Presenter, Test Manager and Web Pages are linked to provide a flexible, unified, and interactive system of instruction. How are they linked? The diagram here helps answer that question.



Start with the link between the Computer Concepts textbook and the Course Labs. The Labs teach skills and concepts that are introduced in the textbook. Each Lab is identified by an icon, and the icons appear throughout the text adjacent to the text material they reinforce. Quick Checks appears in both the textbook and the Labs. The textbook contains Lab Assignments that students complete using the Course Labs. These are only a few examples of how these two components are linked.

All of the components are linked in similar ways. Here are some examples. While using Course Presenter, you can click a button and launch a Lab. Presenter also contains Quick Checks that you can display for student interaction. Students see the same figures in Presenter that they see in the textbook and in Course Test Manager. The Practice Tests in the Test Manager generates a study guide of pages in the textbook to help students study the topics of those questions they incorrectly answered. Some of the Projects in the textbook require students to visit the *New Perspectives on Computer Concepts* Web page. And so on...

You can choose to integrate these components as much or as little as you like. Used in total this integration provides a powerful teaching and learning system.

Instructor's Manual: Your Help System

For each chapter the authors provide a chapter outline; suggestions for instruction on the chapter content, for integrating the Labs, and for using the Resources; answers to the Review, Projects, and Labs Assignments; Quick Quizes: and numerous teaching tips.

Student Course Pak: For Students With Computers and Distance Learners

We are pleased to present another Course Technology first–the Student Course Pak. It is available to students who have their own computers or who have access to computers with CD-ROM drives. It is also ideal for instructors and students in distance learning programs.

The Student Course Pak includes:

— the textbook *New Perspectives on Computer Concepts Second Edition* (Brief, Introductory, or Comprehensive Editions)

— a CD which contains:

- the 25 Course Labs
- the structured presentations from Course Presenter
- the Practice Test component of Course Test Manager

— The Internet Student Survival Guide—a kit that provides students e-mail and World Wide Web access through a remote service provider.

These items are package together and discounted in price.

The New Perspectives Series: A Wide Selection of Application Software Texts

New Perspectives on Computer Concepts is part of the New Perspectives Series, which includes microcomputer applications textbooks. These applications textbooks are also part of the integrated system of instruction. For example, they include Quick Checks and Lab Assignments; they link to Course Presenter and Course Test Manager; and they have home pages.

The applications textbooks are available in different lengths, platforms, and releases. They are also available with the concepts textbooks in bound editions, in Course Kits, and in our new Custom Editions. Contact your CTI sales representative or customer service representative for the most up-to-date details. The following list shows the programs available in the New Perspectives Series.

dBASE	Microsoft PowerPoint	Paradox
Internet and World Wide Web	Microsoft Windows 3.1	Presentations
Lotus 1-2-3	Microsoft Windows 95	Quattro Pro
Microsoft Access	Microsoft Word	Microsoft Visual Basic
Microsoft Excel	Microsoft Works	WordPerfect
Microsoft Office Professional	Perfect Office	

Course Kits and Custom Editions: Exactly What You Want, the Way You Want It

If you want to customize your textbook to fit your course *exactly*, Course Technology offers you two ways to combine the materials you want and save students money. With Course Kits you can choose two or more New Perspectives or other Course Technology textbooks to use in one course; they will be packaged together in a box and sold to your students for a deeply discounted price. Or, if you want your New Perspectives course materials bound together in one volume, you can choose from our Custom Editions—select the materials and the binding (spiral or three-ring binder) and order at a discounted price. Contact your CTI sales representative or customer service representative for more details.

Acknowledgments

This integrated system of instruction works because of a powerful system of talented people. Many thanks to Mark Ciampa, Gail Miles, Cathy Moore, and Dave White, whose comments were invaluable. Sandi Poindexter and John Zeanchock deserve special recognition for their review of the instructional design. The extraordinary talent of Debbie Masi, Ella Hanna, and Kim Munsell are woven throughout this system of instruction. Coco and Claire hounded the team until everything was perfect. And still, no thanks to Marilyn.

Course Labs

Course Labs offer the absolute best when it comes to interactive learning reinforcement. The newly designed Labs now offer:

- Steps, which guide students step-by-step as they learn/review basic concepts
- Quick Checks, which appear as students work through the Steps and which draw attention to key points
- Summary Reports, which automatically grade reports that can be printed as homework and as validation that students have completed the Steps
- Explore, in which students can experiment, practice skills, and complete the Lab Assignments at the end of each chapter.

CHAPTER ONE

Using a Mouse
This Lab guides students through basic mouse functions and operations.Interactive exercises using dialog boxes allow students to practice mouse skills by creating posters.

Using a Keyboard
Students learn the parts of the keyboard and basic keyboard operations.They practice basic keyboarding with interactive typing exercises, including a self-paced typing tutor that helps improve speed and accuracy.

User Interfaces
Students are presented with user interfaces on a general/conceptual level, and then have the opportunity to interact with menu driven, prompted dialog, command line, graphical, and combination interfaces.

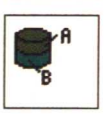
DOS Command-Line Interface
This Lab presents students with concepts and basic skills associated with the DOS command line, and provides hands-on practice entering commands at a live DOS prompt.

Peripheral Devices
Descriptions, drawings, and animations explain the functions of many popular peripheral devices.

