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华章教育

第2版

大学实用计算机英语教程

吕云翔◎编著

机械工业出版社
China Machine Press

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本书按照最新《大学英语教学大纲》对计算机专业英语的要求，以 3 位计算机专业大学本科生 Mark、Henry 和 Sophie 的学习生活为主要背景，围绕各章主题展开他们交流的话题，并在对话中丰富各章主题，将全书内容巧妙地联系在一起。不仅涉及计算机的核心知识，而且包括 3D 打印、云计算、社交网站、物联网、大数据和移动互联网等相关知识。

本书包括 10 个单元，每个单元都分为听与说、读与译以及模拟写作部分。听与说部分描述了与计算机相关的话题；读与译部分给出与计算机相关的技术及发展趋势；模拟写作部分则重点介绍如何撰写报告、提案和商务信函等方面的知识。

本书注重听、说、读、写、译能力的全面发展，适用于高等院校计算机和软件工程及其相关专业、软件学院、各类职业信息技术学院和专业培训机构等。

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Preface 前 言

《大学实用计算机英语教程》第1版于2009年10月出版以来，经过了几次印刷。许多高校将其作为“计算机英语”课程的教材，深受师生的喜爱，获得了良好的社会效益。但从另外一个角度来看，作者有责任和义务维护好本书的质量，及时更新内容，做到与时俱进。

第2版对原教材进行了全面的修订、再组织和更新。本书改动内容如下。

（1）对每一个单元的听与说（Listening and Speaking）内容进行了全面的更新。

（2）每一个单元的读与译（Reading and Translating）中的两篇文章，都被新的文章所替换，包括3D打印、云计算、社交网站、物联网、大数据和移动互联网等。

（3）每一个单元的模拟写作（Simulated Writing）内容，都被新的写作文章所替换，包括如何撰写报告、提案和商务信函等。而且，写作内容以中文的形式呈现。

（4）书后增加了练习答案。

本书选材广泛，内容丰富。全书共分为10个单元，分别从计算机基础、硬件、软件、操作系统、程序开发与程序设计语言、数据库、计算机网络和因特网、因特网和万维网、电子商务、计算机安全和隐私等方面全面介绍和讲解深刻影响着我们生活的信息技术，内容既包含新的科研成果、业界前沿课题和发展趋势，又有计算机文化典故和名人轶事。

本书在对话场景的编排上以3位计算机专业大学本科生Mark、Henry和Sophie的学习生活为主要背景，围绕各章主题展开他们交流的话题，并在对话中丰富各章主题，将全书内容巧妙地联系在一起。

本书信息容量大，知识性强，注重英语的听、说、读、写、译能力的全面培养和实际应用，使读者掌握英语交流所应具备的基本技能，并学习计算机相关知识。各章内容均分为听与说、读与译、模拟写作3部分。其中，听与说部分是与各章主题相关的专题讨论，将计算机的相关知识与实际的场景对话相结合，旨在综合训练读者的听说能力，并使读者在对话中掌握计算机的相关知识。读部分全面地论述各章主题，介绍计算机领域的新技术进展，使读者深入了解和掌握相关的计算机专业知识，开阔视野；译部分结合读部分的文章，将其中的复杂句型和特殊句型或涉及计算机重要知识点的句子摘录出来，并且在练习中给出额外的翻译练习，以帮助读者巩固计算机和英语的专业知识。模拟写作部分讲解IT常用文体写作方法，且在方法指导的基础上辅以实例。

本书采用场景式教学和体验式学习相结合的方式，教材中设计的听力、口语、阅读与翻译和模拟写作练习融合了角色扮演、多人会话和小组讨论等行之有效的训练方法，能较好地满足课堂教学的需要。

另外，本书有配套的听力材料，听力录音均聘请专业人员录制，可为学生提供非常有价值的短文和口语模板。配套的听力材料、教学 PPT 和阅读文章等部分的翻译可以从华章网站（www.hzbook.com）免费注册下载。

