计算机

专业英语

主编 吕 红

21 世纪高职高专规划教材系列

计算机专业英语

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机械工业出版社

本书是根据中国—澳大利亚（重庆）职业教育与培训项目试点专业课的要求，并参照"全国高职高专英语教学的基本要求"和职业院校信息类专业"专业英语"课教学大纲编写的教材。全书共分 20 个单元，参考学时 94 学时。每单元均标有参考学时和学习目的。体例结构采用任务式教学，以学习者为中心，体现了"动中学"的思想。本书配有丰富的插图，有利于激发学习者的思维和参与的积极性，充分体现语言教学的互动式。本书尝试了阶段性测试的重要教学理念，每课结束后均有自测题，使学习者随时了解自己的学习状况，有利于提高学习者的学习兴趣和自信心。本书的材料均选自英文原版书刊，题材广泛、内容新颖，紧跟时代步伐，使学生在学习语言的同时也了解本专业领域的一些最新发展。

本书可作为中等、高等职业技术院校计算机专业和电子技术专业教材使用，也可作为具有一定英语基础的信息类科技工作者自学教材和参考书。

出 版 说 明

为了贯彻国务院发〔2002〕16号文件《国务院关于大力推进职业教育改革与发展的决定》的精神，进一步落实《中华人民共和国职业教育法》和《中华人民共和国劳动法》，实施科教兴国战略，大力推进高等职业教育改革与发展，我们组织力量，对实现高等职业教育培养目标和保证基本教学规格的文化基础课程、专业技术基础课程和重点建设专业主干课程的教材进行了规划和编写。

本套教材内容涵盖了高职高专院校计算机及相关专业的专业基础课、专业课以及选修课程，主要分为计算机文化基础、编程语言、硬件技术、网络信息、数据库应用及多媒体技术等几大类。为配合高职教育关于"培养21世纪与我国现代化建设要求相适应的一线科技实用型人才"的最新理念，我们特为本系列教材配备了实践指导丛书，以利于老师的教学和学生的学习。

本套教材将理论教学和实践教学紧密结合，图文并茂、内容实用、层次分明、讲解透彻，其中融入了作者长期的教学经验和丰富的实践经验。可作为各类高职高专院校的教材，也可作为各类培训班的教材。

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前　言

现代科学技术突飞猛进、日新月异，信息技术作为现代社会的朝阳产业有着更广阔的发展空间。它与其他各门科学技术不断渗透，与人们的日常生活和工作联系越来越紧密。新世纪的信息技术人才不仅需要掌握扎实的专业基础和技能，还应当具备一定的专业英语运用能力，从而提高获取本专业前沿知识的能力和拓展交流本专业知识和技能的空间。《计算机专业英语》的编写目的就是帮助广大从事计算机行业的工作者或计算机爱好者提高专业英语的运用能力。

本书用全英文编写，将帮助已具有中等（及其以上）英语基础的信息类专业学生进一步掌握必备的专业英语知识，使其逐步具备一定的阅读理解专业资料和用英语查阅专业信息数据的能力。

本书参照了中国—澳大利亚（重庆）职业教育与培训项目试点专业课的要求，并结合"全国高职高专英语教学的基本要求"和职业院校信息类专业"专业英语"课教学大纲编写。全书共分 20 个单元，涉及了计算机和通信领域的基础知识和应用技术，内容由浅入深，覆盖信息技术常见的内容和文献格式。为体现信息技术与现代生活的密切相关，本书每隔 3 课，就分别穿插了一篇有关电子邮件、网上购物、网上学习、网上游戏和个人主页等内容。

本书的特色在于集中体现了现代英语和专业英语教学的研究成果，改变传统专业英语教材的编写模式，更加注重以学习者为中心，采用任务式的教学法，调动学生参与课堂活动，体现了"动中学"的重要思想。本书语言选材地道、措辞友好、富有人性化，编写集文字、图片于一体，注重激发学习者的积极思维和参与性，充分体现互动式的语言教学特点。本书还体现了阶段性测试的重要教学理念，每课结束后均有自测题，使学习者随时了解自己的学习状况，有利于提高学习兴趣和自信心。本书的材料均选自英文原版书刊，题材广泛、内容新颖，紧跟时代步伐，使学生在学习语言的同时也了解本专业领域的一些最新发展。

