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978-0-521-71518-8 - Cambridge English for Engineering
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Series Editor: Jeremy Day



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CAMBRIDGE UNIVERSITY PRESS

Cambridge, New York, Melbourne, Madrid, Cape Town, Singapore, São Paulo, Delhi

Cambridge University Press
The Edinburgh Building, Cambridge CB2 8RU, UK

www.cambridge.org
Information on this title: www.cambridge.org/9780521715188

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First published 2008

Printed in Italy by L.E.G.O. S.p.A.

A catalogue record for this publication is available from the British Library

ISBN 978-0-521-71518-8 Student's Book with Audio CDs

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Introduction

The aim of *Cambridge English for Engineering* is to improve your professional communication skills, whether you are an engineer, an engineering technician or a technical manager. The course covers high-priority language that is useful in any branch of engineering (mechanical, electrical, civil, etc.), focusing on skills such as working with drawings, describing technical problems and discussing dimensions and precision. Each of the ten units contains:

- realistic listening activities so you can learn the language used in technical discussions
- situation-based speaking activities so you can practise the language you've learned
- relevant vocabulary presented and practised in professional contexts
- engaging topics and articles to make your learning interesting and motivating.

On the audio you will hear people in the kinds of situation often encountered at work, for example safety meetings, project briefings and problem-solving discussions. Audioscripts for the listening exercises and a complete answer key, including suggested answers for the discussion activities, are at the back of the book. You can also find engineering case studies and extra activities online at www.cambridge.org/elt/englishforengineering.

How to use *Cambridge English for Engineering* for self-study

If you are working on your own, you can do the units in any order you like. Choose the topic that you want to look at and work through the unit, doing the exercises and checking your answers in the answer key. Note any mistakes you make, and go back and listen or read again to help you understand what the problem was. For the listening exercises, it's better to listen more than once and to look at the audioscript after the exercise so that you can read the language you've just heard. For the speaking activities, *think* about what you would say in the situation. You could also try talking about the discussion points with your colleagues.

I hope you enjoy using the course. If you have any comments on *Cambridge English for Engineering* you can email me at englishforengineering@cambridge.org



Mark Ibbotson

Mark Ibbotson has a BSc (Hons) degree in Construction management, and a BTEC National Diploma in Civil Engineering. He spent the initial years of his career in site engineering and technical management positions on construction projects in the UK. Since relocating to France and entering the field of in-company language training, he has designed and taught technical English courses in a wide range of companies, for process, mechanical, electrical, civil and highway engineers, as well as technicians and technical managers. Mark is co-author of the *Business Start-Up* series (Cambridge University Press).

	Skills	Language	Texts
UNIT 1	Describing technical functions and applications Explaining how technology works Emphasising technical advantages Simplifying and illustrating technical explanations	Words stemming from <i>use</i> <i>allow, enable, permit, ensure, prevent</i> Verbs to describe movement Verbs and adjectives to describe advantages Adverbs for adding emphasis Phrases for simplifying and rephrasing	Listening GPS applications Space elevators Advantages of a new pump A guided tour Reading Space elevators Otis lift technology Pile foundations
Technology in use page 6			
UNIT 2	Describing specific materials Categorising materials Specifying and describing properties Discussing quality issues	Common materials Categories of materials <i>consist of, comprise, made of, made from, made out of</i> Properties of materials Phrases for describing requirements Compounds of <i>resistant</i> Adverbs of degree	Listening An environmental audit Specialised tools High-performance watches Reading Materials recycling Regenerative brakes Kevlar
Materials technology page 14			
UNIT 3	Describing component shapes and features Explaining and assessing manufacturing techniques Explaining jointing and fixing techniques Describing positions of assembled components	Shapes and 3D features Words to describe machining Phrases for describing suitability Verbs and nouns to describe joints and fixings Prepositions of position	Listening A project briefing Electrical plugs and sockets Metal fabrication UHP waterjet cutting Options for fixing Cluster ballooning Reading Cutting operations Flow waterjet technology Joints and fixings The flying garden chair
Components and assemblies page 22			
UNIT 4	Working with drawings Discussing dimensions and precision Describing design phases and procedures Resolving design problems	Views on technical drawings Phrases related to <i>scale</i> Phrases related to <i>tolerance length, width, thickness</i> , etc. Drawing types and versions Verbs for describing stages of a design process Verbs and nouns for describing design problems	Listening A drawing query Scale A floor design Design procedures Revising a detail Reading Superflat floors Queries and instructions
Engineering design page 30			
UNIT 5	Describing types of technical problem Assessing and interpreting faults Describing the causes of faults Discussing repairs and maintenance	Verbs and adjectives for describing technical problems Words for describing faults and their severity Phrases for describing certainty/uncertainty Adjectives with prefixes for describing technical problems Verbs for describing repairs and maintenance	Listening A racing car test session Test session problems Technical help-line Tyre pressure problems A maintenance check Reading Air Transat Flight 236
Breaking point page 38			

	Skills	Language	Texts
UNIT 6	Discussing technical requirements	Phrases for referring to issues	Listening
Technical development page 46	Suggesting ideas and solutions Assessing feasibility Describing improvements and redesigns	Phrases for referring to quantity and extent Phrases for suggesting solutions and alternatives Idioms to describe feasibility Verbs with <i>re...</i> to describe modifications Idioms to describe redesigning	Simulator requirements and effects Lifting options Hole requirements and forming A project briefing Reading Mammoth problem
UNIT 7	Describing health and safety precautions	Types of industrial hazards	Listening
Procedures and precautions page 54	Emphasising the importance of precautions Discussing regulations and standards Working with written instructions and notices	Types of protective equipment Phrases for emphasising importance Terms to describe regulations Common language on safety notices Language style in written instructions	A safety meeting Hazard analysis Live line precautions Safety training Oral instructions Reading Live line maintenance Helicopter safety on oil platforms
UNIT 8	Describing automated systems	Words to describe automated systems	Listening
Monitoring and control page 62	Referring to measurable parameters Discussing readings and trends Giving approximate figures	Words to describe measurable parameters Words to describe fluctuations Words and phrases for approximating numbers	Intelligent buildings and automation Monitoring and control systems Electricity demand and supply problems Pumped storage hydroelectric power Internal reviews Reading Industrial process monitoring Dynamic demand controls
UNIT 9	Explaining tests and experiments	Words to describe test types	Listening
Theory and practice page 70	Exchanging views on predictions and theories Comparing results with expectations Discussing causes and effects	Words and phrases for stating assumptions Words and phrases for agreeing and disagreeing Phrases for comparing expectations and results Words for linking causes and effects	Vehicle design and testing Water rockets Air drop problems Moon landings Reading A rocket competition Chicken cannon
UNIT 10	Discussing performance and suitability	Adjectives for describing suitability and performance	Listening
Pushing the boundaries page 78	Describing physical forces Discussing relative performance Describing capabilities and limitations	Words to describe types of forces <i>factor, criteria, criterion, consideration</i> Words and phrases to describe degrees of difference Words to describe capabilities and limits	Wind turbine towers Tall structures TGV world speed record The story of John Paul Stapp Reading Wind turbines fact file Solar towers Transport alternatives The <i>Sonic Wind</i> tests The rocket sled proposal
Audioscript	page 86		
Answer key	page 96		
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