

Course syllabus - Sciences

Higher and Lower

(plan docente)

Course Title: Cursos de Inmersión en Lengua Inglesa - Sciences

Level: B1-C2

Duration: 43 hours (class time)

Student profile:

This course is for students who have a special interest or need to improve their English language knowledge with a special focus on science (The course is especially designed for those exploring the possibility to move into an academic or professional field where a science background would be a requirement).

Course Objectives:

- To improve oral fluency and comprehension.
- To improve on such essential communication skills as debating, discussing, presenting, and reasoning based on topics from sciences.
- To consolidate and learn vocabulary that can be applied to various aspects of science grounded subjects.
- To consolidate and reinforce existing vocabulary and structures through practical application of the language with a focus on participative communication.
- To allow the student to acquire confidence to speak in public in a variety of settings using specific English.
- To learn about and discuss a broad range of subjects from a variety of science based topics.
- To study and, in some cases, practice the writing skills needed for academic and professional application within this field.

Topics:

Statistics and data, presentations, psychology and criminology, experiments and the scientific method, computing and I.T, modern health threats, environmental problems, biotechnology and biomedical engineering, job applications and interview skills, population growth and diminishing resources, inventions.

Grammatical content:

Grammar structures will be practiced during the course through practical application. Specifically needed language structures will be incorporated into the topics.

Methodology:

The methodology used is the communicative approach with a very strong emphasis on total participation. Students will be encouraged to actively participate at all stages of the course to maximize their oral use of the language.

New language and structures are taught through elicitation and the use of the language in context. Students are then helped to assimilate these new elements through natural practice (both teacher led and free practice activities).



Science - Day 1 - Monday

08.30 - 09.00: Breakfast

09:00-10:30 Level testing:

Teachers use prepared questions and test approx. 5 students each. While oral tests are being conducted, students are completing a written test. Students are graded numerically, with these provisional grades noted.
*After class on Monday, teachers will review level grades with students' performance in class. Any changes will be entered in the Amended level evaluation" form.

10:30-11:30 Ice-breaker games (in groups)

Getting to know one another: Students work in pairs to obtain information about each other (10 min).
Presentations: Each student must present their partner to the rest of the group.

11:30-11:45 Break

11.45 - 14.15: Presentations

Topics: Good presentations and good speakers
Different types of presentations
Topics
Dos and Don'ts of presentations
Powerpoint pros and cons
Structure of a presentation

Objectives: Making sure your presentation is tailored to the audience
Talking about the most important aspects of a presentation
Discussing the Dos and Don'ts of public speaking
Discussing and learning non verbal communication
Talking about the content and structure of your presentation

Grammar: Phrasal verbs

14.15 - 15.30: Lunch with teachers

15.30 - 18.45: Talking numbers

Topics: Importance of statistics
Graph types
Data and mathematical functions
Surveys and data collection

Objectives: Think about contexts where statistics are important
Discuss what statistics you trust and mistrust
Learn the names of different types of graphs
Practice describing data and mathematical functions
Use statistics to support a debate
Discuss the role of surveys in data collection
Think about the best practices for designing a survey
Design your own survey and collect data from your classmates

Grammar: Conjunctions

17.00 - 18:00 One-to-One sessions + On-going group project

Students receive their 15 minute one-to-one session. While students are receiving their sessions, the remainder of the class will be working on an on-going project. The objective is to create a play/report/documentary which they must perform in front of their peers in the final class on Friday.

18:45: Finish Class

19.00 - 20.30: Group activity
20.30 - 21.30: Dinner
21.30 - 23.00: Group activity



Science - Day 2 - Tuesday

08.30 - 09.00: Breakfast

09.00 - 11.30: **Psychology and Criminology**

Topics: **Homework check and review**
 The Branches of psychology and common treatments and problems
 Current trends of medication
 Group Psychology
 Mental disorders in Cinema
 Psychology and Criminology

Objectives:
 Discuss the principal branches of psychology and how they are practiced
 Consider the treatments for common psychological problems
 Discuss common behavioral problems, treatments & potential social stigma
 Debate the current trend of medicating ADHD and depression
 Discuss group think, peer pressure and bullying
 Consider the representation of mental disorders in cinema
 Discuss the relationship between psychology and criminology
 Consider whether brain scans can predict criminal behavior
 Take a personality test inspired by Carl Jung & Isabel Briggs Myers' Typology
 Read about famous psychology experiments

Grammar: Phrasal Verbs

11:30-11:45 **Break**

11.45 - 14.15: **Eureka! - Famous Experiments in the Past and Today**

Topics: The scientific method
 Experiments and equipment
 Facts and hypotheses
 Scientific writing
 Famous experiments

