

全国高职高专印刷包装专业教材 ▶▶

# 印刷 专业英语

■ 程常现/主 编  
■ 孙柏林/主 审

印刷工业出版社

全国高职高专印刷包装专业教材

# 印刷专业英语

ENGLISH AND KNOWLEDGE ON GRAPHIC COMMUNICATIONS

主编 程常现

主审 孙柏林

印刷工业出版社

## 内容提要

本书采用英汉对照的方式,内容涉及印刷专业的各个领域,包括印刷发展简史、图像信息传播原理、印前工艺技术、印刷色彩管理、印刷工艺原理及设备、印后加工技术、印刷材料及印刷管理、印刷估价等。书后附录中还收录了常用的印刷专业词汇,便于读者查阅。

本书适合作为高职高专院校印刷包装专业教材,也可作为相关专业在职技术人员提高专业外语水平的学习参考书。

## 图书在版编目(CIP)数据

印刷专业英语 / 程常现编著. —北京:印刷工业出版社, 2006.12

ISBN 7-80000-554-2

I.印... II.程... III.印刷工业—英语 IV.H31

中国版本图书馆CIP数据核字(2006)第122844号

## 印刷专业英语

主 编:程常现                      主 审:孙柏林

责任编辑:魏 欣

出版发行:印刷工业出版社(北京市翠微路2号 邮编:100036)

经 销:各地新华书店

印 刷:河北省高碑店鑫宏源印刷厂

开 本:787mm×1092mm 1/16

字 数:290千字

印 张:14.75

印 数:1~3000

印 次:2007年1月第1版 2007年1月第1次印刷

定 价:36.00元

如发现印装质量问题请与我社发行部联系 发行部电话:010-88275707,88275602

# 出版前言

20世纪80年代以来的20多年时间,在世界印刷技术日新月异的飞速发展浪潮中,中国印刷业无论在技术还是产业层面都取得了长足的进步。桌面出版系统、激光照排、CTP、数码印刷、数字化工作流程等新技术、新设备、新工艺在中国印刷业得到了普及或应用。

印刷产业技术的发展既离不开高等教育的支持,又给高等教育提出了新要求。近20多年时间,我国印刷高等教育与印刷产业一起得到了很大发展,开设印刷专业的院校不断增多,培养的印刷专业人才无论在数量还是质量上都有了很大提高。但印刷产业的发展急需印刷专业教育培养出更多、更优秀的应用型技术管理人才。

教材是教学工作的重要组成部分。印刷工业出版社自成立以来,一直致力于专业教材的出版,与国内主要印刷专业院校建立了长期友好的合作关系。但随着产业技术的发展,原有的印刷专业教材无论在体系上还是内容上都已经落后于产业和专业教育发展的要求。因此,为了更好地服务于印刷包装高等职业教育教学工作,遵照国家对高等职业教育的定位,突出高等职业教育的特点,我社组织了北京印刷学院、上海出版印刷高等专科学校、深圳职业技术学院、安徽新闻出版职业技术学院、天津职业大学、杭州电子科技大学、郑州牧业工程高等专科学校、湖北职业技术学院等主要印刷高职院校的骨干教师编写了“全国高职高专印刷包装专业教材”。

这套教材具有以下优点:

- 实用性、实践性强。该套教材依照高等职业教育的定位,突出高职教育重在强化学生实践能力培养的特点,教材内容在必备的专业基础知识理论和体系的基础上,突出职业岗位的技能要求,所含教材均为高职教育印刷包装专业的必修课,是国内最新的高职高专印刷包装专业教材,能解决当前高等职业教育印刷包装专业教材急需更新的迫切需求。

- 编者队伍实力雄厚。该套教材的编者来自全国主要印刷高职院校,均是各院校最有实力的教授、副教授以及从事教学工作多年的骨干教师,对高职教育的特点和要求十分了解,有丰富的教学、实践以及教材编写经验。

- 覆盖面广。该套教材覆盖面广,从工艺原理到设备操作维护,从印前到印刷、印后,均为高职教育印刷包装专业的必修课,迎合了当前的高职教学需求,为解决当前高等职业教育印刷包装类专业教材的不足而选定。

经过编者和出版社的共同努力,“全国高职高专印刷包装专业教材”的首批教材已经进入出版流程,希望本套教材的出版能为印刷专业人才的培养做出一份贡献。

印刷工业出版社  
2006年12月

## 普通高等教育“十一五”国家级规划教材

印刷专业技能基础·····	魏庆葆	主编
数字印前技术·····	郝清霞	编著
印刷色彩管理·····	田全慧	编著
组版技术·····	翟 铭	编著
印后加工设备及工艺·····	马静君	编著

## 全国高职高专印刷包装专业教材

印刷概论·····	王利婕	主编
印刷原理与工艺·····	何晓辉	主编
数字印刷及直接制版技术·····	胡维友	主编
制版原理与工艺·····	郝晓秀	主编
印刷电工电子学·····	曹少中	主编
印刷色彩学·····	武 兵	主编
胶印机操作与维修·····	严永发	编著
印刷品质检测与控制·····	何晓辉	主编
现代印刷企业管理与法规·····	陈 梅	主编
印刷材料·····	阎素斋	编著
特种印刷技术·····	王德本	主编
印刷专业英语·····	程常现	编著

## CHAPTER 1. INTRODUCTION TO THE GRAPHIC COMMUNICATIONS 第一章 印刷业概览

### 1 Unit 1 The Graphic Communications Industry of Today 今日的印刷工业

1 Its Products Are All Around Us

印刷产品尽在我们的周围

2 Its Purpose Is to Communicate

印刷的目的是传递信息

2 Scope of the Industry

印刷业的涉及范围

3 Scale of the Industry

印刷工业的规模

#### 6 **Supplementary Reading**

6 A Brief Look at Why and How the Industry Developed

印刷工业发展的原因及进程简述

### 9 Unit 2 Basic Printing Methods 基本的印刷方法

10 Relief or Letterpress Printing

凸版印刷

11 Gravure or Intaglio Printing

凹版印刷

12 Planographic or Lithographic Printing

平版印刷

13 Screen Process Printing

丝网印刷

15 Heat Transfer Printing

热转移印刷

15	Ink Jet Printing 喷墨印刷
20	<b>Supplementary Reading</b>
20	New Trends in Media Market 传媒市场的新趋势

## 2

## CHAPTER 2. COMMUNICATING GRAPHICALLY 第二章 图文信息传播

22	<b>Unit 3 The Communication Process and a Communication Model</b> 信息传播过程及其模型
22	The Development of Graphic Communications 图文信息传播的发展
24	The Communication Process 信息传播过程
25	Graphic Communications 图文信息传播
28	<b>Supplementary Reading</b>
28	Graphic Communication Segments 印刷业门类
31	<b>Unit 4 Principles of Design</b> 设计原理
31	What Is Design 什么是设计
31	Principles of Design 设计原理
38	<b>Supplementary Reading</b>
38	Type Measurement and Typography 字形度量及页面排版

## 3

## CHAPTER 3. PREPRESS PROCESS TECHNOLOGY 第三章 印前工艺技术

40	<b>Unit 5 Job Planning and Layout</b> 活件计划及拼版
40	Job Planning 活件计划

41	Preparing the Layout 制作拼版图
43	Multi Page Layouts 多页码书样拼版
46	<b>Supplementary Reading</b>
46	Copy Preparation and Proofreading 文稿准备和校对
48	<b>Unit 6 Use of Digital Cameras and Scanners as the Image Input Devices in the Prepress Workflow</b> <b>印前工艺流程中影像输入设备——数字照相机和扫描仪的应用</b>
48	Digital Photography 数字照相
50	Color Scanner Operator 扫描仪操作人员
51	Color Management Tools Used 所使用的色彩管理工具
54	<b>Supplementary Reading</b>
54	Evaluating Continuous Tone Originals 连续调原稿的评价
57	<b>Unit 7 Plates for Gravure Printing</b> <b>凹印印版</b>
57	Types of Gravure Plates 凹版类型
57	Drypoint Engravings 针刻凹版
58	Metal Etchings 金属蚀刻版
59	Gravure Cylinders 凹版滚筒
62	<b>Supplementary Reading</b>
62	Gravure as an Industry 凹印工业



65	<b>Unit 8 Plates for Lithographic Printing</b>
	<b>平印印版</b>
65	Types of Lithographic Plates
	平印印版种类
66	Direct-Image Plates
	直接描绘印版
66	Presensitized Plates
	预制感光版
68	Diffusion-Transfer Plates
	扩散转印印版
68	Xerographic Plates
	静电复印版
71	<b>Supplementary Reading</b>
71	Computer-to-Plate Technology — The New Trend of Development in Pre-press industry
	CTP直接制版技术 — 印前技术发展的新趋势



## CHAPTER 4. PRINTING

### 第四章 印刷

73	<b>Unit 9 Printing from Lithographic Plates</b>
	<b>平版印刷</b>
73	Offset Duplicators and presses
	小胶印机和大型胶印机
76	Procedures for Operating an Offset Duplicator
	小胶印机的操作步骤
79	<b>Supplementary Reading</b>
79	Press Troubleshooting
	印刷机故障诊断
92	<b>Unit 10 Wide-Web Flexographic Printing Presses</b>
	<b>宽幅卷筒纸柔性版印刷机</b>
92	The Stack Press
	层叠式柔性版印刷机
94	The Central Impression Press
	卫星式柔性版印刷机

94	In-Line Press
	机组式柔性版印刷机
97	<b>Supplementary Reading</b>
97	Advantages of Narrow-Web Flexo Presses
	窄幅卷筒纸柔性版印刷机的优点

# 5

## CHAPTER 5. COLOR PRINTING AND COLOR MANAGEMENT 第五章 彩色印刷及色彩管理

99	<b>Unit 11 Color Printing</b>
	彩色印刷
99	Process Color Printing
	三原色彩色印刷
100	Color Separation
	分色
101	Color Correction
	色彩校正
102	Color Reproduction
	彩色复制
105	<b>Supplementary Reading</b>
105	From Press Proofing to Digital Proofing
	从机器打样到数字打样
107	<b>Unit 12 Introduction to Color Management</b>
	色彩管理概论
107	In Pursuit of Color "Matching"
	追求色彩“匹配”的漫漫征程
108	What Color Management Can Do
	色彩管理的任务是什么
108	Color Profiles
	色彩特征
112	<b>Supplementary Reading</b>
112	The Genie in the Bottle
	魔瓶中的神灵

115	<b>Unit 13 Paper and Papermaking</b>
	纸和造纸
115	Paper
	纸
116	Making Paper by Hand
	手工造纸
117	Paper Manufacturing
	机器造纸
118	Kinds, Sizes, and Weights of Paper
	纸张的种类、尺寸和重量
121	<b>Supplementary Reading</b>
121	Applications of Various Substrates
	不同承印物的应用

124	<b>Unit 14 Ink and Ink Manufacturing</b>
	油墨及其制造
124	Printing Inks
	印刷油墨
125	Ink Manufacturing
	油墨制造
125	Mixing Inks in the Shop
	车间现场调墨
125	Selecting the Right Ink for the Job
	根据活件选择合适的油墨
127	<b>Supplementary Reading</b>
127	Process Ink Analysis
	印刷油墨分析

131	<b>Unit 15 Ways of Finishing and Binding Printed Materials</b>
	印后加工和装订的方法
131	Finishing Printed Materials
	印品后续加工

135	Binding Printed Materials
	印品装订
140	<b>Supplementary Reading</b>
140	Other Finishing Methods
	其他印后加工方法

## 143 **Unit 16 Hand and Machine Bookbinding** 手工和机器装订

143	Producing Case-bound Books
	精装硬壳书籍的生产
153	<b>Supplementary Reading</b>
153	Safety and Health
	安全与健康

# 8

## **CHAPTER 8. CAREERS IN THE GRAPHIC COMMUNICATIONS AND PRINTING MANAGEMENT** 第八章 印刷中的职业及印刷管理

### 156 **Unit 17 Kinds of Jobs Available and How to Prepare for Them** 职业种类以及如何为之做准备

156	Choosing a Career
	选择职业
157	Job Opportunities
	就业机会
159	How to Prepare for a Job in the Graphic Arts
	如何为印刷业中的工作做准备
162	<b>Supplementary Reading</b>
162	Total Quality Management and ISO 9000
	全面质量管理及ISO 9000

### 165 **Unit 18 Printing Trade Customs** 印刷贸易惯例

165	What Are Trade Customs
	什么是印刷贸易惯例
165	Printing Trade Customs
	印刷贸易惯例

170	<b>Supplementary Reading</b>
170	Copyright Laws 版权法
173	<b>Unit 19 Production Management</b> <b>生产管理</b>
174	Selecting a Proper Production Manager 选择合适的生产经理
174	Duties of Production Manager 生产经理的职责
178	<b>Supplementary Reading</b>
178	The Schedule Board 生产调度板
180	<b>Unit 20 Printing Estimating Fundamentals (1)</b> <b>印刷估价学基础(1)</b>
180	Introduction to Cost Estimating for Printing 印刷加工成本估价概述
181	Standard Production Time and Budgeted Hour Cost Rates 标准生产工时及预定小时成本率
182	Rules for the Working Printing Estimator 印刷估价人员的工作准则
186	<b>Supplementary Reading</b>
186	Interrelationship of Cost Estimating and Other Plant Duties 估价与其他工厂职责的内在关系
188	<b>Unit 21 Printing Estimating Fundamentals (2)</b> <b>印刷估价学基础(2)</b>
188	Additional Methods Used to Estimate Printing 印刷估价所用的其他方法
195	<b>Supplementary Reading</b>
195	What the Estimator Needs to Know 估价人员需要具备的知识
197	<b>APPENDIX : GLOSSARY OF MOST USED GRAPHIC COMMUNICATIONS TERMS</b> <b>常用印刷术语汇总表</b>

# INTRODUCTION TO THE GRAPHIC COMMUNICATIONS<sup>①</sup>

**Unit 1****THE GRAPHIC COMMUNICATIONS INDUSTRY OF TODAY****Objectives**

When you have completed this unit, you will be able to:

1. Identify at least ten products produced in their entirety by the graphic arts industry.
2. Identify at least nine products made by other industries with the help of the graphic arts industry.
3. Explain why products are printed.
4. Define the terms communication and graphic communication.
5. List at least ten business enterprises and/or occupations that are part of the graphic arts industry.
6. Describe the services that are provided by a book publishing company.
7. Explain why the graphic arts industry is one of the most important industries in the world.

**Terms to Know<sup>②</sup>**

Here are some of the words you will need to understand before reading this unit. If the meaning of a word is not clear to you, look it up in the Glossary in the back of this book.

message

graphic communication

publisher

communication

compositor

artist

**ITS PRODUCTS ARE ALL AROUND US**

When we think about an industry, we generally think in terms of its major product or products. The steel industry produces steel and the automotive industry, automobiles. But what does

① Graphic communications, graphic arts 与 printing 中文都译作“印刷”，这不仅说明了某种情况下英文术语的多变性，同时也反映了印刷科技发展的不同历史阶段。

② Terms to know 下面的一段话每节中都相同，且易理解，因此在译文部分未译出。



the graphic arts industry produce? The answer is things that are printed or related to the printing business, such as paper, inks, films or bindings.

Printed products are all around us. Books and magazines, newspapers and catalogs, maps and charts, posters and brochures, stamps and paper money are some examples of products produced in their entirety by the graphic arts industry.

Printing plays a key role in the generation of products produced by other industries as well. For example, textiles, wallpaper, toothpaste tubes, soft drink cans, candy wrappers, oranges and baseballs all contain printed images. Even the circuits used for electronic devices such as calculators and television sets are printed.

When we use the term graphic communications as an alternative of printing or graphic arts, we also extend the product scope of printing industry. Satellite communication of documents, computer generated images, monitor display of words, etc., are considered as a part of graphic communications products.

The list of products in whole or in part by the graphic communications industry is almost endless. Think about it. Printing is all around us.

## **ITS PURPOSE IS TO COMMUNICATE**

Most printing is done in order to convey a message from one person or group of people to another. Newspapers, books, magazines, catalogs, greeting cards, labels, and business forms are all examples of printed products used for this purpose. They all contain messages. When a message is sent by one person and received by another, communication takes place.

Printed messages are graphic or visual in form. They are made up of symbols, drawings, and photographs. Communication through the use of printed images is called graphic communication. The primary purpose of the graphic arts industry, then, is to produce products that communicate graphically.

## **SCOPE OF THE INDUSTRY**

This book is a product of the graphic communications industry. Several individuals and business enterprises played an important role in its creation. Together these individuals and enterprises represent the scope of the industry. So let's now take a brief look at how this book was produced.

The main purpose of this book is to help you learn scientific English on graphic communications. It deals with the organization, tools, materials, and processes of the graphic communications industry. The content, or message, of this book was developed by the author after consultation with the publisher.

The publisher provided design and editorial assistance and managed the production and sale of the book.

Type had to be set by the workers that specialize in type composition. They are called

compositors or typesetters. Illustrations were gathered. Artists created drawings and photographers made photographs.

The assembled type, artwork, and photographs were sent to a printer, who made plates, and printed the pages. The printer then sent the pages to a bindery where they were folded, sewn together, trimmed, and encased in a cover.

The author, editor, publisher, compositor, artist, photographer, printer, and binder all played an important role in the creation of this book. Supplies such as paper and ink products and printing equipment were needed as well. The graphic communications industry encompasses a wide range of occupations, activities, and enterprises.

## SCALE OF THE INDUSTRY

Graphic communications industry is one of the most important industries in the world. Like food, clothing, shelter and transportation, graphic communications are also considered as a basic necessity of human life. The industry has the largest number of establishments in any manufacturing industries though most of its firms are small- and medium- sized. Its companies are located throughout the world especially in and around areas of high population and industrial development.

In terms of the value of all products and services sold, the number of persons employed and the annual payroll paid by the industry, it has achieved tremendous expansion in the past decades. As world's economy grows, it is expected to have still greater development in the years to come.

## TEST YOUR KNOWLEDGE

1. List ten items produced entirely by the graphic communications industry.
2. Identify nine products that contain printed images and are produced by industries other than the graphic communications industry.
3. Explain the primary reason for producing newspapers, books, magazines, and almost all other printed products.
4. Define the terms communication and graphic communication.
5. List ten business enterprises and/or occupations that are part of the graphic communications industry.
6. Describe the role of a publishing company in creating, producing, and selling a textbook.
7. What is the reason that the graphic communications industry is one of the most important industries in the world?



## 第1节 今日的印刷工业

### 学习提示:

#### 学完本节后, 你应该能够:

1. 至少认出10种从整体上说是由印刷工业生产的产品。
2. 至少认出9种由其他工业部门生产, 印刷工业进行辅助加工的产品。
3. 解释为什么产品要进行印刷。
4. 定义Communication (信息传播) 和 Graphic Communication (图文信息传播) 两个术语。
5. 列出至少10种属于印刷工业部门的商业企业或职业。
6. 描述书籍出版公司提供的业务。
7. 解释为什么印刷工业是世界上最重要的工业门类之一。

### 印刷产品尽在我们的周围

当我们想到一种工业时, 我们常常想到它的一种或几种产品。炼钢工业生产钢, 汽车制造业生产汽车。而印刷业生产什么呢? 答案是印刷品及有关印刷业的东西, 例如纸张、油墨、胶片和装订材料。

印刷产品尽在我们周围。书和杂志、报纸和目录册、地图和图表、广告和小册子、邮票和纸币就是由印刷业全部完成的产品中的一些例子。

印刷在其他工业的产品生产中也起了重要的作用, 例如, 纺织品、墙纸、牙膏皮、饮料罐、糖纸、橘子和棒球都带有印刷的图像, 甚至用于电器如电子计算器和电视机的电路板也是印刷的。

在我们用graphic communications替代printing或graphic arts时, 我们也扩大了印刷业的产品范围。文件的卫星传送、计算机生成图像、文字在显示器上显示等, 都可看成印刷产品的一部分。

由印刷业全部或部分完成的产品的例子几乎是无穷无尽的, 想一下, 印刷品尽在我们的周围。

### 印刷的目的是传递信息

大多数印刷是为了在人们之间传递信息<sup>①</sup>。报纸、书籍、杂志、目录册、贺卡、标

① Most printing is done in order to convey a message from one person or group of people to another在这里译为“大多数印刷品是为了在人们之间传递信息”, 其中, “from one person or group of people to another”, 有些人译为“从一个或一群人到另一个人或另一群人”则显得累赘。