计算机专业
英　语

魏长华　等编

中等职业技术学校计算机专业系列教材

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计算机专业英语

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中国财政经济出版社

内 容 提 要

本书由课文和附录两部分组成，共有 20 篇课文和 3 个附录。课文部分介绍了计算机的有关基础知识，主要包括计算机概论、计算机体系结构、程序设计语言、程序设计方法及计算机的应用领域。课后附有计算机屏幕英语和习题。附录主要列出了计算机术语、数学符号的英语表示法、计算机操作时常用的命令等。

中等职业技术学校计算机专业系列教材
编写及使用说明

为适应我国当前中等职业技术学校计算机专业教学的需要,我们组织编写了一套实用教材——中等职业技术学校计算机专业系列教材。针对中专学生的层次水平(初中毕业生)及初学计算机的特点,以及计算机专业教学的需要,我们对整套书中的内容作了周密的安排,不仅体系合理,而且深入浅出、概念清晰、例题丰富、逻辑性强、文字流畅、通俗易懂。

全套书共分12册,它们分别是:

1.微型计算机组成原理;2.微型计算机操作;3.BASIC语言程序设计;4.C语言程序设计;5.数据结构初步;6.FOXBASE⁺关系数据库;7.关系数据库FOXPRO;8.微型计算机系统的安装与维护;9.计算机网络基础;10.计算机软件开发技术;11.Windows基础教程;12.计算机专业英语。

每册教材的详细情况请见各册的前言。

本教材建议安排在3—5个学期讲授完,每学期可安排2—3门课程。教学顺序可按上述排列顺序进行,但应根据各学校学生具体情况和上机实习的条件酌情安排。每本书自成体系,可独立使用。这些课程实践性较强,上机实习必不可少。每门课程讲授与实习时数安排建议如下:

1.《微型计算机组成原理》:可安排70—90学时,其中讲授50—60学时,汇编语言的上机可安排20—30学时。

2.《微型计算机操作》:本课程以上机实习为主,课堂讲授为辅。总学时可安排70—90学时,讲授30学时左右,上机实习40学时以上。

3.《BASIC语言程序设计》:总学时70—90学时,课堂讲授占2/3,上机实习占1/3左右。

4.《C语言程序设计》:总学时70—90学时,课堂讲授占2/3,上机实习占1/3左右。

5.《数据结构初步》:总学时70—90学时,讲授50—70学时,上机实习20学时左右。

6.《FOXBASE⁺关系数据库》:总学时70—90学时,课堂讲授占2/3,上机实习占1/3。

7.《关系数据库FOXPRO》:总学时70—90学时左右,课堂讲授占2/3,上机实习占1/3。

8.《微型计算机系统的安装与维护》:总学时80—100学时,课堂讲授占总学时的3/4,实习可占总学时的1/4(有条件的尽可能安排实习,没有条件的可演示)。

9.《计算机网络基础》:总学时70—90学时左右,讲授占3/4,实习占1/4,没有实习条件的可安排参观、演示。

10.《计算机软件开发技术》:总学时70学时左右,讲授50学时左右,寻找小课题按软件开发期进行实习,时数可酌情安排。

11.《Windows基础教程》:总学时70—90学时,讲授与上机各占一半。

12.《计算机专业英语》:总学时80学时。

另外:①书中凡打星号(＊)的章节可作选讲内容,不作要求;②FOXBASE⁺与FOXPRO的许多命令相同,这两门课程可酌情选其中一种开设。对于学生来说,学会其中一种,另一种则很容易掌握(另一种可作为学生自学的教材);③五笔字型与自然码不要求都学,可选其中一种教学;④Windows与网络有条件的学校应尽量开设,没有上机实习条件的学校可暂时不开。

中等职业技术学校计算机专业系列教材编写组
1996年3月

前　言

目前,计算机科学和技术迅速的发展及其广泛的应用,引起了社会各界的普遍关注。不言而喻,计算机科学的发展和技术的应用对于加速我国四个现代化建设的步伐是至关重要的。作为计算机专业工作者应该具有较好的英语水平,对于这一观点,人们已经取到了共识。所以,在计算机专业的学生中开设《计算机专业英语》课程,使学生通过对该课程的学习,能够熟练地掌握常用计算机英语,能够阅读有关计算机的英语技术文献、科技资料和专业书籍,是教育改革进一步深入的重要举措。

