

SYLLABUS
«ENGLISH SQUARED»

NUMBER OF HOURS __ **60** _____

Language __ English _____

Lecturer

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Website

<https://www.englishsquared.org>

English has become the established language of scholarly communication. It's recognized as the international language of science and engineering. Academic reward structures in many countries place great emphasis on publication in international journals that are mostly English-language. As technology advances globally, engineers must be able to communicate across national and cultural boundaries, and English is the vehicle for professionals advancing technology today.

As more and more companies are working on international projects, English is increasingly used by scientists across the world to communicate with all parties involved. As a result, English language skills are both a common requirement and a valuable asset for career progression for every type of engineering background, such as civil Engineers, Biochemical Engineers, Agricultural Engineers, Mechanical Engineers, Chemical Engineers, Petroleum Engineers, Aeronautic Engineers.

The course is designed to help develop the communicative performance of scientists who wish to improve their abilities in English when dealing with their staff, other managers, suppliers, external colleagues and other technologists internally or internationally.

English Squared is fully tailored to the specific needs of scientists, whether they work in the civil, military, mechanical, energy, manufacturing or automotive sector. Whether you are new to the industry or are a working professional, you will learn and practice the specific English skills needed to excel in your job. We work with experienced professionals who focus on the specific engineering vocabulary relevant to your sector.

English Squared consists of ___ hours of online training to enhance communication skills across five dynamic and interactive skills:

- Speaking in Technical English
- Listening and Comprehension
- Technical Writing
- Reading and Understanding Technical Publications
- The Main Aspects of Grammar based on Technical English

New students will take a placement exam to assess and guide level selection: Intermediate, or Advanced. They'll advance through lessons individually and receive feedback on their progress.

Benefits of English Squared

1. Learn to communicate effectively and share ideas with colleagues.

2. Strengthen your written English communications skills, which can help authors and researchers effectively share their research results.
3. Enable greater collaboration with global research teams.
4. Build confidence and the necessary communication skills for job performance and career advancement.
5. Develop more effective verbal communication skills and enhanced presentation capabilities.
6. Improve listening and comprehension skills.

Lexical Content of the course:

The course might include building the range of vocabulary in some of the following areas:

- Scientific Method;
- Energy;
- Renewable Energy;
- Climate change, the greenhouse effect;
- Computers;
- Nanotechnology;
- Chemical Engineering;
- Mechanical Engineering;
- Electrical Engineering;
- Aerospace Engineering;
- Electrostatics for aerospace applications

The course focuses on the relevant vocabulary and grammatical structures that are used in the field of scientific research and we work with each individual to ensure they are given the opportunity to practice the language that they have acquired and require by using a variety of communicative practice activities.

Structure of the course

Topic	Hours	Results / Skills acquired	Listening	Reading
1. Technology in use	6	<ul style="list-style-type: none"> - describing technical functions and applications; - explaining how technology works; - emphasizing technical advantages; - simplifying and illustrate technical explanations. 	Space elevators; GPS applications; Advantages of new pump; A guided tour;	Space elevators; Otis lift technology; Pile foundations
2. Science and Scientists	6	<ul style="list-style-type: none"> - describing scientists of different spheres; - identifying characteristics of a scientist - explaining and illustrate steps of scientific research; - enriching active and passive scientific vocabulary. 	A project briefing; Electrical plugs and sockets; Metal fabrication; UHP waterjet cutting; Options for fixing; Cluster ballooning	Cutting operations; Flow waterjet technology; Joints and fixing; The flying garden chair
3. Materials technology	6	<ul style="list-style-type: none"> - describing specific materials; - categorizing materials; - specifying and describe properties; 	An environmental audit; Specialised tools;	Materials recycling;

		<ul style="list-style-type: none"> - discussing quality issues 	High-performance watches	Regenerative brakes; Kevlar
4. Engineering design	6	<ul style="list-style-type: none"> - working with drawings - discussing dimensions and precision - describing design phrases and procedures - resolving design problems 	A drawing query; Scale; A floor design; Design procedures; Revising a detail	Superflat floors; Queries and instructions
5. Breaking point	6	<ul style="list-style-type: none"> - describing types of technical problems; - assessing and interpreting faults; - describing the causes of faults; - discussing repairs and maintenance 	A racing car test session; Test session problems; Technical help-line Tyre pressure problems; A maintenance check	Air Transat Flight
6. Technical development	6	<ul style="list-style-type: none"> - describing developments and progress; - discussing technical requirements; - suggesting ideas and solutions; - explaining technology to non-specialists; - describing improvements and redesigns; 	Simulator requirements and effects; Lifting options; Hole requirements and forming; A project briefing;	Mammoth problem

7. Procedures and precautions	6	<ul style="list-style-type: none"> - describing health and safety precautions; - emphasizing the importance of precautions; - discussing regulations and standards; - working with written instructions and notices 	A safety meeting; Hazard analysis; Live line precautions; Safety training; Oral instructions	Live line maintenance; Helicopter safety and oil platforms
8. Monitoring and control	6	<ul style="list-style-type: none"> - describing automated systems; - referring to measurable parameters; - discussing readings and trends; - giving approximate figures; 	Intelligent building and automation; Monitoring and control systems; Electricity demand and supply problems; Pumped storage hydroelectric power; Internal reviews	Industrial process monitoring; Dynamic demand controls;
9. Theory and practice	6	<ul style="list-style-type: none"> - explaining tests and experiments; - exchanging views on predictions and theories; - comparing results with expectations; - discussing causes and effects; 	Vehicle design and testing; Water rockets; Air drop problems; Moon landings	A rocket competition; Chicken cannon
10. Pushing the boundaries	6	<ul style="list-style-type: none"> - discussing performance and suitability; - describing physical forces; - discussing relative performance; - describing capabilities and limitations. 	Wind turbine towers; Tall structures;	Wind turbines fact file; Solar towers;

			TGV world speed record; The story of John Paul Strapp	Transport alternatives The Sonic Wind tests; The rocket sled proposal
Total number of hours	60			

Literature:

- 1) Ibbotson Mark. Cambridge English for Engineering. Cambridge university press, 2014. — 110 p.
- 2) Bonamy David. Technical English 4. Coursebook. — Pearson Longman, 2011. — 127 p.
- 3) Ilchenko Olga. The Language of Science. Naukova dumka, 2010. – 338 p.
- 4) Armer Tamzen. Cambridge English for Scientists. Student's Book. Cambridge University Press, 2011. — 108 p.
- 5) Aviation news. Key publishing. August 2021
- 6) Dorling Kindersley. The Science Book. Dorling Kindersley Ltd, 2015. – 352 p.