Science English
A hybrid-type semi-ESP course

For 1st year undergraduate engineers at Kochi University of Technology

01. Syllabus

Unit 1. Describing People & Places
- Personal profiles
- Home town profiles

Unit 2. Numbers & Units
- Ordinals, decimals, fractions and percentages
- Common units of measurement
- Symbols
- Product specifications

Unit 3. Describing Appearance
- 2D, 3D and 4D shapes
- Dimensions of objects
- Measurements and estimations

Unit 4. Describing Materials
- Development/use of metals, ceramics, semiconductors, polymers, composites, biomaterials & new materials.

Unit 5. Describing Functions & Use
- Functions, abilities, features and use of machines/robots

Unit 6. Time, Frequency & Amounts
- Schedules
- Time utilization
- Resource utilization

02. Powerpoint-based content

Introduction
1. Explanation of course content (focus, goals, procedures and assessment)
2. Learner activities answer key
3. Project # 1 guidelines

Numbers & Units
1. Explanation of key unit content (themes/vocabs/target language structures)
2. Learner activities answer key

Shapes & Measurements
1. Explanation of key unit content (themes/vocabs/target language structures)
2. Learner activities answer key
3. Project # 2 Guidelines

Materials
1. Explanation of key unit content (themes/vocabs/target language structures)
2. Learner activities answer key
3. Project # 3 Guidelines

Functions & Use
1. Explanation of key unit content (themes/vocabs/target language structures)
2. Learner activities answer key
3. Project # 4 Guidelines

Time, Frequency & Amounts
1. Explanation of key unit content (themes/vocabs/target language structures)
2. Learner activities answer key

03. Textbook-based content

Reading
- Match question to answer (Bill Gates and Steve Jobs)
- True or False questions (Jim’s schedule)
- Description to picture (Cars in America)
- Chart fill (The iPod: My invention)
- Gap fill (IPod: My invention)
- Theme/Text/Word

Writing
- Information questions
- Information questions
- Information questions
- Information questions
- Information questions

Listening
- Cloze (Bill Gates and Steve Jobs)
- Cloze (Jim’s schedule)
- Cloze (Cars in America)
- Cloze (My invention)
- Cloze (IPod: My invention)

04. Supplementary content

Science English iPod content

Project #1: My Hometown
Students prepare a 10-slide Powerpoint describing their hometown.

Project #2: Product Description
Students prepare a 10-slide Powerpoint describing an object of their choice.

Project #3: Construction Project
In groups, students design, construct one of three devices and write a simple IMRC report.

Project #4: Survey
Students prepare a survey and gather data on the theme of resource use. Then prepare a Microsoft Excel spreadsheet from the data.

Background
Kochi University of Technology is a public university in Kochi Prefecture, Japan. There are five engineering departments (Mechanical, Civil, Electrical/IS, materials) and a Core Studies Department that provides 1st year students with a foundation in mathematics, physics and languages.

Science English - syllabus overview
Integrates a 4-skills approach with content based instruction.
- Developed for lower intermediate level EFL undergraduate learners in science and engineering fields.
- Initial input language through instructor presentation; language is then practised by learners through text-based, classroom activities in each of the four macro-skills. Language is recycled and reinforced in subsequent units.
- Text-based activities are supplemented by interactive activities accessed through IPods and a MOODLE CMS website.
- Learners then apply those skills to complete a series of practical individual and small group projects.

Science English - other info
- The two first year courses, Science English/Science Lab and English for Engineers, runs for one semester (at KUT Prefecture, Japan). There are 11 teaching staff including 9 lectures and 2 TAs.
- Science English is a Public university in Kochi Prefecture, Japan. There are 11 teaching staff including 9 lectures and 2 TAs.
- Science English is a hybrid-type course. It integrates 4-skills approach with content based instruction.
- It is a need for a course teaching practical L2 learning activities.

Presentation
development
by
Michael Sharpe

Syllabus
and content design by Prof. Paul Daniels

05. Lab-based projects

Science English
MOODLE CMS
Science English

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02. Powerpoint-based content

03. Textbook-based content

04. Supplementary content

05. Lab-based projects

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