为此,我们针对中等职业技术学校计算机专业学生的实际,编写了这本《计算机专业英语》,供学生使用。

我们在编写这本教材的过程中,本着实用性、专业性、可教性和可读性的原则,力求在教材的内容编排上,由浅入深,循序渐进;在教材的实施操作上,充分考虑到与其他的相关课程的衔接。因此,我们在课文的选择、习题的编排等方面,均进行了较为精细的设计。同时,为了使本教材不致于与《基础英语》课程在内容上重叠,本教材不包含英语的语音、词法、句法等方面的内容。并且,我们没有提供课文的参考译文,因为我们认为在教材中给出参考译文对学生没有多少好处。

本教材由课文和附录两部分组成,共有20篇课文和3个附录。课文部分介绍了计算机的有关基础知识,主要包括计算机概论、计算机体系结构、程序设计语言、程序设计方法以及计算机的应用领域。为了配合教学,每课后面都备有练习,供学生课后练习使用。附录共有三个方面的内容,主要将一些常用的计算机术语、数学符号的英语表示法和计算机操作时常用的命令,本教材都一一列出,供学生查阅。

本教材讲授的建议学时数是80学时。教师可以以课文为中心,结合有关的附录进行教学。另外,教师根据具体情况,适当地补充一些相关的材料也是有益的。

在本教材的编写过程中,得到了我系许多老师的支持和帮助,编者在此表示衷心的感谢。

由于编者的水平有限,书中难免存在缺点和错误,恳切希望读者给予批评指正。

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编　者

1996年6月于武昌

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目 录

Lesson One

TEXT

What is a Computer

A computer is a machine that takes in information and processes that data in some way. The data may be numbers, letters, pictures, or even sounds.

The computer can perform arithmetical operations, for example, addition, subtraction, multiplication, division and power. All higher mathematical problems are reduced to these simple operations before being solved.

The computer can compare statements. After a computer tests two statements, it can make a decision about which statement is true. This basic ability has made possible many of the successful applications of computers today.

The computer are programmable. Programs are written to give instructions to the computer. Some of programs used to operate the computer are stored inside the computer. People who operate the computer never see the actual programming. Other programs are written by students and professional programmers.

Most of the computers used today are digital computers, from small home computer systems to the large systems that the government uses to handle data about the entire nation.

New Words

computer 　[kəm'pju:tə] 　　　　 *n.* 计算机
information 　[infə'meiʃən] 　　　 *n.* 信息,情报
process 　['prəuses] 　　　　　　 *v.* 加工;处理
data 　['deitə] 　　　　　　　　 *n.* 数据
item 　['aitem,'aitəm] 　　　　　 *n.* 项目,条款
statement 　['steitmənt] 　　　　 *n.* 语句;陈述

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program	['prəugræm]	n. 程序；计划
arithmetical	[æriθ'metikəl]	a. 算术的
addition	[ə'diʃən]	n. 加法
subtraction	[səb'trækʃən]	n. 减法
multiplication	[mʌltipli'keiʃən]	n. 乘法
division	[di'viʒən]	n. 除法
power	['pauə]	n. 乘方
reduce	[ri'djuːs]	v. 化简，归结
programming	['prəugræmiŋ]	n. 程序设计
instruction	[in'strʌkʃən]	n. 指令

Phrases and Expressions

arithmetic operation	算术运算
professional programmer	专业程序设计员
digital computer	数字计算机

计算机屏幕显示英语

Advanced feature	(在一般 BASIC 中使用了)高级 BASIC 功能
Bad file mode	不正确的文件方式
Bad file name	不正确的文件名
Bad file number	不正确的文件号
Can't continue	不可能继续
Device fault	设备故障
Device I/O error	I/O 设备错
Device timeout	设备超时

Exercises

1. Translate the following words into English：

    (1) 数据   (2) 数字

(3) 程序　　　　　　　　　　　(4) 处理
(5) 语句　　　　　　　　　　　(6) 术语
(7) 加法　　　　　　　　　　　(8) 减法
(9) 乘法　　　　　　　　　　　(10) 除法
(11) 乘方　　　　　　　　　　 (12) 运算
(13) 计算机　　　　　　　　　 (14) 指令

2. Translate the following expressions into English：
 (1) 电子数字计算机　　　　(2) 算术运算
 (3) 程序设计　　　　　　　(4) 数据处理
 (5) 计算机应用　　　　　　(6) 信息处理

3. Translate the following sentences into Chinese：
 （1）A computer is a computing tool of processing data and information in some way.
 （2）The digital computer can perform common mathematical calculations.
 （3）In fact, procedure to run program is to perform statements.
 （4）Now, people use computers in every field of national economy.