本书在编写的过程中得到了美国 Auburn 大学 Yvonne Williams 女士的指导，以及曾洪立女士的大力支持，在此表示衷心的感谢。

由于编者能力有限，书中难免有不足，望读者给予批评指正（邮箱：yunxianglu@hotmail.com）。

编者

2016 年 2 月于北航

Suggestion 教学建议

本书共有10个单元，每个单元的训练都分为听与说、读与译和模拟写作几个部分。针对各部分的教学，教师可采用如下方式：

（1）听与说部分（Listening and Speaking）：又分为以下3部分。

- 对话部分（Dialogue）：教师可先让学生听对话录音，以提问的方式，引导学生根据所听信息概括对话主要内容，让学生了解和学习对话中涉及的相关知识。然后，教师可将学生分成三人小组，让其中一组或两组（分别）朗读这个对话，并纠正学生的发音；或让一组或两组参照已有对话通过替换右边栏中的表达式，组织完成一个类似的对话，并对学生完成的情况加以点评。
- 听力理解部分（Listening Comprehension）：教师可先让学生听短文录音和短文后的问题，然后让学生根据所听内容选择正确的答案。若播放一遍短文学生感觉有难度，教师可酌情增加录音播放次数。教师最后公布答案，并且讲解相应的单词、短语及句子，解释这篇短文的重点和难点。另外，可让学生读一遍原文。
- 听写部分（Dictation）：教师可根据实际情况播放1～3遍短文录音，让学生根据所听内容填空，将文章补充完整。文章填充完整后，教师公布答案，并且讲解相应的单词、短语及句子，解释这篇短文的重点和难点。另外，可让学生读一遍原文。

（2）读与译部分（Reading and Translating）：教师可让学生阅读文章（可根据文章的长短和难易程度来设定阅读的时间），并完成文章后的练习。之后教师公布练习答案，并讲解文章后的单词表、短语表和复杂句子或重要知识点来帮助学生进一步理解这篇文章。

（3）模拟写作部分（Simulated Writing）：教师可先让学生阅读写作方法指导，并配合本教材的写作样例进行讲解。教师还可根据实际情况设置场景，让学生根据写作指导并参照写作样例完成一篇类似文章。如果课堂时间不够，教师可建议学生课下自学写作部分。

本书的教学安排建议如下。

章节	内容	学时数
Unit 1	Introduction to the World of Computers	4
Unit 2	Hardware	3～5
Unit 3	Software	3～5
Unit 4	Operating Systems	3～5
Unit 5	Program Development and Programming Languages	3～5
Unit 6	Databases	3～5
Unit 7	Computer Network and Internet	3～5
Unit 8	The Internet and World Wide Web	3～5
Unit 9	E-commerce	3～5
Unit 10	Computer Security and Privacy	4

建议理论教学时数：32～48，包含课堂讨论、练习等必要的课内教学环节。建议授课时间比例为：听与说部分40%，读与译部分40%，模拟写作部分20%。

教师可以按照自己对计算机英语的理解适当地增减一些章节，也可以根据教学目标灵活地调整章节的顺序，增减各章的学时数。

Contents 目 录

Unit

1 Introduction to the World of Computers

Part 1 Listening and Speaking

Dialogue: Buying a New Notebook Computer

(After class, Sophie & Henry are standing by the door, waiting for Mark.)

Henry: Excuse me, Sophie. May I ask you some questions about computers?

Sophie: Sure. What can I do for you?

Henry: I want to buy a new **notebook computer**, but I'm not sure which kind is better, the traditional notebook or **ultrabook**. What do you think? [1]

Sophie: Let me see. In my view, although these two categories of notebook computers have the same general appearance, they vary greatly in power, storage capacity, weight, and battery life. It depends on [2] your uses.

Henry: Well, I am a regular user. I need a desktop replacement and **portable** computer. I typically run office software, use the Internet, and listen to music.

Sophie: I see. My advice is that you should purchase an affordable traditional notebook computer that includes the following **specs**: middle-tier processors—not the fastest but not the slowest either; 4 to 8-GB RAM; 500-GB hard drive; and 15-inch screen.

Henry: Is it expensive?

Sophie: Approximately $500 to $700 currently. For maximum savings, as well as **compatibility** with most software, many buyers choose Windows-based PCs.

[1] Replace with:

1. What's your opinion on it?
2. What's your take on it?
3. What's your view on it?

[2] Replace with:

1. relies on
2. depends upon

(When they are talking, Mark comes toward them.)

Sophie & Henry: Hi, Mark.

Mark: Hi, Henry and Sophie.

Sophie: You are just on time. Just before we were talking about Henry's buying a notebook computer. I heard that you want to purchase a new one also.

Mark: Yes. I am a **power user**. I need a portable computer that can handle the latest video games or process-intensive operations such as video editing, engineering, and design. Sophie, what do you recommend?

Sophie: I see. Well, I suggest that you should purchase a traditional notebook computer that includes the following minimum specs: the fastest categories of processors with large number of **cores** and high GHz **count**; a graphical processor(GPU) **outside of** the main CPU; 8-GB RAM; 750-GB hard drive; and 17-inch screen.

Mark: How much does it cost? [3]

Sophie: Approximately $1000, perhaps more. For games, many individuals choose Windows-based PCs. The video and design industries usually use Macs. What else do you want [4] to know?

