Christiyanti Abel, S.S., M.Pd.

ENGLISH FOR SCIENCE AND TECHNOLOGY

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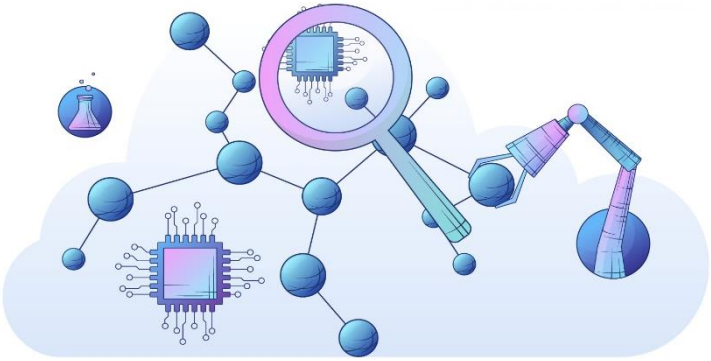


PREFACE

In today's globalized academic and professional landscape, English has become the universal language of science and technology. The ability to communicate effectively in English is no longer a mere advantage—it is a necessity for researchers, students, and professionals who wish to contribute meaningfully to international discourse, publish in reputable journals, and engage in cross-border collaborations.

This book, English for Science and Technology, is designed as a comprehensive reference for learners who aim to strengthen their English proficiency within the specific context of science and technology. The material spans thirteen chapters, each focusing on practical language skills—from understanding scientific texts, writing lab reports and abstracts, to delivering presentations and networking at conferences.

The contents of this book are tailored to meet the needs of university students, particularly those studying science, engineering, and technology-related disciplines. With a focus on real-world communication, authentic vocabulary, and interactive exercises, this book supports both classroom instruction and independent study.

I would like to express my heartfelt gratitude to my colleagues, mentors, and students at Institut Keguruan dan Teknologi Larantuka (IKTL) for their inspiration and feedback throughout the writing of this book. Special thanks are due to those who continue to promote the importance of English for academic and scientific advancement in our region and beyond.

It is my sincere hope that this book serves not only as a language tool, but also as a bridge to global opportunities for every learner who engages with it.

Larantuka, April 4 2025

The Author,
Christiyanti Abel, S.S., M.Pd.

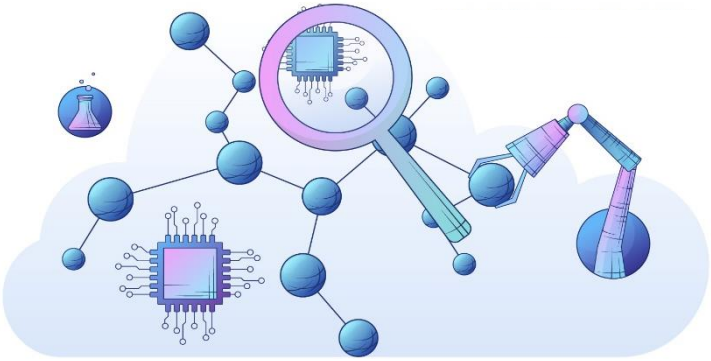
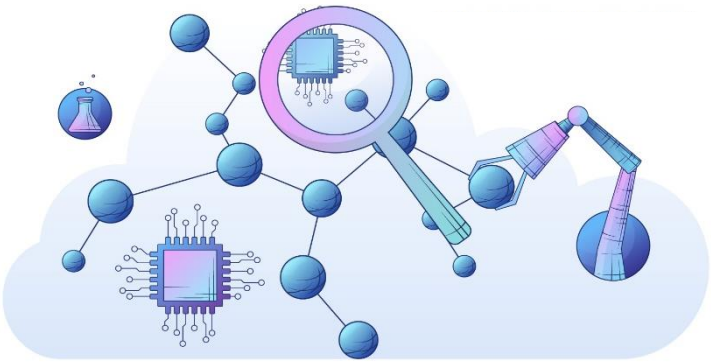