Objectives:
 Discuss the scientific method
 Discuss experiments from your studies or degree
 Learn the names of basic laboratory equipment
 Think about the difference between a fact and a hypothesis
 Design an experiment to test your own hypothesis
 Discuss the Dos and Don'ts of scientific writing
 Compare two examples of scientific abstracts
 Discuss famous scientific experiments, including Newton's discovery of the Laws of Motion, Archimedes' Principle, the Laws of Mendelian Inheritance, & more

Grammar: Precise language

14.15 - 15.30: **Lunch with teachers**

15.30 - 18.45: **Computing and Information Technology**

Topics: IT and modern life
 The internet and technology used in education
 Social media and addiction
 Technology in medicine

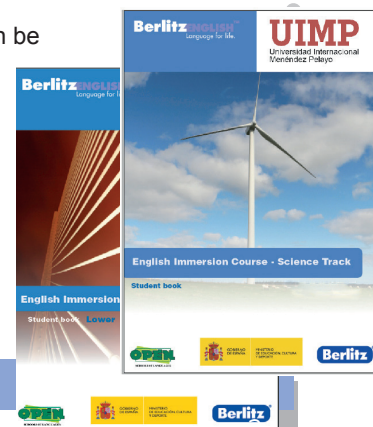
Objectives:
 Discuss the influence of the computing and information technology on modern life
 Discuss the ways that you use the internet, and any specialized technology used in your degree
 Study vocabulary for the components of a computer
 Interpret quotations by famous figures about technology
 Discuss the symptoms of social media addiction and how it can be cured
 Participate in a role play about the value of digital whiteboards, tablets, and other kinds of educational technology
 Consider the influence of technology on medicine
 Research important figures from major technology companies

17.00 - 18:00 **One-to-One sessions + On-going group project**

Students receive their 15 minute one-to-one session.
 While students are receiving their sessions, the remainder of the class will be working on an on-going project. The objective is to create a play/report/documentary which they must perform in front of their peers in the final class on Friday.

18:45: **Finish Class**

19.00 - 20.30: **Group activity**
 20.30 - 21.30: **Dinner**
 21.30 - 23.00: **Group activity**



Science - Day 3 - Wednesday

08.30 - 09.00: Breakfast

09.00 - 11.30: Modern Health Threats

- Topics:** **Homework check and review**
 Health threats in various parts of the world
 Common diseases and symptoms
 Lifestyle related diseases - Healthy life style
 Welfare states and health systems
- Objectives:**
 Learn some common health and nutrition proverbs
 Discuss health threats in developed, developing and underdeveloped countries
 Learn the names of some common diseases and discuss their symptoms
 Discuss obesity and other lifestyle diseases
 Think about ways to improve Britain's Five-a-Day Campaign and develop a healthy lifestyle plan of your own
 Consider the concept of a "welfare state" and weigh the pros and cons of the Spanish health system
 Debate the issue of healthcare for tourists
 Act as a politician, & develop a policy proposal to treat modern health problems

11:30-11:45 Break

11.45 - 14.15: The Changing World I - Environment, Global Warming and Natural Disasters

- Topics:**
 Social issues and the environment
 The history of our planet
 Environmental problems & Global warming
 Helping save the planet
- Objectives:**
 Discuss contemporary social issues and whether the environment is considered a priority
 Discuss important geologic milestones in the earth's history
 Brainstorm environmental problems, their causes and solutions
 Learn vocabulary for natural disasters and key historical examples
 Discuss what to pack in an emergency kit
 Read about the causes and evidence of global warming, and prepare a mock presentation to world leaders
 Consider the representation of environmental issues in cinema
 Think about what ordinary people can do to help the environment
- Grammar:**
 Describing trends

14.15 - 15.30: Lunch with teachers

15.30 - 18.45: Biotechnology and Biomedical Engineering

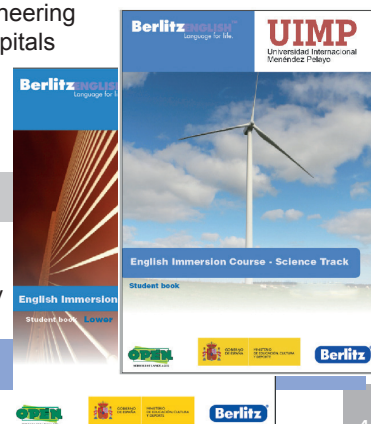
- Topics:**
 Biotechnology and biomedical engineering
 Vaccines and the history of vaccines
 Genetic modification in animals, humans, and food
 Hospitals and medical treatments
 The Human Genome project
- Objectives:**
 Define biotechnology, biomedical engineering, and think about their applications in the past and present
 Read about the history of vaccines
 Learn basic vocabulary for biology, including the names of the parts of a cell
 Discuss amazing examples of genetically modified animals
 Consider the ethics of human genetic modification
 Weigh the pros and cons of genetically modified foods
 Read about impressive developments in biomedical engineering
 Participate in a role play comparing different types of hospitals & medical treatments
 Learn basic vocabulary to describe a hospital
 Research the Human Genome Project
- Grammar:**
 Phrasal verbs

17.00 - 18:00 One-to-One sessions + On-going group project

Students receive their 15 minute one-to-one session. While students are receiving their sessions, the remainder of the class will be working on an on-going project. The objective is to create a play/report/documentary which they must perform in front of their peers in the final class on Friday.