CHAPTER TWO

Word Processing
This Lab guides students through essential word processing skills, such as typing and editing text, formatting, saving, and opening a document. They interact with a word processing program, specially designed for this Lab, that offers a hands-on introduction to word processors.

Spreadsheets
Students are introduced to essential spreadsheet skills. A spreadsheet program, specially designed for this Lab, allows students to practice and explore these skills on their own.



Databases
After learning essential database concepts, students learn to use query by example to search a visual database for specific records.

Computer History Hypermedia
This dynamic Lab contains descriptions, drawings and photos related to the history and development of computing devices. Students learn to use hypertext links to research historical events and trends.

CHAPTER THREE

Using Files
Students see what happens on the screen, in RAM, and on disk when they save, open, revise, and delete files.

Defragmentation and Disk Operations
In this Lab, students interact with simulated disks, files, and FATs to discover how the computer physically stores files. The Lab demonstrates how files become fragmented and how defragmentation utilities work.

Windows Directorie, Folders, and Files
Students work with a directory tree to learn basic concepts of directory hierarchies and file types.

DOS Directories and File Management
Students learn the basics of DOS file managment, including subdirectories, copying, and moving files.

CHAPTER FOUR

Troubleshooting
Students use a simulated computer to step through the boot process. They learn to identify and troubleshoot the most common boot-related problems.

Binary Numbers
This Lab introduces students to binary numbers, demonstrates how data is stored electronically using ones and zeroes, and provides practice converting between binary and decimal.

CPU Simulator
Students use a microprocessor simulation to see what happens in the ALU, control unit, and register during execution of simple assembly language programs. They can run prepared programs or write their own to see how a microprocessor actually works.

CHAPTER FIVE

Buying a Computer
In this Lab an online glossary helps students interpret the technical specifications and advertisements to compare features and make purchase decisions.

CHAPTER SIX

E-mail
Students use a simple e-mail simulation to learn essential e-mail skills including creating, sending , forwarding, replying, printing and saving mail.

CHAPTER SEVEN

The Internet: World Wide Web
Students interact with a simulated Web browser to explore home pages, URLs, linking, and hypertext. You can assign this Lab even if an Internet connection is not available.

CHAPTER EIGHT

Data Backup
Using a simulated business environment, this Lab teaches basic backup procedures.Students experience data loss, attempt to restore lost data, and learn first-hand the value of regular backup procedures.

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Credits

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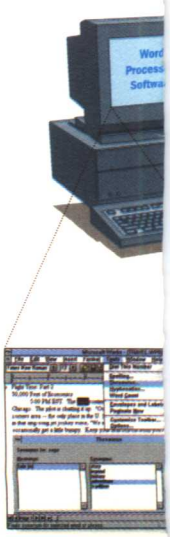

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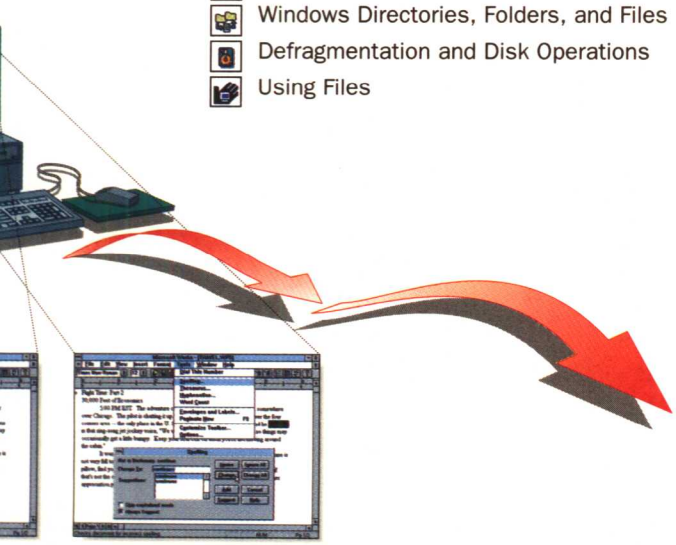

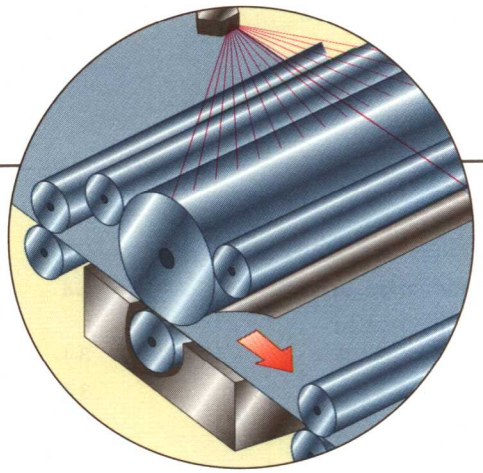

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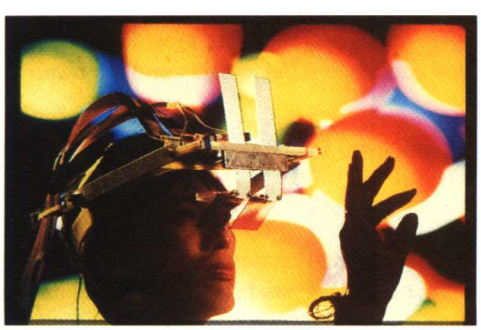

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