Henry: Well, if I want a small, lightweight computer that I can carry, and hope it has a long battery life for extended use, can I purchase a computer like that?

Sophie: Yes. You can purchase an ultrabook with 11 to 13-inch screen, **solid-state** hard drive, 4-GB RAM, and weight under 4 pounds.

Mark: I guess it is very expensive.

Sophie: Not really, $700 to $1000. Many ultrabooks will not include a DVD drive. Windows-based ultrabooks tend to [5] be more affordable. The MacBook is slightly more expensive, but it has always been considered a leader in the lightweight notebook field.

Mark: Ok, we've got it. Sophie, thanks for your valuable suggestions.

Sophie: My pleasure.

[3] Replace with:

1. How much does it take?
2. How much is it?
3. How much?

[4] Replace with:

1. What else would you like
2. What other things do you want
3. What other things would you like

[5] Replace with:

1. **are prone to**
2. **are inclined to**
3. have a tendency to

Exercises

Work in a group, and make up a similar conversation by replacing the statements with other expressions on the right side.

Words

portable ['pɔ:təbl] *adj.* 便携式的，易携带或移动的	适合性
specs [speks] *n.* 说明，规格（spec 的名词复数），规范	core [kɔ:] *n.* 核，核心，芯
compatibility [kəm,pæti'biliti] *n.* 兼容性，	count [kaunt] *n.* 计数，计算
	solid-state ['sɔlid'steit] *adj.* 固态的

Phrases

notebook computer 笔记本型电脑，笔记本式计算机，笔记型电脑	outside of 在…的外面
ultrabook 超薄笔记本电脑	be prone to 有…的倾向，易于
power user 高级用户，超级用户	be inclined to 倾向于，易于…的

Listening Comprehension: John von Neumann

Listen to the article and answer the following 3 questions based on it. After you hear a question, there will be a break of 15 seconds. During the break, you will decide which one is the best answer among the four choices marked (A), (B), (C) and (D).

Questions

1. Where was John von Neumann born?
   (A) The United States
   (B) Britain
   (C) Hungary
   (D) Germany
2. How many components did von Neumann's computer contain necessarily?
   (A) Two
   (B) Three
   (C) Four
   (D) Five
3. Which of the following has become synonymous with von Neumann's name?
   (A) EDVAC
   (B) Modern Computer Architecture
   (C) Quantum mechanics
   (D) Mathematical physics

Words

brilliant ['briljənt] *adj.* 超群的，杰出的
distinguish [dis'tiŋgwiʃ] *v.* 使杰出，使著名
quantum ['kwɔntəm] *n.* 量子，量子论
mechanics [mi'kæniks] *n.* 力学
reside [ri'zaid] *v.* 居住
unveil [ʌn'veil] *v.* 公布
rewire [ri:'waiə] *v.* 重接电线
delve [delv] *v.* 挖掘
predecessor ['pri:disesə] *n.* 前任，(被取代的) 原有事物
successor [sək'sesə] *n.* 后继者，后续的事物
synonymous [si'nɔniməs] *adj.* 同义的

Dictation: The Rise of Mobile Computing: The Getting-Smarter Smartphone

This article will be played three times. Listen carefully, and fill in the numbered spaces with the appropriate words you have heard.

While ___1___, Nick Bilton ___2___ that as his father **aged**, his ___3___ expanded as he added new credit cards, membership cards, family photos, stamps, tickets, and other things—until it became so large that he would pull it out of his back pocket when he ___4___, "dropping it on the table like a ___5___," Bilton says.

However, for Bilton, a New York Times technology ___6___, it's been the reverse experience: Each year his wallet has become ___7___. "Things that once belonged there have been **taken over** by my ___8___," he reports, **to the point** that "I ___9___ I didn't need to carry a wallet anymore. My smartphone had replaced ___10___ everything in it."

Today Bilton's address books, ___11___, maps, music players, and photos have all been ___12___ into his smartphone. So have most ___13___—customer cards, ___14___ membership **ID**, insurance cards, and so on—which now exist as photos ___15___ in the phone. Movie tickets, ___16___, and airline ___17___ also can be stored as ___18___.

The only two non-mobile phone items Bilton carries are his ___19___ and a bank ___20___ (instead of cash). "But I'm confident," he says,"that those, too, will disappear someday" and become part of the smartphone.