TABLE OF CONTENTS



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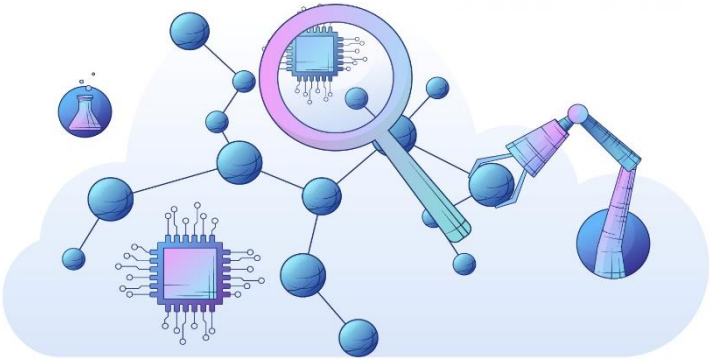


ATTACHMENT 1: EXERCISESS PER CHAPTER

Chapter 1: Introduction to English for Science and Technology

1) Identify scientific terms in a short passage
2) Match terms with their meanings

Chapter 2: Scientific Vocabulary and Word Formation

1) Create nouns from verbs (e.g., "investigate → investigation")
2) Fill in the blanks with correct technical terms

Chapter 3: Reading Scientific Texts

1) Skim a short article and answer comprehension questions
2) Summarize the key idea in 3–4 sentences

Chapter 4: Grammar in Scientific Contexts

1) Complete sentences with correct tenses
2) Transform active to passive voice

Chapter 5: Writing Lab Reports

1) Rearrange jumbled sentences into a report structure
2) Write a short methods section

Chapter 6: Interpreting and Describing Data

1) Describe charts or graphs in 2–3 sentences
2) Identify correct comparative expressions

Chapter 7: English for Scientific Discussions

1) Practice polite disagreement in dialogue
2) Complete dialogues with appropriate responses

Chapter 8: Writing Research Proposals

1) Fill in blanks in a sample proposal template
2) Write a research objective statement

Chapter 9: Reading and Analyzing Journal Articles

1) Identify parts of an article (Abstract, Methods, etc.)
2) Paraphrase complex paragraphs

Chapter 10: Citing Sources and Avoiding Plagiarism

1) Practice in-text citation (APA style)
2) Identify plagiarism in sample texts

Chapter 11: Writing Abstracts and Summaries

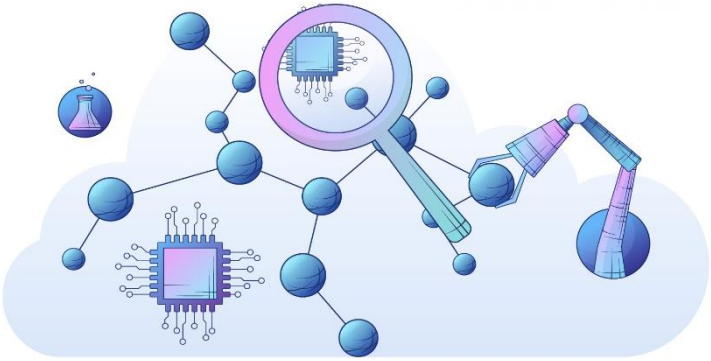
1) Write an abstract from a given research summary
2) Edit unclear or wordy abstracts

Chapter 12: Scientific Correspondence and Emails

1) Complete email templates
2) Identify errors in tone and formality

Chapter 13: Networking and Conferences

1) Practice "elevator pitch" in 3–5 sentences
2) Write a follow-up email after a seminar



ATTACHMENT 2: SILABUS MATA KULIAH

Nama Mata Kuliah : English for Science and Technology
SKS : 3
Jumlah Pertemuan : 13 Pertemuan
Dosen Pengampu : **Christiyanti Abel, S.S.,M.Pd**.

Deskripsi Mata Kuliah:
Mata kuliah ini dirancang untuk membekali mahasiswa dengan keterampilan berbahasa Inggris yang spesifik untuk kebutuhan akademik dan profesional di bidang sains dan teknologi. Mahasiswa akan belajar memahami dan menggunakan struktur bahasa, kosakata, serta keterampilan membaca, menulis, dan berbicara dalam konteks ilmiah dan teknis.

Capaian Pembelajaran Mata Kuliah (CPMK):

1) Mahasiswa mampu memahami dan menganalisis teks ilmiah dan teknis berbahasa Inggris.
2) Mahasiswa mampu menulis laporan ilmiah, abstrak, dan ringkasan dalam bahasa Inggris.
3) Mahasiswa mampu berkomunikasi secara lisan dalam konteks akademik dan ilmiah.
4) Mahasiswa mampu mengaplikasikan kosakata dan struktur bahasa teknis secara tepat.
5) Mahasiswa memahami etika penulisan ilmiah dan mampu menghindari plagiarisme.