本书由吕红担任主编，由张爱维、罗仁家、阳燕婷担任副主编。参与编写的人员还有吴蔚、张震东、江明华以及刘渝。"中澳职教项目"课程设计专家 Bruce Shearer（布鲁斯·希勒）先生和重庆师范大学外语学院院长吴念教授担任本书的主审。

由于编者水平有限，书中不妥之处难以避免，恳请读者批评、指正。

<div align="right">编　者</div>

IV

目 录

Unit 1

Personal Computer

Suggested Length of Lesson: 4 hours

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Learning Outcomes

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Activity 1

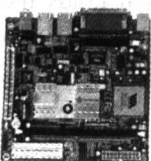### Giving the componets' names with the help of the pictures:

Task one: Work in groups (4 or 6 students in each group); discuss the components of a computer and write down as many words about computer as possible.

(personal computer)

Task two: Work in pairs. Write down the names of the following components of a computer. The first one has already been done for you.
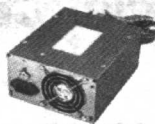
(motherboard)　　　　　　(　　　　)

1

(   )   (   )

(   )   (   )

(   )   (   )

(   )   (   )

(   )

Activity 2

Getting to know the componets of a computer:

Task one: Read the following text. Fill in the blanks with the appropriate words in the box below.

> hardware , directly , central processing unit , a microprocessor, contents, buses, bulk storage medium, vast, chipset

A computer is made up of many parts called _____. Hardware refers to the parts of the computer that you can see and touch. It contains a motherboard, _____, memory, disk drives, monitor, key, mouse and other electronic components.   Then we come to learn the main components of PC.
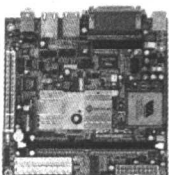
The motherboard is the main circuit board inside the PC which holds the processor, memory and expansion slots and connects directly or indirectly to every part of the PC. It's made up of a _____ (known as the "glue logic"), some code in ROM and the various interconnections or buses. PC designs today use

2

many different _____ to link their various components.
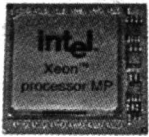
The processor (really a short form for microprocessor and also often called the CPU or _____) is the central component of the PC. This vital component is in some way responsible for every single thing the PC does.

When the power to a PC is switched off, the _____ of memory are lost. It is the PC's harddisk that serves as a non-volatile, _____ and as the repository for a user's documents, files and applications.

Today's mass produced CD-ROM drives are faster and cheaper than they've ever been. Consequently, not only is a _____ range of software now routinely delivered on CD-ROM, but many programs (databases, multimedia titles, games and movies, for example) are also run _____ from CD-ROM - often over a network.

Task two: Decide the following statements are true or false according to the text in Task one.

1. A computer is made up of many parts called software. (   )
2. When the power to a PC is switched off, the contents of memory are lost. (   )
3. The motherboard is the main circuit board. (   )

Activity 3

Discussing input devices and output devices in a computer:

Task one: Group discussion. What are input devices and what are output devices? Write down the name of the devices.

For example: **input devices:** keyboard

Task two: Read the text and complete each sentence.

Keyboard: A computer keyboard is an array of _____, each of which sends the PC a unique signal when pressed. Two types of switch are commonly used: mechanical and rubber membrane. _____ switches are simply spring-loaded "push to make" types, so when pressed down they complete the circuit and then break it again when released. These are the type used in click_____ with plenty of tactile feedback.

Mouse: The commonest mouse used today is mechanical. Its ball is steel for weight and rubber-coated for grip, and as it rotates it drives two _____, one each for x and y displacement. A third spring-loaded roller holds the _____ in place against the other two.