Words

age [eidʒ] *v.* 成熟，变老
columnist ['kɔləm(n)ist] *n.* 专栏作家
slim [slim] *adj.* 微小的，苗条的，修长的
gym [dʒim] *n.* 健身房，体育，体育馆
coupon ['ku:pɔn] *n.* 息票，赠券
replica ['replikə] *n.* 复制品，复制物

Phrases

take over 取代，接管
to the point 切题，中肯，扼要

boarding pass 登机证　　debit card 借记卡，签账卡，提款卡
driver's license 驾驶执照

Abbreviations

ID Identification Card 身份证件

Part 2 Reading and Translating

Section A: Cloud Computing

Cloud computing refers to an environment of servers that **house** and provide access to resources users access via the Internet. Home and business users choose cloud computing for a variety of reasons:

- Accessibility: Data and/or applications are available worldwide from any computer or device with an Internet connection.
- Cost savings: The expense of software and **high-end** hardware, such as fast processors and high-capacity memory and storage devices, **shifts away from** the user.
- Space savings: Floor space required for severs, storages devices, and other hardware shifts away from the user.
- **Scalability**: Provides the flexibility to increase or decrease computing requirements as needed.

Cloud computing consists of a **front end** and a **back end**, connected to each other through a network. The front end includes the hardware and software with which a user interacts to access the cloud. For example, a user might access a resource on the cloud through a browser on a laptop. The back end consists of the servers and storage devices that manage and store the resources accessed by users.

Cloud computing allows companies to outsource, or **contract** to third-party providers, elements of their information technology **infrastructure**. They pay only for the **computing power**, storage, bandwidth, and access to applications that they actually use. As a result, companies need not make large investments in equipment, or the staff to support it.

Consumers and organizations rely on cloud computing services to manage IT infrastructure (Infrastructure as a Service), provide applications (**Software as a Service**), access online data (Data as a Service), and create applications using Web-based development platforms (Platform as a Service).

Infrastructure as a Service

Infrastructure as a Service (IaaS) uses software to **emulate** hardware capabilities,

enabling companies to **scale**, or adjust **up** or **down**, storage, processing power, or bandwidth as needed. For example, retailers may need to increase these capabilities to **accommodate** additional traffic to their Websites during busy holiday shopping seasons. When the season ends, retailers easily can reduce these settings.

Two special cases of IaaS are Storage as a Service and Desktop as a Service:

- Storage as a Service: Cloud storage providers offer file management services such as storing files online, system **backup**, and **archiving** earlier versions of files. Cloud storage is especially useful to tablet and smartphone users, because it enables them to access their files on all of their devices.
- Desktop as a Service: Some companies **specify** the applications, security settings, and computing resources available to employees on their desktop computers. These **images**, or configurations, provide a common desktop work environment available to employees across an entire organization. Because the desktop and its applications appear to be installed on the user's own computer, Desktop as a Service also is known as a virtual desktop.

Software as a Service

Software as a Service (SaaS) describes a computing environment where an Internet server **hosts** and deploys applications. Editing documents or photos, sending E-mail messages, and managing finances are common consumer tasks of SaaS applications. A **pioneering** provider of SaaS applications for companies is Salesforce, which offers customer relationship management (CRM) software (Figure 1-1). Salesforce users subscribe to modules to handle tasks such as sales and marketing **campaigns** and customer services.

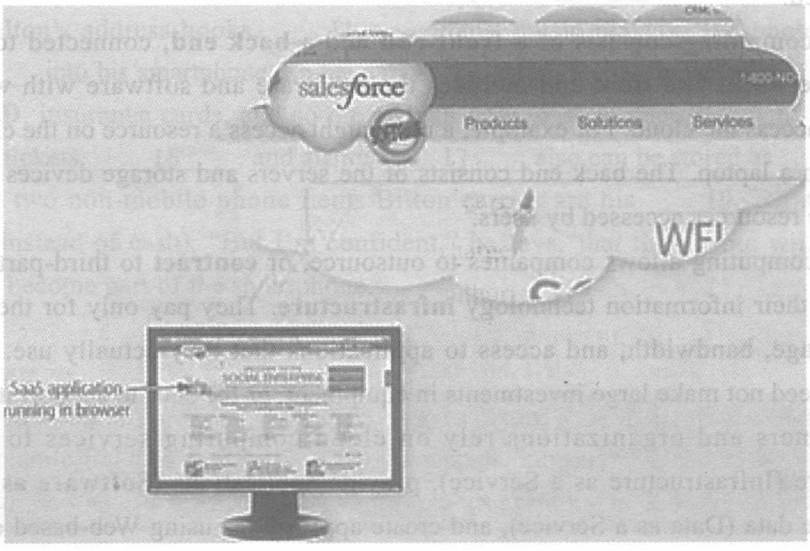

Figure 1-1 SaaS application running in browser

Data as a Service

Government agencies, companies, and social media sites make data available for