Rencana Pembelajaran Semester (RPS):

Minggu	Topik Pembelajaran	Sub-Topik	Metode	Penilaian
1	Introduction to EST	Tujuan, pentingnya EST, kosakata umum	Ceramah, diskusi	Kuis awal
2	Describing Scientific Objects	Struktur deskripsi, noun phrase	Latihan tertulis	Tugas menulis
3	Scientific Process	Tenses, passive voice	Latihan grammar, simulasi	Kuis
4	Reading Scientific Texts	Struktur jurnal, membaca cepat	Analisis teks	Resume artikel
5	Writing Abstracts & Summaries	Struktur abstrak, ringkasan	Latihan menulis	Tugas ringkasan

Minggu	Topik Pembelajaran	Sub-Topik	Metode	Penilaian
6	Scientific Presentations	Ekspresi lisan, struktur presentasi	Simulasi, peer review	Penilaian presentasi
7	Graphs & Data Description	Bahasa grafik, perbandingan	Analisis grafik	Latihan tertulis
8	Writing Research Reports	Struktur laporan, kohesi	Latihan menulis	Draf laporan
9	Scientific Vocabulary	Kosakata bidang sains	Permainan kosakata	Tes kosakata
10	Ethics in Writing	Plagiarisme, parafrase	Diskusi, praktik	Tugas parafrase
11	Technical Instructions	Instruksi teknis, kalimat imperatif	Simulasi, praktik	Menulis manual
12	Debating Scientific Issues	Bahasa debat, opini	Debat simulatif	Penilaian debat
13	Final Project Presentation	Presentasi laporan akhir	Presentasi	Nilai akhir proyek

Bahan Ajar Utama:

1) Buku Referensi: Christyanti Abel, S.S.,M.Pd. (2025). English for Science and Technology. Penerbit KBM Indonesia.
2) Artikel jurnal ilmiah dan teks teknis otentik
3) Modul dan lembar kerja (worksheet) buatan dosen

Metode Pembelajaran:

1) Ceramah interaktif
2) Diskusi dan kerja kelompok
3) Simulasi dan role-play
4) Latihan menulis dan presentasi

Penilaian:

1) Kuis & Tugas Harian : 30%
2) Ujian Tengah Semester (UTS) : 20%
3) Ujian Akhir Semester (UAS) : 30%
4) Proyek & Presentasi Akhir : 20%

RANCANGAN PEMBELAJARAN SEMESTER (RPS)

Program Studi : Pendidikan Bahasa Inggris
Fakultas : FKIP
Mata Kuliah : English for Science and Technology
Kode Mata Kuliah : (Diisi institusi)_
SKS : 3 SKS
Semester : 4
Dosen Pengampu : **Christiyanti Abel, S.S.,M.Pd.**
Tanggal Disusun : 4 April 2025

1) Capaian Pembelajaran Lulusan (CPL) yang Dukung Mata Kuliah

Kode CPL	Capaian Pembelajaran Lulusan
CPL-01	Mampu menguasai dan menerapkan komunikasi akademik dalam Bahasa Inggris secara efektif.
CPL-02	Mampu memahami dan menganalisis informasi ilmiah dalam bentuk lisan dan tulisan.
CPL-03	Mampu menyusun karya ilmiah sesuai kaidah akademik dan etika penulisan.

2) Capaian Pembelajaran Mata Kuliah (CPMK)

Kode CPMK	Capaian Pembelajaran Mata Kuliah
CPMK-1	Mahasiswa mampu memahami teks ilmiah dan teknis dalam bahasa Inggris.
CPMK-2	Mahasiswa mampu menulis abstrak, ringkasan, dan laporan ilmiah secara benar.

Kode CPMK	Capaian Pembelajaran Mata Kuliah
CPMK-3	Mahasiswa mampu menyampaikan presentasi ilmiah dan berpartisipasi dalam diskusi akademik.
CPMK-4	Mahasiswa mampu menggunakan kosakata dan struktur bahasa Inggris yang relevan dengan sains.

