

TAKE-OFF TECHNICAL ENGLISH FOR ENGINEERING

David Morgan and Nicholas Regan, *Take-Off – Technical English for Engineering, Reading*, Garnet Publishing Ltd., 2013, 321

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1. SUMMARY

Take-Off – Technical English for Engineering is an integrated-skills course designed for students preparing for academic study as well as for standardised NVQ Level 2 and above. This textbook is primarily intended for non-native students of English studying engineering. Moreover, it is designed to meet the English language needs of students in a range of engineering specialisations. The *Take-Off* textbook reaches out towards a wide audience of both pre-work and in-work engineers whose practical or theoretical aspirations are driven not only by gaining an insight into the essential engineering vocabulary these students will need in their working lives, but also in a strong grammar syllabus. Whilst exploring various aspects of engineering texts that occur in engineering organisations, the *Take-Off* textbook also presents key engineering concepts concisely and with well-labelled illustrations throughout the book. The comprehensive range of engineering components provides the students, future engineers, with ultimate flexibility to tailor the textbook contents to their engineering needs.

The textbook opens with an introduction (p. vi) which sets the scene: each unit is focused on a unit topic and contains activities to practise all four skills as well as activities to develop engineering key vocabulary. The authors sketch out the approach and the main features of the engineering course. The rest of the textbook is organised into twelve units: 1. Design and innovation (p. 2-21), 2. Manufacturing techniques (p. 22-41), 3. Frameworks (p. 42-61), 4. Control systems (p. 62-81), 5. Engine and fuel systems (p. 82-101), 6. Review (p. 102-121), 7. Safety and emergency (p. 122-141), 8. Air and gas (p. 142-161), 9. Electrical systems (p. 162-181), 10. Communication (p. 182-201), 11. Maintenance (p. 202-221), and 12. Review (p. 222-241). The textbook ends with "Additional material" (p. 242-253), "Glossary" (p. 254-262), "Electrical symbols" (p. 263-265), "Word lists – Unit by unit" (p. 266-275), "Word list – Alphabetical" (p. 276-283), and "Tapescript" (p. 284-321).

Take-Off creates an authentic learning experience through well-chosen and carefully controlled texts, extensive engineering vocabulary development and meaning-focused exercises. Regardless of students' previous knowledge level, students' effective comprehension commences immediately by engaging with engineering content in both authentic and meaningful way. Units fully support the needs of target learners, i.e. future engineers, by incorporating step-by-step demonstrations.

By including state-of-the-art topics, the authors of this textbook add fresh and stimulating content to their tried and tested syllabus, which may additionally satisfy the users of this textbook. Not only do activities throughout the *Take-Off* provide systematic grammar practice, but they contain diverse exercises which may be used in engineering

mixed-ability groups. Every unit contains the skills section which covers all assessment needs. Since the authors included visual material in the form of photos, charts, diagrams, it may be freely stated that they have also succeeded in providing both lively and motivating up-to-date lessons. All four skills are structured as to enable students to use the engineering language confidently and effectively in the course of their study and work. In addition to teaching the language common to engineering discourse, *Take-Off* also prepares students for dealing with specific task-based engineering situations in the different engineering contexts in which they usually may operate.

Furthermore, it may be seen the *Take-Off* was developed taking into account the actual engineering language demands of higher education. Equally commendable is that this textbook teaches students how to integrate skills and content in engineering world academic contexts, which is not an easy task. Not only are the specific engineering terms and phrases clearly explained when introduced, but the textbook provides two well-balanced chronological and alphabetical glossaries, as a most welcome addition.

Stimulating authentic material includes listening activities, note-taking, spoken and written exercises. All this provides a variety of practice and assessments opportunities based on students' individual needs. Since students need step-by-step instruction in the concepts of engineering discourse, the authors have also expanded thematic lessons by means of academic engineering vocabulary. Well-crafted instructional sequence of the *Take-Off* allows for both progressive skill building and varied learning experiences.

The experienced authors of the *Take-Off* course recognise that students need to go beyond talking about general engineering topics in English, and therefore, they include the necessary skills, which are immediately transferable to technical English for Engineering routine. Each lesson is a fast-track unit which improves particular skills the engineering students may meet in their everyday academic or working lives. Text topics have been selected in such a way as to involve and provoke students into lively discussions, as well as to contextualise the technical English language for engineering. Real-world tasks in the domain of engineering encourage students to draw on their experiences at faculty and at work. Grammar is always introduced in a practical engineering context and is incorporated into the relevant unit.

Specifically designed text chunks provide a challenge to students and allow them to utilise technical English language and the relevant lexical items they have learnt so far in a more independent and creative way. The lessons in the textbook give students the flexibility to follow the order of material and choose their own pathway throughout the textbook. This is achieved by high-level engineering style texts, a wealth of various tasks, tips and references for in-depth practice of specific technical English for engineering grammar, its specific vocabulary and functional engineering language.

On the one hand, engineering academic style sections focus on key aspects of academic engineering English while on the other hand, they develop students' ability to achieve the appropriate engineering format style in the domain of technical English. The writing sections in the textbook show the students how to order and link paragraphs into cohesive and coherent technical reports and documents. In addition to this, the authors also display the way in which students should create various text types which are used in technical English for engineering.

Guided listening, writing and speaking activities include brainstorming, outlining and drafting in the context of technical English for engineering. Furthermore, this textbook is very practical, engaging and easy-to-use and may build confidence in a potentially

difficult area of engineering English. The step-by-step approach of *Take-Off* builds the students' speaking and writing skills, without neglecting listening and reading, whilst task analysis activities encourage better understanding of engineering key language.

2. EVALUATION

Take-Off provides the engineering students with the appropriate tools and training they need to acquire, remember and use the engineering English language with confidence. The obvious merit of this textbook lies in the fact that all the texts are carefully and meticulously put together to cut down on teacher-planning time, thus making the learning process more memorable for students. In addition to this, the logically staged grammar points and carefully controlled engineering vocabulary ensures the students, future engineers, that they are equipped and provided with the most frequently employed vocabulary they will one day use.

Step-by-step academic skill development helps students learn how to organise engineering information, make connections and think critically. Appealing and appropriate range of topics and themes stimulate discussion and provide clear directions for speaking and writing, while multiple realistic engineering models include authentic step-by-step demonstrations which display how revision is essential to effectively completing an engineering assignment in English.

In a nutshell, the *Take-Off* textbook helps students to prepare for the world of engineering, whilst focussing on systematic development of their communicative abilities and increasing their engineering employment opportunities. Bearing all the above said, *Take-Off* is an absolute must-have for any teacher of technical English for Engineering.