

UNIVERSITÀ DEGLI STUDI DI BARI - "ALDO MORO"

CORSO DI LINGUA INGLESE

Corso di Laurea in Fisica

A.A. 2011-2012

Course Programme

Required readings

Prof.ssa Maria Tarantino
Dipartimento di Fisica

Programma del Corso di Lingua Inglese L-LIN/12

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Modalità di erogazione del corso: Il percorso didattico applicativo si articola in lezioni ed esercitazioni ad impostazione modulare. Le strutture grammaticali e sintattiche studiate si analizzano in relazione a funzioni espressive e strategie espositive del contesto culturale. Si inizia da strutture e frasi semplici e, con approccio graduale, si promuove lo sviluppo di competenze linguistiche più articolate. Le quattro abilità comunicative (parlare, leggere, scrivere, comprendere) sono arricchite in aula tramite la simulazione di interazioni discorsive pratiche. Le attività e gli esercizi svolti durante il corso sono presenti nei testi consigliati. Il loro contenuto è integrato con letture di articoli, su tematiche d'interesse generale e disciplinare, scelti da riviste e siti specialistici.

Supporti didattici: Collaboratori Esperti Linguistici, laboratorio linguistico, audiovisivi. Corsi di base (facoltativi).

Metodi di valutazione del profitto: La prova di profitto finale comprende una parte scritta ed una orale, in lingua inglese. Essa serve per valutare sia le competenze acquisite dello studente nell'uso organico delle operazioni linguistico-retoriche studiate dai libri di testo ed elencate in A (Communication and pragmatic tasks), sia la sua interazione critica con le letture proposte durante il corso riportate in C. La valutazione viene espressa con giudizio di idoneità accompagnato da un voto interno in trentesimi. Si tiene presente anche la scala di competenze specificate dal *Common European Framework* e, secondo il numero di crediti e le competenze acquisiti dallo studente si qualificano in base ai livelli previsti.

Gli argomenti di grammatica, sintassi, semantica e retorica attinenti al corso sono specificati in B (Grammatico-syntactic and rhetorical specifications relevant to the English course).

Testi consigliati: *Basic English for Science* (Oxford University Press, Oxford 1994); *Macmillan English Grammar in Context, Intermediate* (Macmillan Publishers, Oxford 2008); *A Concise Dictionary of Physics* (Oxford University Press, Oxford 1996).

A – Communication and pragmatic tasks

- Expressing numbers and basic operations, describing 2- and 3-dimensional figures, defining simple tools: shape, size and use.
- Describing angles, lines and graphs, reading mathematical symbols, equations and formulae.
- Describing position, movement, action and direction of objects in space.
- Describing qualities of materials, colours, appearances, simple apparatuses and related experiments
- Classification, definition and comparison of substances and physical properties.
- Time and logical sequencing in the description of a process.
- Explaining cause and reason, drawing contrast, difference and similarity.
- Stating probable, hypothetical and theoretical results, suggesting possible cause, effect and result.
- Reporting actions, observations and findings, accounting for results, stating conclusions.
- Main parts of a scientific report and their rhetorical function.
- Writing letters and curriculum vitae.

B – Grammatico- syntactic and rhetorical specifications relevant to the English course

- To be and to have as main and auxiliary verbs. Impersonal statements.
- Nouns: countable, uncountable, dual and mass.
- The simple present: to express states, general truths, habits, mathematical concepts.
- The future tense: to signal predictions, intentions and anticipation.
- Adverbs and prepositions of space and movement, manner, means and instruments.
- Simple statements of comparison and contrast: equal, different and proportional relations.
- The possessive genitive: Saxon and 'of' genitive in descriptive statements.
- Fronted statements. Noun phrases, modifiers and qualifiers of nouns and phrases.
- Epistemic modals: to express mental and/or physical ability, possibility, necessity, probability, remote possibility, suppositions.
- The passive voice: present and past tense, by and the agent, agentless passive or thematic focus.

- The relative clauses: identifying, non-identifying and reduced relative clauses.
 - The indefinite article: in definitions, introductions and partitive phrases.
 - The definite article: anaphoric, cataphoric and deictic reference.
 - The present perfect: to focus on events and results.
 - The first, second and third type conditional: implications and possible adverbials.
 - Time sequencing and logical connectors to signal cause, effect and results.
- The five phases of a scientific report: conceptual paragraphs and logical organization of content matter and argumentation.

C – Required readings A.A. 2011-2012

1. Does infinity come in different sizes? - *Sc. Am.* Jan. 2008.
2. What is a ‘fictitious force’. - *Scientific American*, September 2007.
3. What would happen to Earth if the moon were only half as massive? *Sc. Am.* Oct 2008.
4. Equations as Guides to Thinking... - *The Physics Teacher* – May 2011.
5. Drawing to Learn in Science - *Science* –August 2011.
6. Climate-cooling trials... - *New Scientist* - September 2011.
7. Snow and ice crystals - *Physics Today* – December 2007.
8. Electric ice a shock to ... - *New Scientist* - August 2011.
9. The origin of bird flight. - *Physics Teacher*, Sept. 2006.
10. The saving of planet Gaia. - *New Scientist*, March 2006.

Along with the 10 required readings, each student should choose 5 readings among the ones listed below:

1. Differences between graphite and diamond. - *Scientific American*. September 2007.
2. Keeping constant – physics - *New Scientist* - September 2011.
3. Moon’s age may be out.. - *New Scientist* - August 2011.
4. Why do migratory birds fly in a V formation? - *Scientific American* September 2007.
5. Space storms cause decade of damage - *New Scientist* - September 2011.
6. Single molecule – electric motor - *New Scientist* - September 2011.
7. Early universe erupted... - *New Scientist* - August 2011.
8. Internal Particle of Mystery - *Scientific American* - July 2011.
9. Photons morph in colour and shape - *New Scientist* - August 2011.
10. Who ate all the stars? - *New Scientist* September 2010.
11. Black hole universe - *New Scientist* - August 2011.
12. The Galileo affair - *Physics World* March 2009.
13. The Believing Brain - *Scientific American* - July 2011.
14. What Is Pseudoscience? - *Scientific American* - July 2011.