These rollers then turn two disks with radial slots cut in them. Each _____ rotates between a photo-detector cell, and each cell contains two offset light emitting diodes (LEDs) and light sensors. As the disk turns, the sensors see the light appear to flash, showing movement, while the offset between the two light sensors shows the _____ of movement.

Monitor: The monitor cable plugs into this port. It is normally a 15-pin female _____. The signals from _____ are sent to the monitor, where they're displayed.

Activity 4

Building sentences:

Task one: Put the words in order to make sentences.

1. memory / and / the processor, / the motherboard / holds / expansion slots/.

2. the central component / is / the PC / of / the processor/.

3. non-volatile, / serves /the PC's hard disk / as a / bulk storage medium / .

4. is / lost / when / the power to a PC / are / switched off / the contents of memory / .

5. via / attached to / is / a slot / the graphics card / the motherboard/

6. this port / into / plugs / the monitor cable / .

Learning outcomes

On successful completion of this unit, students should be able to:

1. Identify the three essential components of a computer system (motherboard, CPU, monitor).
2. Identify input devices (keyboard, mouse, etc).
3. Identify storage devices (RAM, hard disk , floppy, etc).
4. Identify output devices (monitor, etc).
5. Describe the functions of computer main parts.

Finish the following tasks with the help of the figure below:
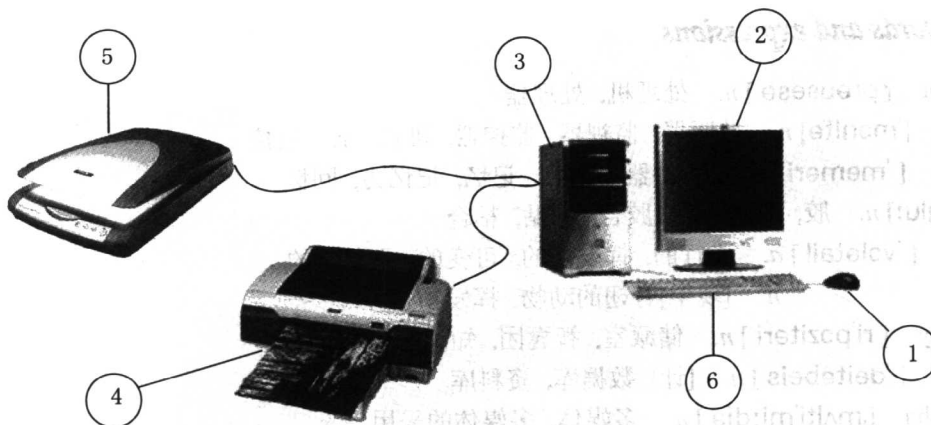
1. Label the numbered components.
2. Identify the components of a computer system.
3. Classify the components of a computer system.
4. Describe the function of each device.

Notes

[1] Hardware refers to the parts of the computer that you can see and touch. 硬件是指我们能看到和触摸到的计算机部分。"refer to"意为"涉及(指的是,提作)","that you can see and touch"是定语从句,修饰"computer"。

[2] The motherboard is the main circuit board inside the PC which holds the processor, memory and expansion slots and connects directly or indirectly to every part of the PC. 母板是电脑内的主要电路板,在它上面安装着处理器、内存和扩展插槽,并且直接或间接地连接着电脑的每个部分。介词短语"inside the PC"作定语后置,修饰"board","which holds the processor, memory and expansion slots and connects directly or indirectly to every part of the PC"是由关系代词"which"引导的定语从句,修饰先行词"board"。which 在从句中作主语,其中"holds"和"connects"是两个并列的动词。

[3] This vital component is in some way responsible for every single thing the PC does. 这个重要的组件通过某些方法完成电脑所发出的指令。"be responsible for"意为"对……负责","the PC does"修饰"every single thing"。

