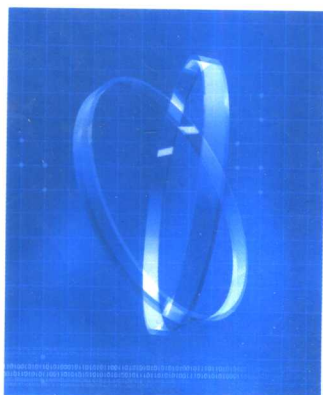




计算机专业英语

(第4版)

主编 王开铸

**English in
Computer Science**

哈尔滨工业大学出版社

计算机专业英语

(第4版)

主 编 王开铸
副主编 吴 岩 李秀坤
刘 挺 杨 玲

哈尔滨工业大学出版社

内 容 提 要

本文通过计算机各领域知识的介绍,使学生了解和掌握常用的计算机专业英语词汇。书中内容包括微机结构、算法语言、数据库、编译系统、操作系统、网络协议、多媒体技术、Windows 98 及超文本标志语言 HTML4 等方面的知识。书后附有常用计算机专业英语词汇表、参考译文和在国际刊物上发表论文的英文样本。

本书可作为计算机专业的计算机专业英语课教材,也可供有关计算机专业的科研、教学人员、计算机应用人员以及计算机爱好者使用。

图书在版编目(CIP)数据

计算机专业英语/王开铸主编.—4版.—哈尔滨:哈尔滨工业大学出版社,2007.1

ISBN 978-7-5603-1106-7

I. 计… II. 王… III. 电子计算机—英语—高等学校—教材 IV. H31

中国版本图书馆 CIP 数据核字(2007)第 004597 号

责任编辑 孙雅洁

封面设计 卞秉利

出版发行 哈尔滨工业大学出版社

社 址 哈尔滨市南岗区复华四道街 10 号 邮编 150006

传 真 0451-86414749

网 址 <http://hitpress.hit.edu.cn>

印 刷 哈尔滨工业大学印刷厂

开 本 880×1230 1/32 印张 9.75 字数 260 千字

版 次 2007 年 1 月第 4 版 2007 年 1 月第 6 次印刷

书 号 ISBN 978-7-5603-1106-7

印 数 28 001~32 000

定 价 16.00 元

(如因印装质量问题影响阅读,我社负责调换)

第四版前言

承蒙读者关爱与支持,本书再次修订出版了。计算机专业英语是计算机专业学生的一门必修课。为配合大学本、专科计算机专业的英语教学,我们哈尔滨工业大学计算机科学与工程系部分授课教师编写了这本书。

本书的编写目的首先是让学生掌握计算机专业英语的基本专业术语,同时是为了使学生了解一些计算机专业的基本知识。

本书问世多年来,得到各方同仁和读者的厚爱与支持,值此再版之机,深表谢意。

为了适应计算机技术的迅猛发展,本书已修订多次并增加许多新内容,此次再版增加的是计算机专业与你的未来一章。各章附有参考译文,学生可参考这些译文理解原文。书末附有常用的专业术语,以便学生阅读、翻译和写作英文文章时查阅。

本书的第0章内容由杨玲老师编写,第1、2章和第11章由吴岩编写;第3、4章由李秀坤编写;第5、6、9、10章由王开铸编写;第7、8章由刘挺编写。全书由王开铸教授统稿、定稿。

作者深感出版一本高质量的图书,需作者与读者双方面的努力和培植,因此,真诚希望广大读者多提宝贵意见。

作 者

2007年1月

于哈尔滨工业大学

CONTENTS

<i>0</i>	Computer major and your future	(1)
	0.1 Computer science major	(1)
	0.2 Example of application	(3)
	参考译文	
	第0章 计算机专业与你的未来	(6)
	0.1 计算机专业	(6)
	0.2 求职信范例	(7)
<i>1</i>	The 8086 Primer	(10)
	1.1 Overview	(10)
	1.2 8086 Family Architecture	(13)
	1.3 8086 Central Processing Units(CPUs)	(17)
	1.4 Memory and Input/Output(I/O)	(22)
	1.5 8086 Instruction Set	(26)
	参考译文	
	第1章 8086 入门	(32)
	1.1 概述	(32)
	1.2 8086 系列的体系结构	(33)
	1.3 8086 中央处理单元	(35)
	1.4 内存和输入输出(I/O)	(38)

