

In the Name of God



Technical English for Chemical Engineers (TECE)

Minoo Alemi (Ph.D.)

Associate Professor (IAU), Islamic Azad University
West Tehran Branch

Seyed Jaleedin Shayegan (Ph.D.)

Full Professor (SUT), Sharif University of Technology

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Email: press@um.ac.ir

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Preface

Academic textbooks vividly typify an important pedagogic genre in academic and professional settings. Additionally, academic textbooks contain a tremendous influence on the academic milieu and serve as means to disseminate facts and developments in different disciplines. They can open up new avenues, and produce appealing new themes that merit a big effort. Academic textbooks usually address multiple audiences so that they link themselves to their disciplines in interesting ways, and underscore the relationship between disciplinary discourses and related social practices (Hyland, 2000).

Local educational institutions produce in-house English for Specific Purpose (ESP) materials according to the curriculum policies designated and developed by the Ministry of Higher Education in Iran. To this end, this book aims to be used in the Iranian setting at the tertiary level for undergraduate students majoring in Chemical Engineering. Moreover, the style of English usage in this ESP textbook is American.

The features of TECE are as follows:

Presentation

The field of Chemical Engineering and English is too vast to have everything in one book, but it has a special focus on reading and vocabulary exercises. Examining just the presentation of the language does not seem adequate since investigating how the materials are sequenced and linked to previous texts, activities, and topics seems inevitable. In this ESP textbook, the units are comprehensive since they cover almost all chemical engineering themes and are cross-referenced. To grasp meaning amply within a particular unit, students need to review or preview the previous units. That is to say, the content recycles continuously.

Contents

Regarding the content of the textbook, it has both thematic organizations in which the topics are relevant and includes sufficient treatment of the target language areas necessary for the students. The principle organizing approach of this textbook is theme-based. In addition, the content is international and non-culture specific, which means it can be tailored much more easily. Concerning the frequency of vocabulary types, a tripartite classification of vocabulary, i.e. jargon, technical, and core, proposed by Chung and Nation (2003) was adopted in this book. The major reason found in the history of research for claiming the legitimacy of ESP has been the

application of specific vocabulary. This claim can be verified by examining texts, which are of a specific nature and contain vocabulary related to the discipline in question, viz, chemical engineering.

Methodology

With regard to methodology, TECE is learning -centered and activity-based which are characteristics of special- purpose language teaching in ESP. It can be claimed the methodology used in this book is communication- oriented.

Reading Type

It contains sophisticated and knowledge-based texts and articles that are adapted from various resources. Nearly every unit discusses specific aspects of chemical engineering.

Authenticity

With regard to authenticity, ESP textbooks are expected to be selected from real-life texts that are not necessarily produced for language teaching. Tasks should encourage students to process texts as they may occur in the real world.

The material offers some practical information that facilitates more effective communication in the workplace. It can also support the development of instructional materials and/or courses for non-native English speakers seeking jobs in chemical engineering abroad. It copes at length with the target domains documented in the needs analysis and addresses the relevance of their significance for students' future job requirements. This book is recommended for a two-credit course at the sophomore or junior level Chemical Engineering students.

It is hoped that the present book opens up important avenues for the teaching of chemical engineering as an ESP course in Iran. Like any other academic work, this book has surely some flaws and the writers will appreciate and welcome the students', instructors', and materials developers' constructive suggestions.

Minoo Alemi, Ph.D.

Associate Professor of Applied Linguistics (IAU, West Tehran Branch)

minoalemi2000@yahoo.com

Seyed Jalaledin Shayegan, Ph.D.

Full Professor of Chemical Engineering (Sharif University of Technology)

shayegan@sharif.edu

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