[4] Today's mass produced CD-ROM drives are faster and cheaper than they've ever been. 今天大量生产的光驱驱动器的速度是越来越快,价格越来越便宜。"faster and cheaper"是两个并列的形容词比较级。

[5] The commonest mouse used today is mechanical. 现在最常使用的鼠标是机械式的。"the commonest"是形容词的最高级，"mouse"和"used"之间省略了"which is"，"which is used"是定语从句修饰"mouse"，其中"be used"是被动语态，"被使用"。

New words and expressions

processor   ['prəusesə] *n.*   处理机, 处理器

monitor   ['mɔnitə] *n.*   监听器, 监视器, 监控器, 班长   *v.*   监控

memory   ['meməri] *n.*   存储(器), 内存, 记忆, 记忆力, 回忆

glue   [glu:] *n.*   胶, 胶水   *v.*   胶合, 粘贴, 粘合

volatile   ['vɔlətail] *a.*   飞行的, 挥发性的, 可变的, 不稳定的

　　　　　　　　　　　n.   [现罕]有翅的动物, 挥发物

repository   [ri'pɔzitəri] *n.*   储藏室, 智囊团, 知识库, 仓库

database   ['deitəbeis] *n.*   [计] 数据库, 资料库

multimedia   [ˌmʌlti'mi:djə] *n.*   多媒体, 多媒体的采用

membrane   ['membrein] *n.*   膜, 薄膜

sensor   ['sensə] *n.*   传感器

diode   ['daiəud] *n.*   二极管

tactile   ['tæktail] *a.*   触觉的, 有触觉的, 能触知的

Unit 2

Operate Computer Equipment
Occupational Health, Safety and Welfare

Suggested Length of Lesson: 8 hours
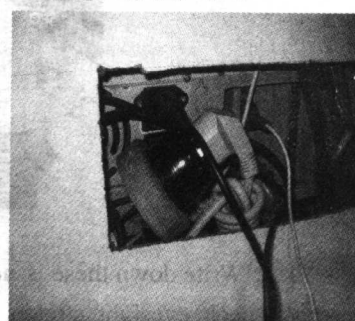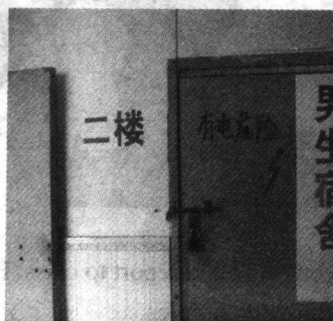
Table of Contents:
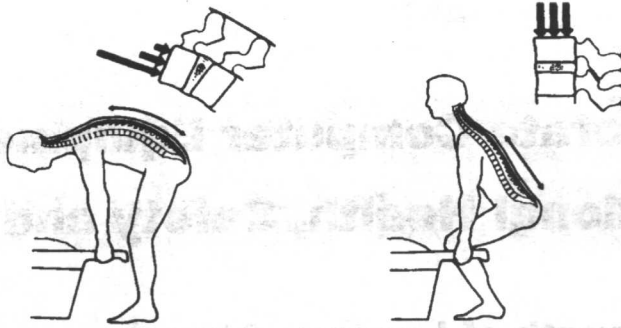
Learning Outcomes

Assessment

Activity 1

Learning by doing:

Task one: Work in pairs. Discuss the OHSW principles with the help of the following pictures.
Here are some hints of words to help you.

obstacle, electricity, electric shock, upright, bent, vertebra ['vəːtibrə] *n.*脊椎；椎骨

Task two: The class sits in a computer lab.

Task three: Work in groups (4 or 6 students in each group). Look at the following pictures. Please find out the OHSW issues appearing in them.