4. Read the following passage and translate it into Chinese：

 A computer is a machine whose function is to accept data and process them into information. Data are facts or observations, while information is the meaning we attribute to them.

 A computer is a data processing machine. Data flow into the machine as input. Information flows from the machine as output. The computer processes the data.

 What do we mean when we say that a computer processes data? We process iron ore to make steel; we process wood pulp to make paper. 'Process' implies that a change takes place, that the raw materals are in some way restructured or manipulated. Often, data processing involves filtering and summarizing data so that underlying patterns can be perceived. How does a computer process its data? What functions, what operations, can it perform? Generally, computers can add, substact, multiply, divide, compare, copy, request input, and request output. So can most pocket calculators.

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Lesson Two

TEXT

Some Characteristics of the Computer

Let us consider some characteristics of the computer that lend to its popularity.

Computers are fast. Information can be processed at such a rapid speed that the terms used to describe the amount of time a computer requires to process data may be difficult to comprehend. For example, one second contains one billion nanoseconds. The same information that took several hundred nanoseconds to process 20 years ago now requires only a few nanoseconds. The computer works at tremendous speeds that may seem instantaneous to the person waiting for the results of a program.

Computers are accurate. Computers do precisely what they are programmed to do. This is where mistakes may occur. If a program contains errors, the computer will not be able to produce correct results. If the application program for payroll does not include correct information and accurate description of calculations, then the check that the computer prints as a final result will not be correct. Errors are seldom attributable to the computer itself.

Computers can work 24 hours per day. Payroll can be processed at night, for example, while the personnel in charge are at home asleep. Computers in Japan operate robots that build automobiles all night long. They work without the need for lighting, which makes utility costs minimal. Maintenance is often done during weekends so that computers can function without breakdowns throughout the workweek. Many large systems contain programs that check for conditions requiring maintenance. When early signals of trouble are brought to the attention of the computer operator, maintenance technicians can be called in immediately to prevent further problems.

Computers perform repetitive tasks without becoming bored. A successful

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program can be run over and over with large amounts of data and many repetitive calculations. The computer never asks for a coffee break because its work is boring.

computers do not sense that they are in dangerous situations. The computer in the space vehicle that flew past Saturn complied with all directions given it, oblivious to the fact that this was a one-way trip.

Computers are becoming smaller and more convenient as technology advances. Some computers are now small enough to be held in your hand.

Computers are becoming less expensive. A computer that cost $25,000 three years ago is now available for resale at $5000. Technological advancements make computers that are several years old obsolete. The same amount of memory(computer storage capability) that cost $10,000 a few years ago can be purchased in a much more compact computer today for $2000.

You are virtually surrounded by the effects of the computer. Perhaps you know several people who own computers. Consider how few people owned television sets in the 1940s, or how few cars were seen on the streets in the early 1900s. In the mid-1800s, the Industrial Revolution drew the population from rural to urban life and set into motion a series of advancements in automation technology that has culminated in the wide use of computers that we experience in our daily lives today. It is likely that computers will become an even more pervasive force in our society in the years ahead.

New Words

character	['kæriktə]	n.	字符
item	['aitəm]	n.	项目
nanosecond	['nænəuˌsekənd]	n.	纳秒;毫微秒
accurate	['ækjurit]	a.	精确的,准确的
precisely	[pri'saisli]	ad.	精确地,明确地
payroll	['pei'rəul]	n.	工资单;工资
manipulation	[məˌnipju'leiʃən]	n.	操作;操纵
function	['fʌŋkʃən]	n.	功能;函数
robot	['rəubɔt]	n.	机器人
breakdown	['breikdaun]	n.	崩溃,故障,破坏
repetitive	[ri'petitiv]	a.	重复的,反复的

dangerous	[ˈdeindʒrəs]	a. 危险的
memory	[ˈmeməri]	n. 存储器
rural	[ˈruərəl]	a. 乡村的,郊区的
urban	[ˈəːbən]	a. 城市的,市区的
advancement	[ədˈvɑːnsmənt]	n. 前进,进展;进步

Phrases and Expressions

difficult to comprehend	难于理解
application program	应用程序
attributable to	归结于
maintenance technician	维护技术员
space vehicle	空间飞行器
one-way trip	一种方式飞行
industrial revolution	工业革命
daily life	日常生活
automation technology	自动化技