1.5 8086 指令系统	(41)
---------------------	------

2

FORTAN 77	(44)
------------------------	------

2.1 Introduction	(44)
------------------------	------

2.2 Constants, Variables and Expressions	(48)
--	------

2.3 Control Statement and Structured Program	(52)
--	------

2.4 Input and Output	(55)
----------------------------	------

参考译文

第2章 FORTAN 77	(60)
----------------------------	------

2.1 介绍	(60)
--------------	------

2.2 常数、变量和表达式	(62)
---------------------	------

2.3 控制语句和结构化程序	(64)
----------------------	------

2.4 输入和输出	(66)
-----------------	------

3

The C Language	(69)
-----------------------------	------

3.1 History and the Characteristic of C	(69)
---	------

3.2 Computer	(73)
--------------------	------

3.3 Programming and Using C Compilers and C Interpreters	(77)
---	------

3.4 Program Format	(81)
--------------------------	------

3.5 Programming Errors and Modifying Programs	(86)
---	------

参考译文

第3章 C语言	(89)
----------------------	------

3.1 C语言的历史和特点	(89)
---------------------	------

3.2 计算机	(91)
3.3 程序设计和使用 C 编译程序、解释程序	(94)
3.4 程序格式	(96)
3.5 程序设计错误和修改程序	(99)

4

Data Base System (101)

4.1 Introduction	(101)
4.2 Data Base System	(105)
4.3 Three Data Models	(109)
4.4 Logical Design and Physical Design	(111)
4.5 Data Description Languages	(114)

参考译文

第 4 章 数据库系统	(117)
4.1 介绍	(117)
4.2 数据库系统	(119)
4.3 三种数据模型	(121)
4.4 逻辑设计和物理设计	(123)
4.5 数据描述语言	(124)

5

Operating System (126)

5.1 Importance of Operating System	(126)
5.2 Operating System Terminology	(127)
5.3 Operating System Based on the View of Resource Manager	(129)
5.4 Operating System-Process Viewpoint	(132)
5.5 Operating System-Hierarchical and Extended	

Machine View	(134)
--------------------	-------

参考译文

第5章 操作系统	(138)
5.1 操作系统的重要性	(138)
5.2 操作系统的术语	(138)
5.3 基于资源管理观点的操作系统	(139)
5.4 操作系统——进程观点	(141)
5.5 操作系统——层次和扩充机器观点	(142)

6

Compiler Overview	(145)
--------------------------------	--------------

6.1 Scanner	(146)
6.2 Parser	(150)
6.3 Intermediate Code Generator and Optimizer	(154)
6.4 Code Generator and Error Recovery	(159)

参考译文

第6章 编译程序概述	(163)
6.1 扫描程序	(164)
6.2 分析器	(165)
6.3 中间代码生成和优化	(168)
6.4 代码生成器和错误校正	(171)

7

Computer Networks	(174)
--------------------------------	--------------

7.1 Introduction	(174)
7.2 The ISO Reference Model	(179)

参考译文

第7章 计算机网络·····	(183)
7.1 简介·····	(183)
7.2 ISO 参考模型·····	(186)



Multimedia Computing ·····	(190)
-----------------------------------	-------

8.1 Introduction·····	(190)
8.2 Multimedia Computer System I·····	(193)
8.3 Multimedia Computer System II·····	(196)

参考译文

第8章 多媒体计算机技术·····	(199)
8.1 引言·····	(199)
8.2 多媒体计算机系统 I·····	(201)
8.3 多媒体计算机系统 II·····	(203)



Windows and Application ·····	(206)
--------------------------------------	-------

9.1 Using Windows 98——Getting your work done·····	(206)
9.2 Using Windows 98——Getting your work done (continuu)·····	(210)
9.3 Microsoft FronPage 2000·····	(213)

参考译文

第9章 Windows 及其应用·····	(219)
9.1 使用 Windows98——得到你所做的工作·····	(219)
9.2 使用 Windows98——得到你所做的工作(续)·····	(222)
9.3 Microsoft FrontPage 2000·····	(224)

10

Introduction to HTML4 (229)

10.1 Background (229)

10.2 HTML 4 (233)

10.3 Authoring documents with HTML 4 (237)

参考译文第 10 章 超文本标志语言 **HTML4** (239)

10.1 背景 (239)

10.2 HTML4 (241)

10.3 用 HTML4.0 版编写文档 (244)

