

CSIS 1110

Introduction to Computer

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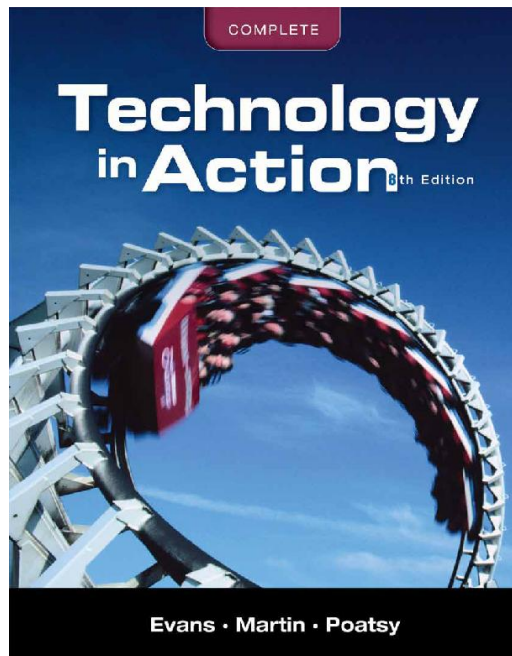
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Technology in Action

Chapter 1 Why Computers Matter to You: Becoming Computer Literate

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Chapter Topics

- Computer literacy
- Computers in today's careers
- Challenges facing a digital society

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What is computer literate?

- Familiar enough with computer that you understand their capabilities and limitation
- Know how to use them

Why Become Computer Literate?

- Benefits:
 - Can use a computer more wisely and efficiently
 - Be a knowledgeable consumer
 - Can better understand and take advantage of future technologies
 - Increase your career options
 - Understand ethical and legal implications

Becoming a Savvy Computer User and Consumer

- Avoid hackers and viruses
 - Protecting your personal information and data on the computer
- Understand the real privacy and security risks
- Use the Internet and web wisely

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Becoming a Savvy Computer User and Consumer

- Avoid online annoyances
 - Avoiding spam mail, adware, spyware
- Maintain, upgrade and troubleshoot your computer
- Make good purchase decisions
- Integrate the latest technology

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Computers in the Workplace

- Information technology (IT) involves:
 - Information management and processing
 - Information retrieval
 - Computers
 - Telecommunications
 - Software deployment
- The seven fastest-growing occupations are computer related

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Computers in Your Career?

- Computers are used in:
 - Retail
 - Law enforcement
 - Arts
 - Agriculture
 - The military
 - More

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Computers in Business, Retail, and Delivery

- Data mining: searching huge amounts of data to spot trends
- Forecasting models
- Package tracking: UPS uses a smart label contains a *MaxiCode* to store important info. of a package



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Computers in the Arts

- Create Web sites
- Digitize dance movements
- Produce computer-generated art



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Computers in Gaming

- Get a job doing:
 - Video game design
 - Programming
 - 3D animation



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Computers in Education

- Instructional software programs
- Distance education
- Simulated lab experiments
- Virtual field trips
 - Museum virtual tours

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Computers in Law Enforcement

- Search databases for similar crime cases, criminal info., etc.
- Facial reconstruction, facial recognition
- Computer forensics
- Training law enforcement officers

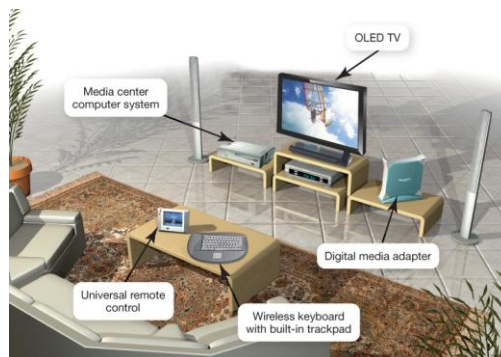


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Digital Home

- You can control home systems from your computer and via the Internet:
 - Entertainment
 - Security
 - Lights
 - Heating and cooling
 - Appliances



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Digital Home: Components

- Media computer with:
 - TV tuner
 - Blu-ray, DVD, and/or CD player and recorder
 - Network adapter
- Network
- “Internet-ready” digital television
- Universal remote

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Computers in the Military

- Electronic communications
- Military career planning
- High-technology projects
 - e.g. unmanned aerial vehicles



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Computers in Agriculture

- Programs manage complex farming business and information systems
- RFID tags track and record animals
- Computerized sensors monitor weather conditions and activate equipment to protect crops

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Computers in Automotive Technology

- Environmental trends and government regulations
 - Lower emission
- Computerized sensors and CPU systems in vehicles
- Consumer demand for computerized subsystems



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Computers in Medicine

- Patient simulators and surgical robots
- Digital modeling of human anatomy



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Biomedical Implants

- Technological solutions to physical problems
- Personal ID chips
 - Moral implications

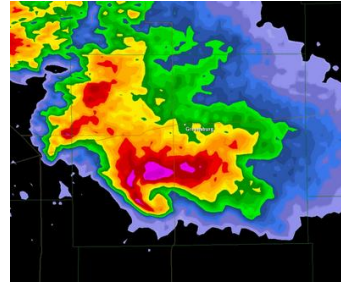


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Computers in the Sciences

- Supercomputers create simulations in
 - Astronomy
 - Meteorology
 - Archaeology

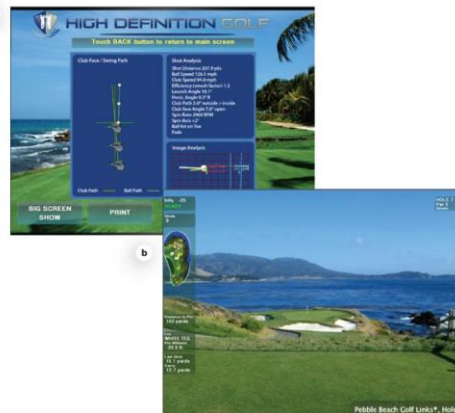


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Computers in Sports

- Improved training
- Timing and scorekeeping
- Data storage and statistics



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Nanotechnology

- Nano: Prefix stands for one billionth
- Nanoscience: Study of molecules and nanostructures
- Nanostructures: Range in size from 1 to 100 nanometers
- Nanotechnology: Science of the use of nanostructures

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Computers in Psychology

- Affective computing: Computing that relates to emotion or tries to influence emotion
 - Emotional social prosthesis (ESP) device
 - Provide interpretations of non-verbal cues to people with autism

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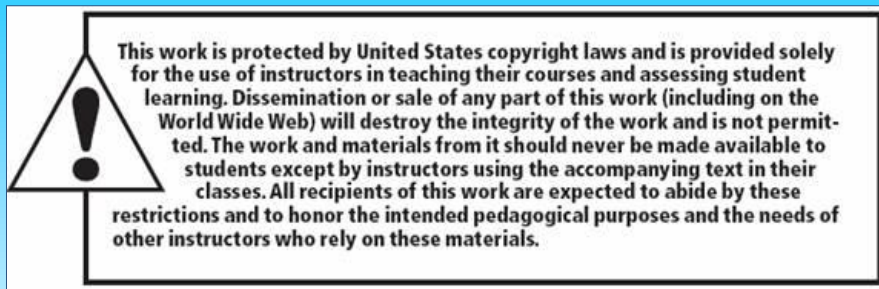
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Challenges Facing a Digital Society

- Privacy risks – should monitoring cameras be allowed at public places?
- Personal data collection
- E-mail monitoring
- Copyright infringement
- Reliance on computers for security
- Digital divide – the discrepancy between the “haves” and “have-nots” with regard to computer technology

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