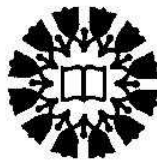


English for the Students of Engineering

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Tehran
2016/1394



The Organization for Researching and Composing
University Textbooks in the Humanities (SAMT)
The Center for Research and Development in Humanities

English for the Students of Engineering/ Mahmoodreza Atai...[et al].

عنوان و نام پدیدآور: مشخصات نشر: تهران: سازمان مطالعه و تدوین کتب علوم انسانی دانشگاهها (سمت)، مرکز تحقیق و توسعه علوم انسانی، ۲۰۱۶ م = ۱۳۹۴.
مشخصات ظاهری: ده، ۲۲۱ ص.: مصور (رنگی).
فروست: «سمت»: ۱۹۳۹. زبانهای خارجی: ۱۷۷.
شابک: ۹۷۸-۶۰۰-۰۲-۰۲۲۶-۲-۱۶۵۰۰۰ ریال.
وضعیت فهرست نویسی: فیبا
یادداشت: انگلیسی.

Mahmoodreza Atai, Alireza Zaré Alanagh, Morteza Nasiri, Reza Taherkhani, Abutaleb Iranmehr.

یادداشت:

یادداشت: پشت جلد به فارسی: انگلیسی برای دانشجویان مهندسی.

یادداشت: کتابنامه: ص. ۲۲۰ - ۲۲۱.

آوانویسی عنوان: اینگلیش فور د استیودنتس ...

موضوع: زبان انگلیسی — کتب برای قرائت — مهندسی

موضوع: زبان انگلیسی — راهنمای آموزشی (عالی)

شناسه افزوده: عطایی، محمدرضا، ۱۳۴۱- Atai, Mahmoodreza

شناسه افزوده: سازمان مطالعه و تدوین کتب علوم انسانی دانشگاهها (سمت)، مرکز تحقیق و توسعه علوم انسانی.

The Organization for Researching and Composing University Textbooks in the Humanities (SAMT), The Center for Research and Development in Humanities.

رده‌بندی کنگره: ۱۳۹۴ ۹ الف ۹ م/۷ E

رده‌بندی دیویی: ۴۲۸/۶۴۰۲۴۶۲

شماره کتابشناسی ملی: ۴۰۷۱۹۷۳



The Organization for Researching and Composing University Textbooks in the Humanities (SAMT),
The Center for Research and Development in Humanities

English for the Students of Engineering

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Editor: Mojgan Zarghami

1st Impression: Winter 2016/1394

Print Run: 1000

Price: 165000 Rials

Typesetting and Lithography: SAMT

Printing: Golha (Qom), Binding: Zarin (Qom)

نشانی ساختمان مرکزی: تهران، بزرگراه جلال آل احمد، غرب پل یادگار امام (ره)، روبه‌روی پمپ گاز، کد پستی: ۱۴۶۳۶

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تلفن: ۴۴۲۴۶۲۵۰-۲

قیمت: ۱۶۵۰۰۰ ریال. در این نوبت چاپ قیمت مذکور ثابت است و فروشندگان و عوامل توزیع مجاز به تغییر آن نیستند.

هر شخص حقیقی یا حقوقی که تمام یا قسمتی از این اثر را بدون اجازه ناشر، نشر یا بخش یا عرضه یا تکثیر یا تجدید چاپ نماید، مورد پیگرد قانونی قرار خواهد گرفت.

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«سخن سمت»

یکی از اهداف مهم انقلاب فرهنگی، ایجاد دگرگونی اساسی در محتوا و شیوه تدوین کتب درسی دانشگاهها، بخصوص در زمینه علوم انسانی بوده است.

به همین جهت شورای عالی انقلاب فرهنگی در تاریخ ۶۳/۱۲/۷ تأسیس «سازمان مطالعه و تدوین کتب علوم انسانی دانشگاهها» را که به اختصار «سمت» نامیده می‌شود، تصویب کرد تا اختصاصاً به این مهم بپردازد.

این سازمان با توجه به نیاز دانشجویان، در فرصتی خاص، علاوه بر تدوین متون آموزش زبان خارجی در مرحله عمومی، نیمه تخصصی و تخصصی برای علوم انسانی، در محدوده خاصی به تدوین کتب آموزش زبان تخصصی سایر رشته‌ها پرداخت که کتاب حاضر یکی از آنهاست.

کتاب حاضر برای دانشجویان مهندسی در مقطع کارشناسی به عنوان منبع اصلی درس «زبان تخصصی (ESP)» به ارزش ۲ واحد تدوین شده است. امید می‌رود علاوه بر جامعه دانشگاهی، سایر علاقه‌مندان نیز از آن بهره‌مند شوند.