3) Sub-CPMK dan Indikator Penilaian

Pertemuan	Sub-CPMK	Indikator Penilaian	Bentuk Penilaian	Bobot
1	Mahasiswa memahami konteks EST	Mampu menjelaskan peran Bahasa Inggris dalam sains	Kuis awal	5%
2	Mahasiswa mampu mendeskripsikan objek ilmiah	Deskripsi tertulis akurat	Tugas menulis	5%
3	Mahasiswa memahami proses ilmiah	Penggunaan tense dan passive voice	Latihan grammar	5%
4	Mahasiswa mampu membaca dan menganalisis jurnal	Resume artikel ilmiah	Tugas resume	5%
5	Mahasiswa mampu menulis abstrak ilmiah	Struktur abstrak dan ringkasan	Tugas tulis	5%

Pertemuan	Sub-CPMK	Indikator Penilaian	Bentuk Penilaian	Bobot
6	Mahasiswa mampu presentasi ilmiah	Ekspresi lisan dan struktur presentasi	Simulasi	5%
7	Mahasiswa memahami data visual	Deskripsi grafik akurat	Latihan menulis	5%
8	Mahasiswa mampu menulis laporan ilmiah	Draf laporan	Penilaian format & isi	5%
9	Mahasiswa memperluas kosakata ilmiah	Tes kosakata	Kuis	5%
10	Mahasiswa memahami etika penulisan	Parafrase dan kutipan benar	Tugas parafrase	5%
11	Mahasiswa menulis instruksi teknis	Manual prosedural	Tugas	5%
12	Mahasiswa dapat berdebat ilmiah	Partisipasi dan argumentasi	Debat	5%
13	Mahasiswa presentasi proyek akhir	Presentasi final	Proyek	30%

4) Strategi Pembelajaran

a) Pendekatan: Content-Based Instruction (CBI)

b) Metode: Ceramah, diskusi kelompok, simulasi, latihan mandiri

c) Media: PPT, video, jurnal, worksheet, papan tulis digital

5) Materi dan Referensi Utama

Materi Utama:

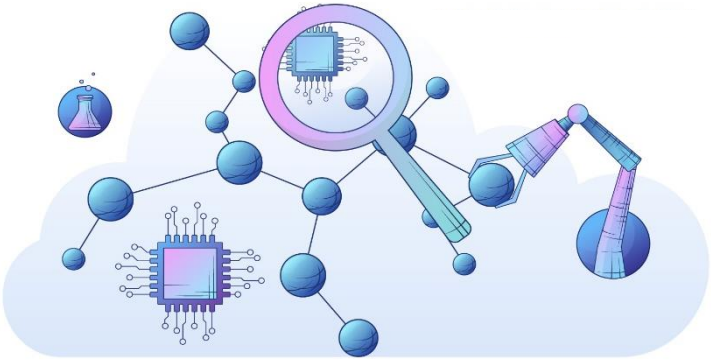
a) Christyanti Abel, S.S.,M.Pd. 2025. English for Science and Technology. Penerbit KBM Indonesia
b) Jurnal ilmiah bidang sains dan teknologi

Referensi Tambahan:

a) Glendinning, E.H. & Holmström, B. (2000). English for Science and Technology. OUP.
b) Jordan, R.R. (1997). English for Academic Purposes. Cambridge University Press.

6) Penilaian Akhir

Komponen	Persentase
Kuis dan Tugas Harian	30%
UTS	20%
UAS	20%
Proyek Akhir (presentasi & laporan)	30%



ABOUT THE AUTHOR

Christiyanti Abel lahir di Malaysia pada tahun 1989 dan merupakan lulusan S1 di Program Studi Sastra Inggris di Sekolah Tinggi Bahasa Asing Kupang pada tahun 2019 dan S2 Pendidikan Bahasa Inggris Universitas Nusa Cendana Kupang pada tahun 2023. Saat ini mengabdikan diri sebagai dosen di Program Studi Pendidikan Bahasa Inggris, Fakultas Keguruan dan Ilmu Pendidikan di Institut Keguruan dan Teknologi Larantuka (IKTL). Menulis artikel pengabdian kepada Masyarakat dengan judul: "Changing the Mindset of the Young Generation to Become Great Entrepreneurs in the Global Era (Entrepreneurship Training for Students and Teachers of Genova Pasir Putih Vocational School – Nagawutung – Lembata – NTT) MICJO – Jil. 2 Nomor 2 edisi April 2025 (2101-2107).