Zur falschen Zeit am falschen Ort im falschen Job?
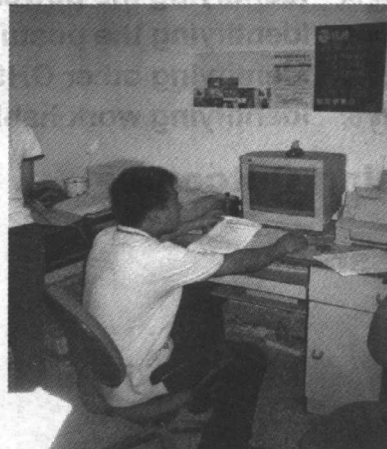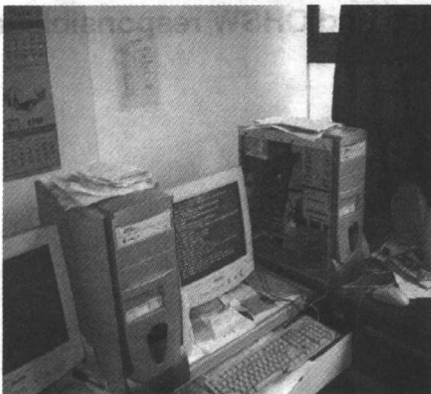
Task four: Write down these issues you think and report to class. Here are some hints to help you. back, neck, eyesight, stretch, hazard, ergonomics…

Activity 2

Introducing the occupational health, safety and welfare

Task one: Work in pairs. Anticipate what will be discussed in the following passage according to the statements below.

occupational health, safety and welfare issues

computing equipment

setting up a worksite

organize a workstation

designed furniture

adjust the chair...

protect your back...

Task two: Compare what you anticipated while filling in the uncompleted adjectives or adverbs. The first one has already been done for you.

It is important to be aware of occupational health, safety and welfare issues and the way they relate to the use of computing equipment. Being aware of the issues to consider in setting up a worksite c_____ for one person, and ensuring you are c_____ will help you to work well. You will then be a_____ to apply this knowledge in working out the best ways to organize a workstation when you are working at a computer with one or more consumers.

Where computers are used, e_____ designed furniture is used with it. You need to know how to adjust the chair, table or desk and computer to protect your back, your neck, your wrists and your eyesight.

Task three: Understand the word "ergonomics" and write down its definition by rearranging the following words.

Ergonomics is /enable / comfortable / the /manner/areas/ and /design/in /healthy / people / to / work /safe /to /a /and /equipment/of /work/.

Ergonomics is _____

_____.

Activity 3

Identifying the power access procedures and lighting:

Task one: Choose the appropriate words or phrases to fill in the blanks while reading the following passage. The first one has already been done for you.

power cord , Electrical leads and cables, power , computing equipment, cables,   power point

Check the following:

- Electrical leads and cables should be positioned to avoid personal injury or where plugs can inadvertently pulled from the socket.
- Ensure _____ don't obstruct walkways.
- Switch off any _____ which is not being used for long periods of time.
- Ensure that cables are not being squashed or stretched. Make sure the _____(including extension lead) is less than five meters.
- Make sure the _____ is easily accessible, in case you need to unplug the power cord.
- If you do turn off the_____ to the computer or a printer, always wait at least 4 seconds before turning it back on.

Task two: Learning by doing. Work in pairs. Student A will do by following the suggestions below. Student B will do in the opposite way. Exchange your experience.

Lighting

Proper lighting will make the computer screen easier to see and will reduce eyestrain. The computer needs to be positioned so that direct sunlight or bright indoor lighting does not reflect off the screen.

Activity 4

Identifying the posture while operating computer equipment:

Task one: Work in pairs. Get to know the correct posture with the help of the following picture. Try to identify the parts pointed with an arrow.