18:45: Finish Class

- 19.00 - 20.30: **Group activity**
 20.30 - 21.30: Dinner
 21.30 - 23.00: **Group activity**



Science - Day 4 - Thursday

08.30 - 09.00: Breakfast

09.00 - 11.30: Job Applications and Interview Skills

Topics: **Homework check and review**
Jobs
Career paths for science based education
Job applications, CVs, Interviews
Evaluating cover letters and candidates

Objectives: Review basic vocabulary for jobs and interviews
Think about what career paths exist for someone with your qualifications
Discuss what factors you take into account when considering a job opportunity
Learn what documents you need to send with a job application
Evaluate a cover letter, and evaluate several imaginary candidates for a sample job description
Learn how to describe your strengths, weaknesses and skills
Think about how to sell yourself effectively in an interview
Interview a peer, and participate in a practice interview
Learn basic language for telephone **interviews**
Practice writing a CV in English

Grammar: Adjectives and prepositions

11:30-11:45 Break

11.45 - 14.15: The Changing World II: Population Growth and Energy Needs

Topics: Global population
Diminishing resources
Renewable/nonrenewable energy and nuclear energy

Objectives: Discuss global population growth in recent years and consider experts' predictions for the future
Think about the relationship between population growth, energy, and diminishing natural resources
Learn about sources of renewable and nonrenewable energy, and compare different countries' approach to the energy problem
Weigh the pros and cons of nuclear energy
Learn how to describe the atom
Participate in a role play
Research current events related to this topic

Grammar: Phrasal verbs related to resources

14.15 - 15.30: Lunch with teachers

15.30 - 17.00: Necessity is the Mother of Invention

Topics: **Homework check and review**
Great inventions
Spanish inventions
Metric vs Imperial
Ergonomics

Objectives: Advertising and marketing
Debate the world's greatest inventions and test your knowledge with an Inventions Quiz
Discuss famous Spanish inventions and accidental products, and attempt to sell them to your classmates
Learn common conversions between the Imperial and Metric systems
Discuss the principles of ergonomics and interesting historical examples
Discuss characteristics of advertisements
Learn some idioms that are common in advertising
Invent a product that solves an everyday problem and market it to you classmates
Research some of the most important inventions of today – apps!

Grammar: Phrasal verbs

17.00 - 18:00 One-to-One sessions + On-going group project

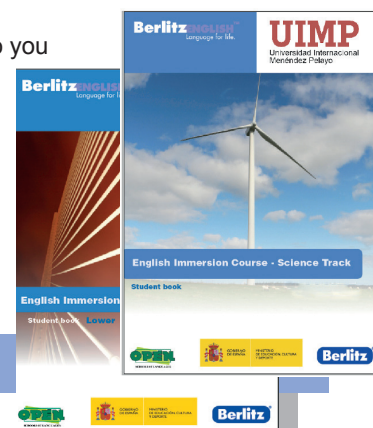
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18:45: Finish Class

19.00 - 20.30: **Group activity**

20.30 - 21.30: Dinner

21.30 - 23.00: **Group activity**



Science - Day 5 - Friday

08.30 - 09.00: Breakfast

09.00 - 11.30: Professional and Practice

Objective: Session dedicated to the following:
Revision and consolidation of topics seen during the week
Debate and Discussion on topics chosen by the students
Professional language: Students will look at elements of Professional English such as:

Topics:

- Cross cultural awareness in the professional environment.
- Meetings
- Telephone skills.

(from the provided materials)

11:30-11:45 Break

11.45 - 14.15: Student presentations

Students, in their groups perform the presentations they have been working on as an on-going homework activity.

They will receive feedback from both teacher and classmates

14.15 - 15.30: Lunch with teachers

15.30 - 17.00: FINAL EXAM AND EVALUTATIONS

17.00 - 18:00: Performance of project + Revision and consolidation

Student will perform the group representation that they have been working on during the afternoon sessions from Monday to Thursday in front of their peers.

7 stage activity spread to review and consolidate the language seen over the duration of the course.

18:45: Finish

