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

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