دشواری چنین کاری بر دانشمندان و صاحب‌نظران برآمده نیست و به همین جهت مرحله کمال مطلوب آن، باید به تدریج و پس از پیشنهادهای اصلاحی ارباب‌نظر دست‌آید و انتظار دارد که این بزرگواران از این همکاری دریغ نورزند.

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Blueprint of the Book

Units	Theme	Reading Strategy	Vocabulary Fuel	Grammar Engine
1	Electricity Reading 1: Electric Current Reading 2: Electric Shock: What to Do against It?	Previewing	Naming Phenomena	'On the Other Hand' & 'However'
2	Robots Reading 1: Robots Reading 2: Robots and Artificial Intelligence	Scanning	Prefixes 1	Relative Clauses
3	Nanotechnology Reading 1: Nanotechnology Reading 2: Nanotechnology and its Dangers	Skimming	Compound Words Word Families	Correlative Conjunctions
4	Magnetism Reading 1: Magnetism Reading 2: What Is Induction?	Speed Reading	Parts of Speech	Conditionals
5	Information Technology Reading 1: An Introduction to Wireless Technology Reading 2: The Internet and Fiber Optics	Understanding Purpose & Text Organization	Collocations	Subject-verb Agreement
6	Electric Vehicles Reading 1: Electric Vehicles Reading 2: Advantages and Disadvantages of EVs	Reading without Knowing Every Word	Using Translation	To + Infinitive Structures
7	Radars Reading 1: Radars Reading 2: Radar and Weather Forecasting	Outlining as You Read	Abbreviations	Passive Voice 1
8	Industrial and Systems Engineering Reading 1: Industrial and Systems Engineers Reading 2: The Interdisciplinary Industrial and Systems Engineering	Marginal Notes	Prefixes 2	Comparative & Superlative Adjectives
9	Concrete Reading 1: Concrete Reading 2: Significance of Various Concrete Strengths	Summarizing	Synonyms & Antonyms	Transitional Expressions
10	Nuclear Power Plants Reading 1: Nuclear Power Plants Reading 2: ?	Inferencing	Suffixes	'(A)lthough' & 'But'
11	Bridging Reading 1: Bridge Types and Economic Spans Reading 2: Location of Bridges	Highlighting, Underlining, Numbering, & Circling	Geometric Shapes & Angles	Passive Voice 2 So that
12	Gear Drives Reading 1: Gear Drives Reading 2: Gear Drive Troubleshooting	SQR3 System	Filling in the Blanks	Reduced Relative Clauses

Introduction

English for the Students of Engineering is designed as an English for Academic Purposes (EAP) textbook for undergraduate university students of engineering ranging from pre-intermediate to upper-intermediate level of English proficiency. The book aims to help students consolidate general reading skills and strategies they have already acquired through general English courses and transfer these skills and strategies to their target academic tasks. Hence, a wide range of engineering text types/genres have been included in the book to provide students with ample opportunities to learn and practice discipline-based reading skills. With the main focus on reading, the other language skills and components (i.e., vocabulary, grammar, discourse, and genre) are used as a springboard for fostering the reading skills and strategies.

The book consists of 12 units based on engineering themes and topics of maximum authenticity and relevance to the students of engineering. The centerpiece of each unit is two reading passages developing the same theme and all activities of each unit are geared to that theme. To that end, there is an efficient integration of relevant content and language with a good distribution of common genres in the field of engineering.

The units are divided into various sections as introduced below:

Title Page: It is designed to give readers a general overview of the theme and content of the unit.

Start-up: They aim to engage students mentally to think about the topic of reading and relate it to their lives. A preliminary focus on important vocabulary items is also intended.

Reading Passages: Texts from a variety of authentic and credible sources are accompanied by glosses and technical notes.

Gauge Your Grasp: These parts assess the readers' comprehension of the texts through a broad range of comprehension questions and tasks.

Reading Strategy: A reading strategy that is helpful in academic contexts is introduced in each unit. It matches with the nature of the relevant reading passage.

Vocabulary Fuel: Different aspects of word knowledge are taken into account through both explicit instruction and task-based activities.

Grammar Engine: Grammar is mostly treated through a discovery approach. The grammar point in each unit is taken from the related reading passage.

Translation: This section is designed as a reading practice as well as a translation activity. It also offers focused activity on vocabulary, grammar, and some features of genres presented in the unit.

Tune-up Time: To give the learners a sense of achievement, each unit ends up with a self-assessment part in which the main objectives of the unit are worded explicitly using performative verbs.

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