eye level
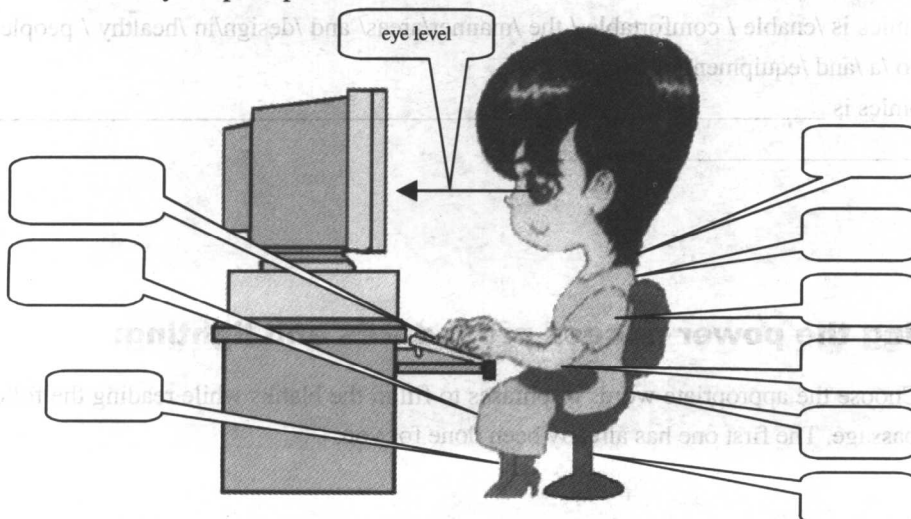
Task two: Point out what the underlined words refer to in the above picture. One of them has already been done for you.

The factors to think about when making adjustments are the <u>height</u> of your chair in relation to the computer <u>screen</u> and the <u>keyboard</u>. Place your <u>chair</u> so that the keyboard is at or slightly below the level of your <u>elbow</u> and the <u>mouse</u> and <u>mouse pad</u> is within comfortable reach. The computer screen should be slightly below <u>eye level</u>. You should be able to type comfortably and use the mouse with your <u>shoulders</u> relaxed and without having to frequently turn your <u>head</u> or twist your <u>neck</u>. Your <u>knees</u> should be slightly higher than your <u>hips</u> – this eases pressure on the back of your <u>thighs</u>. You then need to adjust the <u>back</u> of the chair so it supports the lower curve of your <u>spine</u>. When you sit straight, your knees, hips and <u>elbows</u> should form roughly 90-degree angles when you work.

Task three: Identify the consequences if slumping forward. After reading the following passage, summarize the consequences if you slump forward.

Slumping forward means that your lung capacity is reduced and this lowers the amount of oxygen you are supplying your body. The result is that you feel tired and listless. If your legs are crowded under the desk or table (e.g. if they are crossed) it can cut the supply of blood in your thighs, causing discomfort. If your arms and wrists are not comfortably supported, e.g. hanging on the edge of the desk, it can over time damage the muscles.
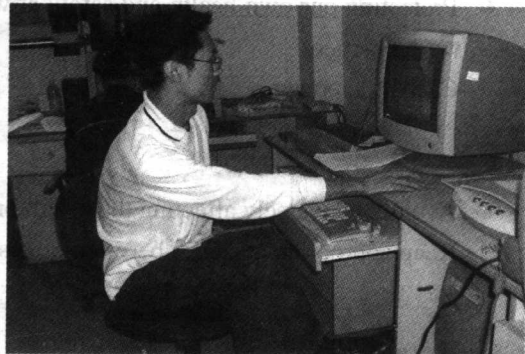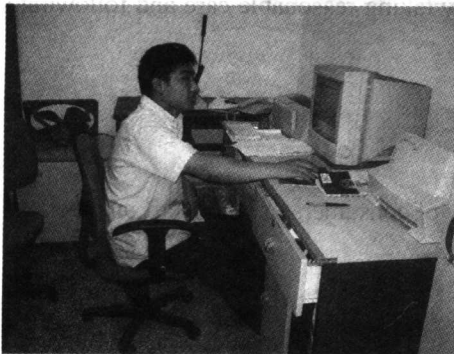
Activity 5

Identifying other OHSW issues and OHSW responsibilities:

Task one: Have you noticed the following issues while operating computers? Work in pairs. Tell your experience to your partner.

Other OHSW issues

- Sensitivity of computers – don't move the computer unnecessarily – movement can dislodge some of the parts (e.g. the sound or video card inside) resulting in the