计算机屏幕显示英语

Disk full	磁盘满
Disk not ready	磁盘没准备好
Disk write protect	磁盘写保护
Division by zero	除数为 0
Duplicate definition	重复定义
File already exists	文件已经存在
File already open	文件已经打开
File not found	文件没找到
FOR without NEXT	FOR 语句没有对应的 NEXT 语句

Exercises

1. Translate the following words into English：
　　（1）精确的　　　　　　　　（2）错误

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(3) 描述   (4) 机器人

(5) 光线   (6) 实用

(7) 维护   (8) 周末

(9) 信号   (10) 注意

(11) 昂贵   (12) 可买到的

2. Translate the following expressions into English：

(1) 高速度   (2) 大量的数据

(3) 几百万纳秒   (4) 正确结果

(5) 很少是由于   (6) 每天 24 小时工作

(7) 整个晚上   (8) 重复的计算

(9) 危险形势   (10) 无意识

(11) 越来越方便   (12) 存储量

(13) 小体积的计算机   (14) 从农村到城市

3. Translate the following sentences into Chinese：

(1) Data and information in the computer are processed at such a fast speed that it is difficult to comprehend.

(2) Besides comparing statements，computers can perform arithmetic and logical operations that may be requested in a program.

(3) The computer can also be used for controlling automatic production.

(4) All complex mathematical problems are reduced to these four simple ones before being solved.

4. Read the following passage and translate it into Chinese：

A computer processes data automatically, without human intervention. They do not know when to add, or subtract, or compare, or request input. If a computer is to function without direct human control, it must be given a set of instructions to guide it, step by step, through a process. The set of instructions is called a program. The program is stored physically inside the machine, making it a stored program.

Lesson Three

TEXT

Components of a Computer System

Now that you have some idea of what microcomputers can do, we can begin the discussion of how they do it. The idea of a general-purpose machine to solve mathematical problems was first proposed over 150 years go by a farsighted individual named Charles Babbage. The device Babbage proposed to build consisted of four components that uncannily resemble a modern computer:

The store to hold data and the results of calculations; Babbage designed the store to contain 1000 numbers of 50 digits each.

The mill to perform the mathematical operations.

Gears and levers to transfer data back and forth between the store and the mill.

An input/output unit to read external data into the store and display results of calculations produced by the mill.

Babbage's machine (named the Analytical Engine and subsequently modified into a more ambitious Difference Engine) would, had it been completed, it would have been the first general-purpose computer. Unfortunately, the technology of the day was incapable of producing the mechanical components to have lost 17, 000 pounds of his own money (and an equal amount of government funding). His critics wrote that "the government received nothing for its money and should at least have gotten a clever toy."

As with so many other geniuses who were ahead of their time, Babbage was proved correct nearly a century after his death, since all modern computers are designed along the lines he laid out. A computer accepts data from an external source (input), stores it temporarily in memory while calculating an answer (processing), and presents the results (output). Thus the computer itself is only one element of the total picture, as can be seen from Figure 1, which

depicts the essential hardware components of computer system. These components and their relationship to one another are found in all computer systems, from the latest technological marvel. Consider:

Central processing unit (CPU) performs the actual calculations and consists of control unit and arithmetic-logic unit. The components of the CPU are more fully described in the next section. Main memory also known as primary memory or random-access memory (RAM) temporarily store any program executed by the computer as well as the data on which the program operates. Main memories are designed for high-speed, short-term (temporary) access to data as opposed to auxiliary storage, which provides permanent (albeit slower) access.

Auxiliary storage (also called secondary storage or external storage) provides a place where data can be permanently stored, and from where it can be transferred to and from main memory. Floppy disks with storage capacities of up to 1.44 million characters and hard (fixed) disks with capacities of 10 to 100 million characters are examples of auxiliary storage used with personal computers.

Input devices accept data from an external source and convert to electric signals which are sent to the CPU. The keyboard, mouse, and joystick are common input devices used with microcomputers.

Output devices accept electric signals from the CPU and convert them to a form suitable for output. Printers and monitors are the most common type of output devices used with microcomputers. Printers provide permanent record (hard copy) of computer output.

New Words

component	[kəm'pəunənt]	n. 部件,组成部分
microcomputer	['maikrəukəm'pju:tə]	n. 微型计算机
propose	[prə'pəuz]	v. 提出,建议
farsighted	['fɑ:'saitid]	a. 有远见的
store	[stɔ:]	n. 存储, v. 存入,容纳
device	[di'vais]	n. 装置,设备;策略
modify	['mɔdifai]	v. 改变,限定,缓和
ambitious	[æm'biʃəs]	a. 雄心勃勃的,有抱负的