11

Papers (246)Sample 1 A Temporal Logic for Specification and
Verification of Protocol (246)Sample 2 A Chinese Question-answer Experimental
System Based on the Sense Coherence Among
the SNEs (257)**参考译文**

第 11 章 学术论文 (270)

例文 1 有关协议的说明和验证的一个时序逻辑
..... (270)例文 2 在事件语义网络中基于意义相关的中文
问答实验系统 (279)**Appendix Computer Terminology** (286)



Computer major and your future

0.1 Computer science major

The computer science major is designed for students who have a good background in mathematics and an interest in the theory, practice, art, and science of computer programming. The graduates in computer science, with an educational foundation appropriate for careers in computer software or computer system design, could work as software engineers, application software designers, system programmers, and system engineers.

Computer science, a fascinating and young subject, develops rapidly and attracts many of the young involved in technical innovation, application, operating, research and training of computer users.

With the development of the Internet, the number of person with computer ability is scarce. Computer talents are widely needed, especially in China. The software programmer designers, the hardware making maintenance engineers, and the game designers are in great demand. At the same time, Educational strategy of China, "computer popularization" calls for hundred thousands of trainers of computer technology.

The purpose of the program is to encourage students to acquire com-

puter science and technology, including basic theories, knowledge, and skill of software, hardware, and application, to solve practical problems through designing program, making use of database and Network technology. Meanwhile the program improves outstanding ability of computer application, the capability for educating computer technology and servicing local economic development.

The main courses are C-Language, Data Structure, Computer Assembly Language, Principles of Compiler, Principles of Computer Composition, Operating System, Computer Network, Principles of Database, Software Engineering and so on. (see the appendix)

There are several jobs within information systems that you might like to consider. You can work as a system analyst, Webmaster, database administrator, programmer, network manager, technical writer, and computer trainer.

Title	Description
Systems analyst	Analyzes, designs, and implements information systems
Webmaster	Designs, creates, monitors, and evaluates corporate Web sites
Database administrator	Structures, coordinates, links, and maintains databases
Programmer	Revises existing software and creates new software
Network manager	Monitors existing networks and implements new networks
Technical writer	Creates user manuals and documentation for information systems
Computer trainer	Provides classes and support for computer users

New words and phrases

computer sciences major
software engineer
application software designer
system programmer

计算机科学专业
软件工程师
应用软件设计者
系统程序员

system engineer

系统程序员

theory

理论

practice

实践

program

编程

0.2 Example of application

0.2.1 Computer Science Personal Statement

Computing and its applications have always fascinated me and for this reason I have found my A-level courses extremely interesting. This also has maintained my long-term interest in computer-related careers.

I have studied mathematics, physics and computing to A-level XXX College.

Last year and this year I have been improving my self-learning, and developing many skills with the help of the key skills qualifications. My sincerest desire is to become a computer scientist. Specifically, I am interested in exploring how problems can be modeled and solved using artificial intelligence. I also want to learn about human cognition and machine intelligence. I have been studying the online debate over whether machines will ever become "intelligent" given the current course of research and reading about such issues as whether a machine can acquire "common sense". I have been exploring many different areas within the domain of artificial intelligence (such as neural networks, genetic algorithms, and natural language processing). The bottom line is that I want to be a part of this exciting field.

My other interests include current affairs and sports, such as football, tennis and general fitness. I have been a successful member of the college football team. I have played basketball as an enrichment activity because it was a new sport to me. I also participated in a 5-a-side indoor football tournament at the college. Over the summer I traveled to Russia,

and thoroughly enjoyed exploring a very different part of the world.

In addition to pursuing my academic studies I would like to continue some of these sports at university.

0.2.2 Computer Science Personal Statement

P.O. Box 36

BIIT University

Beijing, China 100000

Over the summer I traveled to Russia, and thoroughly enjoyed exploring a very different part of the world.

Dear Sir/Madam:

Please consider me for your Sales Management Program. My major is Computer Science.

Where is a will, there is a way. If this holds true, I am sure to be as successful in programmer as I am in my college endeavors. My unceasing optimism, self-determination and ability to set goals have allowed me to achieve academic and personal objectives.

Because of my "can do" attitude, programmer will provide the challenge and opportunity to continue my successful history of setting and achieving goals. Please give me the opportunity to elaborate programming. I guarantee I shall provide you corporation with an outstanding programming. Thank you for your attention.

