COMPLETE

FIFTH EDITION

WILLIAMS | SAWYER

A PRACTICAL INTRODUCTION TO COMPUTERS & COMMUNICATIONS

USING

Information Technology

Using Information Technology
is available in two versions

TABLES OF CONTENTS COMPARED

UIT COMPLETE VERSION by Williams & Sawyer (512 pages)	UIT INTRODUCTORY VERSION by Sawyer & Williams (352 pages)
1. Introduction to Information Technology	1. Introduction to Information Technology
2. The Internet & the World Wide Web	2. The Internet & the World Wide Web
3. Application Software	3. Software
4. System Software	
5. Hardware—the CPU & Storage	4. Hardware—the CPU & Storage
6. Hardware—Input & Output	5. Hardware—Input & Output
7. Telecommunications	6 Telecommunications
8. Files, Databases, & E-Commerce	7. Files, Databases, & E-Commerce
9. The Challenges of the Digital Age	8. Challenges & Promises of the Digital Age
10. The Promises of the Digital Age	
11. Information Systems	
Appendix: Software Development	Appendix: Systems & Programming

DIFFERENT COVERAGE BUT SAME STRONG FEATURES IN BOTH BOOKS

New features in this edition:

- **"Click-along"** Web connection for student "multitasking" for learning reinforcement. Today's students do many tasks at once—e.g., study while surfing the Web and listening to music. This book *harnesses the multitasking impulse in the service of student learning*, offering a "Click-along" website with updates, elaboration, examples, and practical advice.

- **Survival tips.** As part of the continuing *emphasis on practicality*, utilitarian Survival Tips appear in the margins throughout to aid student exploration of the infotech world.

- **More Internet exercises.** Many new and different Internet learning activities.

Fifth Edition

Using Information Technology

A Practical Introduction to Computers & Communications

Complete Version

Brian K. Williams

Stacey C. Sawyer

McGraw-Hill Irwin

Photo and other credits are listed in the back of the book.

Brief Contents

About the Authors

Who are **Brian Williams and Stacey Sawyer?** We are a married couple living near Lake Tahoe, Nevada, with an avid interest in seeing students become well educated—especially in information technology.

What best describes what we do? We consider ourselves **watchers and listeners.** We spend our time watching what's happening in business and society and on college campuses and listening to the views expressed by instructors, students, and other participants in the computer revolution. We then try to translate those observations into meaningful language that can be best understood by students.

Over the past two decades, we have individually or together **authored more than 20 books** (and over 30 revisions), most of them on computers and information technology. Both of us have **a commitment to helping students succeed in college.** Brian, for instance, has co-authored five books in the college success field: Learning Success, The Commuter Student, The Urban Student, The Successful Distance Learning Student, and The Career Student Handbook. Stacey has an interest in language education and has worked on several college textbooks in English as a Second Language (ESL) and in Spanish, German, French, and Italian. We thus bring to our information-technology books an awareness of the needs of the increasingly diverse student bodies now in our colleges.

Brian has a B.A. and M.A. from Stanford University and has held managerial jobs in education, communications, and publishing. Stacey has a B.A. from Ohio Wesleyan and an M.A. from Middlebury College and the University of Mainz, Germany. She has taught at Ohio State University and managed and consulted for a number of for-profit and nonprofit health, educational, and publishing organizations.

In our spare time, we enjoy travel, music, cooking, and exploring the wilds of the American West.
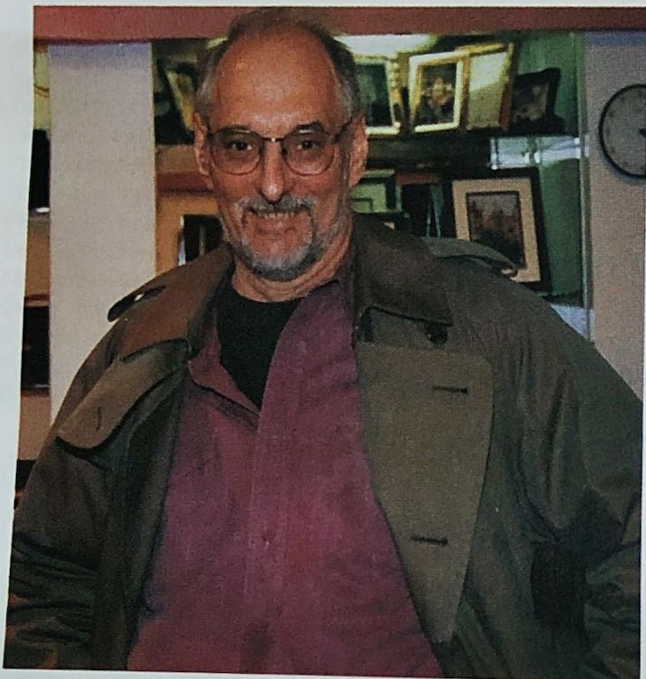
To the Instructor

Introduction

As authors, we are enormously gratified by the continued endorsement of *USING INFORMATION TECHNOLOGY* as a teaching tool for the introductory college course on computers. Over 500,000 students have been introduced to this dynamic and exciting subject through UIT's four earlier editions, and instructors in over 500 schools have selected it for use in their courses.

What are the reasons for this acceptance? One is that UIT was the first textbook to foresee and define the impact of digital convergence—the fusion of computers and communications—as the new and broader foundation for this course. And we have continued to try to pioneer in coverage of new developments. Thus, we are extremely pleased to hear reviewers label UIT as the most up-to-date text published for this course.

The UIT Difference: Motivating the Unmotivated

But there is another important reason, we think, for UIT's frequent adoption. We often ask instructors what their most significant challenge is in teaching this course. One professor at a state university seems to speak for most when she says: "Making the course interesting and challenging." Others echo her with remarks such as "Keeping students interested in the material enough to study" and "Many students take the course because they must, instead of because the material interests them." Another speaks about the need to address a "variety of skill/knowledge levels while keeping the course challenging and interesting."

Our experience with reviews, surveys, and focus groups, then, suggests that **the number one challenge to instructors is *motivating the unmotivated*.** As authors, we find information technology tremendously exciting, but we have long recognized that many students come to the subject with attitudes ranging from, on the one hand, complete apathy and even abject terror to, on the one hand, a high degree of experience and technical understanding (such as those taking the course for a certificate).

We address the problem of motivating the unmotivated by offering unequaled treatment of the following:

1. **Practicality**
2. **Readability**
3. **Currentness**

We explain these features below.

Feature #1: Emphasis on Practicality

This popular feature received overwhelming acceptance by both students and instructors in past editions. **Practical advice,** of the sort found in computer magazines, newspaper technology sections, and general-interest computer books, is expressed not only in the text but also in the following: