

POSTGRADUATE ENGLISH

*For full - Time Professional
Master's Degree Candidates*



全 日 制 专 业 学 位 硕 士 英 语

主编 徐申生 高钦
副主编 柳缤 许涛

(非英语专业)



同济大学出版社
TONGJI UNIVERSITY PRESS

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内容提要

本书是专门为全日制专业学位硕士英语课程而编写的标准通用教材,适用非英语专业的各工程类和跨文理类的专业。本教材编写的基本思想立足点是:教育与教学相结合,教学与训练相结合,训练与目标相结合;充分发挥课程与教材在培养人才上的作用。在选材上,抓住历经时间检验的深刻题材,例如,大学肩负的使命、工程教育的核心基础、励志的人生价值、创新的过程要素等。在文化倡导上,注入普遍的人文素养,例如私人书信与自由想象等。在语言学习上,涵盖英语语言的议论文的推理、说明文的严谨与描述文的想象,让学习者享受和体会英语语言的博、深、美。

本书各章均配有完备的各种类型的练习,书面的、口头的;课堂的、课后的;单人的、小组的等,充分便利教师和学生使用。另外,本书还备有答案,以及电子教案,将极大地提升教师备课的质量与效率。

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出版说明

全日制专业学位教育是我国培养专业人才的重要途径和方向,是我国研究生教育不可缺少的组成部分,也是世界各国为培养应用型专门人才所采用的主要方式。全日制专业学位硕士教育的对象主要是具有理工科专业知识背景的本科毕业生,含各类文理兼通学科的本科毕业生。全日制专业学位硕士教育的目标是培养具有国家与国际专业等级标准的中高级技术人才,诸如工程师、建筑师、医师、经济师、设计师等。

根据专业学位教育和职业岗位要求,在全球化的背景下,专业工作者应具有掌握第二门语言(英语)的能力和熟练使用英语的水平。从我国研究生英语教育的实际和外语教育的性质出发,全日制专业学位英语教程性质上是一门必修的基础课程和人文通识课程。

本书是专门为全日制专业学位硕士英语课程编写的通用教材,适用非英语专业的各工程类和跨文理类专业。本教材编写的基本思想立足点和创新点是:教育与教学相结合,教学与训练相结合,训练要求与训练目标相结合;充分发挥课程与教材在培养人才上的作用。在选材上,抓住深远、赋予内涵的题材,例如大学肩负的使命、工程教育的核心基础、励志的人生价值、创新的过程要素等。从文化倡导上,注入普遍的人文素养的培养,例如私人书信与自由想象等。从语言学习上,涵盖英语语言的议论文的推理、说明文的严谨与描述文的想象,让学习者享受和体会英语语言的博、深、美。

教学训练是课程编制的关键内容。在训练的方法和组织上,本书的创新点是:一、面向所有专业的一般技能需求;二、深化英语的听说读写应用。为此我们找出各专业共同的职业特征,将语言技能训练落实到具体科目上:自述推荐、业务报告、文件设计、职场面试、E-mail 办公、PPT 陈述与议论。在深化提高上,特别将口语训练的要求同社会实际需要相结合,以科学会话为主题,讨论替代能源、电子媒介、科学方法、人类工程、职业道德等当前共同关心的议题,全面提高专业会话的强度要求。此外,课程设计上还增加了针对课文内容的每课一练的课堂前奏活动——Seminar and Demonstration,增强对课文的理解和对自我的阐释发挥。

教学目标的建立是对课程质量必要的监督和检查。课程的语言部分以国家英语 PETS-5 级考试为听说读写的考核量化目标,其中,本书说和写的强度要求超过 PETS-5 的指标要求,听和读的强度与规格完全按照 PETS-5 的范式设计。本课程除期中期末考试成绩外,学生参加 PTES-5 考试的成绩可作为课程教学质量与效果的检验指标之一。

为激发学生的自主学习精神和创造力,提倡多元的教学理念,提高学习效果,课程还特意增加了由学生主导的第七单元——拾遗(课时 2~4 节),尝试建立学生课堂,倡导和鼓励学生自主讲学、自编课件、自我体验、自由评价。

本书严格按照课程设置的课时要求编排内容(4 课时×18 周,含期中、期末笔试及口试),并把听说与读写的教学训练融为一体、互为渗透,既精简了课程课时,减轻了学生负担,又做到了一书在手,全面综合。在教学要求上,课程保留了使用网络视频材料的空间

与时间,以充实教材内容。本课程秉持课内课后相结合的教学原则,严格规定每单元的课堂活动与课后作业,如信息检索、实验室报告、个人陈述写作等。此外,从学生的实际学习任务出发,本书在附录部分,补充了英语口语 700 句与电邮书信英文常用句式的内容,以供诵读与备用。

本教材的编著者都是长期从事硕士生与博士生英语教学与研究的教师,具有丰富的课堂实践经验及课程编制的基础理论,均讲授过多门课程,其中有“国际会议英语交流”、“英语论文写作与发表”、“英文文献阅读与翻译”、“高级写作”、“高级口语”、“研究生综合英语”、“商务英语”、“视听说”等。本课程设计和教材编写的许多方面来自教学的体验,并在细节策划上广泛听取了学生对课程教材的具体要求。本书编著的具体分工如下:徐申生负责教材的思路设计、选材、课文注释、课文理解、职业技能训练;高钦负责全稿审阅、编排、词汇与专用名词注释、听力训练与测试;柳宾负责口语训练部分:科学会话、口语技巧与测试;许涛负责阅读训练部分:填词、泛读与快读。全书 1~7 课课文的正文题图由同济大学传播与艺术学院 2010 级专业硕士研究生林雅创作完成。

在本书在编创过程中,许多部门和个人为之做出了许多贡献。其中,同济大学研究生院与外国语学院公共英语教学部给予了多方帮助;公共英语研究生教研室的老师丁美芳、季晓艳、蒋晓芹、赵琪除担任课程的具体教学工作外,还对教材的编写提出了宝贵意见;同济大学美籍教师鲍尔先生给予了指导;同济大学传播与艺术学院 2010 级专业硕士研究生林雅对题图进行了创作;同济大学出版社张智中编辑为本书的出版做了大量细致的编审工作。编者在此谨致衷心的感谢。

为方便教学,本书有课堂教学设计方案与 PPT 教学课件可供参考。

编者

2011 年 5 月

Preface

English for Full Time Postgraduate Professional Master's Degree Candidates provides a practical approach to furthering the learning of English at an advanced level for postgraduate students. It is compiled and edited on a long-cherished idea that an English course can be a facility for training and education as well, and a provision for both self-learning and class instruction. Our primary purpose in preparing the textbook is to help students enhance the application of the English language as a second language. It is especially designed, for those who take postgraduate programs in full school time with the aim to become professional, especially in engineering and related disciplines.

Significant and imperative issues for texts. We persist with the selection of some thought-provoking issues for learners to learn and practice: the Mission of the University—Unit One, Engineering Education—Unit Two, and Ambitious or Otherwise—Unit Four, the Shape of Making—Unit Six. They will survive us and stand ever with human existence through which people could be educated and enlightened in reason and discussion. Moreover, such values as personal letters and free imagination are encouraged in the engagement in our personal life through the course. The book and its established course are impressed in the following features.

Vocational preparations through classroom activities. We design this course with a definite aim to prepare students to be an educated person of thoughts and reflection, to be an advanced learner using English as a second language, and to be a constructive, ambitious innovator for work. As many activities as seminar, demonstration, speaking devices, scientific talks, and professional skills are arranged for students.

Comprehensive drilling of English. Competent students are more desired by companies and organizations, especially if they are able to use English fluently in the job. Thus, the course features a goal in terms of competence and real ability, but great expectations from all learners can only be accomplished by strict drilling and effective approaches. To begin with, the course book is to be, in the sense of language, a valuable reader, but with great attention to lifting the student's application of English through practice to higher levels of reading, writing, speaking, and listening of professionals. For example, reading aloud with comprehension, translation, writing in exposition and argument, e-mailing for office communication,

talking at desk, listening as a task, and reading for pleasure are all we depend on largely.

Correlative objectives of assessment. The favourable outcome of instruction is the core of a successful course. The problem with many courses of learning English language, today, however, is partly from the uncertain results, because they are not properly evaluated with some available standards. Our course establishes the connection with the PETS (Public English Test System of the nation) Band—5, the highest level, for the evaluation of the course's objectives and outcome, by way of its exercise patterns and assessment standards.

ACKNOWLEDGMENTS. *Nothing more can give the teachers a chance to be dedicated to teaching than a textbook and its course. We would like to express our appreciation for fair use here to all the names of authors listed and unlisted of all passages of seven units including the materials and exercises in the part of Drilling the Class and our thanks to Google search, Wikipedia, the free encyclopedia, and any other educational resources of the Internet websites for their insightful expressions and inspiring use of English.*

To the Student

We were compiling this book with the two questions lingering about in our mind which were probably the ones you might have raised to you all the way from the first day you entered the university up to today you take postgraduate courses for a professional master degree. To first question our answer is surely yes: is English as a foreign language still necessary for us to keep on learning after a good many years? In modern ways across the country, no one can get along in jobs without English, however much we've endured it. To its greatest effect, a foreign language must constantly be touched through whether learning or application. The answer to the second question is going to rely on efforts of both students and teachers: can the text and the course make learning experience both interesting and fruitful? Yes, definitely, if we make unceasing efforts. That is also the reason why we contribute the course to you.

It is therefore prepared for not just an examination of unassociated words, sentences and paragraphs, but a drive to your advances in English language and applications. Each unit consists of two parts, Understanding the Text and Drilling the Language, designed to lift English. The first is aimed at the enlargement of your views of the human society through critical reading, thinking and talking; the second is intended to help you choose, or begin, or build a career with definitive objectives in drilling the skills of reading, writing, speaking, and listening, which can be evaluated by PETS (Public English Test System), a national test.

Now that you begin your studies, we would like to offer you a few suggestions as to how the book is used with expectation and how the success is made at an advanced level.

Read the book critically. Critical reading is reading carefully with full comprehension of the passage that involves every word, sentence, paragraph and discourse. It is no other than critical reading that is the key to the gate of the structural knowledge of the English language; you can expect no more than from critical reading. The more you read, and carefully, the more progress you gain. Besides our coursebook, for example, an English version about related engineering discipline will expectantly be rewarding if such reading comes into your favor. You are also encouraged to examine your own comprehension, using the means of orally asking and answering to one another: Comprehension Questions, Discussion

Questions, and Composition Questions. Based on the preparation, you can then enter into the class at any occasion. This is just a way to turn the time to yours over the class.

Be serious-minded. Have drills on all the exercise parts of **Speaking Devices, Scientific Talk, Professional Skills, Active Listening, Extensive Reading and Use of English Activities**. Never miss any section, because they will enhance you to the higher level of your extended expectation. By means of this connection with fitting goals, some of which are from the National Test, you can assess both you and the course in a more accurate measure.

Attend all lessons. No teacher would like to see their students miss the class, lectures and instructions, nor is the course designed for the placement of attendance, because insights and interaction often occur in the classroom. You will have new ideas and views from the class, you will make progress together with others.

Take notes. Note taking is more of a request, and even is more of competence. By taking notes, you will learn to follow the instruction, move the mind, and arrange the material in order. Rewardingly, your note-book could help you with key points of the course to complete the study.

Work out problems. In the book, such regular exercises as vocabulary exercises, sentence translation appear no more as before. But still there are many problems and questions to be settled, for example, in the part of Understanding the Text to which you need draw your attention one after another. Try to answer all questions in single or in pair or in group, do paper work regularly, and solve problems with care.

Think and talk in English. The most effective approach to learning English is to use it in thinking and talking. Don't hesitate to utter your voice because you are afraid of making mistakes. Being able to talk in English involves two steps for a person who uses it: enunciate correctly sounds of English words so that listeners can response to you; think in the way this language is structured as rule and usage. If you didn't try it before, do it now.

Write two great pieces. We assume that the completion of two writing tasks—PERSONAL STATEMENT; CHOOSING SCIENCE FOR MY CAREER—is an accomplishment and also, a good evaluation of the course. However, it is not the same matter between a piece of homework and a piece of critical writing. Please study the instructions of each lesson carefully and go next after them. Write, put aside, revise, even rewrite until both you and the teacher are content with the work.

Manage the classroom by yourself. We often hear people talking about creation now; but, what shall we do when it comes to our teaching and learning over the class? The course book leaves a special room—Unit Seven—for students who can decide what to teach and how to learn, which means they take the role of a teacher at the class, while the teacher plays the role of an observer. It must be a great day to be a teacher for yourself.

At length, we would like to mention again to you the importance of the English language, as much the same as any practical craftsmanship, by using what Lafacdio Hearn (日籍希腊作家) in the letter to Otani a hundred years ago reminded him: “Hundreds of students leave the university without any real profession, and without any practical ability to make themselves useful. All cannot become teachers, or lawyers, or clerks. They become officials, or they do nothing of any consequence. Their whole education has been of no real use to them, because it has not been practical. Men can succeed in life only by their ability to do something, and three fourths of the university students can do nothing. Their education has been only ornamental.” Work a profession in engineering or science, prepare yourself with anything necessary, including English as a second language, and you will be pleased with the future.

To the Teacher

Different from prevalent textbooks of teaching English as a foreign language in both the design ideas and material arrangements, this text, sticking to the two lines of autonomous learning and effective training, aims to assist an instructor in the establishment of the productive student-centered classroom. It consists of a part of an informed reader and another part of intensive drills of every searchable page. To its effect we'd like to give suggestions to the teacher on creative use of this text.

To the instructor. What is the core in your teaching of a foreign language? Why do many of you make an effort to set up a student-centered classroom? Why do most of you rely on a variety of teaching aids? It is to make every student in move, running the mind, opening the mouth, turning up and around. It is no more correct than to motivate a person who is learning to acquire an intricate skill. Thus, you are actually a facilitator, a leader and an artist. The role of a facilitator is organizing activities and managing the classroom; the role of a leader is guiding students to their expectations; the role of an artist is delivering the maximum of information and ideas and skills from lessons with the minimum amount of time over the class. Therefore, (1) you are strongly recommended to draw your attention to each unit and lead the class to critical reading. (2) you should keep using English as the working language all the way through, then setting an example for students to be immersed in it. (3) you are advocated for working together with students to complete the writing tasks, with comments and corrections, not just as a homework assignment. (4) you'd better leave your assignment and arrangement with the students on the first day, for example, writing tasks, PPT-based oral presentation, class seminars and etc. (5) you shall involve the students and yourself in the section of Drilling the Class in an effective way.

By the way, some users of the text might be questioning how a text with no space for specific technological frontiers of scientific subjects can be beneficial to professional advanced learners. We don't believe, to begin with, a volume can bear any possibility to meet the needs for whole engineering and sciences. We therefore provide learners with such fundamental issues of university education, engineering education, ambition, and creation that professionals should face, and with vocational preparations, positive human relations, and job hunting that every student should

experience. As for Nature Education and Science Education, many coms of Nature, Science, Scientific American, Discovery, Wikipedia, the free encyclopedia and other engineering proper websites are immensely helpful.

To the teaching planner. The course is arranged in 4 periods per week, scheduled for one term of 18 teaching weeks, including two weeks for the mid-term test and the final course or achievement test, one week for job interview simulation, one week for students' self-class, and two weeks for class optional activities. (2weeks \times 6units = 12weeks, 1week/unit-7 = 1week, 2weeks/tests = 2weeks, 1week/job interview = 1week, 2weeks/optional activities = 2weeks, plus all = 18weeks.) A student's performance or the achievement should be evaluated and scored on the basis of the mid-term examination, the completion of two pieces of writing, the recorded attendance rate and performance, and the final paper test.

Table of Contents

出版说明

Preface

To the Student

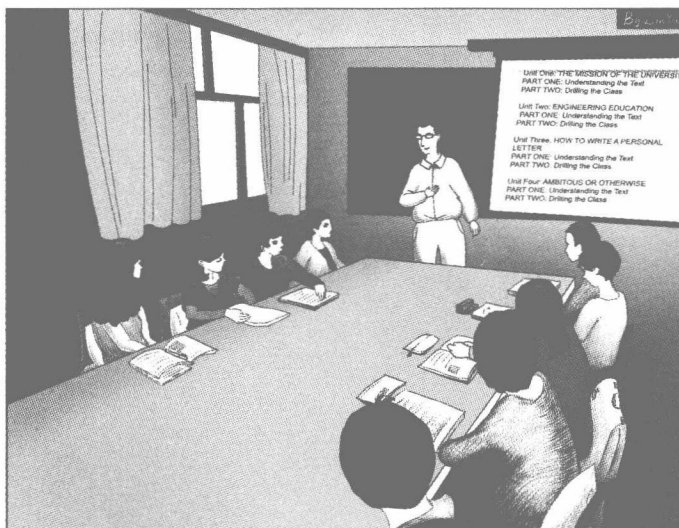
To the Teacher

Unit One	THE MISSION OF THE UNIVERSITY	大学的使命	1
SECTION ONE	Understanding the Text		16
SECTION TWO	Drilling the Class		17
Unit Two	ENGINEERING EDUCATION	工程教育	37
SECTION ONE	Understanding the Text		51
SECTION TWO	Drilling the Class		52
Unit Three	HOW TO WRITE A PERSONAL LETTER	私人书信	68
SECTION ONE	Understanding the Text		80
SECTION TWO	Drilling the Class		82
Unit Four	AMBITIOUS OR OTHERWISE	心高志远……	98
SECTION ONE	Understanding the Text		112
SECTION TWO	Drilling the Class		113
Unit Five	THE INSTRUCTION MANUAL	操作守则	130
SECTION ONE	Understanding the Text		141
SECTION TWO	Drilling the Class		143
Unit Six	THE SHAPE OF MAKING	创新之举	159
SECTION ONE	Understanding the Text		176
SECTION TWO	Drilling the Class		178
Unit Seven	ADDENDUMS	拾遗	194
Appendices			
附录一	English 700		200
附录二	Email Letter Writing		219
Keys to exercises			223

Unit One

The Mission of the University

Section One	Understanding the Text	16
	Part One Comprehension Questions	16
	Part Two Discussion Questions	17
	Part Three Composition Questions	17
Section Two	Drilling the Class	17
	Part One Speaking Devices	17
	Part Two Scientific Talk	18
	Part Three Professional Skills	19
	Part Four Use of English	21
	Part Five Extensive Reading	22
	Part Six Active Listening	33



Prelude

Whether we be teachers or students, in the present university's atmosphere, we would have to reflect us, wondering why we stay in the classroom at the campus, lecturing or listening for many years, just to make a living or develop a career. As a matter of fact, we are not always aware of what we are doing, though seemingly knowing all the world around; "what a university is" is some confusion to human understanding. The essay — the mission of the university — is a contribution to a university education in which we hear a deep voice: "A university is an educational community, a place for teaching and learning. Everything else is secondary, irrelevant, or out of place. Education is also an enriching, a deepening of the personality, a stimulated curiosity, and a certain love, even reverence, for learning." Do you agree? What is your idea? Share your opinions with others at this very place called a university.

A CLASS SEMINAR

Directions: The class seminar is a single, short session devoted to presentations and discussions on a specialized topic around the lesson at an academic level. Participate in the meeting in either group or class to begin your study on the topic as a prelude — The History of Chinese Modern Universities/a Chinese modern university/Tongji University, etc.



Unit One

The Mission of the University 大学的使命

By Robert Solomon and Jon Solomon

Robert Solomon and Jon Solomon are brothers and professors, Robert in the Philosophy Department at the University of Texas, and Jon in the Classics Department at the University of Arizona. This selection is from their book “Up the University: Recreating Higher Education in America,” published by Addison-Wesley in 1993, here with extraction by the editor.

What Is a University?

What is a university? It is an educational community, a place for teaching and learning. Everything else is **secondary**, irrelevant, or **out of place**. Of course, an education includes learning about life, and life is not learned **in a vacuum**. And so it is essential that the life of the university be as rich and varied as possible. The university should provide a rich social life, filled with friendship, romance, and diversity. A university education should assist students in the pursuit of a career or profession. The university should be an **intrinsic** part of the surrounding community. And because students learn best in an **enlightened** learning environment,^[1] faculty research,^[2] whatever other aims it may serve, is essential to the university as well. It provides the atmosphere in which learning is inspired by example and not imposed by authority.

The problem is that these essential but still secondary features of the university^[3] have become ends in themselves.^[4] For most American high school students, acceptance into one or another university is the **definitive** event^[5] of their adult social lives and careers, a place to establish lifelong friendships, enter society, find business associates, and form political **alliances**. Not surprisingly, many students (with the **blessing** of their parents^[6]) choose a university primarily on the basis of the “**contacts**” it will provide or view the university primarily as a **dating service**.^[7] The university has become, in the minds of many, a training center, whose primary if not sole aim is to prepare students for a career. Doctors, lawyers, engineers, nurses, and architects are tested, trained, and **accredited** or **eliminated** from the career path they seek to follow. It is no longer a well-kept secret that the purpose of our best MBA programs is to act as **super-employment agencies** for corporations rather than to “teach business skills” **as such**,^[8] which are, **for the most part**, learned better **on the job**, in the particular context, and according to the particular demands and expectations of a particular

25 industry or company. The university sets the standards, carries on the traditions, defines the quality, and excludes the **quacks**,^[9] but in the pursuit of professional **credentials**, the idea of education is often **laid by the wayside**. . .

A university cannot be a “great” university without a **dynamic** research program^[10] and an industrious, productive **professoriate**. But much of the research on campus today is only
30 secondarily the pursuit of knowledge. It is the search for status, for **notoriety**.^[11] Much of it is sheer junk, although we know that everyone thinks of their own interests as utterly important and essential to the future of the world. Or research is primarily a business, often hidden off campus^[12] and irrelevant to the education that has already been paid for by the taxpayers and the students’ tuition. Much of the budget and resources as well as the energy of university
35 administrators and professors is increasingly structured around research and devoted to the pursuit of **prestigious** research grants,^[13] which are said to help finance the operation and growth of the university. The university has become a major corporation, its eye on the **bottom line**,^[14] its ambition to grow and grow and grow. . .

40 *By the late nineteenth century, the advancement of knowledge through research had **taken firm root** in American higher education, and colonial college values, which emphasized teaching undergraduates, began to **lose ground**. . . Indeed, the founders of Johns Hopkins University considered restricting study on that campus to the graduate level only. In the end, undergraduate education proved to be necessary, but the compromise was reluctantly made,^[15] and for many
45 professors, class and lecture work became almost **incidental**.*

— Ernest L. Boyer, *The Carnegie Report: Scholarship Reconsidered*

The university is an investment in a culture, in **continuity**^[16] and intelligence. It is not primarily a financial investment, and the rewards are not necessarily financial either. There is
50 more than one way for a community to become “rich”.

What Is an Education?

The Japanese word for teacher means roughly “he who pours”, but if that sounds offensive to students, we should think of some of our own **metaphors** of passivity, of students as empty
55 vessels, sponges, and raw materials. But the real problem here is not only the **reduction** of the active, grasping mind^[17] and restless personality of the students to a **static**, passive **receptacle**. It is also the misunderstanding about what it is that gets learned.^[18]

For a few thousand years, philosophers and **sages** have distinguished between information, knowledge, and wisdom. Information has simply to do with input and output, with memory and
60 recognition. One does not get an education by memorizing the *Denver telephone directory*, even if it is filled with useful information. It would not be much different if the book were *Gray’s Anatomy* or the **chronology** of English kings. Nor would information become an education if one