Sincerely

XXXXX

List of courses

- | | |
|-------------------------|----------|
| 1. Computer Basis | 计算机文化基础 |
| 2. Discrete Mathematics | 离散数学 |
| 3. C-Language | C 语言程序设计 |
| 4. Data Structure | 数据结构 |
| 5. Computation Method | 计算方法 |

6. JAVA	JAVA 语言
7. Digital Logic	数字逻辑
8. Simulation Electron circuit	模拟电子电路
9. Computer Assembly Language	汇编语言程序设计
10. Computer Assembly and Maintenance	计算机组装及维修
11. Interface Technology	接口技术
12. Principles of Compiler	编译原理
13. Computer English	计算机专业英语
14. Principles of Computer Composing	计算机组成原理
15. Operating System	计算机操作系统
16. Network Equipment and Technology	网络设备与技术
17. Computer Network	计算机网络
18. Principles of Database	数据库系统原理
19. Formal Languages and Automata	形式语言与自动机
20. Analysis and Design of Algorithms	计算机算法设计与分析
21. Software Engineering	软件工程
22. Secrecy and Security of Computer Information	计算机信息保密与安全
23. Basic of Cryptography	密码学基础
24. Image Processing	图像处理
25. Artificial Intelligence	人工智能
26. Fortran77	
27. HTML Language	HTML 语言
28. Object-Oriented System Analysis and Design	面向对象系统分析与设计
29. Analysis of Unix System	Unix 操作系统分析
30. Software Quality and Testing	软件质量与测试
31. Data Warehouse and OLAP	数据仓库技术与联机分析处理
32. Electronic Commerce	电子商务

33. Distributed Systems and Distributed Processing

分布式系统与分布式处理

34. Parallel Processing and Parallel Programming

并行处理与并行程序设计

35. Advanced Database

高级数据库

36. Technology of Multimedia

多媒体技术

37. Modern Computer Network Technologies

计算机网络新技术

参考译文

第0章 计算机专业与你的未来

0.1 计算机专业

计算机专业是一门为具有良好数学背景,感兴趣于理论、实践、设计和计算机程序编程的一门科学。这个专业的毕业生,具有扎实的专业基础适合从事计算机软件或计算机系统设计,职业包括:软件设计者、系统程序员和系统工程师。

计算机科学是一门充满魅力的年轻学科,它正在以惊人的速度发展着,同时也吸引着大量的年轻人从事与计算机专业相关的技术革新、使用、操作、研究和培训工作。

随着互联网的发展,计算机人才变得异常紧俏。尤其在中国,软件程序设计师、硬件制造维护工程师、游戏设计师在需求量最大。同时,国家“普及计算机”的教育战略,要求合格的计算机专业教师的数量在几十万以上。

培养掌握计算机科学技术,包括硬件、软件应用的基本理论、基础知识和基本技能。比较熟练地进行程序设计和使用数据库、网络技术等解决实际问题,具有良好的计算机应用能力,能够从事计算机技术教育和服务于当地经济建设的计算机应用型专业技术

人才。

开设的主干课程主要有:C 语言程序设计、数据结构、汇编语言程序设计、编译原理、计算机操作系统、计算机网络、数据库系统原理、软件工程(详见附件)。

在就业方向信息系统领域的一些职业可作为参考。他们是:系统分析师、网站管理员、数据库管理员、程序员、网络管理员、计算机创作和计算机培训者。

职业	职业描述
系统分析师	分析、设计、完成信息系统
网站管理员	设计、创建、监控、评估网站
数据库管理员	结构、协调、链接、维护网站
程序员	校对已有的软件、创建新软件
网络管理员	监控网络、创建新的网站
计算机创作	创建用户指南、为信息系统书写文档
计算机培训者	为计算机用户提供课程和技术支持

0.2 求职信范例

1. 计算机专业毕业生自我介绍

计算机及其应用令我着迷,完全出于极大的兴趣,我的各门功课都通过了 A 级(高难度)水平考试。也正因为如此,我意向长期从事计算机相关专业。

我已经学习过了数学、物理和 A 级水平的电子计算课程,在 XXX 大学最高年级。

在去年和今年期间,我一直都在增进我的自学能力发展多方面技能。我真挚的渴望是想成为一名计算机科学家。准确地讲,我感兴趣于利用人工智能探索如何模仿和解决问题。我同样想去学习人类认知和机器智能。我一直都在研究在线讨论机器是否具有“智能”,在给出当前研究的课程和阅读材料的时候,机器能否获